



## **Cromarty Firth Fishery Board Annual Report 2017/18 year ending May 2018**

### ***Catch and counter data***

Coastal bag nets in the Cromarty region did not operate in 2017 because of Scottish Government salmon conservation regulation.

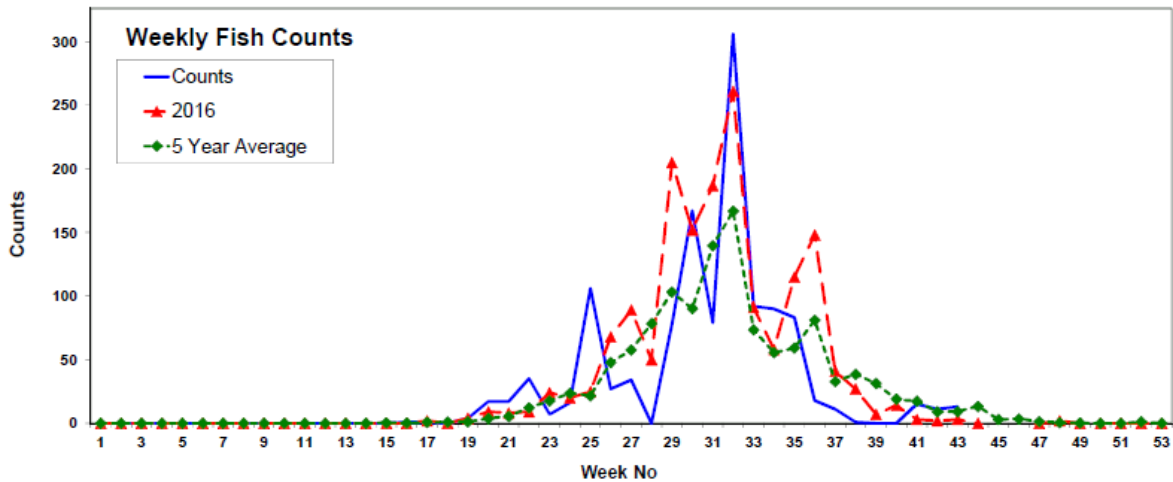
The net and coble fishery took no salmon, 13 grilse and no sea trout. The total salmon and grilse catch of 13 compares with the 2016 catch of 35 and the 5-year average of 39.

The rod fishery on the Alness reported a total catch of 320 salmon and grilse with 86% of these being returned. This compares with the 2016 catch of 256 and a 5-year average of 304.

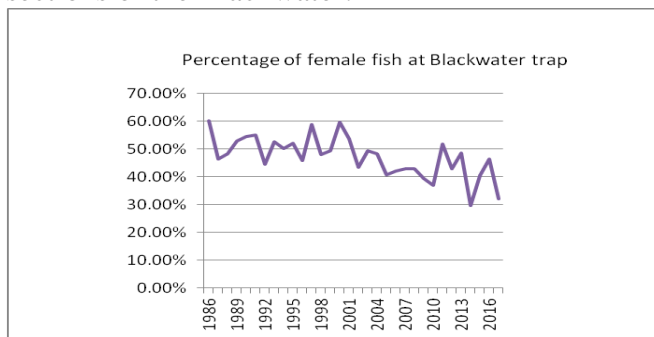
The rod fishery on the Conon reported 1,060 salmon and grilse with 85% of these returned. This compares with the 2016 catch of 1,077 and a 5-year average of 1,085

## *Fish counts at SSE Dams*

The 2017 season began well with another strong spring run, but as in 2016 later running grilse were very scarce. Stocks of fish upstream of Tor Achilty Dam were higher than the 5yr average of 1198, with 1229 counted through the dam. This is partly due to the increasing Meig stock with 478 counted through Meig dam compared with a five year average of 337. This increase is entirely due to wild spawning some of which is now taking place upstream of the restored fish ladder at Corriefeol. The strengthening spring stock can be seen below in the fish count at Tor Achilty Dam, with separate spring and summer peaks apparent in this year's count.



The situation on the Blackwater which is dominated by a summer grilse stock linked to the hatchery operation differed from the increasing stocks on Meig and Bran. On the Blackwater (where a trap has been used to catch the entire run of the Upper Blackwater for the last fifty years) the count was down to 750 compared with a 10yr average of 1063. This decline was due to the lack of late running grilse. Each fish at the trap was examined, weighed, measured and scaled, giving a unique insight into stock structure. In 2017 for the second time in the last 4 years we have found that the decline in numbers is largely due to the absence of larger female grilse, which used to be the main source of eggs for the Blackwater. In 2017 of the 750 fish returning to the Blackwater only 240 were female with 90 of these being multi-sea winter fish. A total of 930,000 eggs were collected, laid down in the hatchery and then stocked as unfed fry into hydro impacted sections of the Blackwater.



## *Bailiffing*

Bailiffs patrolled the rivers and coast of the region throughout the 2017 season. A total of 26 individuals were removed from the rivers for fishing without permission and one was arrested.

We have again had excellent support from Police Scotland with our local Wildlife Crime Officer assisting bailiffs and joining them on some patrols.

## *Pink Salmon*



A total of 3 pink Pacific salmon were caught in the Cromarty region in 2017. On rivers like the Ness and Dee, which have very clear water pink salmon have been observed spawning in numbers. It is still very uncertain what interaction there may be between pink salmon and native species. If they were to become established the presence of large numbers of dying pink salmon in early autumn might increase the risk of fungal infection of salmon and sea trout as they approach spawning time. The juvenile pink salmon hatch in early spring and migrate to sea soon after hatching and so are unlikely to interact with juvenile Atlantic salmon in rivers but may have some interaction with sea trout in estuaries. Some freshly dug redds were reported on the main stem of the Conon and these were excavated and destroyed.

# *Projects / research works*

## *Acoustic smolt tracking project*

Glasgow University recovered acoustic listening stations over the summer of 2107 and analysed the large amount of data collected. A total of 80 smolts were fitted with acoustic tags and were tracked for 8 weeks in May and June 2017 through lochs Meig, Achonnachie and Garve. The mortality in all lochs was high but twice as high in the impounded lochs. The combined mortality through Meig and Achonnachie is very similar to that recorded by our last three years of PIT tagging. This work further emphasises the importance of the issue of downstream smolt passage as the largest factor limiting salmon populations on Meig and Orrin. A report has now been produced by Glasgow University and can be viewed on the Board's website.

[www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk)

## *Meig smolt trap project*

From the PIT and acoustic tracking work carried out in recent years it has become apparent that the losses of salmon smolts through Meig reservoir are limiting the production of the system, with a loss rate of around 70% . The Cromarty Board is working with SSE and Strathconon Estate to find a smolt trapping solution to this problem which will allow smolts to be trapped upstream of the reservoir, transported and then released downstream of the hydro scheme.

Andy Turnpenny, a specialist in designing smolt diversion systems met with SEPA and SSE in Dingwall. We discussed options for the trapping and trucking of smolts from above Loch Meig. Andy recommended a bioacoustic curtain which uses a wall of air bubbles with entrained strobe lighting and sound as a method of guiding smolts towards a trap. This method has been deployed successfully in a number of locations including some very large American rivers. There appeared to be a suitable site upstream of Loch Meig where a diversion curtain could be deployed. A bypass channel containing a trap would have to be constructed. A proposed timetable for the project involved some preparation including; a detailed topographic and bathymetric survey of the river and possible bypass channel, design work for the bypass channel and trap, assessment and preparation of the river bed for the installation of a diversion curtain and application for licences and permissions. This could then be followed by the construction of the channel and trap in late summer 2018 and installation of the diversion array in time for the 2019 smolt run. Survey work was completed in May 2018, confirming the suitability of the site and design work is currently taking place.

## ***Nutrient Research***

Board staff worked with a research team from Glasgow University to complete three weeks of electro-fishing, invertebrate and algal sampling in the summer of 2017. This is part of an ongoing research programme to investigate the effects of restoring the nutrient status of upper catchment streams which have no salmon spawning and dying in them. The 2016 research showed that the addition of small amounts of nutrient, equivalent to that contained in a few dead salmon, increased the productivity of invertebrates in the stream and the weight of fry. Perhaps more importantly the salmon fry in treated streams were produced by more families than in non treated streams where only a few families survived. This increased genetic diversity could be very important to the sustainability of salmon stocks.

The 2017 research followed the survival and growth of last year's fry to the parr stage. Initial analysis shows a significant increase in parr growth in treated streams.

In the spring of 2018 electro-fishing of pre smolts in experimental and control streams took place to investigate the influence on smolt size and age of nutrient restoration.

## ***Riparian works***

Bailiffs completed more tree planting on Forestry Commission land this spring. More than 5,000 native trees were planted along the banks of the Balanagown and Blackwater.

A Black Isle Water Quality Improvement project has been established through the Agri-Environment Climate Scheme. This will reduce diffuse pollution in a number of catchments in the region.

With the help of the Moray Firth Partnership a project proposal has been prepared to set up a rolling programme of native riparian tree planting on private land in the Cromarty Firth region. The proposal includes the construction of a small tree nursery to grow native local stock from seed.

## ***Invasive Species Projects***

The Scottish Invasive Species Initiative is now well underway. With funding from the Heritage Lottery Fund and SNH a four year programme of works has started. Duncan Fraser has been employed over the summer of 2018 and will work with Board staff to deliver the project. This involves the recruitment of a network of volunteers to help remove American mink and invasive non native plants from our rivers.

Bailff's helped with the spraying of giant hogweed in late spring 2018. This ongoing treatment is having a clear impact on the extent and density of giant hogweed in the region.

Volunteers have helped with the clearance of Himalayan balsam across the Cromarty Firth region and are effectively reducing the area of riverbank impacted.

Further details can be viewed on the SISI website and from the Cromarty Board and Trust's twitter feed [@CfFisheries](#)

## ***Cromarty Junior Angling Project***

With a grant from the SSE Fairburn Community Wind Farm Fund the Cromarty Firth Fishery Board delivered another successful Junior Angling Project to local primary schools. The aim of the project was to increase junior angling participation within the Cromarty Firth region and to enhance children's enjoyment and understanding of their local environment.

Following on from the success of the school angling days the Cromarty Firth Junior Angling Club was created so that children could gain more experience and further develop their angling skills. A full report can be downloaded from the Board's website. [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk)



## ***Website***

The website has been further developed this year and has allowed us to make public the activities of the Board and Trust.

The site is at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk) and gives access to important strategic documents such as the Fishery Management and Biosecurity plans as well as regular news updates, monthly reports and dam counts. Frequent updates of day to day activities can be seen on the Board's twitter feed [@CfFisheries](https://twitter.com/CfFisheries)

## ***Proposed programme of works 2018 / 19***

SISI project

Bran PIT tagging of salmon smolts (1000 smolts joint project with MSS /SSE)

Nutrient restoration research (Glasgow University / MSS)

Acoustic tracking of salmon smolts through hydro and non hydro lochs (Glasgow University / SSE)

Schools angling project (Funded by SSE Fairburn Windfarm and support from Trout quest)

Schools education project (10 schools already agreed)

Electro-fishing work for MSS Conservation regulations model

Allt Graad electro-fishing survey (RWE Npower)

Abhainn Na Glasa electro-fishing survey

sawbilled duck counts

Scope construction of temporary smolt trap on River Meig

Tree planting (Forestry Commission Scotland to supply trees and materials)

Develop riparian woodland restoration project with Moray Firth Partnership

Marine Scotland Science PIT tag trawls to attempt to track smolts further out to sea.

Production of Conservation Plan and Fishery Management Plans

Contribution to Wild Fishery Reform Stakeholder Reference and National Strategy Groups

Contribution to Wild Fishery Reform Technical Working Groups

Contribution to Board of Fishery Management Scotland

AST acoustic tracking project support and development



## ***Good governance compliance***

### **Meetings**

The annual meeting of the Board and qualified proprietors was held on 29<sup>th</sup> June 2017 at Torr Achilty. This meeting was publicised by means of invitation to members. No members of the public chose to attend. The minutes from this meeting can be viewed at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk)

The annual public meeting was held on 27<sup>th</sup> October 2017 at Torr Achilty. This meeting was publicised by means of an advert in the Ross-shire Journal which was published on 6<sup>th</sup> October 2017. No members of the public chose to attend. The minutes from this meeting can be viewed at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk)

The triennial election meeting was held on 27<sup>th</sup> October 2017 at Torr Achilty. This meeting was publicised by means of an advert in the Ross-shire Journal which was published on 6<sup>th</sup> October 2017. No members of the public chose to attend. The minutes from this meeting can be viewed at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk)

### **Annual Report and Accounts**

This annual report will be published at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk)

The accounts will be published at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk). The accounts for 2017/18 were published at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk) and a copy sent to Scottish Government.

### **Complaints**

The Board has set up and maintains a complaints procedure which can be viewed at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk). There have been no complaints received to date.

### **Members' interests**

The register of members interests can be viewed at [www.cromarty.dsfb.org.uk](http://www.cromarty.dsfb.org.uk). We will include a standing item at each Board meeting inviting Board members to declare new/amend existing interests and all such instances are recorded in the minutes of these meetings.

# Appendix I



## Category 1 Conservation Policy 2018

**Atlantic Salmon are classified as an endangered species - if they were mammals or birds they would be protected and fishing would be banned.**

The Scottish Government review of the conservation status for the 2018 season has proposed a downgrading many rivers throughout Scotland. There is therefore an overwhelming incentive for all anglers to act responsibly. This will allow the Board and Fishery Management Scotland to bring a clear focus on issues other than angling pressure which are much more important in conserving salmon stocks. Spring fish are sufficiently scarce for it to be foolish to kill any of them. The long term trend of grilse returning from sea appears to be declining in numbers and in size. The sex ratio has changed from being two-thirds female as recently as 2000 to being less than a third female in 2017. (Only half as many female fish as male fish were recorded at the Blackwater trap). Female grilse are now the most endangered stock component and it is the reduction in their numbers that is the critical factor limiting egg deposition.

### ENFORCEMENT

- Proprietors and clubs are urged to make compliance with this policy a condition of their leases and permits

### SALMON UP TO 30<sup>TH</sup> JUNE

- All salmon and grilse to be returned i.e. 100% Catch and Release.

### SALMON AFTER 30<sup>TH</sup> JUNE

- **Whilst it is an aspiration of the Board that 100% catch and release is achieved**, a maximum of two fish (salmon/grilse under 30"/75cm about 10lbs) may be killed per angler during the season. This will allow for any fish which are injured to be kept but we would encourage the careful release of all healthy fish.
- The firth is regarded as a mixed stock fishery due to the other rivers flowing into it, therefore it is categorised as graded 3 which is 100% catch and release and it will be a criminal offence to kill a salmon.
- No female fish should be killed.
- All fish over 30" / 75cm long (about 10lbs) should be released.
- No salmon are to be caught on coastal netting stations for the 2018 season.
- Week ticket guests can retain one fish per week but not more than two in a season.
- Day ticket guests will be permitted to retain one fish per season.

### SEA TROUT

- Sea Trout over 1½lbs are particularly valuable and should be released. A maximum of one sea trout over 1½lbs per angler per week may be killed but it would be preferable to kill only smaller fish, preferably Finnock.

### GENERAL

- All coloured fish must be released
- Use barbless hooks
- Do not use treble hooks
- The board is concerned that fish caught by worming may be difficult to release unharmed. Where worming is permitted only circle hooks should be used
- An angler's first ever fish may be retained if desired
- When releasing fish, try to keep the fish in the water at all times and use knotless mesh landing nets.

### PINK SALMON

Subject to further Government advice any pink salmon caught should be killed and passed to Fishery Board staff for analysis.

### FIN CLIPPED FISH

If an angler catches a fish that has had the adipose fin removed, please retain it and inform Simon McKelvey (07887 845648). It will have been PIT tagged and the information contained in the tag is important to the operation of the Board's stocking programme. The fish simply needs to be scanned to retrieve the tag number. The angler can keep the fish, will be given a £5 reward and, in due course, the life history of the fish.

## Category 3 Conservation Policy 2018

**Atlantic Salmon are classified as an endangered species - if they were mammals or birds they would be protected and fishing would be banned.**

The Scottish Government review of the conservation status for the 2018 season has proposed a downgrading of some of the Cromarty Firth rivers, further restricting fishing for salmon, along with many other rivers throughout Scotland, with the Conon system remaining as Category 1. **The Scottish Government has categorised the rivers Alness, Allt Graad and Balnagown as category 3, which means full catch and release. This categorisation also extends to the estuary waters and netting stations within the designated area.**

### **ENFORCEMENT**

- Proprietors and clubs are urged to make compliance with this policy a condition of their leases and permits

### **SALMON**

- Due to the Scottish Governments categorisation there will be 100% catch and release.

### **SEA TROUT**

- Sea Trout over 1 ½lbs are particularly valuable and should be released. A maximum of one sea trout over 1 ½lbs per angler per week may be killed but it would be preferable to kill only smaller fish, preferably Finnock.

### **GENERAL**

- All coloured fish must be released
- Use barbless hooks
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- The board is concerned that fish caught by worming may be difficult to release unharmed. Where worming is permitted only circle hooks should be used.
- When releasing fish, try to keep the fish in the water at all times and use knotless mesh landing nets.

### **PINK SALMON**

Subject to further Government advice any pink salmon caught should be killed and passed to Fishery Board staff for analysis. However, it is very important to identify that any fish are pink salmon as killing an Atlantic Salmon will be illegal.