



A fine 20lb springer released back into the Findhorn during March 2022. (photo Sean Mclean)

FINDHORN ANNUAL REPORT 2022

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FOREWORD

2022 was a disappointing year. Low warm water in May led to large numbers of fish dying from *Saprolegnia*. Total catch numbers for the year for salmon and grilse were 873. This is the first time that it has fallen below 1,000 since 1981. This can partly be accounted for by extremely low water levels during the summer, but it still represents a continuation in the downward trend of catch numbers. It is hard to know how we, as a Board, can reverse this trend. Our licence to control seals has been denied and we have little control over global warming and over-fishing of the seas. Despite this, positive action is being taken to safeguard and improve our own river environment.

Sean and Alister did some sterling work catching two known poachers red handed but it is disappointing to note that the poachers got away with a written warning. It is hard to know how this is justifiable when the death of a badger is considered one of the most serious wildlife crimes, yet badger numbers are increasing dramatically and salmon numbers are declining.

Many of you will know about the Findhorn Watershed Initiative. This exciting initiative is covered on page 30 of the report. This initiative should result in huge environmental benefits to the Findhorn catchment area which will, in turn, have benefits for the welfare of our salmon in terms of cooler water temperatures, slower water run-off and less acidity in the water. I encourage you to visit the website and to join the mailing list so that you can follow their progress. www.Findhornwatershed.com

It is good news that the Scottish Invasive Species Initiative (SISI) funding has been extended until 2026 and Elise Cox will be continuing her excellent work in controlling Giant Hogweed, Japanese Knotweed and Himalayan Balsam.

Once again, I would like to thank Bob Laughton and his team for an excellent and informative report which will give you an idea of how much time and effort is being put into managing our river. Also, our thanks to Clare Walker who is doing an excellent job having taken over from Valerie.

Anthony Laing

FINDHORN FISHERY BOARD

Chair

Anthony Laing (*Coulmony*)

Board Members

Alasdair Laing (*Findhorn Salmon Fishings Ltd*)

Alex Leven (*Glenferness Estate*)

Colin Cawdor (*Cawdor Estate*)

Andrew Howard (*Moray Estates*)

David Paton (*Dalmigavie Estate*)

Murray Wilson (*Glenmazeran Estate*)

Graham Bell (*Forres Angling Association*)

Michael Barron (*Forres Angling Association*)

Colin Glynne-Percy

Note: Forres AA will be represented by Graham Bell or Michael Barron depending on availability.

Co-optees

Mark Laing (*FNLRT*)

Campbell Ross (*Findhorn Angling Association*)

Staff

Robert Laughton (*FNLRT Director*)

Sean Maclean (*Head Bailiff*)

Alister Taylor (*Assistant Bailiff*)

Clare Walker (*Administrator*)

Clerk

Anthony Laing

Address

Fisheries Office, Logie Steading, Dunphail, Forres, IV36 2QN.

Emails

Chair: anthony@shortbreadhouse.com

Director: director@fnlrt.org.uk

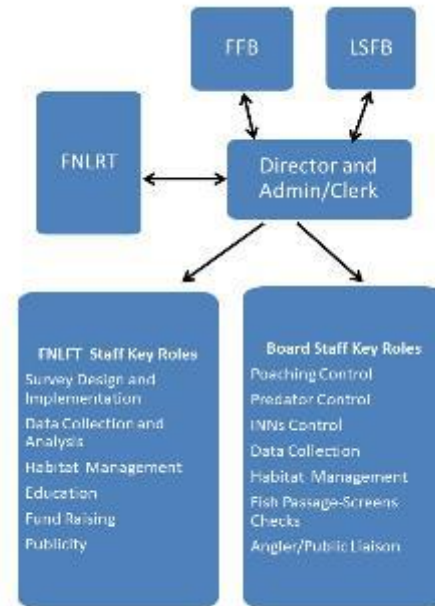
Administrator: admin@fnlrt.org.uk

Web Site: <http://www.fnlrt.org.uk/river-findhorn/>

Management Structure

The Findhorn Fishery Board is a statutory body constituted by the Salmon Fisheries Act of the 19th century and has management responsibility for salmon and sea trout 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 Board to provide management and scientific advice and administration support.



Operating structure for the Boards and FNLRT.

- Management Plan

The [Management Plan 2021-26](#) underpins the work for 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.

- Staff

Bailiffing team is led by Sean Mclean and ably assisted by Alistair Taylor.



After nine years of outstanding service Valerie Wardlaw (centre) decided to leave the Trust and Clare Walker (right) took up the Administrator role from the 22nd of August.

The Board and Trust administrator, Valerie Wardlaw, decided to leave after nine years of outstanding service. Her replacement Clare Walker was appointed in August.

After five years of bashing non-native plants, James Symonds (SISI Project Officer) also decided to leave and take up the biologist post with the Cromarty Firth Fishery Board. Elise Cox was promoted to the SISI Project Officer role in September. Jane Hamilton has

settled into the SISI Publicity and Communications Officer role providing regular updates across the various social media platforms.

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.

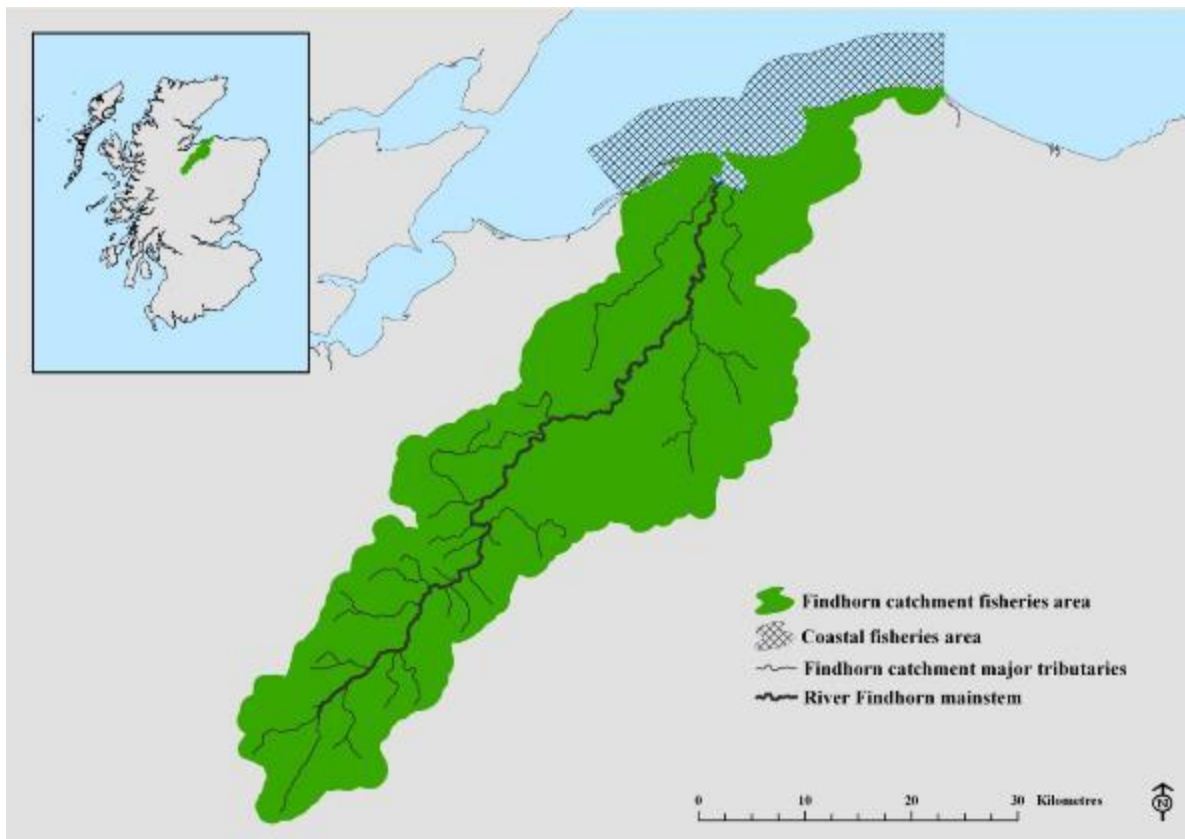


Figure 1: River Findhorn catchment and coastal district.

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/>

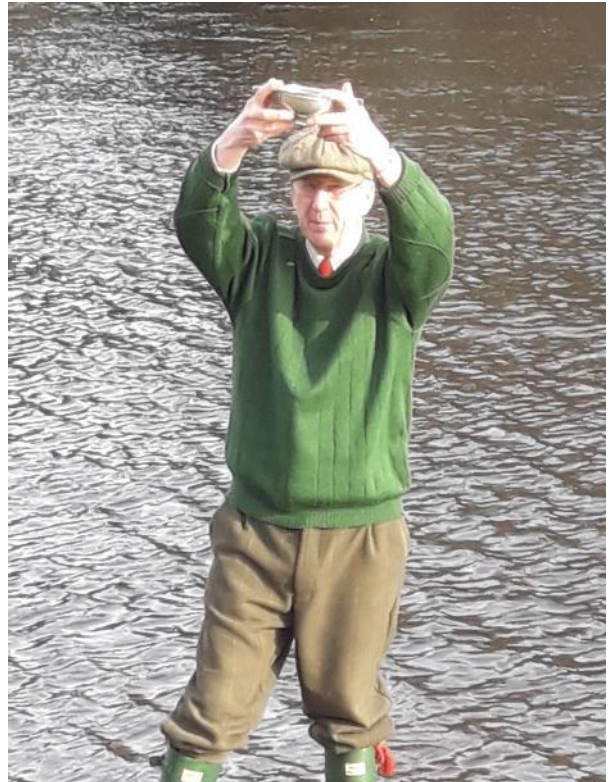
THE FISHERY

Salmon and Sea Trout Catches 2022

Covid-19 restrictions were fully lifted this year allowing Forres Angling Association to organize the traditional opening ceremony at the Stoney Pool.

Brandon Hutchison (Forres AA) caught first salmon of the season. Findhorn anglers continued to enjoy a promising start to the season with good catches of spring salmon reported and the majority of these salmon were of good size and in good condition. However, the hot and dry summer of 2022, lead to low flows which curtailed catches significantly. A small improvement was reported during September but overall, the salmon and grilse catch was low for the season.

Sea trout catches were also low within the river, but anglers reported slightly better catches within the Bay.



Campbell Ross offering a dram of Ben Romach malt whisky to the Findhorn as part of the opening ceremony on the 11th February 2022 at the the Stoney Pool.

Salmon and sea trout catches are summarized in Figures 2 and 3, respectively, and more detailed beat by beat information is provided in Appendix 1. Note that the catch for 2018 to 2022 is data submitted to the Findhorn Board while data from 1952 to 2017 is from official returns published by Scottish Government.

The salmon and grilse catch for 2022 was 853 and the sea trout catch was 131, (Figures 2 and 3). In general, the angling season was poor with the long hot summer reducing flows and angling effort.

Release rates for spring salmon was 100% in keeping with Scottish Government recommendations. The overall release rate for salmon and grilse was 92%. Sea trout release rates were 87%.

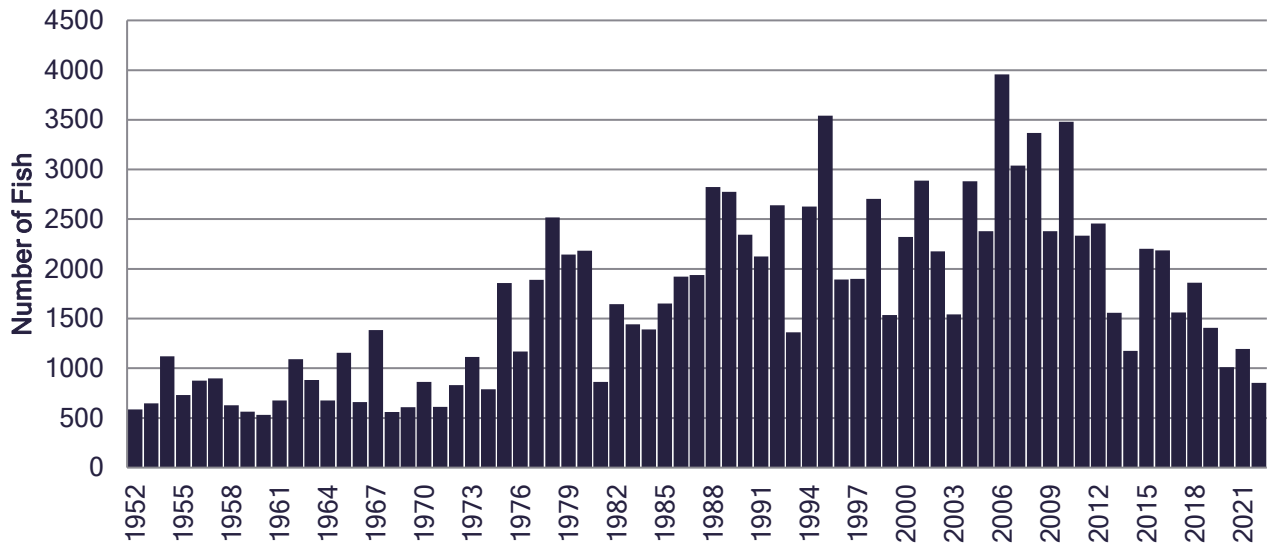


Figure 2: Salmon and grilse rod catch for the River Findhorn from 1952 to 2022.

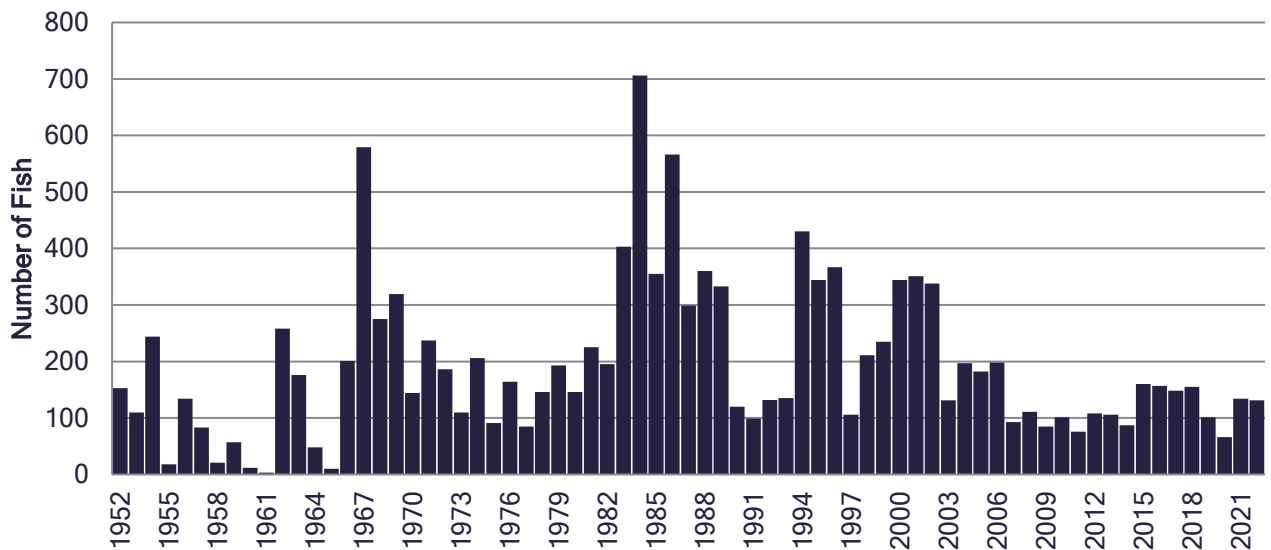


Figure 3: Sea trout rod catch for the River Findhorn from 1952 to 2022.

Further details on the catch are available in Appendix 1. 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 August 2022.

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 (fish under 4lbs) 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.

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 over 9lbs, 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 or beach, 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 [Wild Salmon Strategy](#) for Scotland in January 2022. The strategy was launched by Mairi Gougeon MSP, Cabinet Secretary for Rural Affairs and Islands and 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.

Marine Scotland (MS) continued to develop a conservation limits model for Scottish rivers throughout 2022.

Assessing the conservation status of salmon is a straightforward idea as essentially it is determining whether the number of salmon spawning is above a critical threshold level. However, managing the uncertainties in assessing this leads to some complexity. The International Council for the Exploration of the Sea ([ICES](#)) and countries reporting to North Atlantic Salmon Conservation Organization ([NASCO](#)) have developed pragmatic approaches for applying conservation limits and these have been drawn on to construct the system for Scotland. The approach requires some knowledge of first, actual levels of spawning and second, 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 (attainment of CL). Rivers are then graded 1 – 3 and local management actions applied as detailed below. More details on the approach and results for Scottish rivers can be found [here](#).

Grade 1 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 for the future must be prepared.

Grade 2 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.

Grade 3 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 in Grade 1 for 2023

National Electrofishing Program for Scotland (NEPS)

The conservation limits model approach continues to evolve and to further improve the approach a [National Electrofishing Survey program for Scotland \(NEPS\)](#) to assess the juvenile fish stocks in rivers was initiated by Marine Scotland and funded by Scottish Government. Using randomly selected sampling sites and appropriate statistical analysis, it is possible to estimate the number of fish in a particular section of a river, or by upscaling, 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. The FNLRT completed surveys in 2018, 2019 and 2021 for this initiative. Figure 4 indicates that in 2018 the overall juvenile salmon density for the FNL area was Grade 1, however in the 2019 and 2021 surveys this dropped to Grade 2.

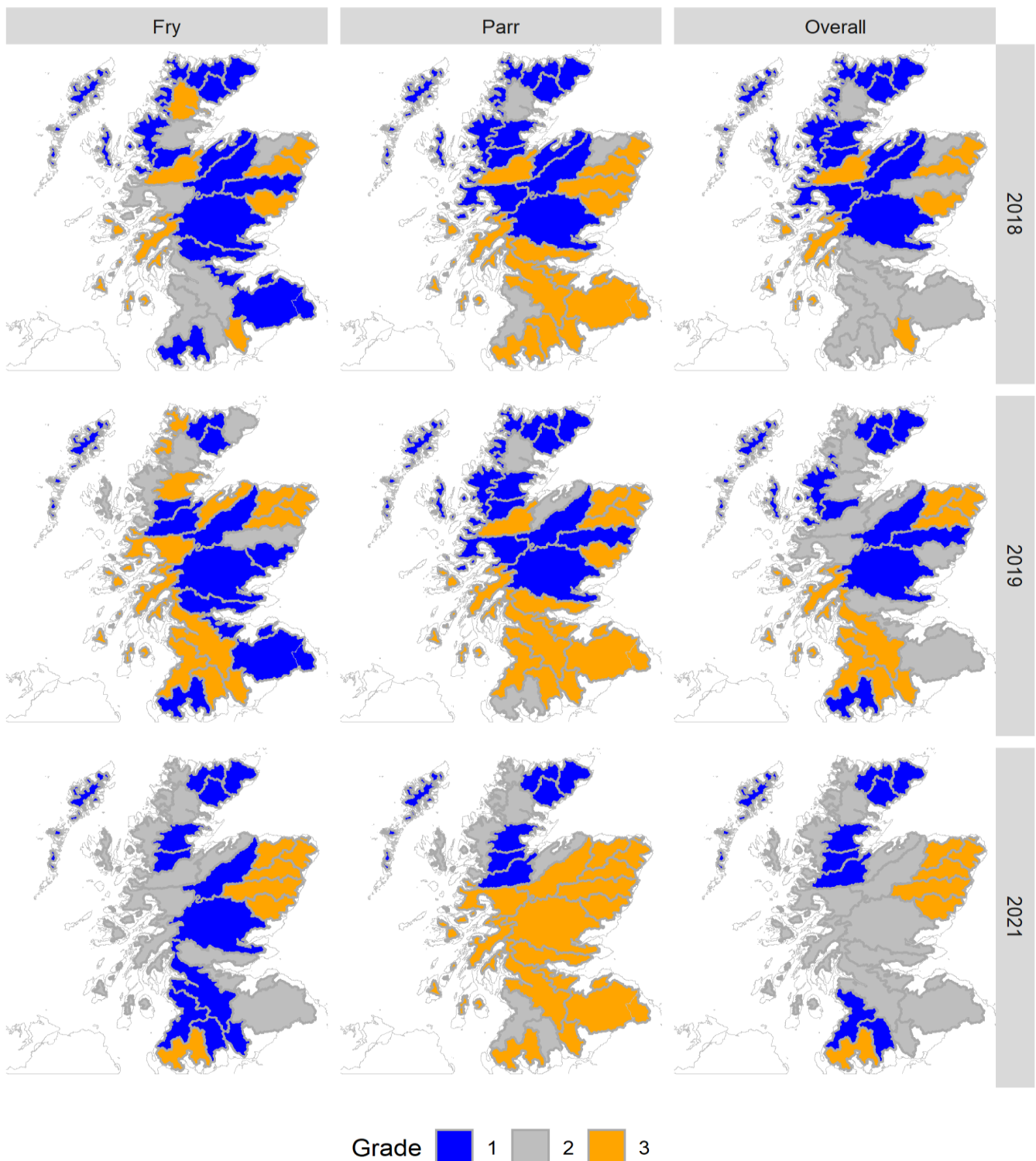


Figure 4: NEPS survey results for Scotland 2018 to 2021. from [Malcolm et al 2023](#).

The 2018, 2019 and 2021 reports are available by [clicking here](#). The results can also be reviewed using the [ShinyApp](#). Sadly the 2022 NEPS survey was cancelled.

RIVER MANAGEMENT

Poaching Control

Poaching or illegal fishing is a wildlife crime and despite the ban on the sale of wild salmonids it still occurs on our rivers. It occurs in a range of forms such as illegal netting to fishing without permits. To control and deter poachers Sean Mclean and Alister Taylor, the bailiff team, conduct regular patrols throughout the year. Poaching can occur at any time, so the timings of patrols are varied throughout the week and during the day. The entire river including the bay and coast is covered. The bailiffing staff have a good range of equipment, including a thermal camera and they also utilise the [Trackplot](#) system if patrolling individually. Both Sean and Alister completed a handcuff and restraint course before the end of the season with bailiffs from the River Spey. The course also covered dealing with a range of aggressive behaviours. It was a very informative course, well presented by an ex- Met Policeman, from Streetwise Training LTD.

Additional Patrols are also carried out along the river Lossie which are funded by the Lossie Fishery Board and we provided training and advice for the River Nairn Bailiff, Russ Baker.

The Findhorn enjoyed good numbers of visiting anglers throughout the early season but the hot dry conditions throughout the summer reduced the number of anglers and fish caught considerably both on the Forres Association water and throughout the rest of the river.

Maintaining regular patrols and keeping a presence on the river ensured that poaching was kept under control. During 2022 there were 30 fishing with "no" ticket incidents and 14 more serious poaching incidents.

During June two prolific long-term poachers were caught using the thermal imaging camera at the Railway Pool in the lower Findhorn. Police Scotland were called, and the poachers were arrested on site with illegally caught grilse in their possession. The case was submitted to the Procurator Fiscal and the two culprits were let off with a warning. This was extremely disappointing for our bailiffs and the two Police Constables who made the arrests since it has taken many years of observation and surveillance to catch the perpetrators. It is seldom that we get a clear-cut arrest with all relevant evidence, and it sends a poor

message back to wildlife criminals that even when they are caught red-handed they can get off with it! The Findhorn Board have decided to express their disappointment with the case and have written to the lead Procurator Fiscal to express their concern at the poor level of support provided to both the bailiffs and the Police Constables regarding this case.

in September three young males were reported to the bailiffs in Findhorn Bay carrying a fishing rod but not fishing. At first look this may seem innocuous, but the three individuals were charged in 2021 after a poaching incident at the Broom Pool. The group picked up a lift to Forres where they were dropped off at Mackenzie & Cruickshank's and proceeded to the river intending to fish. Sean and Ali stopped and asked them their intentions and whether they had a permit. No fishing permit was produced and one of the group became aggressive towards the bailiffs when they were informed that they would be charged with a poaching offence if they continued.

Thankfully, they decided not to go to the river after all, and after a further chat with them an apology for the threatening behaviour was received. No further incidents involving these three young men occurred on the Findhorn, but they had been caught several times on the Spey for poaching incidents and assaulting a ghillie during 2022.

Trout fishing is causing concern in some areas when anglers may be fishing without a ticket or permission and also targeting salmon. A number of incidents of this kind were attended throughout 2022 and the anglers were advised appropriately.

Social media sites have proved to be a good source of information as some poachers post their catches online and, while this can have limited value in terms of evidence, it can be a useful tool for monitoring hotspots. A WhatsApp group may be created to pass on information about offenders and sightings with bailiffs from neighbouring rivers. Any information collected could be passed on to Police Scotland through the normal channels. The bailiffs also report any suspicious vehicles or activities to Police Scotland to feed into the wider picture of rural crime.

Bob Laughton (FNLRT Director) continued to chair the Moray Firth Riverwatch group which met in October and allowed bailiffs and staff from the River Deveron to the River Conon to meet with Police Scotland Wildlife officers and discuss poaching and other wildlife crime activities. He also attended the Northeast Partners against Rural Crime (PARC) and Partnership against Wildlife Crime (PAW) meetings.

Control of illegal fishing is still an important part of the bailiff's duties however, to reflect the changing requirements for river management, their roles were reviewed in 2021 and updated to include, fisheries surveys, smolt trapping, compiling catch data, predator monitoring and control, dealing with river works, as well as education activities.

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

Findhorn Bailiffs:

Sean Mclean 07920 483081

Alister Taylor 07387 302649

Email: seanmclean268@btinternet.com

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. In Findhorn Bay counts are compiled by



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

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 and keepers who joined the bailiffs to complete the counts.

Counts were completed in February, March, May and November, snowy weather prevented the December count (Figure 5 and Figure 6).

Figure 5 indicates that goosanders and mergansers were present at all four of the counts. Numbers vary yearly and seasonally but during 2022 the numbers of goosanders remained low during the year ranging from 6 to 12 birds. Mergansers were observed in all three counts with numbers ranging from 6 to 30 birds. Goosander counts were similar to 2021 while merganser counts had dropped slightly.

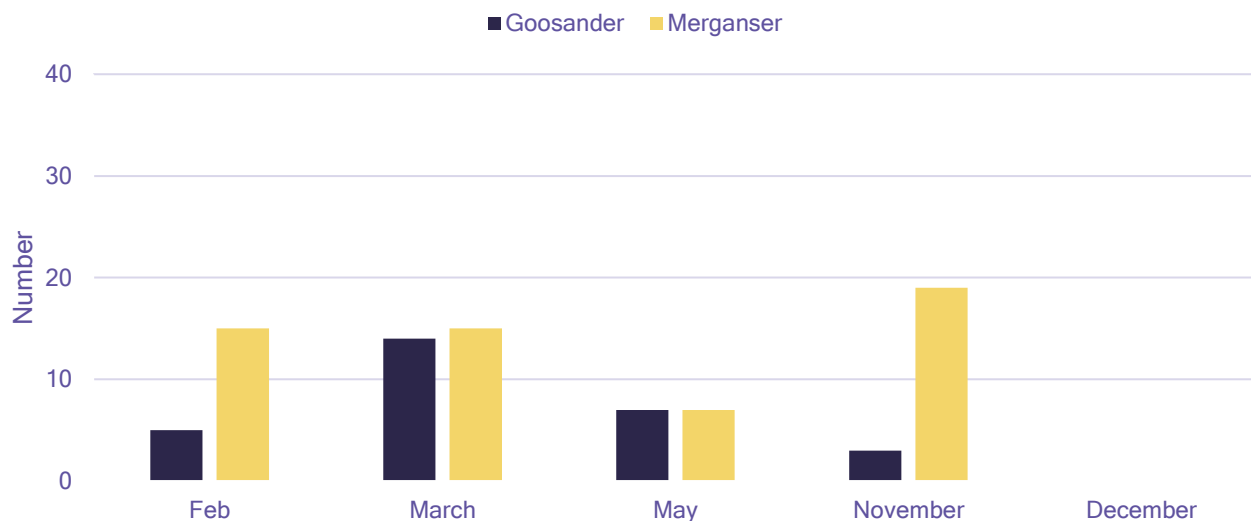


Figure 5: Goosander and Merganser counts from the River Findhorn during 2022.

Goosanders generally migrate into Findhorn Bay during early winter then begin to pair up in the spring as they 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 2022 with goosander numbers peaking in March (Figure 5) and then declining during the May and November counts. In general, numbers of goosanders were low throughout 2022 with the maximum count of 14 achieved in March.

Mergansers numbers were higher than goosanders in all counts except the May count. The maximum count of 19 mergansers was recorded in November. The pattern was similar with birds appearing in winter and spring and then a decline in May as males left the river.

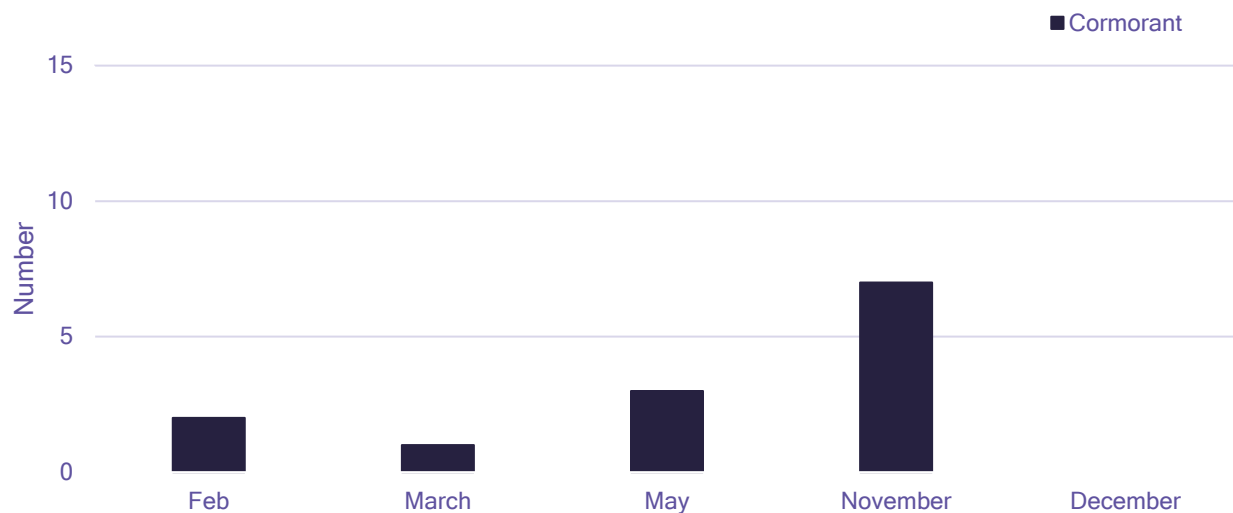


Figure 6: Cormorant counts from the mainstem River Findhorn during 2022.

Figure 6 shows cormorant counts for 2022, they were present in four counts and ranged from 1 to 7 birds. The majority of the cormorants are present in Findhorn Bay, but they also range upriver regularly.

Based on these counts and those from neighbouring rivers a joint licence 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 licence, from 1st October 2022 to 31st May 2023. The licence includes 2 goosander, 5 mergansers and 2 cormorants for the Findhorn and Lossie and control is underway. 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. Counts and scaring tactics will continue in 2023.

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

- Seal Control

The [Moray Firth Seal Management Plan](#) was implemented in 2005 with the aim of protecting Salmon and Sea Trout stocks and maintaining the conservation status of the Dornoch Firth Special Protection Area

(SPA) for Common seals. The Plan covered both Grey and Common seals, although no Common seals have been licensed to be shot for the last five years. This innovative Plan guided the licensing of Fishery Boards (and netting stations) around the Moray Firth, to control seal predation on salmonids along 16 rivers and, initially 5 netting stations, around the Moray Firth.

The scheme introduced the novel approach of managing seals and salmonids over a large geographical area, the training of Nominated Marksmen to an agreed standard and the accurate reporting of all seals shot. The Findhorn DSFB has been part of the initiative since its inception, and we are grateful to Roger Knight (Spey Fishery Board) for coordinating license applications since 2013.

In May 2020, Marine Scotland announced that it intended to lay amendments before the Scottish Parliament with regard to seal licensing in the Animals and Wildlife Bill. These would amend 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. In so doing, these amendments would align 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 Act requires that nations exporting commercial fish and fish products to the United States apply 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 March 2021, Scotland would not be able to export a range of seafood products to the United States with effect from January 2022. The Animals & Wildlife (Penalties, Protections and Powers) (Scotland) Bill 2020 was passed by the Scottish Parliament and became an Act on 21st July 2020. It became effective from 1st February 2021. 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). In January 2021, the SFB Director, Roger Knight, and CEO of Fisheries Management Scotland, Dr Alan Wells, met with Marine Scotland Licensing & Operations Team (MSLOT) to discuss how a revised licence application process could address the future management of seals for conservation purposes, rather than to prevent serious damage to fisheries. A subsequent meeting in February explained the new application process, which requires more information than was previously required. The SFB subsequently completed the revised application for seal licences, which was submitted on the 31st of March 2021, on behalf of the Spey, Deveron, Ness and Kyle of Sutherland District Salmon Fishery Boards, we decided not to apply for the Findhorn and maintained a watching brief.

The applications were rejected by MSLOT on several grounds including Category 1 Rivers already have a sustainable salmon stock and a lack of reporting of seal incursions and predation events within the river. MSLOT also believe that there are other ways of conserving salmon, without the need to control seals.

However, subsequent meetings with MSLOT developed a revised application process for 2022 which has been issued and we completed this application process along with the other Scottish rivers. Only one Scottish salmon river received a seal control licence in 2022. Several rivers appealed against the decision, but these were not upheld. The reasons for this decision are similar to those above. So, it seems increasingly unlikely that a licence to control seals where they have specifically moved into rivers and are affecting the salmon and sea trout stocks is going to be granted in the future.

- Mink Control



Elise Cox (SISI) continues to maintain the mink monitoring raft and trap network across the area with the help of dedicated volunteers. Five mink were caught and dispatched during 2022 in the Findhorn, Nairn and Lossie area, one on the coast and four on the Lossie. Any sightings of a mink or mink tracks can be reported to Elise on **07493 272898**, or elisecox@fnlft.onmicrosoft.com.

Catchment Developments and River Works

An essential part of the Trust and bailiffs duties is to review, comment and inspect river works to ensure that fish populations and habitats are not being blocked or damaged. Three physical works were completed within the Findhorn during 2022. These included repairs to the Dalmagarry Railbridge, repairs to the Allt na Frith (Freeburn) bridge and replacement of a bridge near Inverbrough for forestry access. One forestry consultation was also commented on.

After several years of discussions works started on the new bridge access to the Forres Waste-Water Treatment Works. The new bridge will be built over the Mosset to the north of the existing rail crossing in Forres. Initial consultations regarding the removal of silt from Sanquhar Pond in Forres were also attended.

Three river works were attended on the Muckle Burn, Scottish Water upgrading of water-pipes at Moyness, repairs to the rail bridge at Brodie (see photos opposite) and fallen trees creating an erosion problem near Dyke. Discussions with SEPA and landowners regarding the riverbank works at Achavraat and Banarach Bridge are ongoing.

- Wind Farms

Clashgour and Rothes III: Both wind farm developments sites were granted planning permission in 2022. We are working with the developers for Clashgour to develop a water and fish monitoring program.



The Brodie Railway bridge repair required a portadam to be installed and water pumps to dry out the site prior to in river works.



Prior the site being pumped dry a fish rescue is carried out using electrofishing. All fish captured are released to a nearby area outwith the works area.



Concrete mattress laid below the bridge to strengthen and stabilize the foundations. Substrate was infilled on top to provide a natural riverbed structure and complete repairs.



Bridge repairs completed.



We are always delighted to see contractors develop innovative approaches to protect our rivers during riverworks, here large wooden sleepers are being used to minimize disturbance to the riverbed while preparing to install the new bridge crossing the Allt Bruachaig near Inverbrough. (Photo Sean Mclean)

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 - Mainstem

With no NEPS survey, electrofishing was focused on the mainstem of the Findhorn during 2022. The survey commenced on the 9th August and 19 sites were completed between Findhorn Bay and Tomatin. The low flow conditions during the summer allowed the deeper and faster flowing areas to be accessed more readily. However, the low flows and high air temperatures led to river temperatures approaching 20°C on a few occasions making us reconsider whether it was suitable to carry out electrofishing. Initial findings are presented below in Figures 7 and 8.

Figure 7: Salmon catch per unit effort (fish.min⁻¹)

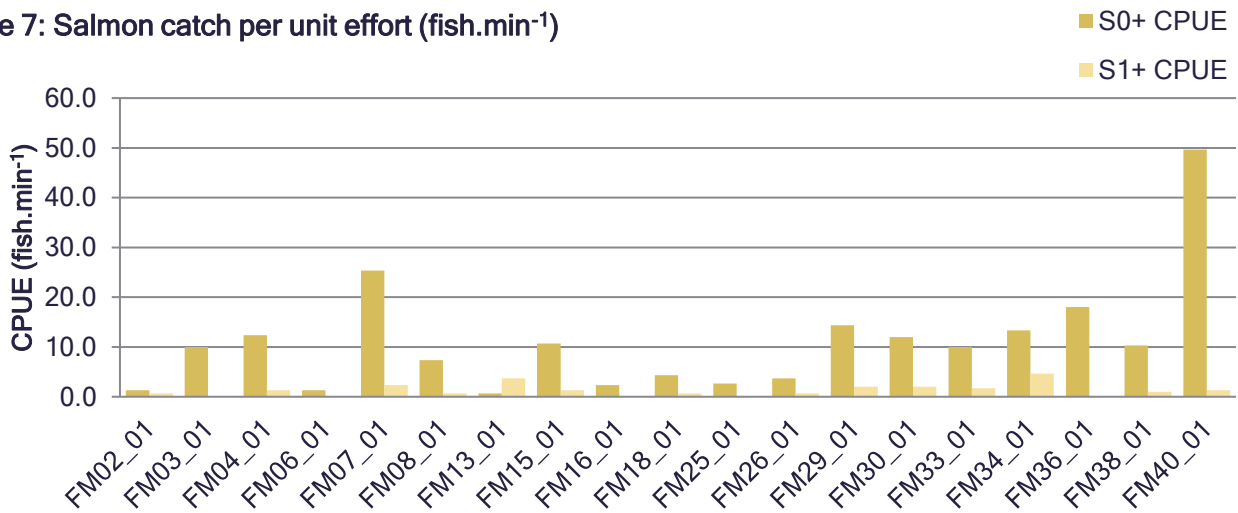
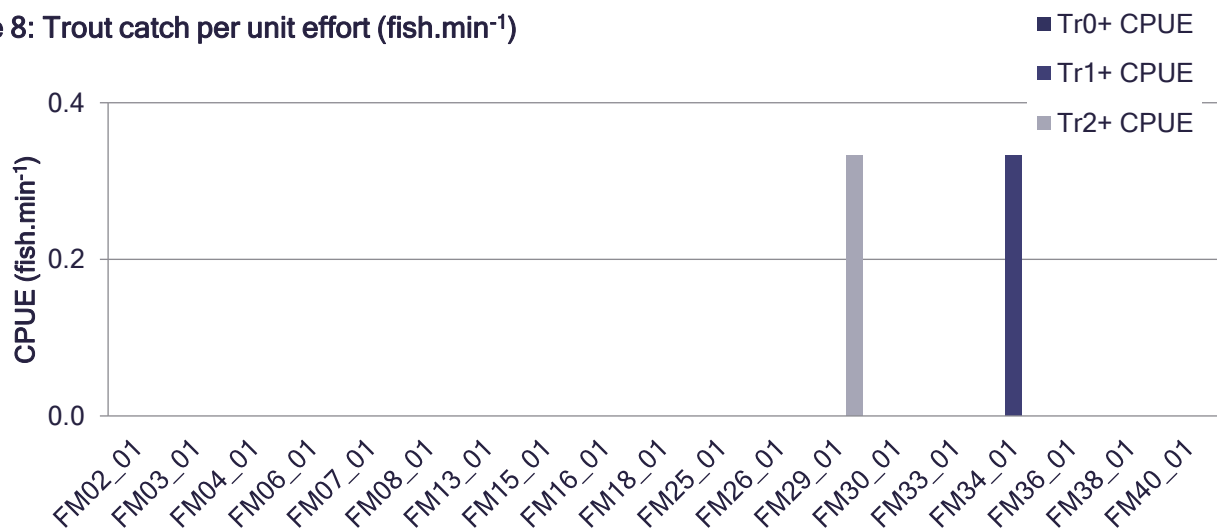


Figure 8: Trout catch per unit effort (fish.min⁻¹)



Salmon 0+ were found at all 19 sites (Figure 7) with a mean CPUE of 11.4fish.min⁻¹, salmon 1++ were present at 13 sites with a mean CPUE of 1.3fish.min⁻¹. Trout were present at only two sites (Figure 8), eels at five sites and minnows at two sites.

This is the first time we have carried out a mainstem survey and so there is no previous data to compare with. However, it does indicate the mainstem is an important rearing area for juvenile salmon. In particular the site at Tomatin (FM40_01) produced very high numbers. Similar surveys have been carried out on the mainstem of the Spey and the results for the Findhorn are very similar, indicating that many areas of the mainstem producing good numbers of juvenile salmon but few juvenile trout.

Fish Disease Outbreak

Reports of dead and poorly salmon began filtering through in early May. Reports increased during June and with information from our own patrols and discussions with proprietors and anglers, our estimate of losses was between 300 to 400 fish although it was difficult to put an accurate figure on it.



Salmon with advanced fungal infections on the Divie, June 2022.

The fish all showed white patches of the fungus *Saprolegnia* which occurs naturally within the river. Outbreaks have occurred before, 2017 was the last one, and these outbreaks tend to occur during late



Marine Scotland Fish Health Inspectors sampling salmon on the Divie, June 2022 (photo Sean Mclean)

April and early May, although the *Saprolegnia* fungus is present in the river all year round. This outbreak was a little different with fish reported from the full length of the mainstem as far up as Coignafearn, whereas in previous outbreaks have been limited to Cawdor downstream.

Low flows, coupled with higher water temperatures seems to be a trigger, although river temperatures this year were not higher

than normal. Low flows led to spring salmon accumulating in the pools and without suitable water flows to continue their migrations they may get stressed and so infection can spread quickly, particularly if there is any damage to the fish, such as scale loss. Spring salmon also have quite loose scales so the fungus can get underneath them more easily than fish entering the river later in the year.

It is also possible that the fish have other infections which are affecting their health making them more susceptible to the fungal infection and with considerable help we managed to get five live infected salmon from the River Divie for sampling by the Marine Scotland Science Fish Inspectors. A swollen vent indicative of Red Vent Syndrome (RVS) was observed on some of the salmon and the nematode parasite, *Anisakis sp*, was also found in several fish which is a cause of the condition. Gill Pox Virus (SGVP) was found in all the five sampled salmon. In addition, an unusual parasite, *Hepatoxylon trichiurid*, was found which is not common in salmon and more prevalent in tuna and swordfish! However, *Saprolegnia* infection appears to have been the main cause of death. A full report on the findings for the River Divie salmon can be downloaded [here](#).

An additional 26 dead salmon were also examined from several fishing beats along the Findhorn by Board and Trust staff. These were visually examined, measured, weighed, sex identified, scales collected and photographed. Photographs of a further 22 diseased or dead salmon were also received from anglers, a canoeist and estate staff. Examinations of the 48 salmon indicated that 39 had significant *Saprolegnia* infections, five were too badly decayed to make a determination, three had red vent syndrome and one may have had Red Skin Disease.

Where the sex could be identified from 22 of the 26 sampled fish, 16 were female (72%) indicating a high proportion of spring salmon are female. The loss of these female spring salmon will mean a considerable loss of eggs during spawning.

Scales were also obtained from 31 fish and added to the Marine Scotland Adult Scale sampling Programme and the head was retained from 14 salmon for further analysis of otoliths and eyes by Dr Anna Sturrock, Essex University.

Thankfully, rain appeared leading to a welcome rise in flows in late June and numbers of infected fish declined sharply afterwards. Although the Fish Inspectors report and our own inspections indicated additional infections from RSD and RVS may be present within the salmon it remains unclear whether this is making them more susceptible to infections from *Saprolegnia*. It is likely that the recent trend towards

warm, dry, spring weather leading to low flow conditions will also contribute to increased outbreaks of infection. Salmon require cold water and also changes in water levels to facilitate migration upstream. With warmer water temperature and a lack of migration cues, salmon will start to congregate in pools, become stressed and be more vulnerable to infections.

My thanks to the proprietors, anglers and canoeists who have alerted us to this problem and retained salmon for sampling and sent in pictures. We are particular grateful to Ewen Manson (Logie) for his help in capturing salmon on the Divie and to the Marine Scotland Fish Inspectors for their prompt response and help.

Reporting Diseased Fish

If you suspect a salmon or trout you have caught or found is infected or appears to be in poor 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 fish,**

Note location and time and any observations on behaviour,

Collect scales, length, weight,

Photograph each side of the fish and the underside.

Contact:

Bob Laughton (FNLRT): 07887 535986

Sean Mclean (Head Bailiff) 07920 483081

or

Use the Fisheries Management Scotland App

<https://fms.scot/fish-health-and-disease/>

Scale Collection

Scales from individual adult salmon provides information on the length weight, sex and age of the fish and feeds directly into the assessment of conservation status of Scottish salmon stocks. Additional information on fish disease, growth and genetic information can also be obtained.

Marine Scotland is working closely with Fisheries Management Scotland and Fisheries Trusts and Boards to develop a national adult salmon sampling program across Scotland. The program will obtain valuable data on salmon entering Scottish rivers that can then be used in stock assessments.

The Findhorn joined the program in 2022 and scales were collected from salmon shortly after they entered the river from the sea, which included the Forres AA, Darnaway, Altyre and Logie fisheries. Data on date of capture, location, length, weight, sex, condition, will be collected along with a sample of scales. The scales were stored in a paper packet for reading by trained staff at the Marine Scotland Freshwater Lab at Faskally. Photographs of the salmon were also collected where possible.

The sampling was undertaken by the bailiffs, Sean McLean and Alister Taylor and took place between June and August. The dry summer and low flows did not help the collection of scales since very few salmon and grilse were caught during the sampling periods. However, seven samples were collected and submitted for analysis. In addition, the scale samples collected from the diseased salmon were also submitted to the project. Results should be available in 2023.

Pollution Incidents

Thankfully, no pollution incidents were reported during 2022.

POLLUTION INCIDENTS

Should be reported to SEPA through the Pollution Hotline

0800 80 70 60

Invasive Non-Native Plant Control

The control of non-native plants continued along the river during 2022 supported through the [Scottish Invasive Species Initiative](#) (SISI). Once again, our approach was to work from the uppermost area of infestation downstream and we concentrated on repeating treatment in the areas tackled in previous years.

Coulmony/Daltulich Bridge is the upper most limit for Giant Hogweed (GH) and treatments commenced there from June onwards. Although GH is reduced to individual plants from Coulmony to Mundole, a pocket of 20+ plants was spotted at the upper end of the Scum Pool in 2020 and treated. A good reduction in the number of plants was observed this year when the site was re-treated. This is the upper limit of GH on the Findhorn and demonstrates the need to revisit areas. Further checks will be maintained in 2022.

GH treatment continued through Logie, Darnaway, Altyre and Mundole downstream as far as the A96 bridge. Downstream from the A96 GH treatment is also underway led by Wild Things who are beginning to make in-roads, particularly on the right bank. We are also grateful for the continuing support from Jenny Davidson (Mundole Farm), Dalvey estate and Moray Estates. Local white water rafting specialists "[Ace Adventure](#)" also provide transport through the gorge section of the Findhorn to treat GH and Japanese knotweed.

During 2021 the Mosset Burn was treated from Rafford and Altyre all the way to the confluence with Findhorn Bay and GH is showing a significant decline in density and we were encouraged to see no GH present in one of the upper treatment areas this year. Treatment of GH was continued along the Muckle Burn from Earlsmill to Dyke.

Japanese knotweed treatment has made satisfactory progress with the majority of JK now treated between Daltulich to Mundole. We are using a combination of techniques with stem injection proving very effective but for some areas foliar spraying is still the better option. Treatments are carried out later in the year, typically from late August through to early October.



SISI Project Officer Elise Cox (right) with volunteer Louise ready to tackle Giant Hogweed at Coulmony.

We are grateful to the funders Heritage Lottery and NatureScot , to all the estate owners, SISI staff and volunteers for their continued support throughout 2022.

The Findhorn Watershed Initiative



Towards the end of 2022 the FNLRT launched the Findhorn Watershed Initiative (FWI) which is a long term, integrated, landscape-scale vision for nature restoration across 1300km² of the Findhorn catchment. From the source to the sea of the River Findhorn, the aim is to foster a broad range of ecological, social, cultural, and economic benefits.

The Findhorn Watershed Initiative seeks to bring together communities, landowners, businesses, farmers, foresters, land managers, local authorities, and educational institutions to work in collaboration at nature's scale to sequester carbon, restore habitat, and mitigate the impacts of the twin crises of climate change and biodiversity loss for future generations.

The project has a strong initial focus on the establishment of a network of riparian woodland along the banks of the River Findhorn and its tributaries, as well as the implementation of peatland restoration works, to support the restoration of wild Atlantic Salmon populations.

The Findhorn Watershed Initiative is instigated and led by the Findhorn, Nairn, and Lossie Rivers Trust (FNLRT) in line with the Trust's 2021-26 Management Plan. It builds on the organisation's experience, expertise, and reputation as a trusted local environmental conservation intermediary, and the success of the 'SISI' invasive non-native species control project. Oversight for the initiative will be provided by the Trust Director, FNLRT Board, and FWI Steering group.

FNLRT have secured £970,000 of funding from the Scottish Government Climate Change Division's 'Just Transition Fund' to be allocated to the project over next 2 years. This grant will resource the expansion of the Trust's staff capacity in order to fulfil the project ambitions, as well as providing a seed fund to support and accelerate riparian woodland creation. Additional funds from the NatureScot Nature Restoration Fund and the LNER Customer and Community Fund have also been secured.

Follow the Initiative progress during 2023 by visiting our website: www.findhornwatershed.com

Education and Publicity

Schools Go To Fish

The Covid-19 pandemic continued to disrupt delivery of the Schools Go To Fish project, with no schools participating in 2022. However, we are optimistic that we will be able to re-commence activities in 2023.

Updates on the activities of the Board and the Trust can be found on www.fnlft.org.uk and [Facebook](#).

Acknowledgements

The Board and Trust are extremely grateful for the continuing support of the proprietors and anglers throughout 2022. We are also grateful for the support from the following organisations, Fisheries Management Scotland, Marine Scotland, Scottish Fisheries Co-ordination Centre, NatureScot, and Scottish Environmental Protection Agency.

Thanks also to James Symonds (SISI), Vicky Hilton (SISI), Jane Hamilton (SISI), Elis Cox (SISI), Steve Turner, Jenny Davidson, Groves Forestry and Wild Things for their considerable help with the treatment of Giant Hogweed and Japanese knotweed. Thanks all the volunteers who look after mink rafts and traps.

Thanks to Forres Angling Association, Jim Mackay and Campbell Ross for supplying scale samples for the National Scale Sampling Program. Special thanks to Ewen Manson (Logie Estate), Marine Scotland Fish Health Inspectors who helped collect samples from diseased salmon, and to all the anglers and estate staff who reported diseased fish.

A special thanks must go to Elle Adams (Living Alive) for all her help and enthusiasm in raising funds and establishing the Findhorn Watershed Initiative. We look forward to developing the initiative throughout 2023 and beyond.



APPENDIX 1: CATCH DATA FOR EACH ESTATE/BEAT 2022.

LOCATION	River Findhorn: Rod Catch						2022				
	SALMON RETAINED	SALMON RELEASED	RELEASED	GRILSE RETAINED	GRILSE RELEASED	RELEASED	OVERALL PERCENT RELEASED	S TROUT RETAINED	S TROUT RELEASED	RELEASED	
	No	No	%	No	No	%	%	No	No	%	
Coignafearn											
Daltomich											
Glenmazeran											
Dalmigavie											
East Clune		7	100%		1	100%	100%				
Glen Kirk		8	100%		6	100%	100%				
Strathdearn (Banchor)		9	100%	2		0%	82%				
Dalmigarry (Morlie & Corrievorrie)Da		2	100%		5	100%	100%				
Glen Kyllachy		2	100%				100%				
Findhorn Bridge(Old Clune)											
Kyllachy		5	100%		2	100%	100%				
Corrybrough											
Tomatin	2	23	92%	1	17	94%	93%				
Balnespick		8	100%	4		0%	67%				
Moy (Upper)											
Moy (Pollochaig)											
Drynachan	3	33	92%	2	50	96%	94%		4	100%	
Banchor	3	17	85%	1	1	50%	82%				
Lethen		53	100%	3	47	94%	97%		3	100%	
Glenferness	1	8	89%	6	17	74%	78%		4	100%	
Coulmony	1	7	88%	1	10	91%	89%				
Logie		12	100%		37	100%	100%		6	100%	
Dunphail					5	100%	100%				
Moray Estates		74	100%	8	38	83%	93%		18	100%	
Altyre Estate		31	100%	1	13	93%	98%		5	100%	
Forres AA	4	74	95%	21	167	89%	91%	17	74	81%	
TOTAL	14	373	96%	50	416	89%	92%	17	114	87%	
Salmon & Grilse	2022		853				Sea Trout	131			

Notes: Data submitted to the Findhorn Board up to 28th February 2023.