

The  
**Annual Report**  
2023

**Cover Photo:** *An angler getting ready to cast, from the Blacksboat Bridge, River Spey, 2023*  
(Photo: Paul Hughes, SFB Digital Marketing & Communications Manager).

# Annual Report 2023

by



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## January 2024

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**Photo:** An angler with Ghillie Davy MacIntosh in action at Delfur, River Spey.  
(Photo: Mark Melville, Head Ghillie, Delfur Fishings).

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# Spey Fishery Board

- Chairman:** *Dr Alexander Scott*, Mandatory for Craigellachie Fishings
- Proprietors:** *William Mountain*, Delfur Fishings  
*Guy Macpherson-Grant*, Mandatory for Ballindalloch Trustees  
*Angus Gordon Lennox*, The G.C. Gordon Lennox Estate Company Ltd.  
*George Wills*, Mandatory for Knockando, Phones and Lower Pitchroy (*since February 2023*)  
*Toby Metcalfe FRICS*, Mandatory for Crown Estate Commissioners  
*Peter Graham FRICS*, Mandatory for Rothes & Aikenway, Laggan and Wildland Fishings  
*David Greer FRICS*, Mandatory for Seafield Estates  
*Callum Robertson*, Easter Elchies, Upper Arndilly and Mandatory for Kincardine
- Co-optees:** *Grant Mortimer*, Strathspey Angling Improvement Association  
*Sandy Howie*, River Spey Anglers Association
- Invitees:** *Jennifer Heatley*, NatureScot (formerly Scottish Natural Heritage)
- Clerk:** *Neil Torrance*, Mackinnons Solicitors

## Spey Fishery Board Members Attendance at Board Meetings

Date	<i>Dr Alexander Scott</i>	<i>Angus Gordon Lennox</i>	<i>Peter Graham</i>	<i>George Wills</i>	<i>Guy Macpherson-Grant</i>	<i>Toby Metcalfe</i>	<i>Callum Robertson</i>	<i>David Greer</i>	<i>William Mountain</i>	<i>Sandy Howie</i>	<i>Grant Mortimer</i>
10/02/23	X	X		X	X	X	X	X	X	X	X
26/05/23	X	X	X	X	X	X	X	X	X	X	X
01/09/23	X	X	X				X	X	X	X	
17/11/23	X	X	X	X	X	X	X	X	X		X

## Spey Scientific Committee

- Chairman:** *Peter Graham FRICS*, Mandatory for Rothes & Aikenway, Laggan and Wildland Fishings
- Members:** *Dr Ronald Campbell*, Tweed Foundation (Retired)  
*Angus Lothian*, Atlantic Salmon Trust Missing Salmon Project  
*Dr Alexander Scott*, Mandatory for Craigellachie Fishings & SFB Chairman  
*Callum Robertson*, Easter Elchies, Upper Arndilly and Mandatory for Kincardine  
*Robert Mitchell*, Head Ghillie, The Macallan  
*Blair Banks*, Ghillie, Arndilly  
*Jon Gibb*, Lochaber District Salmon Fishery Board  
*Roger Knight*, SFB Director  
*Atticus Albright*, SFB Biologist
- Administrator:** *Pru Jowett*, SFB Administrator

# Spey Fishery Board Staff

**Director:** Roger Knight

**Office Administrator:** Pru Jowett (Part-Time)

**Hatchery Manager:** Jimmy Woods

**Operations Manager:** Duncan Ferguson

**Head Water Bailiff:** Richard Whyte

**Water Bailiffs:** Jason Hysert  
Douglas Darling

**Research:** Atticus Albright (Biologist)  
Steve Burns (Assistant Biologist)  
Kevin Greensill (Assistant Biologist - Seasonal)  
Sacha Forbes-Leith (University Intern until April 2023)  
Charles Brew (University Intern late May to end July 2023)

**Digital Marketing & Communications Manager:** Paul Hughes (Part-Time)

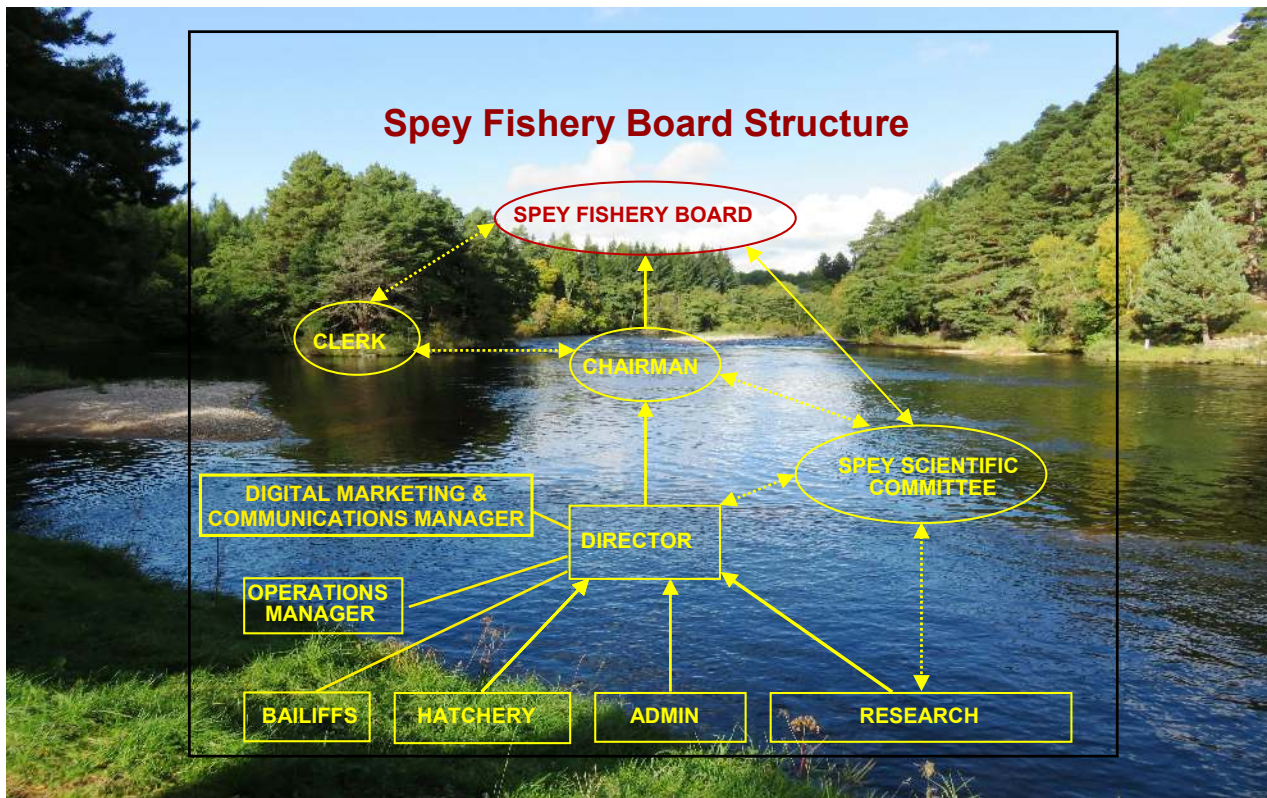


Figure 1: The Spey Fishery Board Structure

# *A Word from the Chair*

2023 will not be remembered with a great deal of fondness by anglers on Scottish salmon rivers nor, indeed, at many international Atlantic Salmon destinations. The Spey catch was just under 3,700 salmon and grilse.

But before I reflect on last year, I need to talk about Roger Knight. Roger has served as River Director on the Spey for more than 17 years. He has been appointed as the first CEO of The Spey Catchment Initiative (SCI), now Incorporated as a new Charity. I am sure everyone who has met Roger will want to wish him every success in this crucial new role. There is no doubt in my mind that Roger is currently the best River Director in Scotland and he will be a hard act to follow.

The Board has provided strong support for the developing SCI since its inception and, for over a decade, it is through the SCI that we have delivered all our major catchment restoration projects at no cost to the Assessment.

Wild Atlantic Salmon were reclassified at COP 28 as “Endangered” and placed on the Red List of Endangered Species.

Two years ago, the Scottish Government published its Wild Atlantic Salmon Strategy. It is an excellent Strategy. But there has been Zero delivery since its publication. Developing Strategy is important but it is Execution that counts. This situation is totally unacceptable and profoundly worrying for the future of our salmon.

Locally on the Spey, the consequences of Climate Change with another very hot, dry May and June and with high water temperatures, were all too apparent. A very hot September week was

followed by a significant fish death incident - stressed salmon succumbing to a combination of warm water with low oxygen levels, a first on the Spey. Salmon need cold, clean water, yet the Spey is one of the most heavily abstracted rivers in Scotland. Everyone should sign our Release The Spey campaign. Increasing summer river flows is perhaps the most important thing we can now do for our salmon.

While water quality is a matter for SEPA, The Board will also monitor water quality throughout the next season with the help of an experienced water Chemist.

Please read this detailed Annual Report. We do not use it as a marketing exercise but as a means of providing as much information as possible on the breadth and depth of what our small team achieve. Some things we are not permitted to do by Government or Regulation, errant seals are a totemic example. Everything we can do, we are doing. In addition to our usual hatchery operations, we will also begin a Smolt to Adult Supplementation programme this spring to try to provide more immediate benefits than long-term projects can provide.

On behalf of the Board, I must thank our staff, our many supportive partners, the Spey Catchment Initiative and our world class ghillies for helping us deliver so much in difficult times. We seem to have entered a five year cycle on salmon numbers so the probability is that 2024 should be very much better. Tight lines to all.

**Dr Alexander Scott**

**Chair - Spey Fishery Board**

# Spey Fishery Board Strategy & Management Plan 2023

The Spey Fishery Board's statutory responsibilities have always been at the heart of all that we do. We will work tirelessly to implement the Scottish Government's Wild Salmon Strategy, in order to enhance, conserve and protect Atlantic salmon and sea trout stocks throughout the River Spey Catchment.

## Mission Statement:

In response to the Atlantic salmon crisis, affecting all our rivers, the Spey Fishery Board's mission is to maximise the number of Atlantic salmon and sea trout smolts reaching the sea from the River Spey.

## Strategies:



**Predation Control:** We are working with the Scottish Government and their advisers to improve the management system for reducing the impacts of fish-eating birds, such as Goosanders, Mergansers & Cormorants, including a review of General Licenses. We shall also work to mitigate predation by other fish and continue our work to actively manage the impacts of seals in the River Spey.



**Stocking:** The SFB will continue to fulfil its statutory duty to consider stocking and to undertake mitigation stocking above man-made barriers. We have maximised the capacity of our hatchery and seek to give the natural population a helping hand wherever we are allowed to. In due course, we may also need a programme of restoration stocking above Spey Dam.



**Protection and Law Enforcement:** In concert with Police Scotland, our Fisheries Officers will continue to vigorously deter and prevent illegal fishing within the River Spey, its tributaries and along its coastline, including the use of technology, to protect our iconic fish.



**Water Quantity & Quality:** We are committed to maximising the quantity & quality of water throughout the Spey catchment and to reducing the significant water diversions made from it for the generation of hydroelectricity through our "Release the Spey" campaign. This will make flows in the River Spey more sustainable and resilient to the impacts of climate change.





**Barriers to Salmonid Migration:** We are committed to opening-up new spawning opportunities by removing or mitigating barriers to fish passage, including the removal of dams, thereby restoring natural river processes and improving in-river and bankside habitat.



**Education:** We will continue to work to promote greater understanding of the issues affecting salmon, its value to the local economy, of what we do and why we do it and, in particular, via digital channels. We shall also aim to develop introductions to angling to recruit and retain new anglers.



**Lobbying:** In close collaboration with Fisheries Management Scotland, we shall continue to robustly represent our views to the Scottish Government.



**Habitat Enhancement:** Working with our local partners in the Spey Catchment Initiative, we see the adoption of a holistic approach to river restoration and more habitat enhancement projects as central elements in bringing about landscape-scale changes, without cost to the Assessment. These will ensure the sustainability and resilience of the River Spey to the climate and biodiversity crises confronting us.



**Invasive Species Removal:** We will continue to work to establish a sustainable means of identifying and removing invasive non-native species, without cost to the Assessment. These species de-stabilise river banks and reduce fly life if left in place. These invasive species include American Mink, plants such as Giant Hogweed, Japanese Knotweed, Himalayan Balsam, White Butterbur and Ranunculus and, more recently, Pacific Salmon.



**Scientific Research & Monitoring:** We shall continue to develop our knowledge of the in-river and coastal migration undertaken by Spey smolts and our understanding of invertebrates. We shall seek to enhance our knowledge of water quality issues and check the health of the river by monitoring the young fish populations. This will highlight areas that need help, provide the scientific evidence we need to inform the Government's regulators and help protect the river from harmful developments.

**Figure 2: SFB Strategy & Management Plan**



## Part 1

# Fisheries and Conservation

## 1.1 Salmon and Grilse Catches

The 2023 season was particularly challenging for Ghillies and anglers – not just here on the Spey, but on salmon rivers throughout Scotland and, indeed, overseas. The declared rod catch amounted to **3,691** Salmon and Grilse caught, well below the 5-year average of 5,032 and the 10-year average of 5,355 (Figure 3).

These numbers are clearly disappointing and partly the result of the very hot and dry months of May and June, which meant the river was often too low and too warm to be fishable. Fishing conditions were variable since then and have also continued to be affected by the significantly fewer numbers of fish returning from their epic sea migration than used to be the case.

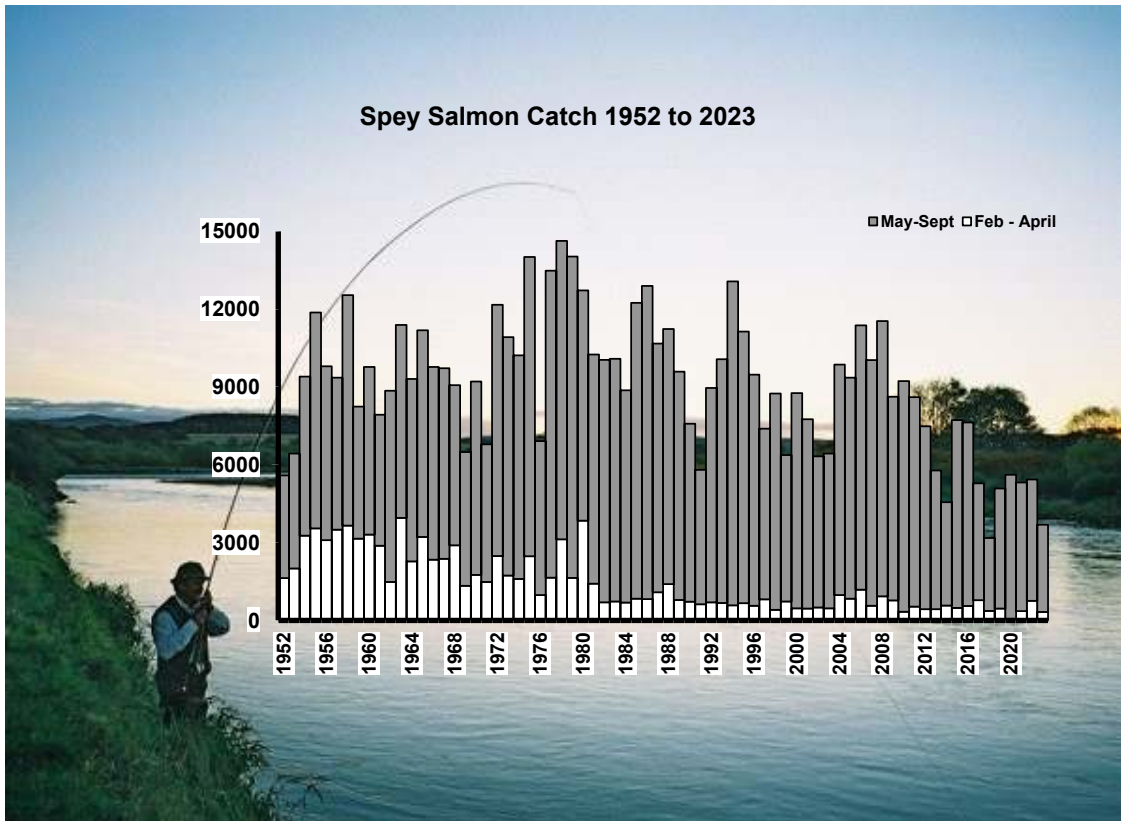
The early spring catch (between 11<sup>th</sup> February and

30<sup>th</sup> April) amounted to 327 fish, which was less than half the 764 fish caught for the same period last year. May produced catches of a further 291 fish (a reduction on the 544 fish in May 2022), whilst June produced catches of 464 salmon & grilse, also lower than the 668 fish caught in June 2022. Catches rose to 1,327 in July, comparable to the 1,354 salmon & grilse caught in July 2022, and helped by rises in river water from welcome rain which significantly improved catches. Catches in August amounted to 941, slightly below the 1,011 caught in August 2022 and the season concluded with September producing 341 fish, well below the 1,099 caught during the same month last year (Figure 4).

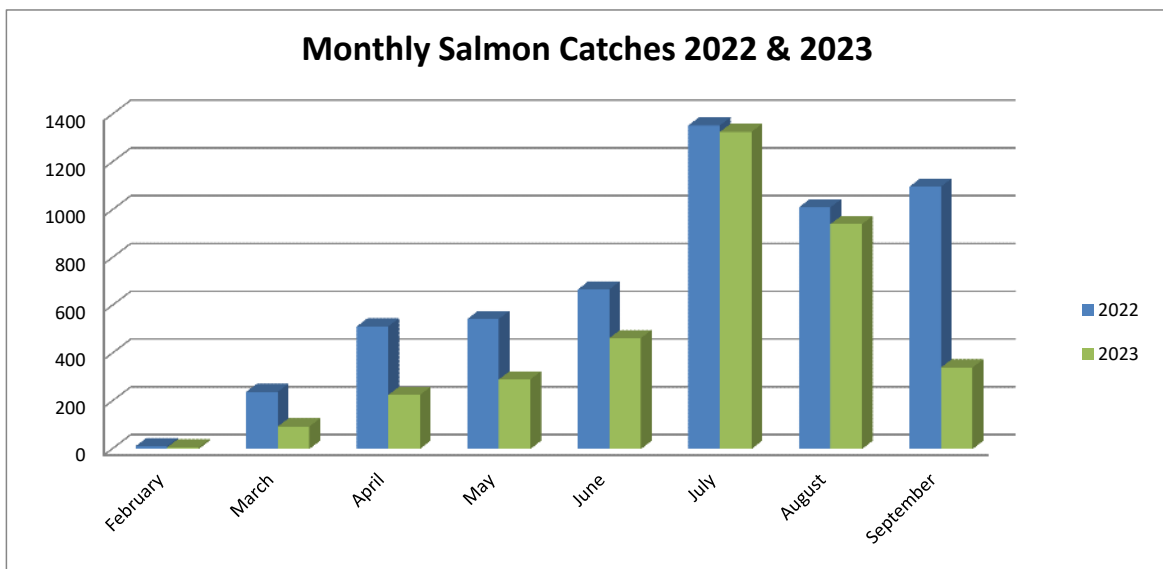
Further details regarding the 2023 catches can be found in the weekly reports on the Board's website.

**Photo Above:** *Young angler Ellie Mountain with a fine summer salmon in August 2023, one of the 3,691 salmon & grilse caught on the River Spey during the 2023 season.*  
(Photo: Mark Melville, Head Ghillie, Delfur Fishings).

# Spey Salmon & Grilse Catch



**Figure 3:** Annual declared rod catch of wild Salmon and Grilse from the River Spey, 1952-2023. The 2002-2023 catches are from returns made to the SFB by proprietors.



**Figure 4:** Declared monthly rod catch of wild Salmon and Grilse from the River Spey in 2022 and 2023, calculated from returns made to the SFB.

## 1.2 Sea Trout Catches

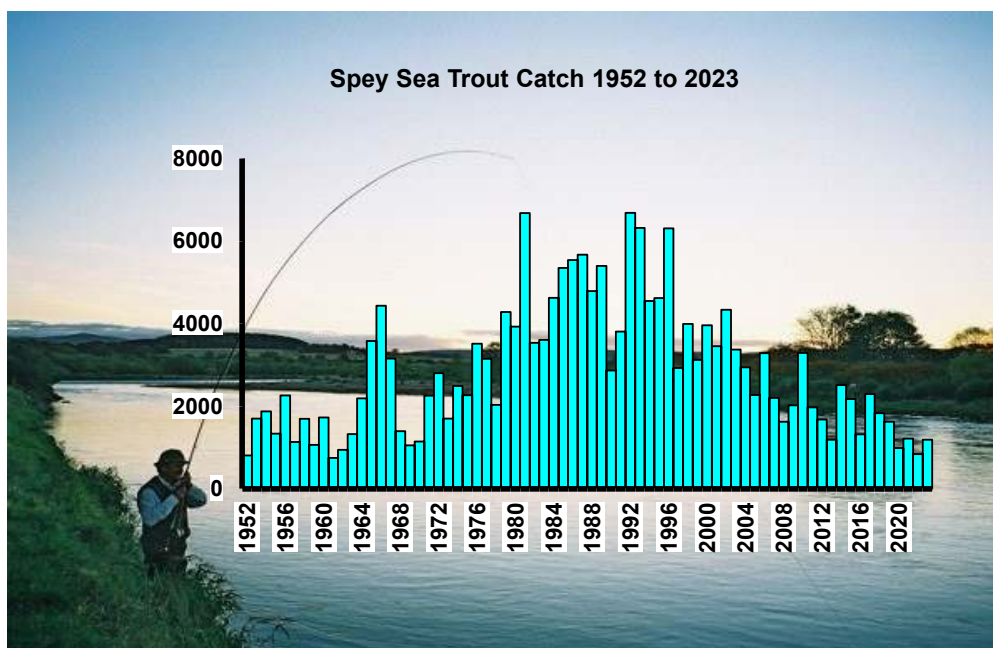
The 2023 declared River Spey rod catch for Sea Trout was 1,188, (Figure 5), which was significantly better than the 840 caught in 2022 and slightly above the five-year average of 1,171.

For the majority of recent years, June has been the most prolific month for Sea Trout catches on the

River Spey, followed by July. The reverse was true in 2023, as it was in 2022, with 335 Sea Trout caught in July and 315 caught in June. So July accounted for 28% of the annual catch, whilst June accounted for almost 26%. Overall therefore, 54% of Sea Trout caught on the River Spey in 2023 were recorded in these two months.



**Above:** A fine Sea Trout, caught at Castle Grant in June and one of the 1,188 Sea Trout caught on the River Spey during 2022. (Photo: Simon Crozier, Senior Ghillie, Reidhaven Trust Estates).



**Figure 5.** Annual declared rod catch of Sea Trout from the River Spey, 1952-2023. The 2002-2023 catches are from returns made to the SFB.

### 1.3 Salmon Conservation Policy

As part of its long term commitment to the protection of Salmon stocks, the SFB launched a Salmon Conservation Policy in 2003. The policy aimed to achieve the release of at least 50% of Salmon and Grilse and to protect the depleted stocks of multi-sea winter Salmon in February-June. It has now achieved a level far higher than that originally anticipated. Most of the larger fish arrive in the river in the early months and these are the fish which have the potential to make the most significant contribution to successful spawning. Furthermore, a high proportion of these fish are female, and therefore contribute an important part to the river's spawning stock. Studies by the former Spey Research Trust (the fore-runner to the Spey Foundation) have also shown that these fish are particularly vulnerable to capture and re-capture having been released.

Throughout the 2023 season on the River Spey, **97%** of salmon and grilse caught were released (Figure 6), just 1% below the 98% released for each of the four previous years. For a voluntary policy to achieve such a significant release rate is highly commendable and we are grateful to all of our proprietors, ghillies and anglers for their support for the policy. In total, **3,590** Salmon and Grilse were released to spawn in 2023.

The SFB would also like to draw attention to the Conservation of Salmon (Annual Close Times and

Catch and Release) (Scotland) Regulations, which came into force in January 2015 and which make it illegal to kill wild Atlantic salmon caught before 1<sup>st</sup> April each year.

### 1.4 Sea Trout Conservation Policy

Sea Trout are the sea-running form of Brown Trout. The majority of Sea Trout are female and Sea Trout and Brown Trout inter-breed. Under fisheries legislation, Sea Trout have the same legal status as Salmon and District Salmon Fishery Boards are also responsible for their conservation, protection and enhancement. Catch statistics show that the Spey Sea Trout rod fishery has historically been one of the largest in Scotland, although catches have declined in recent years and the SFB has maintained a precautionary approach.

2023 saw the rate of catch and release for Sea Trout achieve **90%**, just below the 93% released in 2022 (see Figure 6).

When it reviewed the Conservation Policy in November 2023, the Board concluded that the voluntary policy overall was working well and should remain unchanged for 2024. The Conservation Policy for 2024 is illustrated in Figure 7 and the SFB will continue to monitor the situation throughout the forthcoming year.

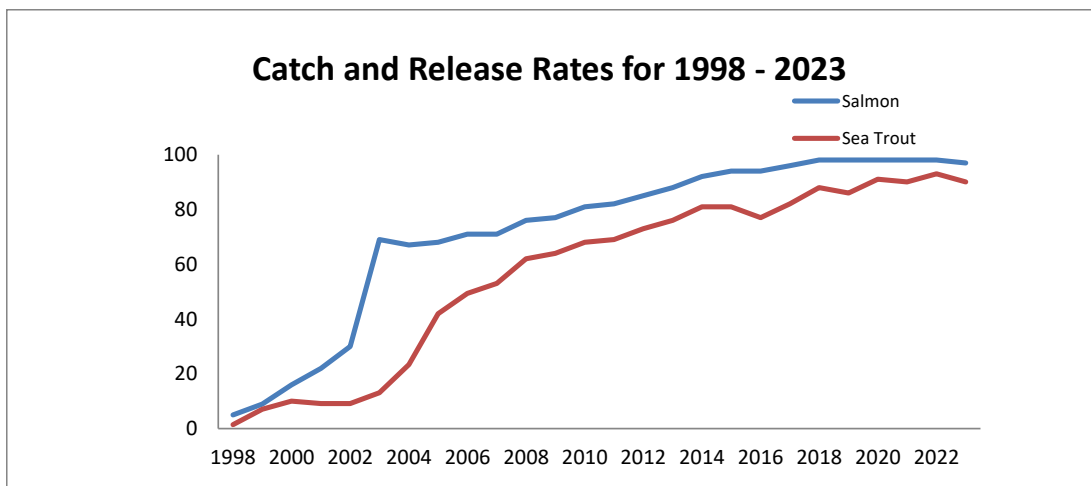







Figure 6: Catch and Release Rates for the River Spey 1998-2023.

Scottish Legislation requires that all salmon caught before the 1st April must be released. In order to protect the integrity of the Spey stock and to maximise their spawning potential, the Spey Fishery Board's policy is that all fish caught up to and including the 31st May should be released alive. From the 1st June the policy set out below will apply.

### SEA TROUT

-  Release all finnock of 16oz / 35cm / 14" or less
-  Release all Sea Trout of 3lb / 50cm / 20" or above
-  Retain only 1 Sea Trout of takeable size per calendar day. Anglers are also encouraged to release their first fish and keep the second that is of takeable size
-  Release all stale or coloured fish
-  Release all unseasonable fish (smolts, kelts, over-wintered finnock)

### SALMON





-  Each angler must return the 1st, 3rd, 5th etc... cock fish caught
-  All hen salmon and hen grilse must be released
-  Throughout the season all stale or unseasonable fish must be released e.g. gravid, kelts
-  Escaped farmed salmon must be retained

Figure 7: The Spey Fishery Board's Conservation Policy for 2024. N.B. Since January 2015, it has been illegal to kill wild Atlantic salmon caught before 1st April .



## Part 2

# Management Report

### 2.1 Strategy & Management Plan

The Scottish Government published its Wild Salmon Strategy on 14<sup>th</sup> January 2022 and the SFB's Director, Roger Knight, had been part of the Advisory Group that created it. This Strategy represents the first time that the breadth of pressures and management approaches have been considered in full in order to establish a new path of restoration and recovery for salmon in Scotland, guiding collective action over the course of this decade to 2030.

The Strategy's vision is aimed at protecting and enhancing Scotland's wild Atlantic salmon population and developing and boosting the environmental, social and economic benefits arising from it by addressing the 12 pressures on salmon. These include: Exploitation; Predation; Fish Health; Genetic Introgression; Invasive Non-Native Species; Habitat – Water Quality; Habitat – Water Quantity;

Habitat – Thermal; Habitat – Instream; Habitat – Riparian; Barriers to Migration; and Coastal and Marine.

The Strategy's Implementation Plan was published in early 2023 and SFB Director, Roger Knight, was part of the Advisory Group for this. Throughout 2023, he has subsequently been part of the Scottish Government's Delivery Group to put the Strategy into place.

In support of the Scottish Government Strategy, the Board developed its own Strategy & Management Plan and went out to consultation on it, to proprietors, ghillies and the wider public.

The revised Strategy & Management Plan was published last year and is illustrated in Figure 2 on pages 8-9. The Board has continued to pursue this Strategy & Management Plan throughout 2023 and looks forward to continuing its implementation during 2024.

**Photo Above:** *Spey salmon smolts caught above Spey Dam in 2023.*  
(Photo: Paul Hughes, SFB Digital Marketing Manager).



## 2.2 Spey Catchment Initiative (SCI)

The Spey Fishery Board has continued to be the driving force behind the Spey Catchment Initiative (SCI) throughout 2023, as well as providing it with substantial administrative and management support. The SCI exists as a result of support from the organisations illustrated on page 17 and the Initiative continues to be a highly effective demonstration of a public/private partnership, managed by the Spey Fishery Board.

Since its inception in 2010, the SCI has enjoyed considerable success delivering a range of multiple-benefit projects, which in turn have enabled the SFB to secure significant fishery habitat enhancements. These have included river restoration and bankside improvement works, in-river habitat enhancements and obstacle removal, as well as riverside amenity works to improve access and enjoyment of the River Spey for local communities.

We reported last year that the SCI had held a Strategy Day in April 2022. The outcome was a

consensus to expand the SCI's remit to adopt an even more holistic approach to the management of the catchment, by including peatland restoration, carbon sequestration and potentially deer management, in order to make the Spey catchment sustainable and more resilient to the climate and biodiversity emergencies confronting us all.

The Strategy Day also agreed by consensus to progress the SCI to become a legally recognised entity. Following consideration of all the options for this, it was agreed, again by consensus, that the SCI should apply to become a Scottish Charitable Incorporated Organisation (or SCIO). A comprehensive application to incorporate the Initiative as a SCIO was subsequently submitted to the Office of the Scottish Charity Regulator (OSCR) on 16<sup>th</sup> November 2022 and the Initiative was successfully incorporated on 14<sup>th</sup> December 2022.





Above: The organisations that are members of the Spey Catchment Initiative (SCIO).

There had also been consensus that the Spey Catchment Initiative should become a two-tier SCIO, with a Board of Trustee Directors sitting above the Steering Group in order to provide strategic guidance and oversee governance issues.

2022 had also seen the SCI Steering Group consider a revision of the Spey Catchment Management Plan, which had last been revised and published in 2016. In early 2023, the SCI went out to public consultation on the revised Plan, which was subsequently published in time for the launch of the Spey Catchment Initiative as a SCIO in May 2023.

The revised Spey Catchment Management Plan sets out a broad strategic framework for the wise and sustainable use of the water resource between 2023 and 2030, as well as the protection and enhancement of the water quality and natural heritage throughout the whole River Spey catchment. It summarises in one document all the current key issues, pressures and opportunities that exist as they relate to the local environment and provides a wealth of information on flood management, water quality, fisheries management, economic development, as well as

the protection of species, habitat, fisheries, forestry and woodland.

## 2.2.1 SCI Launch

The Spey Catchment Initiative was successfully launched as an incorporated charity on the 18<sup>th</sup> May 2023 in Boat of Garten. Feargal Sharkey was the special guest, which also helped to attract significant press interest. Aside from fame as a former rock musician and solo artist, Feargal has been a renowned campaigner against pollution in rivers for the last 20 years and is a passionate fly fisherman.

Feargal Sharkey and SFB staff were interviewed on camera by STV and BBC Highlands and Alba on the banks of the River Spey before the launch. They were also photographed and subsequently interviewed by reporters from the Press & Journal, Daily Record and Badenoch & Strathspey Herald. This led to significant television coverage on STV News and on BBC Alba News that evening.

The launch event itself was attended by circa 60 people, including all of the Initiative's partner organisations, as well as community organisations and others keen to hear more about the opportu-



-nities for the new organisation, including green investment. It was also filmed by STV and the BBC and SFB Digital Marketing Manager, Paul Hughes, broadcast the event live over social media channels, including Facebook, LinkedIn and Twitter. We also launched the SCI's re-branded logo and new website, on which Paul Hughes had worked hard.

Feargal Sharkey gave a passionate opening address, focusing on the plight of the Atlantic salmon and the need to restore populations of these iconic fish on the world-renowned River Spey. Feargal also offered to help us again in the future and told the press that the SCI could become a blueprint for all the other rivers in the UK.

### 2.2.2 River Gynack Restoration Project

The SCI has worked throughout 2023 to develop a project on the River Gynack, above Kingussie. This river has, over millennia, created significant erosion scars within its valley which are unstable and cause substantial volumes of sediment to fall into the river, washing-out salmon redds and causing flooding issues for Kingussie down below when the river goes into spate. These are illustrated in the picture on page 19.

Cbec Eco-Engineering were commissioned to survey the erosion scars and sediment deposition there, with a view to looking at how we might stabilise the hillside scars with geotextiles and the planting of Willow trees. This survey was completed at the end of March 2023 and will link to the reduction of flood risk for Kingussie.

**Photo Above:** *The SCI Launch received substantial media coverage. Pictured here, from left to right, are SCI Project Officer Penny Lawson, SFB Director Roger Knight, guest of honour Feargal Sharkey, SFB Operations Manager Duncan Ferguson and SFB Digital Marketing Manager Paul Hughes.*  
(Photo: courtesy of the Press & Journal).



**Above:** *The River Gynack above Kingussie, and the unstable erosion scars the River has created over millennia. These cause significant volumes of sediment to fall into the river when it goes into spate, washing-out salmon redds and causing flooding problems for Kingussie in the process.*

(Photo: Paul Hughes, SFB Digital Marketing Manager).

This type of project has not been done before on this scale and it has become a complex undertaking, requiring further survey work to provide more reassurance of project success. This work will involve ground investigations and ecological, topographical, habitat and flow surveys.

The SCI are now planning to submit a development funding application in January 2024 to NatureScot's Nature Restoration Fund (NRF), in order to undertake these surveys and planning work during the spring/summer of 2024.

This will be followed by a further application to the NRF later in the year, for full implementation in 2025. This approach has been supported by NatureScot, which has approved the initial Expression of Interest and invited the SCI to submit a full proposal.

The SFB looks forward to progressing this project in 2024 and to reporting on progress in due course.

### 2.2.3 The River Conglass Restoration Project

Work has continued throughout 2023 on the development of a significant project at sub-catchment level on the Conglass, a tributary of the upper River Avon.

This project is proposing to plant trees across up to 300 hectares of ground owned by Crown Estates Scotland, as well as additional tree planting on other landholdings, together with the placement of Large Woody Structures within the water course.

Work on this project was begun by Gary Brown, who joined the SCI in June 2022 for ten months as a result of grant funding from the Cairngorms National Park Authority (CNPA) to support the position. Gary left at the end of March 2023 and the SCI's principal Project Officer, Penny Lawson, took up the reins. Penny has since been working closely with the Scottish Wildlife Trust, who have applied for National Lottery Heritage Funding

(NLHF) to develop this project and the early indications are that NLHF are keen to support it, both in terms of core costs for project officer employment, and capital costs for implementation.

The Conglass Restoration Project has proved to be the most complex project the SCI has attempted so far; there are multiple stakeholders, a plethora of designations (Special Areas of Conservation, Special Protection Areas, RAMSAR sites and Sites of Special Scientific Interest) and various, sometimes conflicting, land management and sporting interests. The SCI is working closely with NatureScot and the CNPA to overcome some of these designation issues.

The aim continues to be a project implemented over 3-5 years which will make landscape-scale change to build sustainability and resilience for the benefit of the upper Avon area and the River Spey catchment as a whole.

### 2.2.4 Flailbot Trials

The SCI trialled the use of a Flaitlbot during 2023. This innovative piece of equipment can be remotely and wirelessly operated on challenging terrain to cut vegetation, even on steep surfaces, and rejuvenate natural seed sources to regenerate tree growth. In so doing, it avoids tree planting and the use of plastic tree shrouds.

Initial trials near the River Truim proved positive and work elsewhere will continue throughout 2024. We look forward to further use of this tool throughout the coming year.



**Photos Above Right:** *Trials of a Flailbot to encourage natural tree regeneration have proved successful during 2023, overseen by the SFB's Operations Manager, Duncan Ferguson (pictured on the right).*  
 . (Photo: Paul Hughes, SFB Digital Marketing Manager).



# Release the Spey

## 2.3 Water Abstraction Update



*Above: Photographs taken at various abstraction sites throughout the upper Spey catchment. (Photos: Paul Hughes, SFB Digital Marketing Manager).*

### 2.3.1 Envirocentre Report 2021

One of the greatest threats to the River Spey and its fish, is that of increased water abstraction. This is particularly apparent as we strive to make the Spey catchment sustainable and more resilient to the impacts of the climate and biodiversity emergencies. The SFB remains concerned by the significantly high levels of water abstraction, particularly from the upper catchment, for the production of hydro-electricity.

We have previously reported on Envirocentre's update of their 2008 report on River Spey water abstractions. Their Report - **River Spey Abstractions 2021: Water Resource Management Now and Implications for the Future** - was completed and published in 2021. The Report shows that of all the water permitted to be abstracted or diverted out of the catchment, over 90% of it is taken from the top 13% of the Spey catchment, then diverted either to Fort William, or to the Tay, to generate hydro-electricity. In place since the 1940's, these schemes can reduce the natural flow in the Spey by up to 24%

at Boat o' Brig, near Fochabers, and by up to a massive 61% at Kinrara, near Kingussie.

Crucially, the Report highlights that the Spey valley has extensive sand and gravel deposits that have been denuded of their water re-supply and led to lower river levels as a result of these diversions.

This loss of water storage is exacerbated by historic land use practices and reduced snow melt in the spring. The net result of this reduction in natural flow is that it has reduced the resilience of the river to cope with the low flow conditions and higher water temperatures we are experiencing more and more as a result of climate change.

The SFB is therefore calling for the licensed abstraction from our upper tributaries to be re-appraised and appropriately regulated. As a result, the Board is committed to reducing the significant water diversions from the Spey for the production of hydro-electricity, and returning that water instead down our upper tributaries to make the River more resilient to the impacts of the climate emergency. The Board has also determined that its ultimate objective is to see the removal of dams throughout the Spey catchment.



**Photo Above:** *Spey Dam near Laggan, which is operated by GFG (Gupta Family Group) Alliance.*  
(Photo: Paul Hughes, SFB Digital Marketing Manager).

The SFB is therefore promoting a programme of ecosystem restoration. For example, if the flow was reinstated to the Allt Sluie near the top of the Spey catchment at Dalwhinnie, this would off-set the amount of water abstracted at the Dipple Wellfield on the lower Spey near Fochabers. Crucially, though, it would provide benefits downstream throughout the entire river. Other opportunities include: increasing the compensation flow from Spey Dam; the restoration of the River Mashie near Laggan, most of the flow from which is diverted to Fort William; and the re-instatement of flows down the Allt Bhran and down the River Cuaich and its tributaries, all of which is currently diverted into the Tay system. SEPA's Hydro Review Team is now actively reviewing the flows down the Allt Bhran and the Cuaich, with a view to restoring them under the Water Framework Directive.

### **2.3.2 GFG Alliance: Spey Dam**

The SFB remains concerned by the significantly high levels of water abstraction, particularly in the upper catchment by ALVANCE Aluminium and SIMEC as part of the GFG (Gupta Family Group) Alliance. They are licensed to divert substantial

volumes of water from Spey Dam, some twelve miles from the source of the Spey, to Fort William.

The impact of the abstraction and its associated infrastructure on the upper Spey salmon population is severe; in recent years the Board's electrofishing monitoring above the dam has found only very low densities of salmon fry present at any of the 11 sites visited (see section 3.1), indicating that only a small number of fish presently ascend the Dam's fish pass and limiting the spawning which takes place. This led the Scottish Environment Protection Agency (SEPA) in 2015 to designate Spey Dam as a barrier to fish passage.

For many years the Board has remained concerned about the efficacy of the fish pass at Spey Dam and has also maintained that the water flows emanating from the Dam are insufficient to allow adult salmon to ascend up to and above it to spawn, or to allow salmon smolts to descend below it. The Board is also worried about the efficacy of the screens at the off-take (which are in place to prevent juvenile fish from exiting the River Spey and its catchment and gaining access to Loch Laggan) and concerned by the water flow speeds through the off-take and down the Crunachden Cut.

The heck on the River Markie, which enters the reservoir immediately above Spey Dam, also remains an issue, as it appears to completely block access to migratory fish. Equally, the Board would like to see the restoration of the River Mashie, much of the flow from which is also diverted to Fort William.

The SFB has continued to press SEPA, as the regulator of water quality and quantity, to address the Board's concerns. SEPA's designation of Spey Dam as a barrier to fish passage ensured its re-classification to "Poor" under the EU's Water Framework Directive (see section 4.6), with a consequential impact on the water bodies above Spey Dam, which are now also classified as "Poor". Significant remedial action therefore needs to be taken in order for this area to achieve the requirements of the Water Framework Directive by 2027.

To facilitate this, senior representatives of the SFB, together with SEPA and NatureScot, have continued to meet with representatives of GFG as part of a Spey Dam Technical Working Group, chaired by SEPA. These meetings have seen a much more positive relationship develop than that which existed with the previous owners and the Technical Working Group met remotely on several occasions during 2023.

We have previously reported on the technical assessment of the fish pass at Spey Dam by consultants, Multiconsult and later FishTek, and their recommendations for improvements to be made to the fish pass. These involve making changes to the notches between the fish pass compartments, so as to create an adherent nappe, which will reduce turbulence in the water flow and the introduction of artificial lighting, which is expected to encourage adult fish migration. A fish tagging project had also been proposed by the scientists within the Technical Group, to investigate smolt passage through the reservoir and fish pass.

The first phase of modifications to the fish pass was completed in May 2022. This involved the installation of LED lighting within the fish pass compartments, activated by external sensors to replicate the ambient light conditions outside, and the completion of a topographical survey to inform modifications to the notches between the fish pass compartments. In 2023, a trial of a modified notch within the fish pass was undertaken during the summer, but SIMEC want to insert flow monitors upstream and downstream of the modified notch to provide more conclusive evidence, before progressing with the alteration of the majority of notches within the fish pass. SEPA have given GFG/SIMEC until the end of 2024 to conclude these modifications.

We have previously reported that the Board has sought to better understand the movement of smolts from the upper Spey through the reservoir. 2023 saw a trial of the upper Spey smolt trapping project, which began in March. The Board worked closely with GFG Alliance to implement this project, which saw the deployment of one of the Board's 4-foot Rotary Screw Traps near Glenshero Lodge above the reservoir behind Spey Dam. Captured salmon smolts were counted, measured and die-marked before being released. The aim was to provide an initial indication of smolt success in finding and transiting through the reservoir and fish pass at Spey Dam, where an excellent Wolf Trap, fabricated by GFG Alliance, caught those that were successful. Full details can be found in section 3.3 on page 44 of this report.

The SFB is grateful to GFG Alliance for their support, cooperation and the progress made during 2023 and looks forward to welcoming the completion of modifications to the fish pass, as well as a further trial of the smolt trapping and subsequent monitoring, during 2024.

### 2.3.3 Scottish & Southern Energy: Tummel CAR Licence Scheme

Scottish & Southern Energy (SSE) divert water from Loch An-t Seilich at the top of the River Tromie and from the River Truim, both important upper Spey Salmon spawning tributaries, into the River Tay catchment as part of the Tummel CAR (Controlled Activities Regulations) Licence Scheme. Water from Loch An-t Seilich (River Tromie), from Loch Cuaich (also impounded by SSE), from the Cuaich tributaries, from the off-take above Dalwhinnie on the Truim and from the Allt An't Sluie (another tributary of the Truim ) is diverted to Loch Ericht, before being channelled to Loch Rannoch and on to Loch Tummel. In so doing, it passes through seven power-generating stations at Cuaich, Rannoch, Gaur, Tummel, Errochty, Clunie and Pitlochry, before being discharged into the Tay system.

### 2.3.4 “# Release the Spey” Campaign

We have continued to promote our efforts to reduce water abstraction on the Board's website

and social media channels under our “#Release the Spey” campaign, focusing particularly on our aim of re-watering tributaries that are impounded.

We produced a short video of the water diversion of the Allt Bhran into Loch an't Seilich on the River Tromie, as part of SSE's Tummel Hydro Scheme, and the devastating impact that this is having on Atlantic salmon populations in this area. You can see this at

<https://www.youtube.com/watch?v=4AIEm-TTUas>

You can also sign a petition in support of the campaign at: [https://www.change.org/p/release-the-spey-reduce-water-abstraction?utm\\_source=share\\_petition&utm\\_medium=custom\\_url&recruited\\_by\\_id=adbffe40-b410-11ec-9035-897b29bf6561](https://www.change.org/p/release-the-spey-reduce-water-abstraction?utm_source=share_petition&utm_medium=custom_url&recruited_by_id=adbffe40-b410-11ec-9035-897b29bf6561)

The SFB will continue to promote its “#Releasethespey” campaign throughout 2024, as well as working closely with SEPA, the hydro operators and relevant landowners, to progress these significant river restoration opportunities.



**Above:** SFB Director Roger Knight photographs the Spey catchment water discharged into Loch Ericht near Dalwhinnie. This water is diverted into the Tay system by Scottish & Southern Energy to generate hydro-electricity. Restoring this flow would benefit the whole River and help make the Spey more resilient to the impacts of climate change. (Photo: Paul Hughes, SFB Digital Marketing Manager).



## 2.4 Angling, Canoeing and Access

A major issue highlighted by the economic survey commissioned by the Spey Catchment Management Plan was the potential conflict between angling and canoeing. This situation was complicated by the introduction of the Land Reform (Scotland) Act 2003 and the launch of the Scottish Outdoor Access Code in 2005. The Code encourages reasonable and responsible access to rivers and river banks, and has been promoted within the Spey catchment by the Moray Council, Highland Council, NatureScot and the Cairngorms National Park Authority.

To aid the resolution of any issues, core representatives of the Spey Users' Group (SUG),

including the SFB, Scottish Canoe Association and Access Officers from the three Local Authorities, used to meet each year. This Group had developed a code of Guidance for Paddlers and Anglers, which has been successfully implemented since 2008 to promote harmony between the two river user groups. The Group has not met since 2020, and instead addresses any issues by correspondence.

Principle concerns remain, however, in relation to large groups of paddlers on the River, the increase in irresponsible "wild" camping and some groups of river users who appear to be unsighted on the Guidance that has been developed.

## 2.5 Salmon Stocking on the Spey

Historically, stocking has often been the first choice strategy adopted by organisations such as fishery boards to try to improve fish numbers. Hatcheries have been operated on the Spey periodically since the late 1800's, when a large-scale hatchery at Gordon Castle reared up to one million fish, although it was discontinued in 1914 after 22 years of operation. In the late 1960's, the fishery board established a hatchery at Knockando, prior to the construction of the current facility at Glenlivet in 2001. Various drivers have prompted the establishment of hatcheries on the Spey, including declining catches or stock components, or UDN-associated mortalities.

It is generally considered that there are four different types of stocking:

- **Reintroduction:** with the aim of re-establishing populations in areas from where they have been lost, e.g. salmon stocking in the Thames where there was historically a thriving salmon population.

- **Restoration:** where the aim is to restore populations at a low ebb back to previous abundance e.g. above dams.

- **Enhancement:** where the aim is to increase stocks and subsequently catches in the catchment above natural carrying capacities.

- **Mitigation:** compensatory stocking to maintain production in areas no longer accessible to migratory fish due to e.g. man-made obstacles.

Back in 2003, the number of salmon stocked on the Spey had been increased three-fold as part of a programme aimed at increasing salmon catches by 8%, using a combination of catch and release, habitat improvements and stocking. The stocking expansion was based on a combination of enhancement and mitigation stocking. The enhancement element focussed on stocking suitable habitat above impassable waterfalls, in effect expanding the range of salmon within the Spey catchment, and in "under-utilised" areas. Meanwhile, mitigation stocking upstream of man-made obstacles was also increased.



**Left:** SFB Head Water Bailiff, Richard Whyte, at work with salmon eggs at the SFB's Sandbank Hatchery. (Photo: Paul Hughes, SFB Digital Marketing Manager).

In recent years the focus has been on mitigation stocking. Whilst this is generally considered acceptable, providing best practice is followed, it is now illegal to stock above impassable waterfalls following implementation of the Wildlife and Natural Environment Act (the WANE Act), which makes it an offence under the Habitats Directive to move a species out-with its natural range. The opportunities for mitigation stocking on the Spey are limited; it is estimated that the proportion of the catchment rendered inaccessible by man to migratory fish is less than 1%, a figure that is slowly reducing as more and more barriers are removed. Hence, we are now in a situation where we have a relatively small hatchery operation, focused on mitigation stocking, and mainly in small tributaries throughout the catchment. The Board considers that there may be further opportunities for mitigation or restoration stocking above Spey Dam in due course.

The identification of areas perceived to be under-utilised can be difficult and may lead to incorrect conclusions being drawn. There are areas of the Spey catchment which are likely to have always

supported only low densities of fish, such as high altitude areas and those with granite geology that support only low productivity.

So to try to improve fish populations in these areas by stocking is unlikely to be productive. Salmon do use these areas in the Spey - we have a strong population of salmon spawning at over 500m (1640ft) altitude, up to over 650m (2130ft) - but these should be viewed as highly specialised and adapted fish that spawn early, hatch late and concentrate their growth in the relatively short summer. Highly-adapted populations such as these are particularly susceptible to disruption, be that climate or habitat change, or the introduction of stocked fish from out-with that particular area.

A more sustainable strategy, that will benefit the whole river, is to conserve stocks to ensure there are adequate fish available to spawn, and to ensure that the habitat in the nursery areas is as good as possible, so as to promote enhanced survival through the parr and ultimately smolt stages of the salmon life cycle.

## 2.5.1 Stocking Policy

The Scottish Government's Marine Scotland published its current Stocking Policy at the end of May 2019, as part of a five-year plan it submitted to the North Atlantic Salmon Conservation Organisation (NASCO) in early 2020. The policy sets out a series of principles which the Scottish Government now use to govern its assessment of stocking applications. The Marine Scotland Wild Atlantic Salmon Stocking Policy adopts a presumption in favour of Mitigation Stocking, a neutral presumption in respect of introductions for restoration and/or scientific research and a presumption against all other forms of stocking.

Significantly, the current policy only permits the stocking of ova and/or unfed fry, rather than the fed fry that had previously been stocked by the SFB. This has meant that for the last three years, the Board has conducted its stocking (Table 1) earlier in the year than in the past, with eyed ova being stocked in February and unfed fry in late March and early April, rather than in September.

With regard to the regulation of stocking, the Board understands that the Scottish Government aspire to take full control of the regulatory process for stocking activities, rather than the system of split responsibility that presently exists. Currently the Scottish Government licence the broodstock capture, with the subsequent stocking authorised by the District Salmon Fishery Board. The Board also understands that Scottish Government thinking on stocking is still developing and its current stocking policy is being reviewed as part of the Wild Salmon Strategy Implementation Plan (see section 4.3).

Since 2020, the Board has secured agreement from the Scottish Government that if the Board's stocking plans follow those of previous years, the Scottish Government would permit the Board to submit its Broodstock Capture Licence application earlier in the year than before and using the

previous year's electro-fishing data. Prior to 2020, the Board had had to wait for the latest electro-fishing data to be compiled, which was not usually available until at least July.

Taking into account the Scottish Government Stocking Policy, the Spey Fishery Board, with advice from the Spey Scientific Committee, has to consider its stocking policy and the requirements for each year. Other work pressures on SFB staff, and in particular the undertaking of smolt tracking monitoring and valuable contract work, did not provide sufficient time for the Scientific Committee to meet to do so this year. As a result, the Board decided to broadly repeat the stocking it had undertaken this year and for which it had prepared in 2022. Looking ahead to 2024, the Board's 2023 broodstock licence application therefore maintained a policy of mitigation stocking above man-made barriers, as previously practised by the Board.

In early July 2023, the Board submitted a comprehensive application to the Scottish Government's Marine Scotland Science (MSS) for a licence to catch 80 fish from the River and its tributaries and to hold them as broodstock outside the Salmon net fishing season. The licence application was submitted to MSS, who in turn consult NatureScot (formerly Scottish Natural Heritage - SNH). The River Spey's status as a Special Area of Conservation (SAC) for Atlantic salmon requires the Board, as the Competent Authority for the stocking of juvenile salmon into the River Spey catchment, to complete a Habitats Regulations Appraisal (HRA), and subsequently an Appropriate Assessment, to determine whether such stocking of juvenile fish would adversely impact upon the integrity of the River Spey's SAC Status. The Board consulted local representatives of NatureScot over the completion of this HRA and Appropriate Assessment and are grateful for the advice and support received.

In continuation of its stocking policy, another comprehensive programme of electro-fishing was again undertaken by the Board during 2023 (see section 3.2), initially to monitor the stocking it had undertaken earlier in the year (see Table 1) , as well as the results from that undertaken in 2022 (see Table 10 in section 3.2 on page 43).

The Board's 2023 Broodstock Capture Licence application was successful and it was granted a licence from the Scottish Government for the collection of 80 broodstock fish, which began in early October. The Board is most grateful to the volunteers who assist us each year with this.

### **2.5.2 Smolt to Adult Supplementation**

During 2023, the Board explored the option of using Smolt to Adult Supplementation as a means to boost the number of eggs deposited within the catchment, without removing adult fish for use as broodstock. Salmon smolts are captured instead and taken into a hatchery to be reared on to adult fish. Eighteen months later, when these fish have become grilse, they are stripped of their eggs and those eggs are stocked back into the river from which the smolts had been taken. The grilse are then returned to the hatchery for another year, after

which they are returned as two-year-old adult fish to the river from which they had been taken as smolts, so that they can spawn naturally.

The Scientific Committee considered this proposal and concluded that at worst there might be a minimal detrimental impact on salmon genetics, but that it would be so small at the level proposed that the Board could proceed with it. The project would also be time-limited to between 3-5 years and employ genetic analysis to ensure appropriate breeding, further reducing any impact. The Board agreed to progress this by producing a Habitats Regulations Appraisal and Appropriate Assessment which it is discussing with NatureScot. The Board aspires to raise 150 adult fish from circa 400 smolts, possibly from the River Dulnain and beginning in spring 2024, and to utilise the services of Drimsallie Hatchery at Lochaber, which is experienced in operating such a programme.

The SFB Stocking Policy remains progressive and will continue to be subject to review in light of new legislation, our ongoing monitoring and advances in scientific research, as well as any changes that may arise from consultations regarding the Marine Scotland Wild Atlantic Salmon Stocking policy.



**Photo:** *The SFB's Hatchery at Sandbank, Glenlivet.*  
(Photo: Roger Knight, SFB Director)

Burn	Site details		Stocking 2023		
			Number of ova/fry required	Hatchery Source	Stocking Density
	Area (M <sup>2</sup> )	Quality			
Maggielknockater Burn	3,150	Moderate	6,400	Fiddich	2.0
Corrie Burn	5,350	Good	16,000	Fiddich	3.0
Fochabers Burn	10,250	Moderate	20,500	Lower Spey	2.0
Roths Burn	5,600	Good	28,000	Lower Spey	5.0
Back Burn	900	Moderate	2,700	Lower Spey	3.0
Macallan Burn	7,200	Good	21,600	Lower Spey	3.0
Green Burn (Carron)	14,250	Good	42,600	Middle Spey	3.0
Glenbeg Burn	11,300	Good	45,200	Upper Spey	4.0
Milton Burn (Aviemore)	4,700	Good	9,400	Upper Spey	2.0
<b>Total</b>			<b>192,400</b>		

**Above: Table 1: Spey Fishery Board Stocking Numbers, Locations and Densities for 2023. All fish stocked either as eyed ova in February 2023 or as unfed fry in March/April 2023.**

## 2.6 Pollution Incidents

The discovery of dead adult fish in the River from 9<sup>th</sup> September onwards was a significant and time-consuming event, involving all of the Board's staff and resulting in several Formal Complaints being made to the Board (see section 4.2). Although investigations by the Scottish Environment Protection Agency (SEPA) failed to find any evidence of a pollution event, popular opinion perceived it to be so. It is likely the cause was a lack of dissolved oxygen, following a week of high water temperatures.

The SFB were first informed of the issue by our Chairman on the evening of Saturday 9<sup>th</sup> September 2023, who reported dead fish being found along the mainstem river. On Sunday the 10<sup>th</sup> September, SFB Biologist Atticus Albright, suggested that these fish deaths may have been stress-related, due to warm water temperatures and post-catch & release. On Monday the 11<sup>th</sup> of September, however, the SFB received further reports of dead fish and alerted SEPA, as the regulator of water quality, via SEPA's Pollution Hotline. We also alerted the Fish Health Inspectorate. Separately, the SFB's Head Water Bailiff had alerted the SEPA Pollution Hotline on Sunday the 10<sup>th</sup> of September of a suspected pollution event.

While still awaiting any response from SEPA, an Inspector from the Fish Health Inspectorate arrived on Wednesday 13<sup>th</sup> September, and took pathology samples from 19 dead fish that had been kept in the water in nets by ghillies - the procedure requested by the Inspectors, so as to preserve any histology which might have been adversely affected by freezing. SFB Director, Roger Knight, also asked the Inspector to test for toxicology, so as to address suspicions that there had been a pollution event and see if the fish had succumbed to this, rather than to a disease. Initial results showed no signs of the dead fish having succumbed to any notifiable disease, and further analysis showed no signs of toxicology.

On the afternoon of Wednesday 13<sup>th</sup> September, we also became aware of reports of a sick child who had swum at Carron & Laggan on Saturday 9<sup>th</sup> September, three sick Speyside Way walkers who had drunk filtered Spey river water at Aberlour around that time too and dogs which had become sick after entering the river. The Chairman asked the Director to email the four Members of the Scottish Parliament representing constituencies through which the River Spey flows, to inform them of the emerging situation and ask for their help in getting SEPA to respond. Douglas Ross MP and

Richard Lochhead MSP were subsequently most helpful liaising with SEPA to ensure a comprehensive and robust response to this incident.

The proprietors were informed of the reports of dead fish and the suspicion of a pollution incident on 13<sup>th</sup> September, following efforts to confirm that the suspicion was well-founded and to assure them the regulator was taking robust and effective action. On 14<sup>th</sup> September, SEPA informed the SFB that it had undertaken site visits and water sampling activities along the river, testing the pH and dissolved oxygen levels, as well as the water temperature, all of which had revealed nothing untoward; water temperature and pH levels were all within standard parameters. SEPA had also engaged with local distilleries and consulted local Water Treatment Works, all of which confirmed that there had been no issues with water quality. They also undertook to notify Environmental Health at Moray Council, due to the reported impacts on people and dogs.

The SFB's staff, meanwhile, had been conducting the Board's own thorough investigation, with its staff walking both banks of some 13 miles of the River Spey where dead fish had been reported. They looked for signs of potential contamination, discolouration of the water or riverbanks and any other causes for concern. Water samples were collected too, for analysis by a water chemist. Despite our extensive efforts, nothing was found to indicate any source of potential pollution.

The SFB's Director, Roger Knight, gave multiple media briefings during this period, being interviewed by STV and BBC television, and speaking to reporters from The Times Scotland, The Press & Journal, The Northern Scot, Northern Sound radio and the Scottish Daily Mail. This coverage helped to raise awareness of this event and put pressure on the appropriate regulatory bodies to investigate the situation.

This issue aroused widespread public concern, and subsequently led to three formal complaints being made about the Board's response to it. In reply to these complaints, we explained, with assistance from our Clerk, that the Spey Fishery Board has no powers to address issues of water quality, as it is not one of the areas that is covered by the general powers and duties of a District Salmon Fishery Board as laid down in the legislation that governs us i.e. the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003 with specific reference to section 45.

SFB Board Member, Callum Robertson, subsequently secured the assistance of a bio-chemist (Michael Taylor, a member of the Upper Arndilly Fishings Syndicate), as an independent expert to assist the Board. Michael attended the Board Meeting on 17<sup>th</sup> November to present and discuss his opinions on water quality issues within the river and has generously agreed to conduct some trials during 2024.

In response to two Parliamentary Questions in the Scottish Parliament regarding this recent incident, Minister Mairi McAllan answered:

*"Scotland's independent environmental regulator, the Scottish Environment Protection Agency (SEPA), monitors and investigates impacts on our water environment and takes steps to ensure it is protected on a daily basis."*

*Scottish Ministers introduced the Water Environment (Controlled Activities) (Scotland) Regulations 2011, updating legislation first introduced in 2005, giving SEPA enforcement powers and a duty to control activities liable to cause pollution of the water environment.*

*On Monday 11th September, SEPA responded to reports it received of large dead fish along a section of the River Spey. SEPA has conducted a range of water quality and ecology monitoring of the River Spey along with investigating local regulated activities. However, no water quality issues have been identified and no impact on other aquatic species and smaller fish has been observed. This would not be expected from a chemical spill where all aquatic species and fish populations would be impacted.*

When the Board met in November 2023, it determined that it would establish clear Standard Operating Procedures for dealing with pollution events on the River Spey. In the meantime, it will issue notices to encourage anyone who finds dead fish on or near any watercourse to contact SEPA via its Pollution Hotline on **0800 80 70 60** or online."

## 2.7 Control of Invasive Non-Native Species: The Scottish Invasive Species Initiative (SISI)

We reported last year that NatureScot had successfully secured over £2 million from the Nature Restoration Fund for a second phase of the Scottish Invasive Species Initiative (SISI) Project, which had been running for four years and will now run until April 2026.

We are particularly grateful for the generous donations made in 2023 by the Ian and Clare Mattioli Charitable Trust, together with others from Moray Council, which have enabled invasive plant control in the lower catchment. The Cairngorms National Park Authority have also funded mink control within the park boundary. This funding has made a significant positive impact on the control being carried out and we are grateful for the support.



**Above:** Japanese Knotweed being controlled by a pressurised sprayer from a tractor cage was successfully trialled in 2023.

(Photo: Jason Hysert, SFB Water Bailiff).

Our SISI Project Officer, Karen Muller, together with volunteers, land managers, ghillies, estate staff and Fishery Board staff, continued in 2023 to strategically control the upper extends of invasive plants along the mainstem Spey, the Mulben burn, River Fiddich and for the first time on the Burn of Tynet. Monitoring and trapping for American mink across the catchment has also continued. A novel approach of using a pressurised spray tank,

mounted on a tractor with a cage, has also been effectively deployed, enabling large infestations of Japanese knotweed to be treated in a short amount of time.

Contractors have also been deployed and significant progress has been made with tackling Giant Hogweed, Japanese Knotweed, Himalayan Balsam, American Skunk Cabbage and Himalayan knotweed, as well as ongoing work to control mink. Meanwhile, pesticide training courses to up-skill volunteers and land managers continue to be offered, with five having been trained in 2023. This effectively embeds sustainable invasive species control within local communities.

An on-going priority for the project is to establish a legacy strategy, so that the situation does not revert to the way it was. Our Project Officer has liaised with local landowners/managers to seek letters of support that will provide local assistance from them with this, to ensure the maintenance of progress made to date. This work will continue over the next two years as responsibility is increasingly handed back over to landowners/managers and the SISI project build capacity to move efforts strategically further downstream to new areas to be taken under management.



**Above:** Volunteers from Diageo helped SISI Project Officer, Karen Muller with Giant Hogweed control in 2023.

(Photo: Karen Muller, SISI Project Officer).

## 2.8 Beavers

On 24<sup>th</sup> November 2021, the Scottish Government announced its decision to increase the translocation of beavers (principally from Tayside and the Forth) and provide financial and practical support for doing so, in order to reduce the number of licences issued for lethal control. One of the two priority catchments for these translocations is the Spey and NatureScot has developed a National Strategy for these translocations to proceed.

The Cairngorms National Park Authority (CNPA) agreed to take a leadership role and to act as a facilitator for beaver translocations within the Park. In early 2023, the CNPA recruited a Beaver Project Officer to oversee these, undertake a comprehensive public engagement during 2023, and the modelling to identify potential dispersal routes and locations that would inevitably follow beaver releases.

The SFB has been concerned that beavers could create dams which may impede salmonids from accessing their spawning grounds, and that these dams may also alter the in-river habitat, creating standing pools of water, rather than the riffles that juvenile salmonids habituate. In this regard, the Board has written to NatureScot with concerns regarding its Habitats Regulations Appraisal and Appropriate Assessment, which have to be undertaken because of the Spey's status as a Special Area of Conservation.

The CNPA submitted its licence application to NatureScot on 20<sup>th</sup> October 2023 and this was successful, with two beaver families released into the Cairngorms in December 2023. The CNPA has confirmed that it will continue to work closely with and engage the SFB to monitor any impacts beavers have on salmonids in the Spey catchment. We look forward to developing this during 2024.



**Left:** *Beavers are being reintroduced to Speyside from December 2023 after an absence of 400 years, following Scottish Government policy to translocate problem beavers, rather than lethally remove them.*

(Photo: by Jakob Mrocek, courtesy of Alamy).

**Right:** *Beaver damage to well-established trees can be significant.* (Photo: courtesy of the 2015 Final Report of the Tayside Beaver Working Group).





## 2.9 Sawbill Ducks and Cormorants

2023 saw the SFB continue to coordinate a combined Moray Firth-wide application to NatureScot (formerly Scottish Natural Heritage) for a sawbill licence to run from October until the following May. This application is to shoot a licensed and limited number of Goosanders, Mergansers and Cormorants as part of a broader programme of “shooting to scare”, in order to move these birds away from the river. The application is submitted on behalf of the Spey, Conon, Helmsdale, Kyle of Sutherland, Ness, Beauly, Findhorn, Nairn, Lossie, and Deveron Rivers. Although one application is submitted, separate licences (if granted) are issued to provide individual quotas for each river involved, following analysis by Scottish Government agencies of the respective supporting bird count data principally by Science & Advice for Scottish Agriculture (SASA).

To provide supporting evidence for the Spey’s licence application, the SFB aims to conduct four counts per year of Goosanders, Mergansers and Cormorants. The counts are carried out from Boat of Garten to Spey Bay and usually take place in late March and early May, early October and mid-December. The count is conducted by SFB staff counting sections of the mainstem River Spey, some of whom canoe a section of the River, whilst others walk and drive their sections. This enables some 80 Km of the River to be covered, from Boat

of Garten to Spey Bay, over a period of 3-4 hours and usually commencing at first light. In 2023, we were able to expand this to include counts on the River Avon, so that we may apply for a licence to cover that River too. The Board is most grateful to Wayne Davidson and his team of volunteers who have undertaken these counts on our behalf.

The data collected from these counts contributed to our 2023 application for the 2023/2024 licence period and was submitted to NatureScot (formerly SNH) in early July 2023. This licence application was again successful, although the Board was initially granted a licence to shoot 39 Goosanders and 1 Merganser, but not any Cormorants, between 1<sup>st</sup> October 2023 and 31<sup>st</sup> May 2024, although only male Goosanders may be shot during May, when the females are usually nesting.

The count conducted on the 2<sup>nd</sup> October 2023 recorded 33 Cormorants on the River Spey, which was the highest number recorded for many years. SFB Director Roger Knight used this data to appeal the licence issued and request that a retrospective quota for Cormorants be added. This appeal was successful and the licence for 2023/24 was amended to include 5 Cormorants, as well as the 39 Goosanders and 1 Merganser.



**Left:** *A Cormorant taking a fine Sea Trout.*  
(Photo: Courtesy of Gwilym Hughes, Save the Salmonid & other Fishes Group at [change.org](http://change.org)).

Last year we reported that SFB Director Roger Knight has also been part of a Scottish Government Fish-Eating Bird Policy Review Group. This is part of the Scottish Government's Wild Salmon Strategy (see section 4.3). The Fish-Eating Bird Policy Review Group is reviewing the licensing process for sawbill birds, but it did not meet during 2023. We understand that this Group will resume its work in 2024 and we shall report on the outcome in due course.

In the meantime, the SFB will continue to conduct its bird counts throughout 2024, to provide the supporting data for our future licence applications.

## **2.10 Seal Management**

Until 2021, the SFB utilised the Moray Firth Seal Management Plan for seal management on the Spey, which the SFB had coordinated since October 2013. This Plan licensed the SFB, and other Fishery Boards around the Moray Firth, to shoot Grey seals, and previously Common/Harbour seals, which entered the rivers to predate on salmon and sea trout, although no Common/Harbour seals were licensed to be shot for the last five years.

The Plan was first implemented in 2005, with the aim of protecting Salmon and Sea Trout stocks, whilst also maintaining the conservation status of the Dornoch Firth Special Protection Area (SPA) for Common seals. The scheme introduced the novel approach of managing seals and salmon over a large geographical area, the training of Nominated Marksmen to an agreed standard and the accurate reporting of all seals shot. Overall, it provided for seal management for 16 rivers and 5 netting stations throughout the Moray Firth region.

In July 2020, the Scottish Parliament passed the Animals & Wildlife (Penalties, Protections and Powers) (Scotland) Bill 2020, which became an Act on 21<sup>st</sup> July that year, effective from 1<sup>st</sup> February 2021. The Act amended the Marine (Scotland) Act 2010 by removing the specific

grounds for which Scottish Ministers were able to grant licences for the killing or taking of seals and increased the penalties for doing so. The Act thereby aligned Scotland with conservation measures taken by other countries, such as the United States, and would ensure compliance with new provisions in the US Marine Mammal Protection Act (MMPA). This US Act requires that nations exporting commercial fish and fish products to the United States are held to the same standards as US commercial fisheries, where the taking of marine mammals is prohibited. So, if the proposed amendments to our seal licensing system were not implemented by 1<sup>st</sup> March 2021, Scotland would no longer be able to export a range of seafood products to the United States (one of the biggest markets for Scottish seafood products) from January 2022.

Fisheries Management Scotland (FMS) had, however, pointed out to Marine Scotland that there are existing conditions within the Marine (Scotland) Act 2010 to enable the lethal removal of seals for the purpose of conserving other animals (i.e. salmon). SFB Director, Roger Knight, and the CEO of FMS, Dr Alan Wells, subsequently worked with Marine Scotland Licensing & Operations Team (MSLOT) to establish a revised licence application process to address the future management of seals for conservation purposes, rather than to prevent serious damage to fisheries. Further meetings with MSLOT followed the subsequent rejection of our 2021 Seal Licence application led the SFB to believe that we had reached agreement with the Scottish Government on the application requirements that would be acceptable to the licensing authorities. Despite this, our 2022 Seal Licence application was also rejected.

SFB Director Roger Knight submitted the Board's comprehensive 2023 Seal Licence application on 24<sup>th</sup> January, to manage Grey Seals in the River Spey with effect from 1<sup>st</sup> May 2023. After 6 months of deliberation, it was rejected by MSLOT on the following grounds:

1. The River Spey has been assessed by Marine Scotland Science as being a Category 1 River and so the exploitation of Atlantic salmon is deemed to be sustainable, regardless of the source of exploitation.

2. Although we had undertaken to deploy an Acoustic Deterrent Device (ADD) in the lower River Spey, and undertaken not to shoot any seals above this point until an ADD was in place, we had not yet deployed such a device and so did not yet have any evidence as to its efficacy.

All other 2023 seal licence applications throughout Scotland were also rejected.

The SFB subsequently submitted an appeal on 31<sup>st</sup> October 2023. This appeal considered that the decision taken by MSLOT was unreasonable and, following legal advice, also considered that the decision was unlawful. The Board recognised that this appeal fell out with the 14 day period permitted for appeals, but requested that, given MSLOT had taken 6 months to determine the outcome, that our appeal should be duly consid-

ered. Despite this, the SFB's appeal was rejected because it fell out with the appeal period.

The SFB's Director, Roger Knight, and CEO of FMS, Dr Alan Wells, subsequently met with a senior official from the Marine Directorate on 29<sup>th</sup> November 2023 to discuss a way forward. Roger Knight explained that we had understood that we had established agreement with MSLOT that Category 1 Rivers could still obtain Seal Licences, albeit that the bar was set that much higher than for Category 2 and 3 Rivers. This appeared not to be the case and he urged the Scottish Government to be transparent if this was not the case. The Marine Directorate undertook to liaise with the Licensing Team and with NatureScot to clarify the situation, particularly as the next licensing application period would begin in January 2024.

The SFB will be applying for another Seal Licence in January 2024 as we maintain our efforts to reduce seal predation of River Spey salmon and sea trout.



**Above:** A grey seal eating a salmon. The SFB's 2023 comprehensive Seal Licence application was again rejected by the Scottish Government's licensing authorities. A subsequent Appeal was also rejected and the original decision was upheld. (Photo: courtesy of Steve Waddingham and Flickr).

## 2.11 Fishery Protection

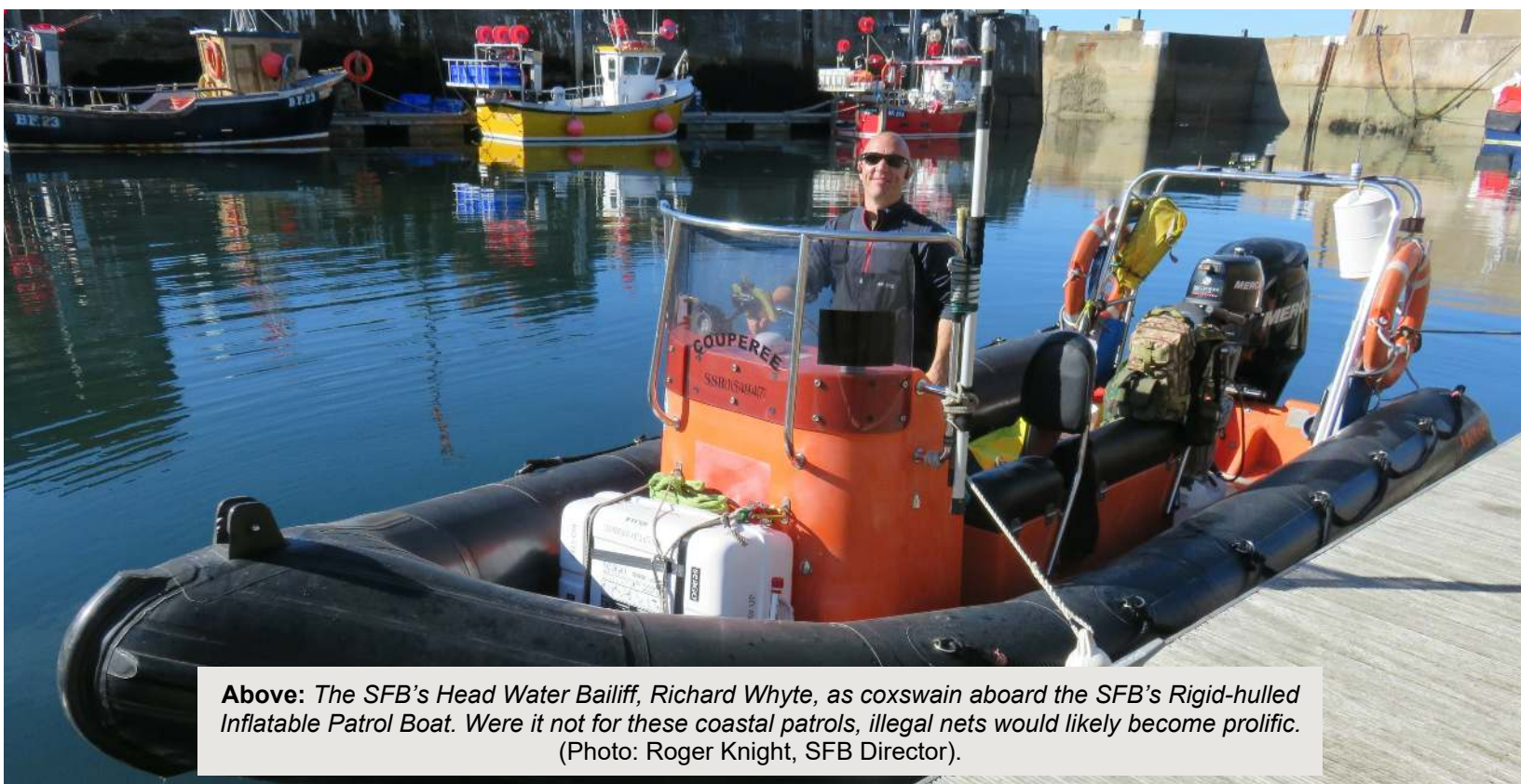
A Government-sponsored survey conducted in 2003 showed that Salmon and Sea Trout angling on the Spey contributes at least £11.8 million each year to the local economy and supports 367 full-time-equivalent jobs. Poaching therefore not only causes serious environmental damage, but also has a significant impact upon the local economy and causes damage to the rural community.

2023 was another particularly challenging year for the Board's Water Bailiffs, who continued to work tirelessly to protect the River and its tributaries from a significant upsurge in illegal fishing. The SFB continued to work closely with Police Scotland, with whom we are fortunate to enjoy close links, to tackle a total of 29 reported incidents during the season, the majority of which involved petty, local criminals. This resulted in 9 arrests, 6 of which were referred to the Procurator Fiscal, with written warnings given to the other 3.

The SFB's Head Water Bailiff has also continued to be a member of Police Scotland's North East

Scotland Partnership Against Wildlife Crime and the Rural Crime and Safety Partnership, which have now been combined and are chaired by senior officers from Police Scotland.

Coastal patrols between the Boar's Head stretch of coastline and Cowhythe Head, using our commercially-coded 6.4 metre Rigid-hulled Inflatable Boat (RIB), were also continued from May-September 2023. This RIB was a significant investment for the Board, but it enables us to conduct patrols along the 20 miles of coastline over which we have jurisdiction. Furthermore, our jurisdiction extends 3 nautical miles out to sea. Numerous patrols were completed during 2023 to deter illegal netting, with one gill net being recovered. Were it not for these patrols being undertaken, though, the level of illegal netting along our coastline would likely become prolific. The SFB was also once again contracted in 2023 to undertake a patrol for the Deveron DSFB, which it conducted in August 2023 from Rosehearty Harbour. These contracted patrols have also continued to illustrate the value of pooling resources to tackle shared problems.



**Above:** The SFB's Head Water Bailiff, Richard Whyte, as coxswain aboard the SFB's Rigid-hulled Inflatable Patrol Boat. Were it not for these coastal patrols, illegal nets would likely become prolific. (Photo: Roger Knight, SFB Director).

## 2.12 Administration and Staffing

2023 saw four changes to the Board's staffing.

We reported last year that in May 2022, the Board had secured a grant from the Cairngorms National Park Authority (CNPA) to engage an additional Project Officer for the Spey Catchment Initiative until 31<sup>st</sup> March 2023. We reported last year that we were pleased to welcome **Gary Brown** to our ranks on 1<sup>st</sup> June 2022 as the **SCI's new Nature Restoration Officer**. The Spey Board acted as the employer, but at no cost to the Assessment. Gary worked to establish a landscape-scale restoration project on the Rivers Conglass, Livet and upper Avon and departed at the end of his contract. We wish him every success in the future.

The CNPA grant has provided us with an opportunity to scope and prepare a substantial funding bid, perhaps to the Nature Restoration Fund or National Lottery, for a significant project at sub-catchment level, implemented over 3-5 years. This will aim to make landscape-scale change and build sustainability and resilience for the benefit of the River Spey catchment as a whole. Gary was succeeded by **Phil Whitfield**, who was welcomed as an employee of the Spey Catchment Initiative on 1<sup>st</sup> December 2023 and is hard at work on the Rivers Conglass, Livet and the upper Avon. The Board wishes Phil every success in his new role with the SCI.

We also reported last year that in September 2022 we had said farewell to **James Symonds**, who had been with us for over three years as our Scottish Invasive Species Initiative (**SISI**) **Project Officer**, controlling invasive species such as Giant Hogweed, Japanese Knotweed and Himalayan Balsam, as well as White Butterbur and American Mink (see section 2.7).

On 1<sup>st</sup> August 2023, we welcomed **Karen Muller** as James' successor. Karen had previously been the SISI Project Officer for the Deveron, Bogie & Isla Rivers Trust for three years and had achieved

an excellent reputation. Karen wasted no time in getting to grips with invasive species along the lower River Spey and has already had considerable success, earning the respect and gratitude of the Spey Board. We wish her every success in her future role.

We also reported last year that in September 2022, we had welcomed **Sacha Forbes-Leith** to the Board's Research Team as a **temporary Assistant Biologist**. Sacha is studying at Portsmouth University and had applied, through Fisheries Management Scotland, to undertake an Internship as part of his degree, albeit at no cost to the Assessment. Sacha departed in late April 2023 and the Board is most grateful for the valuable contribution he made to our work. The Board wishes him every success in the future.

At the end of May 2023, we welcomed **Charles Brew** to the Board's Research Team as a **temporary Assistant Biologist**. Charles is a third year BSc student studying Environmental Science at the University of Dundee and had applied to the SFB to undertake an Internship as part of his degree, again at no cost to the Assessment. The SFB, as not only one of the largest District Salmon Fishery Boards in Scotland, is able to provide students with experience in a broad range of fishery management work and was delighted to welcome him to the Team. Charles remained with us until the end of July and, as with Sacha Forbes-Leith, the Board is grateful for the valuable contribution he made to its work.



### Part 3

# Spey Scientific Report

Although the 2023 field season did not involve the excessive temperatures we had experienced in 2022, particularly low flows throughout the start of the year, followed by flooding in the latter stages of the season, all hindered our fieldwork. Moreover, with the renewal of the National Electrofishing Programme for Scotland (NEPS) and numerous smolt projects, the Research Team has been working at full capacity to achieve our targets. The Board is grateful to seasonal Assistant Biologist Kevin Greensill and seasonal interns Sacha Forbes-Leith and Charles Brew for their invaluable assistance during another busy year.

## 3.1 Juvenile Surveys 2023

Repairs to our electrofishing kit enabled our work in 2023 to proceed without being beset by the technical issues we had experienced during the 2022 field season. This enabled the Team to complete all our required electrofishing, including surveys of the mainstem, the River Calder, River Truim, stocked sites and NEPS sites. Some contract work, namely baseline surveys prior to restoration and post-restoration monitoring, was

also carried out. Heavy rainfall near the end of the season unfortunately affected the validity of juvenile density estimates on the tributaries, particularly on the Calder.

### 3.1.1 Mainstem Juvenile Salmon Index Survey 2023

A total of 41 mainstem sites were surveyed in 2023, the results of which are shown in Tables 2 and 3 below, with the results of the last 12 years for reference. The fry and parr counts are also summarized below.

- The mean salmon fry count in 2022 was  $18.7 \text{ min}^{-1}$ , below the 10-year average of  $21.4 \text{ min}^{-1}$ .
- The mean salmon parr count in 2022 was  $5.7 \text{ min}^{-1}$ , well above the 10-year average of  $3.5 \text{ min}^{-1}$ .
- The overall trend of mainstem salmon fry and parr counts continues to be stable overall.

**Photo Above:** *SFB Biologist Atticus Albright emptying the Smolt Trap above Spey Dam.*  
(Photo: Paul Hughes, SFB Digital Marketing Manager).

Table 2: Salmon Fry Index

Salmon Fry Class	Grade	Breakpoint (salmon fry/min)
Absent	AB	0
Very low	E	<5.00
Low	D	Between 5.1 to 10.9
Moderate	C	Between 11.0 to < 17.3
Good	B	Between 17.4 to 28.0
Excellent	A	>28.1+

Table 3: Salmon Parr Index

Salmon Parr Class	Grade	Breakpoint (salmon fry/min)
Absent	AB	0
Very low	E	0 to 1.0
Low	D	>1.0 to <2.0
Moderate	C	2 to 3.9
Good	B	>4.0 to 6.9
Excellent	A	>7.0

Table 4: Mainstem Salmon Fry/min

Site code	Location	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
S07R1	LW2	24.7	22.7	16.3	27.3	5.7	46.3	9.7	1.1	16.3	10.0	16.0	10.0
S012R1	LW1	11.3	17.0	17.3	20.3	10.7	14.7	44.3	9.0	20.7	10.0		
S017L2	Gordon Castle	31.7	52.7	24.7	20.0	13.0	32.0	31.0	15.3	35.7	27.0	22.7	35.7
S019L2	Gordon Castle	15.3	37.7	28.7	34.7	17.3	39.3	33.3	19.0	46.3	22.3	25.0	19.0
S025L1	Gordon Castle	7.7	26.0	23.0	26.0	20.7	24.0	22.5	17.7	44.3	15.7		
S029L1	Orion Water	6.3	41.0	15.0	11.7	15.7	39.0	28.3	14.7	49.7	21.7		
S032L1	Orion Water	9.0	44.0	17.7	28.3	14.7	36.3	42.7	19.3	25.7	46.3	39.7	46.7
S034R1	Deffur	19.7	12.0	55.0	27.0	6.0	27.7	24.7	11.3	39.7	23.0	32.0	28.3
S040L1	Deffur	6.7	14.0	13.3	22.0	4.0	30.3	22.7	15.7	24.7	19.0		
S040L2	Deffur		90.0	66.0	29.0	15.7	52.7	61.3	30.3	49.3	75.3	124.3	31.7
S042L1	Bothes	7.7	44.0	10.3	14.7	12.0	31.7	6.0	11.3	12.7	14.7		
S047L1	Bothes	6.3	9.3	9.0	18.3	4.0	21.7		6.3	19.3	12.3	11.0	23.7
S050R1	Arndilly	13.7	29.7	28.3	16.0	13.3	31.0		17.3	21.0	20.0	25.3	19.3
S052L1	Arndilly	15.7	15.7	19.7	23.7	9.3	21.3		13.3	31.0	15.3		
S056L1	East Etchies	17.7	34.7	43.7	39.7	16.0	50.3		38.3	52.0	29.3	51.0	44.0
S059R1	Craigellaich	36.7	28.3	33.3	23.0	17.3	45.7	24.7	20.3	47.7	17.3		36.7
S060R1	Craigellaich	13.0	12.3	25.0	11.7	17.7	20.3	15.3	13.5	29.0	15.0		
S061R1	Craigellaich	20.3	12.3	22.0	10.0	4.0	16.0						
S062L1	Micellan							33.3	16.7	47.3	24.0	43.0	26.7
S066L1	Abertou	10.0	15.3	27.7	17.0	11.0	31.3	15.7	19.0	30.3	21.0	14.5	18.0
S068L1	Wester Etchies		15.7	12.0	9.3	8.3	58.7	1.3	10.3	25.7	19.7	18.7	34.3
S072L2	Wester Etchies		19.3	7.3	18.3	6.0	22.7	18.3	16.7	34.3	14.3		
S074L1	Laggan	7.0	5.3	9.0	13.7	18.0	8.3	9.0	21.3	12.0	24.0	9.3	
S077L1	Laggan	36.3	10.0	31.3	27.7	7.7	42.0	18.3	21.7	40.3	28.0		
S079R1	Carron	15.7	23.0	16.3	18.3	11.7	27.0	8.3	21.7	45.0	36.3	18.7	8.3
S082L1	Knockando	8.3	9.3	17.7	15.0	8.7	18.7	5.7	11.7	32.0	16.7	20.0	4.3
S087L1	Phomes		6.0	6.0	4.0	8.0	7.0	8.0	11.0	12.0	8.0		
S093R1	Lower Pitchroy	21.3	25.7	20.3	41.7	16.7	40.7	25.3	45.7	38.3	27.3	44.3	21.7
S096R1	Ballindalloch	11.0	20.0	49.0	37.0	20.3	52.0	30.0	27.7	69.7	31.3	46.3	32.7
S104L2	Ballindalloch	20.3	61.3	40.7	43.0	25.0	54.7	45.0	26.0	79.3	51.3	33.3	38.7
S105L2	Tulchan D	35.0	65.7	32.7	45.7	19.3	39.0		26.0	49.0	48.3		
S112L1	Tulchan C	10.3	35.0	11.3	31.3	14.7	28.7		27.0	43.0	26.0	44.0	13.7
S119L1	Tulchan B	28.0	30.7	10.0	27.7	12.7	31.0		19.0	30.7	30.0	22.7	16.3
S134R1	Tulchan A	13.0	38.0	14.7	18.7	11.7	33.7		9.3	29.0	18.3		
S131L1	Castle Grant 3	29.0	40.0	21.0	34.3	24.0	35.3	18.3	18.0	48.0	31.3	36.7	27.3
S135L1	Castle Grant 2	17.7	44.0	36.3	20.0	10.0	32.3	49.3	16.3	36.3	26.3		
S141L1	Castle Grant 1	3.3	8.0	9.3	17.0	24.3	19.7	18.3	15.3	22.0	20.3		
S147L1	SAIA	11.0	17.3	16.0	43.3	24.7	42.3	4.3	16.7	45.7	39.0	19.0	27.7
S148L1	SAIA	12.0	10.3	14.7	11.7	23.7	23.0	6.7	17.3	31.0	20.0		
S163L1	Abernethy AA	33.7	73.3	59.3	20.0	28.3	68.3	106.0	43.3	61.3	41.0	55.0	36.0
S177L1	Abernethy AA	23.0	53.0	24.0	11.0	24.3	45.3	46.3	11.3	35.0	27.3	24.0	30.3
S183L1	Kinchurdy	5.7	45.0	22.0	19.7	17.3	38.0	50.3	10.7	22.7	18.3		
S185L1	Ajlemore AA	14.0	26.0	13.7	11.0	14.3	17.7	31.3	11.7	23.3	20.3		
S209L1	Kinross	19.0	28.3	13.3	19.3	12.3	27.0	41.7	22.7	26.3	46.3	20.0	11.0
S215L1	Dairaddy	24.3	63.3	47.7	24.0	21.3	24.3	31.7	20.0	10.3	31.7		
S243R1	Ruthven Bridge	8.7	14.3	17.7		36.7	56.0	25.0	31.7	27.7	25.0	20.0	38.3
S254R1	Golf course	6.0	8.0	18.3	10.7	12.0	18.7	28.0	11.0	12.3	15.3	22.0	11.3
S258L1	Calder Mouth	12.7	11.0	19.3	5.7	38.3	37.0	47.3	21.0	27.0	35.3	11.0	26.3
S260L1	Badenoch AA				20.7	22.7	23.7	16.3	16.3	16.7	26.7		
S264R1	Trum	22.0	4.3	5.3									
S282R1	Laggan	19.7	17.7	18.7	26.0	20.7	30.0	36.0	13.3	23.3	32.3	37.7	24.7
S287L1	Laggan	12.3	21.3	14.7	6.0	26.7	25.3	24.0	18.7	18.7	46.7	28.3	23.3
S290L1	Below Spay Dam	18.0	25.0	5.7	8.0	17.0	8.0	18.7	3.0	13.7	19.3	25.0	6.7
S298R1	Glenishra	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	3.3	3.3	6.7	1.3
S305R1	Garnvaore	4.3	8.7	0.0	3.7	0.0	0.3	11.3	5.3	6.7	16.3	2.7	3.3
S305R2	Garna Bridge	1.3	1.3	0.0	0.0	0.0	1.0	3.3	2.3	0.3	3.3	3.0	0.0
S311L1	Upper Spay	4.0	0.0	0.0	0.0	0.0	1.0	9.7	1.7	3.3			
S312L1	Upper Spay	6.0	0.0	0.0	0.0	0.0	3.0	8.0	1.0	0.0	6.0		6.0
S315L1	Upper Spay	5.7	0.0	0.0	8.0	0.0	2.0	6.3	3.3	0.7	1.7	6.7	
S317L1	Upper Spay	7.0	0.0	0.0	1.0	0.0	6.7	12.7	8.0	1.7	1.3	8.3	11.7
S318L1	Upper Spay	9.0	0.0	0.0	0.0	0.0	1.0	8.0	8.0	0.0	0.0	8.0	5.7
S319L1	Upper Spay	8.0	0.0	0.0	0.0	0.0	1.3	8.0	1.3	0.0	3.7	3.3	
S324L1	Upper Spay				0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
S326L1	Upper Spay	5.7	0.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	3.0	3.0	5.7
Mean		14.1	24.2	18.8	19.2	13.0	27.0	24.5	15.6	28.0	22.3	26.7	18.7

Table 5: Mainstem Salmon Parr/min

Site code	Location	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
S07R1	LW2	1.0	4.3	2.3	3.3	3.3	0.0	0.0	2.0	1.3	3.3	0.0	1.0
S012R1	LW1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
S017L2	Gordon Castle	0.0	2.3	0.0	2.3	5.0	0.3	2.0	9.7	3.7	6.3	1.7	16.0
S019L2	Gordon Castle	1.3	1.0	4.0	4.0	3.7	0.0	4.0	4.0	1.0	0.3	6.7	7.3
S025L1	Gordon Castle	0.0	2.7	1.3	0.3	0.0	0.0	0.0	4.7	3.7	6.3		
S029L1	Orion Water	0.0	4.7	7.7	0.3	4.3	0.0	0.0	4.3	1.0	0.0		
S032L1	Orion Water	0.0	1.7	4.0	3.0	4.3	4.0	0.0	2.7	1.7	1.0	3.3	4.0
S034R1	Deffur	1.7	2.0	4.0	0.0	6.3	0.0	4.0	2.3	2.0	2.3	0.0	4.0
S040L1	Deffur	0.0	0.0	3.7	1.7	8.3	0.0	3.0	6.7	3.0	2.0		
S040L2	Deffur		2.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S042L1	Bothes	1.3	7.0	1.7	2.0	7.0	6.0	1.0	3.3	3.3	5.3		
S047L1	Bothes	0.0	12.0	14.0	1.3	12.7	1.3		9.3	8.0	9.3	4.7	19.0
S050R1	Arndilly	0.0	3.0	0.0	1.7	3.7	0.3		1.7	0.0	3.3	0.0	0.0
S052L1	Arndilly	0.3	0.0	3.0	2.0	6.3	0.0		3.7	1.0	1.0		
S056L1	East Etchies	0.3	0.0	1.0	0.3	3.7	0.0		2.7	0.0	1.3	2.3	2.0
S059R1	Craigellaich	0.3	4.0	2.0	0.3	2.0	0.7	3.3	0.0	1.7	1.0		1.0
S060R1	Craigellaich	0.3	0.0	3.0	0.0	2.7	0.3	0.3	1.3	1.7	0.3		
S061R1	Craigellaich	1.0	6.7	9.7	0.0	8.0	3.3						
S062L1	Micellan							4.3	5.3	8.7	9.0	0.0	8.3
S066R1	Abertou	2.0	15.7	19.7	1.3	18.7	14.3	17.0	12.0	14.7	11.7	7.7	10.7
S068L1	Wester Etchies		13.7	15.7	3.7	12.3	5.3	11.3	6.3	8.0	18.0	4.7	22.7
S072L2	Wester Etchies		5.7	3.3	2.3	3.3	8.3	4.3	0.0	3.7	5.0		
S074L1	Laggan	2.0	8.3	4.3	0.0	4.7	6.0	2.3	2.0	3.7	5.0	0.0	3.7
S077L1	Laggan	0.0	3.3	1.3	0.0	7.7	2.0	3.7	1.7	4.7	0.0		
S079R1	Carron	1.7	2.0	6.3	1.3	3.0	6.0	3.3	0.0	5.3	4.7	0.0	5.3
S082L1	Knockando	2.3	17.7	18.0	3.3	7.7	8.3	7.7	4.0	6.0	8.3	5.7	8.3
S087L1	Phomes		5.3	6.3	0.0	3.7	5.3	2.3	7.3	5.0	0.0		
S093R1	Lower Pitchroy	4.7	9.7	9.7	1.7	11.7	10.3	17.0	0.0	9.3	6.7	4.7	7.7
S096R1	Ballindalloch	1.7	2.3	11.0	2.3	6.0	8.7	4.8	9.3	5.7	8.7	2.3	5.3
S104L2	Ballindalloch	1.3	5.0										

Once again, the issues of adult passage at Spey dam are highlighted in the juvenile index as a clear reduction in both fry and parr counts occurs immediately above Spey dam. Additionally, the consistently low parr counts between Abernethy and the Calder mouth indicate a large stretch of the river which contains very little parr habitat, likely due to historic canalisation of the river.

Although fry counts are below the 10-year average, they are still not at a level of concern. Furthermore, 5.7 parr  $\text{min}^{-1}$  is the highest recorded in over 12 years on the mainstem. Moreover, as the electrofishing results of the tributaries do not show a decline in parr overall, this indicates that this increase in mainstem parr is not due to parr simply moving out of tributaries due to low flows. The increase in parr counts appears to be concentrated on the lower and middle river (for example, Lower Wester Elchies). We suspect this is partly due to the proliferation of *Ranunculus* within the Spey creating more parr habitat. This is encouraging news and indicates that 2024's smolt run should be substantial.

### 3.1.2 National Electrofishing Programme Scotland (NEPS)

We are pleased to report that the Scottish Government revived NEPS in 2023, following cancellation of the 2022 programme. NEPS was founded in 2018 and aims to produce a statistical

survey design that ensures collection of unbiased, spatially representative data on the abundance of freshwater fish. It also includes measures of the pressures that affect them, such as water quality and introgression from aquaculture. This allows for the creation of a benchmark density for freshwater fish across Scotland and inter-catchment comparison through modeling.

To accomplish this, regions across Scotland were assigned sites according to an unequal probability, Generalized Random Tessellation Stratified (GRTS) survey design, whereby sample site selection was weighted towards areas with higher expected juvenile salmon densities. The Spey was assigned 30 sites, 6 above Spey dam and 24 below. Of these 30 sites, 10 were selected to be fully quantitative 3-pass electrofishing surveys, with the remainder to be conducted as single pass, semi-quantitative electrofishing surveys.

The Research Team, with assistance from our seasonal intern, Charles Brew, successfully surveyed all assigned NEPS sites in 2023. It took us to many rarely-visited areas of the catchment and we caught in excess of 3,200 juvenile fish, the vast majority of which were salmon. We now await the publication of the 2023 NEPS report, as we believe that NEPS is one of the most useful surveys to aid our understanding of juvenile salmonid distribution in Scotland and the factors that affect that distribution.



**Left:** A fully quantitative 3-pass NEPS Site within the River Feshie.  
(Photo: Atticus Albright, SFB Biologist).



### 3.1.3 Tributary Juvenile Salmon Surveys

Timed juvenile counts on the Calder (Tables 6 & 7) have shown a decrease in 2023, despite the habitat restoration efforts. This is disappointing. However, the Calder surveys occurred during a period of high flows, at the borderline where electrofishing is possible. As a result, it is likely that our 2023 results are underestimating the true juvenile counts of the Calder. This is evidenced by the quantitative electrofishing that occurs on smaller burns, which shows a lesser reduction in fry density and even an increase in parr density in 2023.

**Table 6: Results of the Timed Survey of the River Calder: Salmon Fry/min**

SITE	Location	2017	2018	2020	2021	2022	2023
TC01	Below road, 1st riffle below revetments	16.7	36.7	4.3	32.7	25.3	2.0
TC05	Down Alder path, above pool	0.3	0.3	0.3	0.0	1.3	1.3
TC08	opp layby	11.3	15.0	1.7	1.0	11.3	5.0
TC10	u/s Allt Foinndrigh	8.3	23.0	2.7	4.3	17.0	5.7
TC18	400m d/s Cluny Bothy	2.0	11.0	0.0		6.7	0.7
Mean		7.7	17.2	1.8	9.5	12.3	2.9

**Table 7: Results of the Timed Survey of the River Calder: Salmon Parr/min**

SITE	Location	2017	2018	2020	2021	2022	2023
TC01	Below road, 1st riffle below revetments	3.0	3.0	8.3	1.7	6.3	2.0
TC05	Down Alder path, above pool	0.0	2.3	1.7	1.0	0.7	0.3
TC08	opp layby	0.0	5.7	2.7	1.7	0.7	1.7
TC10	u/s Allt Foinndrigh	0.0	4.3	1.7	1.3	1.7	3.0
TC18	400m d/s Cluny Bothy	0.7	0.3	1.7		1.0	0.7
Mean		0.7	3.1	3.2	1.4	2.1	1.5

**Table 8: River Calder: Semi-Quantitative Electrofishing: Salmon Fry & Parr/min**

Site	Location	Salmon Fry (per 100m2)					
		2014	2017	2020	2021	2022	2023
SC7	Calder upstream Allt a' Chaorainn	6.7	11.4	4.7	1.0	32.4	12.1
SC2	Calder, Cluny Bothy	3.8	1.0	0.0		1.7	0.7
SC5	Allt Fiondrich at Glenballoch	8.5	6.0	0.0		20.8	4.6
SC6	Allt a' Chaorainn below Bridge	3.3	0.0	0.0		11.9	4.8
Mean		5.6	4.6	1.2		16.7	5.5

Site	Location	Salmon Parr (per 100m2)					
		2014	2017	2020	2021	2022	2023
SC7	Calder upstream Allt a' Chaorainn	4.0	0.0	10.0	6.8	3.4	9.4
SC2	Calder, Cluny Bothy	6.4	1.0	3.2		2.6	3.6
SC5	Allt Fiondrich at Glenballoch	0.0	6.0	18.2		10.1	5.7
SC6	Allt a' Chaorainn below Bridge	0.0	0.0	0.6		0.0	4.2
Mean		2.6	1.8	8.0		4.0	5.7

The Truim juvenile counts, comparatively, have increased in terms of both fry and parr compared to 2022 (Tables 9-11). The quantitative surveys also show increased salmon juvenile density. Comparison with the Marine Scotland Electrofishing Analysis Tool shows that both salmon fry and parr densities were above the benchmark (181.0 % for fry and 249.4 % for parr). This may result from improved habitat or access to the Truim for spawning fish.

**Table 9: River Truim: Timed Electrofishing: Salmon Fry/min**

Site code	Location	2016	2019	2022	2023
TSTU01	Invertruim Farm, right channel	1.0	11.0		
TSTU04	0.5km upstream Invertruim bridge	0.7	8.3	9.3	12.3
TSTU10	Upstream Truim Falls	3.3	2.7		
TSTU17	An Stac	20.7	12.7	22.7	31.0
TSTU24	Upstream bridge above Cuaich	40.7	14.0	46.3	32.7
TSTU30	Opposite distillery	24.3	10.0		
TSTU36	Upstream hydro intake	0.7	1.0	12.7	7.3
TSTU40	Opp Layby			6.0	17.3
TSTU45	D/S Balsporan			3.7	10.3
TSTU47	U/S Balsporan			1.3	4.0
	<b>Mean</b>	<b>13.1</b>	<b>8.5</b>	<b>14.6</b>	<b>16.4</b>
	<b>S.D.</b>	<b>15.77</b>	<b>4.93</b>	<b>15.67</b>	<b>11.31</b>

**Table 10: River Truim: Timed Electrofishing: Salmon Parr/min**

Site code	Location	2016	2019	2022	2023
TSTU01	Invertruim Farm, right channel	4.0	10.3		
TSTU04	0.5km upstream Invertruim bridge	6.0	12.3	3.3	6.7
TSTU10	Upstream Truim Falls	6.7	10.7		
TSTU17	An Stac	9.3	12.7	7.0	9.3
TSTU24	Upstream bridge above Cuaich	8.3	3.0	4.0	3.3
TSTU30	Opposite distillery	4.7	0.7		
TSTU36	Upstream hydro intake	2.0	4.0	14.7	11.7
TSTU40	Opp Layby			5.3	7.0
TSTU45	D/S Balsporan			2.7	6.0
TSTU47	U/S Balsporan			1.7	3.0
	<b>Mean</b>	<b>5.9</b>	<b>7.7</b>	<b>5.5</b>	<b>6.7</b>
	<b>S.D.</b>	<b>2.54</b>	<b>4.94</b>	<b>4.40</b>	<b>3.09</b>

**Table 11: River Truim: Semi-Quantitative Electrofishing: Salmon Fry & Parr/min**

		Salmon Fry/100m <sup>2</sup>							
Code	Site	2013	2016	2019	2020	2021	2022	2023	
STU45a	Balsporan	18.3	12.5	2.2	0.7	6.6	9.3	33.0	
	U/S								
STUCFa	Railway	1.4	0.0	0.0	0.0	1.3	2.5	9.3	
	U/S								
STU37b	Conifer Plantation	6.1	4.1		9.2	7.7	19.6	6.4	
	<b>Mean</b>	<b>8.6</b>	<b>5.5</b>	<b>1.1</b>	<b>3.3</b>	<b>5.2</b>	<b>10.4</b>	<b>16.2</b>	
	<b>S.D.</b>	<b>8.72</b>	<b>6.37</b>	<b>1.56</b>	<b>5.12</b>	<b>3.42</b>	<b>8.63</b>	<b>14.59</b>	
		Salmon Parr/100m <sup>2</sup>							
Code	Site	2013	2016	2019	2020	2021	2022	2023	
STU45a	Balsporan	20.0	8.8	14.2	9.1	9.1	8.1	36.6	
	U/S								
STUCFa	Railway	24.4	18.1	43.0	30.1	18.7	24.0	20.5	
	U/S								
STU37b	Conifer Plantation	15.3	4.1		16.4	5.8	16.0	15.1	
	<b>Mean</b>	<b>19.9</b>	<b>10.3</b>	<b>28.6</b>	<b>18.5</b>	<b>11.2</b>	<b>16.0</b>	<b>24.1</b>	
	<b>S.D.</b>	<b>4.55</b>	<b>7.12</b>	<b>20.36</b>	<b>10.66</b>	<b>6.70</b>	<b>7.95</b>	<b>11.21</b>	

The Delliefure Burn was also surveyed once again. Although fry densities have notably decreased since last year, this survey occurred immediately after a period of flooding. This may have resulted in some fry washout and resulted in our survey recording a lower than usual fry density. However, the habitat improvement has aided the Burn, as the parr density has again increased. Moreover, when comparing with the Marine Scotland Electrofishing Analysis Tool, the Delliefure burn contains juvenile salmon in considerable excess of the modeled benchmark (>400 % for fry and >350 % for parr).

**Table 12: Results of the Semi-Quantitative Survey of the Delliefure Burn**

Area	Code	Year	Area	Salmon Fry 100 m <sup>-2</sup>	Salmon Parr 100 m <sup>-2</sup>
Allt Lorgy	SDALb	1997	107.6	18.6	3.7
Allt Lorgy	SDALb	2003	69.3	109.7	15.9
Allt Lorgy	SDALb	2012	168.4	33.8	3.0
Allt Lorgy	SDALb	2013	124.3	39.4	13.7
Allt Lorgy	SDALb	2014	133.9	9.7	9.0
Allt Lorgy	SDALb	2015	94.9	141.2	13.7
Allt Lorgy	SDALb	2018	113.5	122.5	22.9
Allt Lorgy	SDALb	2021	133.8	3.0	8.2
Allt Lorgy	SDALb	2022	89.1	226.7	3.4

### 3.2 Stocking Monitoring 2023

Once again, the research team monitored the burns stocked with eyed ova and unfed fry from the SFB hatchery earlier in the year (see Table 1 on page 29 for a breakdown of ova/fry per burn). A total of 7 burns and 23 sites were surveyed during the field season and the results are summarized in Tables 13-14 below.

Code	Date	River	Area m2	S Fry/m2	S Parr/m2	T Fry/m2	T Parr/m2
SLB3c	04/07/2023	Fochabers Burn, below weir	103.8	2.9	5.8	25.0	4.8
FBA3	04/07/2023	Burn of Aldernie	62.9	9.5	0.0	0.0	0.0
FCB1	07/07/2023	Corrie Burn, lower	70.8	0.0	1.4	11.3	7.1
FCB3	07/07/2023	Corrie Burn, upper	75.9	22.4	1.3	5.3	0.0
SLB8a	03/07/2023	Burn of Ringorm	97.2	2.1	6.2	52.5	7.2
SLB8d	03/07/2023	Burn of Ringorm	44.2	0.0	0.0	9.1	31.7
SLB8b	03/07/2023	Burn of Ringorm	56.6	0.0	7.1	10.6	23.0
SLB8c	03/07/2023	Burn of Ringorm	62.1	0.0	0.0	16.1	0.0
SLB10e	05/07/2023	Green Burn	69.1	10.1	1.4	0.0	4.3
SMB14d	06/07/2023	Glenbeg Burn, d/s track bridge	81.9	47.6	2.4	116.0	67.2
		Mean		26.0	6.1	70.8	16.3

**Table 14: Stocking Monitoring 2023: Timed Electrofishing Results**

Code	Date	River	S Fry/Min	S Parr/Min	T Fry/Min	T Parr/Min
SLB3ca	06/07/2023	Fochabers Burn, below weir	0.0	0.3	0	0.3
	15/08/2023	Fochabers Burn	0.0	1.3	7	1.7
	15/08/2023	Fochabers Burn	4.7	1	14.3	0.7
	15/08/2023	Green Burn	0.3	1	0.7	1
	15/08/2023	Green Burn	1.3	0.0	0.0	0.3
SMB14b	07/07/2023	Glenbeg Burn, u/s A95	5.3	0.3	14	4
SMB14a	06/07/2023	Glenbeg Burn, u/s road bridge	6.7	1	10.7	6.3
	15/08/2023	Glenbeg Burn	4.3	1	9.7	7
	15/08/2023	Glenbeg Burn	5	0.3	11	6
TSMB17b	07/07/2023	Milton Burn Behind First House	3	1.7	17.3	5.3
TSMB17c	07/07/2023	Milton Burn 150m U/S 17b	6	1.3	17.3	2
	14/08/2023	Milton Burn	3.3	2.3	18	4.3
	14/08/2023	Milton Burn	3.3	1.7	12.3	2.3
Mean			3.3	1.0	10.2	3.2

*NB: some sites in Table 14 are not named as they were new sites, conducted to aid a field assistant's dissertation work.*

It appears that the fish densities in 2023 within stocked burns, for both fry and parr, are generally low. Unusually, this applies to both salmon and trout. This may be partially due to the extremely low flows present during the sampling period. This would have reduced the recorded densities, as electrofishing efficiency is greatly enhanced by a moderate flow which carries fish to the banner net. Moreover, in such an environment, fish are likely to seek deeper areas to act as thermal refugia. This can move them outside of our existing

electrofishing sites, or even out of the burn in question, further reducing the density of juvenile salmonids in the burn.

Regardless, these are concerning results which reinforce the importance of cool waters and consistent flows to salmonids across the entire catchment, not just the mainstem of the Spey. The Ringorm burn seems especially affected by these conditions, with almost no salmon fry and very few salmon parr or trout fry observed during surveys.

### 3.3 Spey Dam Smolt Mark and Recapture Study

In collaboration with the ongoing improvements to the fish pass at Spey Dam, a smolt mark and recapture study has begun above the dam. This study hopes to investigate the size of the smolt run above Spey Dam, their movement through the reservoir and factors contributing to mortality rates. 2023 was the pilot year of this study and aimed to establish suitable locations for smolt trapping and obtain a rough estimate for the smolt run. As this was a pilot study, it was decided to employ a mark-recapture methodology using alcian blue dye due to its affordable cost.

An effective location for a Rotary Screw Trap (RST) was found above Sherramore bridge, whilst a Wolf Trap was successfully installed on the spillway of Spey dam (see photo on page 45). During the trapping period, a total of 870 salmon smolts and 505 trout were captured in the RST and marked. The RST had an estimated minimum capture efficiency of 14.7 %. From this, the total smolt run across the study period is estimated to be approximately 5,900. Although this estimate is considerably higher than the value indicated by the Board's juvenile electrofishing data above Spey

Dam, it is still noticeably below the prior estimated carrying capacity of approximately 10,000 smolts. However, as this estimate was built off a capture efficiency produced by only two mark-recapture events, there are concerns that it may not be accurate. Although the estimated salmon smolt survival percentage of circa 20% found by this preliminary study is concerning, this estimate may also be inaccurate due to methodological flaws that overestimated the true mortality rate.

The Board is grateful to GFG Alliance for producing the Wolf Trap to such a high standard

and we are confident that it operated with 100% efficiency, as there were no spills over the dam during the study period which might have transported salmonid smolts out with the Trap. The Wolf Trap captured a total of 2,233 salmon smolts and 247 trout across the study period. Of these, 177 salmon were determined to have been previously marked. This results in a marked to unmarked percentage of 7.9%. Furthermore, when compared to the number of marked fish released from the RST, a minimum survival percentage of 20.3 % for salmon is found.



**Photo Above:** GFG Alliance’s Wolf Trap in operation in the spillway at Spey Dam.  
(Photo: Paul Hughes, SFB Digital Marketing Manager)

### 3.4 Loch Insh Trap & Transport Study

Following the findings of the third and final year of the Atlantic Salmon Trust’s “Missing Salmon Project” in 2022, the Board decided to embark on a pilot trap and transport study focused on Loch Insh, supported by acoustic telemetry. We aimed to investigate if a trap and transport operation increased smolt survival to Spey Bay and if the mortality rate within Loch Insh is consistent with the 2022 figure.

During the study, a total of 8 acoustic receivers were deployed across the Spey (Table 15), ranging from upstream of Loch Insh to Spey Bay. Smolts were captured at the Tromie confluence with a Rotary Screw Trap. A total of 60 smolts were tagged with V6-2x acoustic tags. Of these, 30 were released at the Tromie confluence and 30 were transported and released downstream of Loch Insh.

Station	Location	Distance From Sea	Spacing
Spey_07	U/S Loch Insh	111.5	6.5
Spey_06	D/S Loch Insh	110.5	1
Spey_05	Kinrara	106.5	4
Spey_04	Strathspey Angling Association Lower End	72	34.4
Spey_03	Knocando	42.5	29.5
Spey_02	Lower Wester Elchies	32	10.5
Spey_01	Spey Bay	0	32

**Table 15: Acoustic Receiver Locations 2023.**

Figure 8 shows the tags detected per receiver in this study. From this, we can calculate that Loch Insh shows a mortality rate of 32.0%, comparable to the results found in 2022. As a result, it appears that Loch Insh is a persistent issue for smolt mortality. Whether or not this mortality rate has always been present in Loch Insh, or if it has since been elevated by anthropogenic factors, is unclear.

Only two tagged smolts were detected at Spey Bay. One of these had been released from the Tromie, and one transported below Loch Insh. This indicates that the trap and transport operation had a neutral impact on smolt survival to Spey Bay. However, all smolts were released during the day. Automated night release boxes may increase the survival of transported smolts to Spey Bay if utilised in future years.

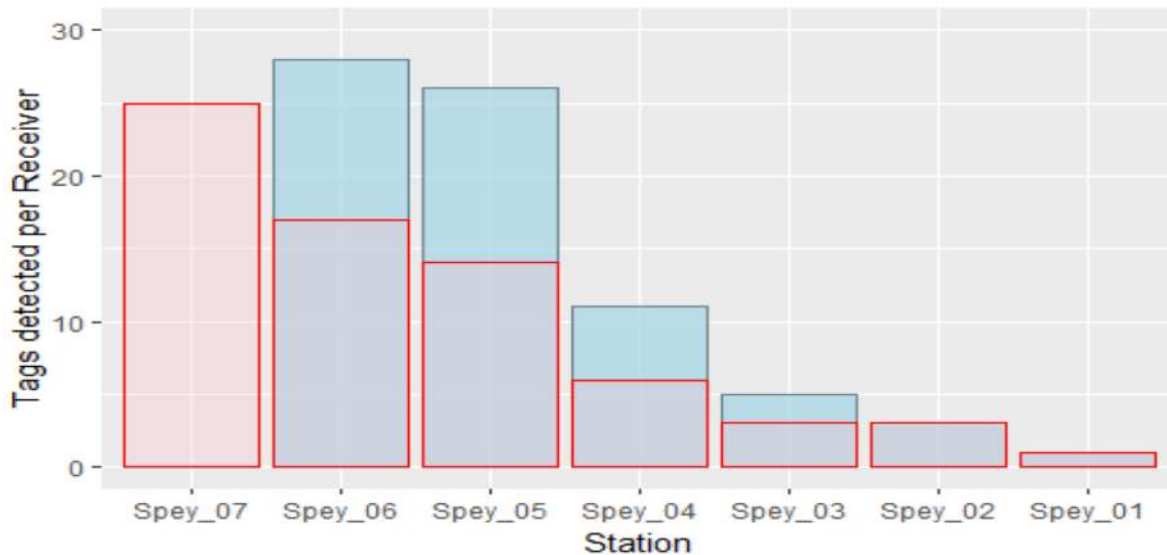


Figure 8: Tags detected per receiver, pink are Tromie releases and blue are Insh releases.

### 3.5 Introduced Fish Species to the Spey

In order to reassess the state of the fish species present within Lochs Insh and Alvie, the Board, funded by the Cairngorms National Park Authority (CNPA), decided to repeat a NORDIC netting study. This study was previously conducted in 2004 and so comparison with 2023 gives an indication of the impacts of climate change and other anthropogenic activity on the Lochs. Although the primary aim was to investigate the status of the Arctic Charr population in Loch Insh, this study also allowed us to verify the findings of the Scottish Environment Protection Agency's (SEPA's) prior eDNA report, which indicated that perch had become established in the catchment.

Our results confirm that Perch (*Perca fluviatilis*) has become firmly established in both Loch Insh

and Loch Alvie, whilst Roach (*Rutilus rutilus*) has also become established in Loch Alvie. Moreover, the trout population of both Lochs seems to have notably reduced, whilst the Arctic Charr population unique to Loch Insh has both drastically declined and moved to deeper water within the Loch.

The establishment of perch within the catchment creates a novel predation pressure on juvenile salmonids, including Arctic Charr. However, they will also compete with trout for invertebrates and habitat. This decline of Arctic Charr is especially troubling, as the Loch Insh population is a unique stream spawning population. It would appear the establishment of Perch and warming of Loch Insh due to climate change is reducing their suitable habitat and pushing them to extirpation. If Roach become established in Loch Insh, this pressure will be greatly increased through competition.



**Above:** Examples of Roach and Perch captured in Loch Alvie.

**Right:** Examples of Stone Loaches captured in the River Truim.

(Photos: Atticus Albright, SFB Biologist).



Consequently, a conservation translocation of Arctic Charr is of the utmost importance to create a satellite population. Additionally, although total eradication of Perch is near impossible, control efforts may limit the population growth in Loch Insh and reduce the pressure on salmonids. The Board is grateful to Ronald Greer and Johan Hammar for their assistance in this fieldwork and subsequent reporting. A copy of the report can be found on the Board's website.

2023 saw the return of Pink salmon (*Oncorhynchus gorbuscha*) to the Spey and Scotland as a whole. However, fewer individuals than initially anticipated were recorded, with a total of 46 incidents Scotland-wide reported to Fisheries Management Scotland. A handful of sightings were noted in the lower reaches of the Spey, but no definitive redds were found or

destroyed. The Board's Biologist is looking into the possibility of fyke netting the lower reaches in early 2024, to investigate if Pink salmon have successfully recruited within the Spey.

As a footnote, populations of Stone loaches (*Barbatula barbatula*) were discovered during electrofishing surveys of the Rivers Tromie and Truim. It appears that these populations are successfully recruiting and are likely to spread throughout the system. The source of this introduction is unclear. Although they may compete with juvenile salmonids for benthic invertebrates, predation by trout is likely to minimize the impact of this introduction. Nonetheless, the importance of improved biosecurity is again highlighted if future introductions are to be avoided.

### 3.6 A Look Forward to 2024

In 2024, the Research Team hope to bring less-studied areas of work on the Spey into focus. In particular, following an incident of significant adult fish deaths during the autumn of 2023, the issue of water quality is a potential concern. Consequently, the Research Team aims to add invertebrate sampling to their electrofishing protocols as part of a long-term monitoring project. Moreover, the Board is working with a retired water chemist and Upper Arndilly Syndicate member, Michael Taylor, to deploy mobile water quality sensors to record water parameters in 2024 and identify key issues.

Additionally, the issue of coastal habitat and species diversity may contribute to smolt survival immediately after leaving the freshwater stage, as well as sea trout growth and survival at sea. Consequently, we hope to collaborate with more marine-focused local organisations to see if the Board can aid with the understanding and restoration of structurally heterogeneous marine habitats, such as oyster beds, around the Moray Firth. The Research Team also aspires to survey the coastal burns within the Board's remit, so as to improve our understanding of their importance to the Spey.

### 3.7 Education and Outreach

Salmon in the Classroom was successfully conducted this year, with both Newtonmore Primary and Grantown Primary schools raising salmon ova from our hatchery to the alevin stage, before releasing them as unfed fry. All students received lessons on the importance of Atlantic salmon to healthy river ecosystems, as well as to the wider Spey catchment. The Board is particularly grateful to John Trodden for organizing our Salmon in the Classroom programme and we look forward to repeating it in 2024 in Fochabers and Rothes.

We were delighted to facilitate a successful field trip from University College London (UCL) in October. UCL visited the Allt Lorgy to practice habitat survey of restored riparian habitat. The Research Team then conducted electrofishing demonstrations to the students. Although no quantitative electrofishing was completed, large numbers of juveniles and even some adult salmon were found in the burn. We look forward to UCL's return in 2024.

***The Spey Fishery Board and the Spey Foundation are most grateful to Walkers Shortbread for their continued and generous support of the Board's and Foundation's educational projects.***







## Part 4

# Statutory Remit of the Spey Fishery Board

### 4.1 Constitution

The Spey District Salmon Fishery Board (SFB) was established under the 1860s Salmon Fisheries legislation as subsequently amended and stated in the Salmon Act 1986 and the Salmon Conservation (Scotland) Act 2001. This legislation was later streamlined into the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003, which has subsequently been amended by the Aquaculture and Fisheries (Scotland) Act 2013. The SFB is empowered under the legislation to take such acts as it considers expedient for the protection, enhancement and conservation of Atlantic Salmon and Sea Trout stocks and their fisheries (Table 10). The SFB is responsible for the Spey Fishery District (Figure 9), which includes 52 rod fisheries within the mainstem of the Spey and its tributaries. The District covers 107 miles of Mainstem River, approximately 560 miles of main tributaries and 20 miles of coastline in the Moray Firth, from Lossiemouth to the west of the Spey estuary to Cowhythe Head in the east. The District extends 3 nautical miles out to sea. The SFB's Strategy and Management Plan, which was revised during 2022 and maintained throughout 2023, is outlined in Figure 2 on pages 8-9.

The SFB has put in place measures to ensure it is in full compliance with the latest legislation.

Furthermore, since November 2013 and in addition to its annual public meetings, the Board has conducted the major part of all of its quarterly meetings in Open Session to enable members of the public to attend.

### 4.2 Complaints Procedure

Section 24 of the Aquaculture and Fisheries (Scotland) Act 2013 amended the 2003 Act to place a number of new duties on DSFBs relating to openness and accountability. Under section 46D these new duties require a DSFB to: *'maintain, and keep under review, proper arrangements for dealing with complaints made to the board about the way in which the board have carried out, or propose to carry out, their functions under this Act or any other enactment'*

The SFB has published its complaints procedure on its website. Full details can be found at: <https://www.riverspey.org/wp-content/uploads/2022/07/Spey-Fishery-Board-Complaints-Procedure.pdf>

**Table 10. Statutory Responsibilities of the Spey Fishery Board**

1. Provide fisheries protection;
2. Set Salmon rod fishery season (11<sup>th</sup> February – 30<sup>th</sup> September);
3. Set Sea Trout rod fishery season (15<sup>th</sup> March – 30<sup>th</sup> September);
4. Police weekly rod fishery close times (midnight Saturday – midnight Sunday);
5. Police the purchase and sale of illegally-caught or unseasonable fish;
6. Ensure fish passage over obstructions to migration;
7. Protect juvenile fish and spawning redds;
8. Regulate the movement and/or introduction of adult fish, juvenile fish and ova.

Five formal complaints were received by the SFB during 2023. The first related to the Board's response to dead adult fish and a suspected pollution incident in early September. The second and third complaints were duplicates, relating to the fish deaths in September and the Board's response to it, the non-publication of Board Minutes and annual accounts on the Board's website, the creation of a Pollution Incident Register and the pollution incident in April 2022 on the River Fiddich. Two further Formal Complaints related to the levying of Assessments for two particular beats, the actions of the Board's Clerk regarding the Valuation Rolls and the conduct of the 2022 Triennial Elections.

All five complaints were addressed by Stage 1 of the SFB's Complaints Procedure, involving an investigation and response by the Board's Director and Chairman. The first and elements of the second complaints were referred to Stage 2 of the Board's Complaints Procedure. These were considered by the Board when it met on 17<sup>th</sup> November 2023, with the outcomes conveyed to the complainants in writing by the Board's Clerk, Neil Torrance.

### **4.3 Wild Salmon Strategy: Progress During 2023**

The Scottish Government published its Wild Salmon Strategy on 14<sup>th</sup> January 2022 and the SFB's Director, Roger Knight, had been part of the Advisory Group that created it. This Strategy represents the first time that the breadth of pressures and management approaches have been considered in full in order to establish a new path of restoration and recovery for salmon in Scotland, guiding collective action over the course of this decade to 2030.

The Strategy's vision is aimed at protecting and enhancing Scotland's wild Atlantic salmon population and developing and boosting the environmental, social and economic benefits arising from it by

addressing the 12 pressures on salmon. These include: Exploitation; Predation; Fish Health; Genetic Introgression; Invasive Non-Native Species; Habitat – Water Quality; Habitat – Water Quantity; Habitat – Thermal; Habitat – Instream; Habitat – Riparian; Barriers to Migration; and Coastal and Marine.

The Strategy's Implementation Plan was published in early 2023 and SFB Director, Roger Knight, was part of its Advisory Group for this. Throughout 2023, he has subsequently been part of the Scottish Government's Delivery Group to put the Strategy into place, although little progress was made during 2023.

### **4.4 Conservation Limits and the Categorisation of Rivers According to Conservation Status**

2023 was the eighth season in which the Scottish Government Conservation Regulations applied. The regulations are based on compliance with modelled egg deposition targets (conservation limits). Estimates of spawning stock and egg deposition are generated based on adult catches and factors such as river flows, fish size and age, release rates, wetted areas, fecundity, etc. For the Conservation Regulations, rivers are assigned into one of three categories:

**Category 1:** Districts which had exceed the conservation limit in four of the previous five years (80%+ compliance). In these rivers exploitation is sustainable therefore no additional management action is currently required.

**Category 2:** Districts which had achieved the conservation limit in three of the previous five years (60 to 80% compliance). For rivers in these categories, management action to reduce exploitation is required.

**Category 3:** Districts where the conservation limit had been achieved in fewer than three of the previous five years (less than 60% compliance). In these rivers exploitation was considered unsustainable, therefore mandatory catch and release is required.

It is important to note that whilst killing of salmon is not permitted in Category 3 rivers, the regulations also mean that the killing of salmon in coastal waters, by the nets for example, was also prohibited, as was the taking of salmon anywhere until the 1<sup>st</sup> April.

The Spey has been classed as a Category 1 river since the inception of the process and for the 2022 season it was classed at 83.3% compliance. The River Spey was one of 37 rivers in the top category for 2022 and is one of 29 rivers to remain in Category 1 for 2023. Further details on this can be found at the following link:

<https://www.gov.scot/publications/salmon-fishing-proposed-river-gradings/pages/overview-and-gradings/>

#### **4.5 Fisheries Management Scotland**

Fisheries Management Scotland (FMS) represents Scotland's network of District Salmon Fishery Boards, the River Tweed Commission and Rivers and Fisheries Trusts. FMS maintains a regular dialogue with Government and Agencies to ensure the interests of its members and Scotland's wild freshwater fisheries are represented clearly.

FMS has continued to make sound progress in developing its vision and objectives of being the pre-eminent, representative fisheries management body in Scotland, recognised as such by local fishery management, Governments and other agencies. It achieves this by promoting and ensuring the best fisheries management for the protection, conservation and development of Scotland's wild salmon and freshwater fish, along with their fisheries and environment. FMS also provides value to and represents the interests of its member organisations by enabling and supporting local fisheries management. It also works to ensure that its members are recognised

by all relevant stakeholders as the foremost, professional and positive influence on all matters relating to the evidence-based management of fish and fisheries.

Throughout 2023, the SFB's Chairman, Dr Alexander Scott, has continued to be a member of the FMS Board.

#### **4.6 EU Water Framework Directive**

The European Union (EU) Water Framework Directive (WFD) came into force in December 2000 and was transposed into Scottish law through the Water Environment & Water Services Act 2003. Under the aegis of the Scottish Environment Protection Agency (SEPA), the Act aims to establish a process of River Basin Management Planning to achieve "Good Ecological Status" of freshwater, groundwater and coastal water bodies by 2027. For Heavily Modified Water Bodies (e.g. those impacted by water diversion for the production of hydro electricity), such as parts of the River Spey, the aim is to achieve "Good Ecological Potential".

Achievement of the requirements of the WFD was divided in to three, six-year River Basin Management Plans (RBMPs). We are currently within the third and final Plan, which must be completed by 2027.

We have reported previously that, significantly, SEPA re-classified Spey Dam at the end of 2015 as a barrier to fish passage, with a consequential down-grading of the water bodies above the Dam to "poor" status. Spey Dam is covered in more detail in section 2.3.1 of this Report. This re-classification of Spey Dam has remained throughout 2023. The SFB will continue to work closely with SEPA throughout 2024 on the implementation of the WFD.

## Part 5

# Publicity

### 5.1 Opening Ceremony 2023

We were pleased to welcome Mr. Ian Gordon ([www.speyonline.com](http://www.speyonline.com)) as our Guest of Honour to open the salmon fishing season at Aberlour on 11th February 2023. Ian is a renowned international salmon fishing guide and former Spey ghillie, and he gave a fitting speech championing fly fishing and his home river, the Spey.

The opening ceremony was streamed live via social media to an audience of 29,000. People tuned in from around the world, from countries including France, Denmark, Spain, Norway, Sweden, Mexico, Canada, Australia, New Zealand, and Saudi Arabia.

The Board is grateful to the Aberlour Distillery, Walkers Shortbread, and the Aberlour Hotel for generously sponsoring the Opening Ceremony, and Rev. Andrew Kimmitt, for his contribution and support. **We would like to pass on our condolences to the family and friends of the late piper Alan Sinclair. Alan has been our long time opening ceremony piper and will be greatly missed.**

### 5.2 Website

Our new website, [www.riverspey.org](http://www.riverspey.org), continues to prove popular with anglers and those interested in finding out more about our work. In 2023, our website was viewed over 135,000 times, which is an 8% increase from 2022.

Weekly updates of catches have continued to be made available on the Board's website throughout the season. The Board is most grateful to Sandy Howie, Chairman of the River Spey Anglers

Association, for his stalwart assistance throughout 2023 in maintaining this.

News items are also regularly published and these have been linked to the Board's social media channels, including Facebook, Twitter, Instagram, and LinkedIn (see 5.3).

### 5.3 Social Media and News Updates

Building on the success of 2022, our social media channels have continued to grow in reach and engagement. Over the course of the year, we published 242 posts, which reached over 2 million people (compared with 400,000 in 2021 and 1.35 million in 2022). This increase can, in part, be attributed to a new strategy implemented by our Digital Marketing & Communications Manager, Paul Hughes, which focuses on posting quality content over quantity, yielding significant results. For example, a video of juvenile salmon caught while electrofishing on the River Calder was published in September and viewed well over 500,000 times, performing better than every other video posted in 2023 and most of 2022 combined.

### 5.4 Public Meeting

The Board decided to change the format of its Public Meeting this year and hosted a drop-in event from 4–7pm on the 13th of December at the Craigellachie Hotel. A number of people joined us to learn more about what we do, discussed any particular issues of concern, and asked a wider number of questions on topics from seal licensing to hatcheries. The Board is most grateful to the Craigellachie Hotel for hosting this event, as well as many of the Board's quarterly meetings.

**Spey District Fishery Board**  
**Statement of Financial Activities**  
**for the year ended 30th September 2023**

	2023	2022
	£	£
<b>Income</b>		
Fishery assessments	485,290	452,808
Other operating income	<u>73,004</u>	<u>95,274</u>
<b>Total</b>	<u>558,294</u>	<u>548,082</u>
<b>Overheads</b>		
Personnel Costs	395,378	347,098
Direct Costs	88,634	72,842
General Expenses	62,798	62,181
Spey Projects	11,181	23,064
Financial Costs	<u>2,331</u>	<u>2,257</u>
<b>Total</b>	<u>560,321</u>	<u>507,442</u>
<b>SURPLUS/(DEFICIT)</b>	<u><b>(2,027)</b></u>	<u><b>40,640</b></u>

Spey District Fishery Board

Balance Sheet  
30th September 2023

	2023 Unrestricted fund £	2022 Total funds £
<b>Fixed assets</b>		
Tangible assets	73,729	60,782
<b>Current assets</b>		
Debtors	89,124	128,986
Cash at bank	<u>197,321</u>	<u>163,055</u>
	286,445	292,041
<b>Creditors</b>		
Amounts falling due within one year	<u>(81,344)</u>	<u>(71,966)</u>
<b>Net current assets</b>	<u>205,101</u>	<u>220,075</u>
<b>Total assets less current liabilities</b>	<u>278,830</u>	<u>280,857</u>
<b>NET ASSETS</b>	<u>278,830</u>	<u>280,857</u>
<b>Funds</b>		
Unrestricted funds	<u>278,830</u>	<u>280,857</u>
<b>Total funds</b>	<u>278,830</u>	<u>280,857</u>

1. The above figures must be considered as draft until approved by the Board's Annual General Meeting.
2. These are abbreviated accounts. A copy of the Board's full Financial Statements, together with explanatory notes, will be published on its website ([www.riverspey.org](http://www.riverspey.org)), once they have been approved at the Annual General Meeting.



**Above:** *A small number of the lucky anglers who caught and released a Spey salmon during the 2023 season. Many thanks to the photographers.*

**Back Cover:** *A selection of photographs of the Spey Fishery Board and Spey Catchment Initiative staff taken throughout 2023.*



# SPEY

Fishery Board

*since 1863*

# 2023

