

Photo Scotland the Big Picture

FINDHORN ANNUAL REPORT 2024

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FOREWORD

Most days at Coulmony I walk along the river and in 2022 and 2023 I hardly ever saw a fish jump in the pools. So, it was with a great sense of relief that in 2024 I saw a good number of fish throughout the season. This was reflected in catch statistics which were up from 818 to 1246 which was most encouraging, and I hope that the improvement will continue in 2025.

During the year the International Union for Conservation of Nature has classified the Atlantic Salmon as 'endangered' which raises the question of whether any salmon should be retained for eating. The Board's view is that, with a 93% return rate, compulsory catch and release for the whole season is not necessary but please continue to return as many fish as possible.

A great deal of hard work has gone into Saprolegnia research this year, Vasileios Kyparissis has been appointed to work with Pieter van West from Aberdeen University to study this disease on the Findhorn and other rivers. To this end, Sean and Alister have worked hard to collect water samples throughout the year to give us a better understanding of the prevalence and strains of this disease at different times of year. Preliminary results of this water sampling should be available this spring. As I mentioned last year, the Board has contributed funding to this research using reserve funds. As in the previous two years, there was an outbreak of Saprolegnia in the spring, but this seems to have been contained by a spate at just the right moment.

The Findhorn Watershed continues to gather momentum, and I encourage you to follow their activities on their website (www.findhornwatershed.com)

Major inroads have been made into the control of Giant Hogweed and Japanese Knotweed and my thanks go to Elise Cox, Gareth Meadows and all the volunteers for their work in this area.

Sean and Alister have had an extremely busy year and my sincere thanks go to both of them for their dedication and professionalism. My thanks also go to Clare for her calm and efficient work in the office.

Most of you will know by now that Bob Laughton will be retiring in March. How things have changed since Bob first started working for the Board in 1997. There was no Management Plan, the Trust had not been set up, invasive species were rampant and there was little concern about the future of the Atlantic Salmon. So, we owe Bob a huge debt of gratitude for all that he has achieved over the years and for his wise and valuable advice to the Board. Bob will be greatly missed but we are very fortunate that Elle Adams will be the Executive Director of the Trust from 1st April. She will take over Bob's role of managing the Board's business. A testament to all the work carried out under Bob's control is contained in the following pages which I hope you will enjoy reading. I and the Board wish Bob a long and happy retirement.

Anthony Laing

FDSFB Chair

FINDHORN FISHERY BOARD

Chair	Anthony Laing (Coulmony)		
Board Members	Alasdair Laing (Findhorn Salmon Fishings Ltd) Alex Leven (Glenferness Estate) Andrew Howard (Moray Estates) Colin Cawdor (Cawdor Estate)		
Co-optees	Colin Glynn-Percy (Tomatin Estate) David Paton (Dalmigavie Estate) Rob Hoskin (Lethen Estate) Michael Barron (Forres Angling Association) Murray Wilson (Glenmazeran Estate) Campbell Ross (Findhorn Angling Association) Mark Laing (FNLRT)		
Staff	Robert Laughton (FNLRT Director) Sean Mclean (Head Bailiff) Alister Taylor (Assistant Bailiff) Clare Walker (Administrator)		
Clerk	Anthony Laing		

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Management Structure

The Findhorn District Salmon Fishery Board (FDSFB) is a statutory body constituted by the Salmon Fisheries legislation in the 1860s, amended by 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 FFB 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 within the Findhorn district.

The Findhorn, Nairn and Lossie Rivers Trust (FNLRT) is an independent charity which promotes sustainable management of river resources and fish populations through research, restoration and education. The Trust works with the Findhorn Fishery Board (and the Lossie Fishery Board) to provide management and scientific advice and administration support.

Fisheries Management Scotland (FMS) represents Scotland's network of Fishery Boards, the River Tweed Commission and the Rivers/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. Both the FFB and the FNLRT are members of FMS and Alasdair Laing has continued as member of the FMS Board during 2024.



Management structure for the FDSFB and FNLRT

Management Plan

The <u>Management Plan 2021-26</u> underpins the work of the Board and Trust and encompasses six key priorities, Climate Crisis, River Habitat and Land Use, Biosecurity and Invasive Non-Native Species, Fish and Fisheries, Marine and Inshore Environment, Education and Awareness.

FINDHORN DISTRICT

The River Findhorn has a catchment area of over 1,300km² and a stream network length of about 1,500km, of which the main river comprises 90km. The catchment is split between two Local Authority administrations, which are the Highland and Moray Councils.

The Findhorn Fishery District (Figure 1) includes the River Findhorn and its tributaries plus 35km of coastline in the Moray Firth, from Burghead to the east of the Findhorn estuary to The Bar in the west. The District extends 3 nautical miles out to sea (Figure 1). The Muckle, Mosset, Kinloss and Burgie Burns are also included within the District.



Figure 1: The River Findhorn catchment and coastal district.

Further information on fisheries management on the Findhorn and Scotland in general is available on the following web sites: http://www.fnlrt.org.uk/river-findhorn/

http://www.fnlrt.org.uk/

http://fms.scot/

THE FISHERY

Salmon and Sea Trout Catches 2024

The Findhorn salmon and sea trout angling season starts on the 11th February and ends on the 30th of September each year. The Forres Angling Association organised the traditional opening ceremony at the Stoney Pool on the 11th February 2024. Mrs Caroline Macleod from Dalvey Estate opened the season in traditional style by offering a dram of Benromach malt to the river with piping provided by Scott Hay. The fine weather brought an excellent turnout to see the opening and enjoy the lovely food and drinks provided by Audrey and Billy Strathdee.

Findhorn anglers enjoyed a reasonable season with an improvement on salmon and grilse catches when compared to 2022 and 2023. The weather played its part in this with a much cooler and wetter summer providing better fishing conditions than the previous two hot years. Sea trout catches remained low within the river, but anglers reported slightly better catches within the Bay.



Forres AA president, Michael Barron accompanies Caroline Macleod (Dalvey Estate) who opens the 2024 season with a dram of Benromach malt whisky at the Stoney Pool on the 12th February 2024.

Salmon and sea trout catches are summarized in Figures 2 and 3, respectively. Note that the catch for 2024 is data submitted to the Findhorn Board while catch data from 1952 to 2023 is from official returns published by Scottish Government.



The salmon and grilse catch for 2024 was 1246 and the sea trout catch was 80, (Figures 2 and 3). In general, the salmon and grilse catch improved from 2023 while the sea trout declined.

Figure 3: Salmon and grilse rod catch for the River Findhorn from 1952 to 2024.



Figure 3: Sea Trout rod catch for the River Findhorn from 1952 to 2024.

Release rates for spring salmon was 100% in keeping with Scottish Government recommendations. The overall release rate for salmon and grilse was 96%, an increase of 3% on 2023. The sea trout release rate was 91% which was a considerable improvement on previous years.

In view of the current scarcity of Atlantic Salmon in our Scottish rivers, the Board are delighted that anglers have continued to adopt a very positive response to the catch and release recommendations and are contributing to safeguarding stocks for the future. The Board reviewed and updated its conservation policy in November 2024 which is presented below. The conservation code is an absolute minimum that should be achieved.

Spawning

Settled dry weather in early November 2024 produced low clear river flows ideal for observing spawning salmon and reports were encouraging particularly from the upper Findhorn and tributaries. Numerous salmon were observed in spawning and fully formed redds were present in most areas where suitable substrate was available.



Spawning salmon in the mainstem of the Findhorn at Dalmigavie Estate, 11th November 2024. A female salmon in the center cutting a redd with two male salmon either side.

Findhorn Conservation Code Conservation Code 2025

FINDHORN CONSERVATION CODE

RELEASE: Up to and including the 14th May, anglers must,

Release all salmon and grilse. Are encouraged to release all sea trout and finnock.

RELEASE: From 15th May,

All salmon over 9lbs / 28inches (4kg / 72cm) All Sea Trout over 4lbs / 21inches (1.8kg / 55cm) All coloured, stale and gravid salmon/grilse/sea trout As many female hen salmon/grilse/sea trout as possible

RELEASE RATE: Anglers are asked to achieve a minimum of: 75% of all salmon/grilse caught from the 15th of May 75% of all sea trout and finnock caught from 11th February

KEEP RATE: Guidance only as Release Rate above should take priority: A maximum of 1 salmon (under 9lbs) or 2 grilse per rod per 6 days.

METHOD: Before 1st May fly fishing is encouraged, most beats are fly only all season. From 1st May it is mandatory. Pinched or barbless hooks are recommended and avoid using triple hooks.

No bait fishing is allowed within the river. This includes the Findhorn Bay Angling Association waters in Findhorn Bay.

If an angler catches a fish that they feel is likely not to survive, then the angler can retain it, but they must report immediately to the estate, the head bailiff, Sean McLean 07920 483081, or the FNLRT, Bob Laughton 07887 535986, who will decide what to do with the fish. This course of action also applies to all fish, which would normally be returned throughout the season under the FDSFB Conservation Code.

Catch and Release – 6 Simple Steps:



1. Use the strongest practical nylon cast to aid quick landing of fish. Long playing leads to the build-up of harmful metabolites such as lactic acid which kills fish even after they appear to swim away unscathed.

2. Use single or double hooks but avoid using triple hooks. Pinch the barbs by carefully crimping them with slim-jawed pliers. This is better than using barbless hooks.

3. Plan your release strategy as you are playing the fish - think where the best area would be to net, unhook & release your fish. Avoid sandy beaches and silty bays, and where there are

extensive areas where the water depth is shallower than the depth of the fish.

4. Take great care in handling fish. It helps if there are two of you so try and fish in pairs. Do **not** pick the fish up by the tail and carry it to the bank for unhooking purposes. If possible, use a wide-mouthed small knot-less mesh net to minimise handling, remove the hook, and release the fish while still in the water. Wet the hands first or use surgical gloves and wet them as well, avoid the gill area, do not squeeze the stomach and take care not to rub off scales. Turning the fish upside down will often prevent it from struggling. Use your knees or the riverbank to keep the frame of the net level and just above the water surface.

5. Use long-nosed artery forceps or slim-jawed pliers for removing hooks.

6. Try to minimise out-of-water and handling times. Return the fish as quickly as possible. Some photographers keep fish out of the water far too long, reducing their chances of recovery. Support it until it has recovered enough to swim away.

Fishing During Periods of Hot Weather and High-Water Temperatures

1. Salmon start to become uncomfortable at water temperatures of 20°C (68F) or more and there is documented evidence that with a water temperature above 20°C salmon may not survive C & R.

2. Early morning fishing is best from a welfare point of view as the water temperature will be at its lowest. As the day wears on into the evening on a hot sunny day the fish will be very reluctant to show any interest in taking a fly. A reduced fishing effort at this time decreases the chances of over-stressing the fish as there is still an element of stress caused by fishing over them.

3. If a fish is hooked the playing increases the fish's requirement for oxygen, and as warm water holds less of it, they can struggle to catch their breath when released. Great care must be taken to unhook the fish in the water and not remove it to improve its chances of survival on release. The fish should be gently held upright in the water until it is fully recovered so allow plenty of time before releasing it.



Conservation of Wild Salmon Stocks

The Scottish Government published a <u>Wild Salmon Strategy</u> for Scotland in January 2022. The strategy sets out the vision, objectives and priority themes to ensure the protection and recovery of Scottish Atlantic wild salmon populations as follows,

- Scotland's rivers have healthy, self-sustaining populations of wild Atlantic salmon that achieve good conservation status.
- Wild salmon management is evidence-based and underpinned by integrated data gathering, research and dissemination.
- The environmental and socio-economic benefits arising from healthy wild Atlantic salmon populations are identified and maximised through partnerships between the public, private and charitable sectors.

This was followed by the publication of the <u>Wild Salmon Implementation Strategy</u> in early 2023 setting out the actions to be taken over the next five years to 2028.

Within the strategy Marine Scotland (MS) continued to develop a conservation limits model for Scottish rivers. The approach requires some knowledge of actual spawning levels and the minimum acceptable (target) levels of spawning. The target level is also called the "conservation limit". Actual spawning levels are usually expressed in terms of egg deposition and rely on estimation of numbers of returning adult salmon from counters and catches. The conservation limit (CL) approach uses rod catches from the most recent 5 years to develop a run reconstruction model. This value is then used to estimate egg deposition which is compared to the estimated egg requirement to assess the probability that the stock will equal or exceed its CL in each year. Rivers are then graded and local management actions applied as detailed below. More details on the approach and results for Scottish rivers can be found <u>here</u>.

Towards the end of 2023 the International Union for Conservation of Nature (IUCN) published their latest Red List of threatened species which highlighted the precarious state of the world's freshwater fish species populations. Alarmingly Atlantic Salmon has been classified as <u>near threatened</u> across their global range and as endangered within the UK. Climate change, pollution, barriers, the effects of fish farming among other issues are contributing to this decline in population status. Many of these issues affect the Findhorn and are targeted within our management plan and the Board continues to promote the conservation of salmon stocks, through predator control and habitat improvement throughout the river.

Good: At least an 80% mean probability of CL being met in the last 5 years.

Advice provided to the District Salmon Fishery Board indicating that exploitation is sustainable therefore no additional management action is currently required. This recognizes the effectiveness of existing non-statutory local management although a Conservation plan must be prepared.

Moderate: 60-80% mean probability of CL being met in the last 5 years.

Management action is necessary to reduce exploitation though mandatory catch and release will not be required in the first instance, but this will be reviewed annually. Production of a conservation plan is required in consultation with Marine Scotland.

Poor: Less than 60% mean probability of CL being met in the last 5 years.

Exploitation is unsustainable and mandatory catch and release (all methods) for 1 year will be required. Management action is necessary to reduce exploitation and production of a conservation plan is required in consultation with Marine Scotland.

The Findhorn remains Good for 2025

National Electrofishing Program for Scotland (NEPS)

Incorporating juvenile salmon data is a key part of improving the conservation limits model and led to the establishment of the <u>National Electrofishing Survey program for Scotland (NEPS)</u>.

This approach uses randomly selected sampling sites and appropriate statistical analysis, to estimate the number of fish in a particular section of a river and then estimate the total production of fish in a river or region. This information can be used to compliment angler catch data to assess whether sufficient adult fish are returning to each river system to indicate a healthy population of salmonids. FNLRT and FDSFB staff completed surveys in 2018, 2019, 2021 and 2023 for this initiative. The 2018 survey indicated that juvenile salmon density for the Findhorn, Nairn and Lossie catchments was at Grade 1 (Good), however in the 2019 and 2021 surveys this dropped to Grade 2 (Moderate). The 2018, 2019 and 2021 reports are available by clicking here. The results can also be reviewed using the ShinyApp. The NEPs team are currently analysing the 2023 data and results should be available in 2025.

RIVER MANAGEMENT

Poaching Control

Poaching or illegal fishing is a wildlife crime, and it occurs in a range of ways such as illegal netting to fishing without permits. To control and deter poachers our Fishery Officers, Sean Mclean and Alister Taylor, conduct regular patrols throughout the year. Poaching can occur at any time, so the timings of their patrols are varied throughout the week and during the day. The entire river including the bay and coast is covered. They have a good range of equipment, including a thermal camera and they also utilise the <u>Trackplot</u> system if patrolling individually. Both Sean and Alister will also complete a handcuff and conflict resolution refresher course (<u>Streetwise Training LTD</u>) in March 2025.

Poaching Incidents



Thermal imaging camera in use on the Findhorn, an important tool in the fight against poachers.

During 2024 we continued to strengthen our connections with Police Scotland, through assisting them at their stand at Moy Game Fair in August.

Maintaining close contacts with Police Scotland and our neighbouring Fishery Boards is an important part of our work and helps to provide an effective deterrent against poaching across the Moray Firth. We continued to conduct regular patrols within the Lossie catchment funded by the Lossie Fishery Board and three incidents were dealt with. These were also anglers fishing without a permit although one angler

was caught fishing with his rod supported by a stick in the riverbank. This is an illegal approach for game fishing and the angler was cautioned but allowed to continue fishing with his rod in hand.

To support wider liaison Bob Laughton (FNLRT Director) chaired the Moray Firth Riverwatch group which met in May and allowed bailiffs and staff from around the Moray coast from the River Deveron to the River Conon to meet with Police Scotland Wildlife officers and discuss poaching and other wildlife crime activities. Sean also attended the Northeast Partners Against Rural Crime (<u>PARC</u>) and Partnership against Wildlife Crime (PAW) meetings throughout the year.

On the Findhorn and coast there were 13 poaching incidents, 11 of these were fishing without tickets/permission or with improper tackle which resulted in verbal, or a written warning being issued. Two incidents were of a more serious nature and were reported to Police Scotland. Sean and Ali outline a few examples below.

We are coming across more fishers using the Fishpal website, which is allowing more anglers to visit the beats along the river. But we are finding that nobody knows who is on your water at any given time. During June this year we caught a party of five fishing the Forres Association with only three tickets. When approached the gentleman who had booked the fishing became very aggressive towards us and regarding the matter and we issued a verbal warning. The party indicated they were fishing the river Thurso the following next week, so we contacted the local water bailiff up in Thurso and shared my information on what had happened hopefully avoiding a similar situation developing. It's clear that the folk that book don't always read the legislation that comes with the ticket, so more needs to be done regarding this. We had numerous similar incidents like this throughout the season and verbal or written warnings were issued. We have also had useful discussions with FishPal to resolve the issue.

We have had a couple of anglers fishing the Findhorn Bay using bait. Although the ticket does not say 'no bait fishing' this is against the Findhorn conservation code and rules. This happens quite regularly so I have pointed this out to the Board and tickets/conservation code will be changed for next season.

Late July saw the unwelcome return of a hardened poacher to the river. After extensive night patrols and surveillance using the thermal imaging camera, we caught up with him and his pal at the Dump Pool. Both were wearing balaclavas, but we recognized our long-term poacher from his size and gait and clothing. Both escaped across the river but dropped a rod and salmon which was on the line as they scarpered. We retrieved and retained the rod and salmon for evidence and by good fortune the two poachers were also caught on one of our wildlife cameras which confirmed their clothing and identified their faces. A full report was submitted to Police Scotland along with additional background evidence on the main poacher. The case will go to the Procurator Fiscal in 2025.



Sean Maclean with Dugie Vipond at Findhorn Bay during filming for BBC Landward program featuring the Findhorn.

Control of illegal fishing is still an important part of the Fishery Officers' duties and Sean was featured in a recent BBC Landward program outlining his role on the Findhorn. The program featured a range of other activities within Findhorn Bay including the Moray Inshore Rescue Organisation (MIRO), Tim Negus on the Old Findhorn village and Roy Dennis discussed geese and bird populations. The program was well received and can still be watched on <u>BBC iPlayer, Landward</u> 2024:Episode 23.

The Fisheries Officers' role is continuing to evolve to include a wider range of river management duties including fisheries surveys, smolt trapping, compiling catch data, scale reading, predator monitoring and control, dealing with river works, as well as education activities. Details of these activities are indicated throughout this report. They are also the eyes and ears for the Board and provide the best way to inform the anglers of fishing and conservation policies and return information back to the Board.

If you observe or suspect illegal fishing (poaching) is underway Please contact.

Findhorn Fishery Officers: Sean Mclean 07920 483081 Alister Taylor 07387 302649 Email: <u>sean@findhorn.org.uk</u>

> or Police Scotland 999 or 101

Do not attempt to apprehend the poachers!

Predator Monitoring and Control

Sawbill ducks (goosanders, mergansers) and cormorants can affect juvenile and smolt stocks. Typically, five counts are carried out throughout the year, in Jan/Feb, Mar/Apr, May, Oct, Nov/Dec, and are organised by Alistair Taylor. Counts are carried out by walking each section of the river simultaneously, between 08:00 and 10:00 and in Findhorn Bay counts are compiled by observers from several fixed points around the Bay. Counts are organized through a WhatsApp group, and we are extremely grateful to all the estate staff, keepers and volunteers who helped with the counts.



Left: Male Goosander (photo Gordon Rennie), right Female Merganser (photo Graham Bell)

During 2024 bad weather conditions prevented counts being conducted in March and December leaving three counts completed in February, May and November, the results are presented in Figures 4 to 6.



Figure 4: Goosander and Merganser count data for the River Findhorn 2024.

Figure 4 indicates that goosanders were present at two of the four counts ranging from 2 to 8 birds. This was lower than 2022 and 2023 where the range was 3 to 14 birds. Goosanders generally migrate into Findhorn Bay during winter then begin to pair up in the spring and move upriver to find breeding sites. After mating the males leave the river in early summer and head back to sea while the females remain on the river to raise their brood. This pattern was evident through 2024 with goosander numbers peaking in May (Figure 4) and lower in the November and February counts.



Figure 5: Cormorant counts on the River Findhorn 2024.

Mergansers were observed in all three counts with numbers ranging from 19 to 32. This was similar to 2023 where the range was 18 to 62 birds and higher than in 2022, where the range was 7 to 19 birds.

Mergansers numbers were higher than goosanders in all counts. The maximum count of 32 mergansers was recorded in May and November. The pattern is generally similar to goosanders with birds appearing in winter and spring and then a decline in summer as males left the river. However, our counts indicate that the population of mergansers remain on the upper Findhorn throughout the year.

Figure 5 shows cormorant counts for 2024; they were present all three counts and ranged from 3 to 8 birds. Most of the cormorants are present in Findhorn Bay, but they also range upriver regularly.

Concern on the numbers of Grey Herons in the upper Findhorn and their potential effects on juvenile salmon and trout populations was also raised with the Board during 2023. So, during 2024 numbers of herons were also counted within our regular sawbill counts to assess the population levels within the Findhorn. Figure 6 provides the data from the three counts and counts ranged from 3 to 23 birds.





Based on these counts and those from neighbouring rivers a joint license application for control of these birds during the smolt migration was prepared by Roger Knight (Spey Fishery Board). The application was successful, allowing birds to be controlled under license, from 1st October 2024 to 31st May 2025. The license includes 5 goosanders, 7 mergansers and 3 cormorants for the Findhorn. Scaring tactics such as firing blank cartridges and the installation of rope bangers at selected locations are also used to disturb the birds throughout the smolt run in 2025.

Any additional sightings of these birds on the river from anglers is also welcomed, please send any data to Bob Laughton at <u>director@fnlrt.org.uk</u> or by text to 07887 535986, providing date, location and number/type of birds.

Catchment Developments and River Works

An essential part of the Trust and Fishery Officers' duties is to review, comment on and inspect river works to ensure that fish populations and habitats are not being blocked or damaged.

Road Works

Work started on the A9 dualling between Tomatin and Dalmagarry. We have made initial contact with Balfour Beattie to discuss the construction plans and the Dalmagarry burn crossing.

Wind Farms



Helen Watson and Dave Riach (Hutton Inst) downloading data from the fixed monitoring site on the Corshellach Burn.

The Trust and Board have worked closely with the developers for the <u>Clashgour Wind Farm</u> which received planning permission in October 2022. The development spans the upper Lossie and the upper Divie and to ensure

there are no detrimental effects on the water courses a monitoring plan has been commissioned to monitor water quality, invertebrate and fish populations within these burns before,

during and after construction. Monitoring began in Feb 2024. Habitat and fish monitoring was also completed under contract for the proposed Carn na Saobhaidh wind farm. Consultations regarding two other wind farm proposals, Lethen and Lynemore, were also completed.



Sean and Ali electrofishing the upper Divie as part of the Clashgour wind farm monitoring plan.

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RIVER WORKS GUIDANCE

All developers undertaking river works, should contact their local planning authority, SEPA, NatureScot and the Fishery Board for advice and guidance.

To provide protection for salmon and sea trout and other fish the preferred operational period for works is from 1st June to 30th September.

Juvenile Fish Surveys

Smolt Monitoring

Establishing a smolt monitoring program for Findhorn has been a key objective for many years. The Board purchased a rotary screw trap for monitoring smolts in 2018 and this has been used in several locations throughout the river. The site at Red Craig on the lower river worked well for providing a sample for smolts for acoustic tagging as part of the Atlantic Salmon Trusts <u>Moray Firth Tracking Project</u> but was not suitable for providing an estimate of the overall output of smolts from the river. So, focus has switched to exploring potential sites in the upper Findhorn catchment.

Many of the upper tributaries of the Findhorn, such as the Kyllachie and Mazeran, are very important rearing areas for spring salmon and through the work of the Findhorn Watershed Initiative (FWI) much of our riparian woodland restoration is taking place in the upper catchment. So, establishing a smolt monitoring program to determine long term changes in populations is a key target.

A potential site between the railway bridge and the A9 road bridge near Tomatin was identified and tested in April 2024. The installation was supported with funding from LNER secured through the Findhorn Watershed Initiative (FWI). The trap was installed from the 1st April to the 3rd of May 2024, approximately 150m downstream from the railway bridge 80m up from the A9 bridge near Tomatin. The trap was installed for 32 days, with 11 days lost due to high flows. A summary of the fish caught is provided in Table 1.

Fish Species	Number
Salmon Smolt	1644
Salmon Parr	117
Trout Smolt	0
Trout Brown	30
Eel	1
Minnow	19
Lamprey <i>sp.</i>	2

Table 1: Summary of fish species captured in the rotary screw trap at Tomatin, 2024.

Salmon smolts dominated the catch with 1644 smolt caught during the 21days when the trap was operational. Salmon parr (117) were also caught regularly. All 30 of the trout caught were classed brown trout with none of the trout showing any silvery colouration consistent with smoltification and heading to sea. An eel, minnows and lamprey species were also caught.

The installation was a trial to determine if the site would be a suitable long-term location for smolt monitoring. Access to the site and installing the trap was good and tie off points were present on both sides of the river. In low to medium flows the trap performed well with the drum rotating between 3 revs.min⁻¹ and 16 revs.min⁻¹, which is well within recommended revolutions for capturing smolts. Once staff became familiar with the site the trap could also be repositioned to ensure it was in the most effect part of the river flow. However, as always higher flows proved an issue. We tend to raise the drum when a spate is imminent which allows the trap to float out the event and select a site where water can spill on to a flood plain during higher flow events. This site doesn't have this spill feature so higher flows are channeled and can be very fast. In early April just after installation we had a high flow event and thanks to Sean and Alister's diligent work in raising the drum and pulling the trap to the side it rode out the spate with minimal damage. However, it took several days for the flow to drop to a safe level for staff to reinstall the trap, meaning a loss of operating time and data. This will be one of the main limits on the site for longer term operation but despite this the site offers considerable potential.

The other limit is from fishing access, the site is in one of the main fishing pools and will affect angling from May onwards leading to a potential loss of revenue for Tomatin Estate. So further discussions are required for longer-term operation.



Sean and Ali installed and operated the trap for most of the installation, with tremendous support and help from Tomatin and Clune Estates, FNLRT staff and local volunteers.

Photos: 1. Rotary Screw Trap in operation near Tomatin, 2024; 2. Sean Mclean and Alister Taylor; 3. Guy Harris (FWI), Beth Lamont (Coignafearn Estate), Helen Nasrat (FWI); 4. Ian Waugh, May Buckle, Alan Hardwick Tomatin volunteers; 5: Ali Taylor, Clune Keepers, Edward Usbourne (Tomatin Estate); Ali Taylor and MacDonell family

Fish Disease



Billy (Abdn Univ) and Ali collecting water samples from the Findhorn for *Saprolegnia* analysis.

Tissue samples collected from infected salmon on the River Divie for analysis by Prof Peiter van West and his team at Aberdeen University in 2023 confirmed the salmon infection was a new variant of *Saprolegnia* which is more infectious than its previous forms. This outbreak was also reported from several other Scottish rivers and is extremely worrying. To address concerns Fisheries Management Scotland and Aberdeen University have raised funds from across the Fishery Board network to support a PhD study to better understand the effects of this new Saprolegnia infection. The Findhorn Board have contributed funds to the study and welcomed the appointment of Vasileios "Billy" Kyparissis by Aberdeen University to undertake the study in early 2024.

Sampling of the Findhorn and other Scottish rivers started in February 2024. Sean and Ali were trained in water sampling techniques and have collect bi-weekly samples which will be used to determine *Saprolignia* levels throughout the year and eDNA will also be used to determine the *Saprolegnia* species present. A considerable volume of samples has been collected across Scotland and Billy is working his way through the samples with initial result expected in early 2025.

Spring and summer 2024 were more typically Scottish with rain and cooler temperatures prevailing! This led to higher river flows and reports of infected salmon



Murray Wilson (Glenmazeran Estate) and Pieter van West (Abdn Univ) sampling a male salmon badly infested with *Saprolegnia*, post spawning.



Tissue samples from an infected salmon are placed on agar plates and cultured to determine the type of *Saprolegnia* infection.

were thankfully much lower than in the last two years. Where infected salmon were reported we tried to inspect the fish collecting basic data and photographs and adding this to the <u>FMS Fish Disease App</u>. Four adult salmon from Glenmazeran and one from Altyre were fully sampled for *Saprolegnia* infections in November after spawning. Our thanks to the proprietors, anglers and estate staff who retained salmon for sampling and/or sent in pictures. Please continue to do this into 2025. We are particularly grateful

to Murray Wilson (Glenmazeran) for his help in retaining the salmon on the Mazeran and to Prof Peiter van West (Aberdeen Univ) and his team for their help and advice.

Reporting Diseased Fish			
If you suspect a salmon or trout, you ha	ve caught or found		
is infected or appears to be in poor l	health, please:-		
If facilities exist, keep the fish alive	(keep net etc)		
If not store the fish in a cool place, if	possible on ice,		
But do not freeze the fis	sh,		
Note location and time and any observations on behaviour,			
Collect scales, length, we	eight,		
Photograph each side of the fish and	I the underside.		
Contact:			
Bob Laughton (FNLRT):	07887 535986		
Sean Mclean (Fishery Officer)	07920 483081		
or			
Use the Fisheries Management	Scotland App		

Scale Collection

Salmon scales have two distinct parts, a river zone which is the period spent in freshwater until it leaves the river as a smolt and the sea zone, which is the period spent in the marine environment. During growth the salmon lays down rings or circuli which can be used to determine the age of the fish with freshwater and sea water, much the same as reading the rings on a tree! More details on scale reading can be found in <u>ICES 1992</u>.

Although there was no formal scale collection program in 2024, we are always happy to receive scales from anglers and can complete scale readings in-house. Scales should be collected from the side of a salmon or trout just behind the dorsal fin by using a blunt knife then stored in a paper scale packet which we are happy to supply. Data on the date of capture, location, length, weight, sex, condition, should be compiled on the front of the packet. Anglers can put their name on the back to receive information on the age reading.

Seventeen scale samples were collected in 2024, 16 from salmon (Table 2) and 1 from sea-trout (Table 3). Nine of the fish salmon sampled were grilse (one-sea-winter) and eight of these were river age of 2 winters. The remaining four were salmon of two sea-winters and two river winters. The sea trout was three river winters and one winter at sea.

Salmon Scales 2024	Sea Age 1SW (Grilse)	Sea Age 2SW	Sea Age 3SW
River Age 1yr	0	0	0
River Age 2yr	8	4	0
River Age 3yr	1	0	0
Uproadable cealer - 2			

Unreadable scales = 3

 Table 2: Summary of the river and sea age classes of 16 River Findhorn salmon scale samples collected during 2024.

Sea Trout Scales 2023	Sea Age 1SW	Sea Age 2SW	Sea Age 3SW
River Age 1yr	0	0	0
River Age 2yr	0	0	0
River Age 3yr	1	0	0
Unreadable scales = 0	·		'

 Table 3: Summary of the river and sea age classes of one River Findhorn sea-trout scale sample collected during 2024.

Pollution Incidents

Thankfully, no significant pollution incidents were reported during 2024.

POLLUTION INCIDENTS

Should be reported to SEPA through the Pollution Hotline

0800 80 70 60

Invasive Non-Native Plant Control

Giant Hogweed

Control of invasive non-native plants continued throughout 2024 with the support of the Scottish Invasive Species Initiative (<u>SISI</u>). In keeping with our approach from previous years, infestations of invasive plants were tackled strategically from their uppermost extent, then working downstream. As of 2024 we were controlling approximately 50km of river for invasive plants with the help of staff, volunteers, and

landowners. Thanks to extra funding obtained through SISI we were able to employ Gareth Meadows as a seasonal invasive species project officer. Gareth worked with us from May to October and made an invaluable contribution to our INNS control efforts.

We started our program of giant hogweed (GH) treatment in early May and continued control until mid-July. Logie



Seasonal Project Officer, Gareth Meadows preparing to tackle Giant Hogweed with FNLRT director Bob Laughton.

Bridge/Coulmony is the upper limit of GH treatment. While densities of GH have been much reduced in these areas, we are still seeing small patches of plants appearing along the stretch of river from Coulmony to Mundole. The small pocket of GH at the Scum Pool was visited again this year, and we were encouraged to discover no emergent plants. However, because GH can produce seeds that can lie dormant for up to ten years, this area will be revisited in



White water rafting was used to tackle Giant Hogweed in the gorge section of the Findhorn.(photo Ace Adventure)

2025 to ensure no further colonisation takes place.

GH control in 2024 continued from Coulmony through Logie, Darnaway, Altyre, Mundole and Dalvey to the A96 bridge, thanks to the efforts of FNLRT and SISI staff, landowners, specialist contractors and volunteers. We have control underway downstream of the A96 thanks to the continuing work of Wild Things and their volunteers on the right bank.

We are grateful for the continued support of all local landowners, and for that of our specialist contractors, whose expertise has allowed us to maintain our control efforts in difficult to access areas. Local outdoor activity company "Ace Adventures" once again provided their white-water rafts as transport through the gorge section of the Findhorn, helping the team to reach otherwise inaccessible GH plants. The team were greatly encouraged to find only a handful of plants this year- even in areas where they had once been established. The ropes access company, "Blokes on Ropes", also returned to treat GH found on the cliff at Broadreeds and reported a continuing reduction in densities compared to previous years.

GH control also continued along the Mosset and Muckle burns. The Mosset showed continuing improvement from the original upper reaches of the infestation in Rafford and Altyre all the way to the confluence with Findhorn Bay. We are continuing to find large stretches of the upper treatment areas to be completely free of mature plants, with only a handful of seedlings appearing. However, there was a small outbreak discovered on the Altyre Burn this year which was quickly dealt with. This only reinforces how vital continuing, annual checks of these areas are.



Elise and Bob chopping Giant Hogweed plants before they produce seed heads beside the railway at Dalvey.

Treatment on the Muckle burn occurred from the Earlsmill to Abbotsford Bridge. There was particular focus this year in tackling the infestation of GH on the banks and field edges near Dyke and Brodie.

After trialling the method last year to great success, we also hired the large, pressurised spray tank from Kellas Estate this year to treat GH infestations along the railway at Brodie and Dalvey. The use of the tank allowed a small team of

operators to tackle large, extensive areas efficiently and effectively. The use of the tank was once again combined with more traditional treatment methods which allowed for a fine level of control to be achieved. However, while we made good progress on our side of the fences, we were disappointed to not receive support from Network Rail this year. Despite the efforts made by their contractors and our staff last year, all our attempts to arrange follow-up treatment this year were met with no reply. Our staff and volunteers

did what they could to tackle the problem where possible, but without Network Rail's input the effectiveness of this year's and ongoing year's control efforts will be reduced.

Japanese Knotweed

Following the end of GH control, we began treating Japanese knotweed (JK) in mid-August and finished late October. Control for the year finished just the first



After the seed heads were chopped the plants were treated with Roundup using the pressurized spray tank supplied by Kellas Estate.

hard frosts and sustained cold temperatures of the year, after which the JK begins to die off, so we made the most of the time we had until then. JK was treated from Ardclach to Mundole, mostly using foliar spray methods, and we were encouraged to find densities in many treatment areas were much reduced. In many locations, such as at Altyre, we are pleased to see native plants recolonising the areas once dominated by JK. Many thanks to Anthony Laing, who alerted us to the outbreak of JK at Ardclach, ensuring the area is on our radar for future checkups and control.



Top: Japanese knotweed at the lower fishing Altyre undergoing stem injection treatment in 2018. Lower: The same area in 2024 after yearly follow up treatments we have kept the are clear of JK with alders, willow and other native species beginning to re-colonize the area.





• Mink Control

Elise continues to maintain the mink monitoring and trapping network across the Findhorn, Nairn and Lossie catchments with the help of a dedicated group of volunteers and with high tech 'smart traps' which allow deployed traps to be monitored remotely. A total of 24 mink were caught across the Findhorn, Nairn and Lossie area, with 1 caught on the Lossie, 21 on the Nairn, 2 on the Mosset Burn.



Mink tracks at Logie Bridge during April 2024. A trap was set for a few weeks but this one escaped capture!



We were delighted to receive the support of the Forres Men's Shed this year, who produced over 40 rafts for us. The build quality of these rafts was excellent, and they have since proved their hardiness by surviving all the storms and spates that the winter has thrown at them!

Any sightings of mink or mink tracks Please contact Elise. 07880 971890 <u>elisecox@fnlft.onmicrosoft.com</u>

The Findhorn Watershed Initiative



The Findhorn Watershed Initiative (FWI) is a multi-generational vision for nature recovery and connection at a watershed-scale. The project has three key areas of focus:

- **Nature Recovery** Restoring a mosaic of nature-rich habitats from the source to the sea.
- **Nature Connection** Growing a local culture of nature connectedness, belonging and stewardship amongst the people who live and work in the watershed.
- **Nature-Positive Economy -** Playing our part to enable a thriving rural nature-positive economy.
- Nature Recovery

Building traction: We are delighted that 28 landholdings are now actively engaged within the Initiative, representing nearly all major landholdings in the watershed area. Together with these land stewards the FWI team have been co-developing a pipeline of 19 riparian woodland and river restoration schemes for funding and implementation.



Breaking ground: Our first riparian woodland scheme was implemented on the Kyllachy burn during Spring 2024. Combining planting and natural regeneration from existing seed sources, the project will shade 5km of a key spawning tributary for wild Atlantic Salmon in the upper catchment. Works on a further second and third schemes are currently underway, which will protect and regenerate an important remnant of ancient riparian woodland on the Mazeran burn in the river's headwaters, securing this locally adapted seed source into the future, and establish new riparian woodland to shade other key spawning grounds on the Allt Bruachaig and Allt Seileach burns. Collectively these three schemes will see 150ha of native riparian woodland restoration implemented.



Fencing and tree planting completed on our first woodland scheme in Glen Kyllachy, Spring 2024.

Growing our understanding of key habitats for climate resilience and biodiversity in Findhorn Bay: With funding from Moray Climate Action Network, and in collaboration with Moray Ocean Community, over the Summer we mapped the distribution and density of the intertidal seagrass meadows in Findhorn Bay to help us determine what role this carbon sequestering



habitat can play in local climate resilience and biodiversity enhancement into the future. Alongside the seagrass, we are also keen to develop a better monitoring system for water quality from the various outflows into the Bay and have begun the process of mapping these.



invertebrate monitoring programme, thanks to support from Buglife's Guardians of our Rivers project and Wildfish's Smart Rivers approach. Volunteers have been trained to help carry out surveys that monitor the abundance and diversity of invertebrates to assess water quality and biodiversity across the catchment, including at key restoration sites. Any anglers interested in taking part would be warmly welcomed to join us – please get in touch to express your interest.

Monitoring our impact over the long

term: A network of temperature loggers placed in key tributaries, alongside a smolt trap (mentioned above, allowing for the counting, measuring and tagging of fish) were among the ecological monitoring activities installed in the upper catchment thanks to funding from LNER's Customer and Community Investment Fund. The Initiative has also established a citizen science freshwater



Nature Connection

Rekindling cultural heritage to inform nature recovery: We marked the culmination of our pilot community engagement programme with a sellout Headwaters Celebration in Tomatin in March. Curated by FWI Human Ecology Researchers in Residence Raghnaid Sandilands and Mairi McFadyen the concert celebrated the forgotten names, songs and stories of the upper reaches of the River Findhorn, unearthed from the archives, and brought back to life by a talented band of acclaimed musicians including multi-award-winning Gaelic singer Julie Fowlis.

The full body of research from this first phase of the residency is being published on the FWI website, including maps, recordings and sheet music. Lucky for us, Raghnaid and Mairi have agreed to continue their research downstream, and we look forward to seeing what their inspiring work of 'cultural darning and mending' brings forth in the lower catchment over the coming months.



FWI Human Ecology Researchers in Residence Raghnaid Sandilands and Mairi McFadyen entertain the Headwaters Celebration audience in Tomatin, March 2024.

Gathering village wisdom to track changes to the ecology of Findhorn Bay over time: Over the Summer alongside our seagrass and water outflow surveys, and with the support of Feeldwork Futures, we worked with Findhorn village elders to gather their wisdom and insight from observing, working and living alongside Findhorn Bay for many years, on how habitats



have changed, what was once more prevalent and what could be restored and protected into the future.

Raising awareness of our waterways and their wildlife, and sharing opportunities to get involved:

The FWI team has been popping up, holding stalls and delivering talks at community and

professional events across the watershed and further afield, including the Scone Game Fair, the MOD Global Charge at the Kinloss Barracks, Findhorn Village Fair, the Royal Highland Educational Trust's 'Rural Futures' event, Logie Timber Festival, Findhorn Bay Festival, and Moray's Climate Change Conference.



Nature Positive Economy



A coordinated approach to deer management at a watershed-scale: Deer management continues to present a cross-cutting issue throughout the Findhorn Watershed area. After 12months of co-development and with the support of local deer management expert Dr Linzi Seivwright, in May we launched the <u>Findhorn Watershed Deer</u> <u>Forum</u>. A first of its kind place-based membership

network through which landowners and managers from across the watershed area can work together to drive forward a collaborative and progressive approach to deer management at a landscape-scale, the Findhorn Watershed Deer Forum and 2024-2029 Deer Management Strategy aims to foster collaboration, communication and build capacity for the benefit people, nature and the health of the deer population.

A pioneering private finance partnership for river restoration: In March, we embarked upon <u>The River Within</u> - a pioneering new multi-year partnership with Scotch whisky company Chivas Brothers. Working in close collaboration with our neighbours at the Spey Catchment Initiative and the Deveron, Bogie and Isla Rivers Charitable Trust, Chivas Brothers's support will enable a variety of woodland and river restoration schemes to be delivered across all three catchment areas.



During 2024 the work of the Findhorn Watershed Initiative was funded thanks to the Scottish Government's Climate Change Division Just Transition Fund, Scotch whisky company Chivas Brothers through their programme The River Within, Moray Climate Action Network, and LNER's Customer and Community Investment Fund.

Follow the Findhorn Board, the FNLRT and the Findhorn Watershed Initiative at the following websites: <u>Fisheries Board - River Findhorn - Findhorn, Nairn and Lossie Rivers Trust (fnlrt.org.uk)</u> <u>Findhorn, Nairn and Lossie Rivers Trust (fnlrt.org.uk)</u> Findhorn Watershed Initiative

Acknowledgements

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Thanks also to Jane Hamilton (SISI), Steve Turner, Groves Forestry, and Wild Things for their contractors and volunteers who supported the control of invasive non-native plants and looked after mink rafts and traps.

Thanks to Prof Pieter van West and Vasilieos "Billy" Kyparissis for their help with Saprolegnia sampling and advice, and to all the anglers and estate staff who reported diseased fish.

A very special thanks to Helen Nasrat for proofreading this report.