Tay District Salmon Fisheries Board



Annual Report
2017 / 18

ANNUAL REPORT 2017 / 18

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TAY DISTRICT SALMON FISHERIES BOARD

Chairman

Iain McLaren (Mandatory for Kinnaird)

Members Elected by Upper Proprietors

S. Furniss (Mandatory for Clayfield Investments) (Replaced the Earl of Mansfield)
C. Mercer Nairne
J. Perrett
M. Smith

Members Elected by Lower Proprietors

D. Godfrey (Mandatory for Tay Salmon Fishing Company Ltd)
Councillor R. Band (Mandatory for Perth and Kinross Council)

Co-opted Members

Representatives of Salmon Anglers

D. Brown
C. O'Dea (Tay Ghillies Association)
S. Mannion
T. Monaghan
A. Stewart
A. Wallace (Replaced I. Young)

Observers

N. MacIntyre (Scottish Natural Heritage)
B. Roxburgh (Scottish Environment Protection Agency)

Board Staff

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CHAIRMAN'S REPORT 2018

The past season can only be described, from a fishing point of view, as one to forget as quickly as possible! As an angler who has fished the Tay for the past five decades I can't ever remember such a challenging season. While much of the season's poor catches can be blamed on adverse weather conditions, the more worrying issue was the clear lack of fish. As an industry, salmon angling is in a very precarious position throughout Scotland. I can only admire the stoicism with which the ghillies up and down the river faced their jobs with conditions all but impossible on occasion.

It is clear that there has been a significant increase in mortality at sea in recent times. The return rates of smolts leaving the Tay currently are most likely the lowest ever known. The rate of decline, particularly of grilse, is unprecedented.

As a District Salmon Fishery Board, we have a responsibility to protect those fish that do make it back to our river. This is why we increased the protection, in our catch and release policy, of fish caught in the summer months. We announced this at the start of the 2018 season, with the aim of reducing the numbers that should be killed by anglers. As the season progressed it became clear that the spring run had all but failed and faced with the likelihood of a poor grilse run, the board took the decision to recommended that all salmon and grilse should be returned for the remainder of the season. This decision was not universally popular. However, following a precautionary route was felt to be the right move at the time. Currently there can be little doubt we are in the position now that every fish in the river is needed at spawning time as there are likely to be no surplus spawners. The board would like to thank all of the anglers, up and down the river, for showing restraint and returning the vast majority of the fish caught.

On a more positive note the hatchery this year held more eggs than ever. As is detailed in this report, more than one million eggs were planted out in February and March. Our Almondbank kelt reconditioning facility is the largest of its type in the country and is where Steve and Craig work tirelessly on the board's behalf. We are continuing to grow our capacity at Almondbank with the emphasis always being on producing as many eggs as possible from reconditioned kelts. We are also hoping to expand its parr rearing capacity for next spring and, we are once again, indebted to John Apthorp for his generosity in contributing to this work. The success of this operation can be seen in this report in the significant of smolts being produced in the rewatered part of the river Garry. All of the estimated 6,000 plus smolts were derived from the eggs of reconditioned kelts planted out prior to the rewatering of the river.

The main aim of the board will always be to try and maximise smolt production from all of the catchment. To that end it is vital that we protect what we have and I personally would like to take this opportunity to thank the Fishery Officers for their continued anti-poaching work. We all know that salmon poaching is not the issue that it once was but we should be in no doubt that without a deterrent presence it would soon return. I have used the new name we have given to our bailiff team to reflect the changing emphasis in their duties to a much wider remit than only bailliffing.

My thanks must go particularly to both David Summers our Director and Inga MacGillivray our clerk. Without the tireless efforts of both our board would not operate.

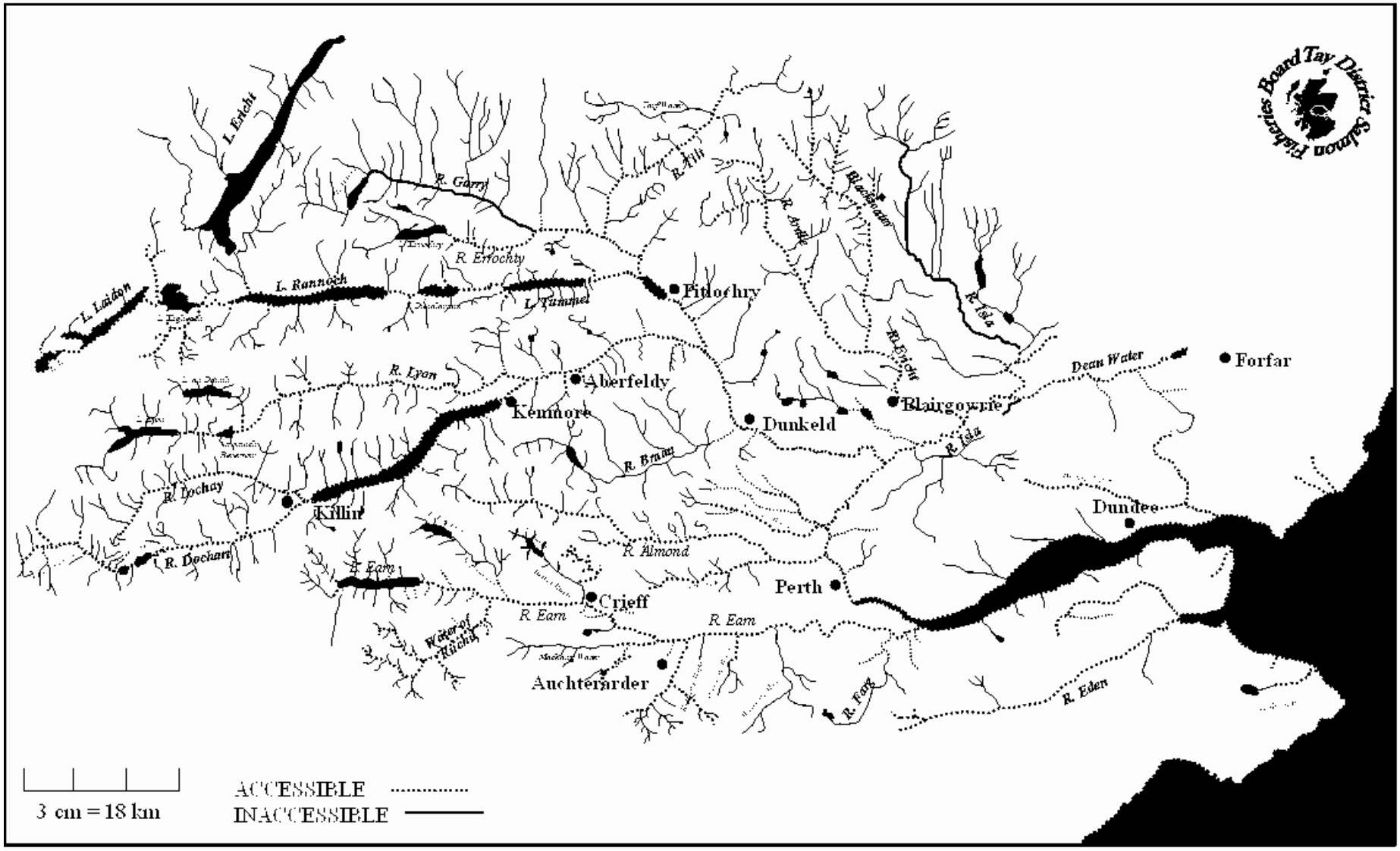
Finally, of course, I wish to thank my fellow board members for all their advice and help during my first year as chairman. We were all really saddened by the news that Ian Young died while fishing on the River North Esk. Ian, as secretary of the Eden Angling Association, had regularly attended board meetings as an observer for several years before being co-opted onto the board in January. Ian was passionate about his river and a valued board member. He will be missed. However, his loss reminds us that salmon angling is not without potential danger and anglers should always take sensible safety precautions, especially on the Tay.

I wish you all tight lines for the 2019 season.

Yours sincerely

Iain McLaren

Salmon Distribution within the Tay District



2018 REPORT

Season 2018

The 2018 Tay season opened on a nice sunny day but with a rising river. Only one springer was caught on opening day, a 21 pounder from Loch Tay. The following week saw levels steadily drop back but was wintry and not very conducive to fishing. In the last week of January, there was a spate of almost ten feet and the river remained high to the end of the month. Less than 20 fish are likely to have been caught in January which will be down on recent years. However, based on their size, most of those fish are likely to have been 3SW fish. Perhaps the largest fish, a 27 pounder caught on Dalmarnock, might even have been 4SW.

February started with high water but then remained relatively steady at about three feet until rising to over 6 feet on the 20th , falling away thereafter. It was a cooler month, finishing with the now legendary Beast from the East settling in and drawing levels down. With perhaps not many more than 60 fish, the salmon catch was down on recent years. A significant proportion again appear to have 3SW fish. Most notably, a 35 pound fish was caught on a harled fly on Glendelvine, probably the biggest February fish from the Tay for quite some time. While the weather did not help, with hindsight, it is clear that a reduced run of 2SW fish pulled the catch down.

March commenced with the river relatively low. Bitter easterly winds persisted through much of the month with bouts of snow. This led to a succession of snow melt rises, culminating in a flood of around 8 feet on the 24th. The overall catch for March is likely again to be down on recent years, with perhaps around 200 fish. However, the quality was again excellent. Many of the fish caught were in the mid to high teens of pounds range, with a number up to around 25 pounds, likely to have been good 3SW fish. A 36 pounder was caught on Loch Tay.

April started with relatively low water, but then maintained a roughly steady level just under four feet for most of the month as snow melted off. It was another cooler than normal month, which can mean springers slow down and get caught more easily. But instead, the catch was considerably down, with perhaps not much more than 300 springers caught.

May commenced with a reasonable water level, between three and four feet, caused by melting snow, as it was a dry month. Levels fell away and the weather warmed up, ending in a heatwave. Rather than a spring, there was just a switch from winter to summer. The conditions later in the month didn't help many beats and the overall catch, likely to be not much more than 300, was again well down on recent expectations due to the weather and by then a clear lack of 2SW fish. As well as affecting the fishing, the conditions started impacting on the fish too. The River Ericht, for example, became increasing low and fish were little more than trapped in some pools. By the end of the month, some early fish had already made it as far as Craighall, but unfortunately some of them were already showing signs of fungus under the highly stressful conditions.

June was also warm and dry. Apart from a few small thundery rises, levels were low. It was not a month conducive to fishing. The salmon catch was again well down on recent years, perhaps only in

the region of 300. Some grilse did start to appear in catches as June progressed and things seemed to be picking up as the month went on, only to crash in the last week when air temperatures almost hit 30 degrees on occasion.

For most of July, the weather continued unusually warm, sometimes scorching. The river remained low and the fishing continued difficult except for the last two days of the month when there was some rain at last. Again, perhaps little more than 300 salmon and grilse were caught, making it one of the poorest Julys in many years. Some of the fish caught began to have the appearance of having been in the river for a few weeks.

With a little rain at the end of July and the first week in August and another bout later in the month, the Tay maintained a slightly higher level than in July. More salmon and grilse were caught, but there was no really big burst of delayed fish as might have been hoped for. However, on the Tay at least, catches did equal those of the same month last year, the first time in the season that had been the case. In 2017, scarcely any fresh fish appeared to enter the Tay after July, but some fresh grilse were in evidence in August 2018, particularly low down the river.

The early part of September continued dry with water levels remaining low. Mid month, the river ramped up to about three feet and on 19/20 September, there was the first big spate in a long time, rising briefly to over 9 feet. For a few days following, catches increased markedly. Nearly 500 fish may have been caught in that last week, making it the best week of the season, by far. Despite the water height, some of the best catches were made well down the river on beats like Lower Redgorton. Even there, the great majority of the fish appeared to have been in for a few weeks and relatively few were truly fresh run. However, all in, September proved to be much better than September 2017, on the Tay at least.

Following the late September spate, the Tay fell away into October, but rose again in the last few days of the Tay season. Once into October, the level of activity in the Tay slowed, although October still proved to be better than last year. But again, like the two previous years, few of the fish caught were the sort of fresh fish numerous only a few years ago. Many appear to have been salmon too, with a number well over 20 pounds. The Earn which fished on until 31 October also rose in mid month, but fell away thereafter until the season ended. The Eden, which also fished to 31 October, did not have any significant rise at all.

To sum up the season, the spring was down overall, despite having one of the best runs of 3SW fish in at least 25 years. It was the run of 2SW fish that had gone down. The hot dry summer was bad for fishing but may have masked a poorer grilse run too. However, the fact that numbers of colouring salmon were caught in September especially in the lower Tay meant there had been a run of such fish into the system in the summer. That at least meant that there were more fish in the system than might have been feared initially.

Catch and release

In 2017 the Board had continued to recommend a policy, introduced in 2010, of 100% catch-and-release of salmon up to the end of May with no more than one fresh grilse per day for the rest of the season. However, on the basis of a poorer grilse run in 2017 and concern that the same thing could happen again in 2018, the Board agreed to strengthen the recommendations for 2018. Rather than one grilse per day, it was changed to "no more than the very occasional clean fish weighing, where possible, under 10 pounds" over the entire June to October period. The concern, of course, was that one grilse a day could potentially add up to a significant number per angler over the season.

However, by the end of May 2018 it was apparent to the Board that 2017's reduced grilse run was being followed by a reduced run of 2SW springers and if this was followed by another poorer grilse run, sufficient spawning fish might be an issue. Therefore the Board announced that from 1 June onwards it recommended that all salmon and grilse should be returned for the remainder of the season.

At the time of writing, the latest catch returns available to assess compliance with this policy are only for the 2017 season. In 2017 catch and release rates continued to increase or remain steady and were high or very high throughout the entire season. Last year's Annual Report noted that there had been a marked increase in the release rate later in the season reflecting mandatory catch and release on the Earn and Eden for the entire 2016 season plus a lack of fresh run fish throughout in autumn 2016. However, there was no drop off in 2017 despite the Earn and Eden having been reclassified as Category 2 that year. It most likely reflected the prevalence of coloured fish in the autumn catches in 2017.

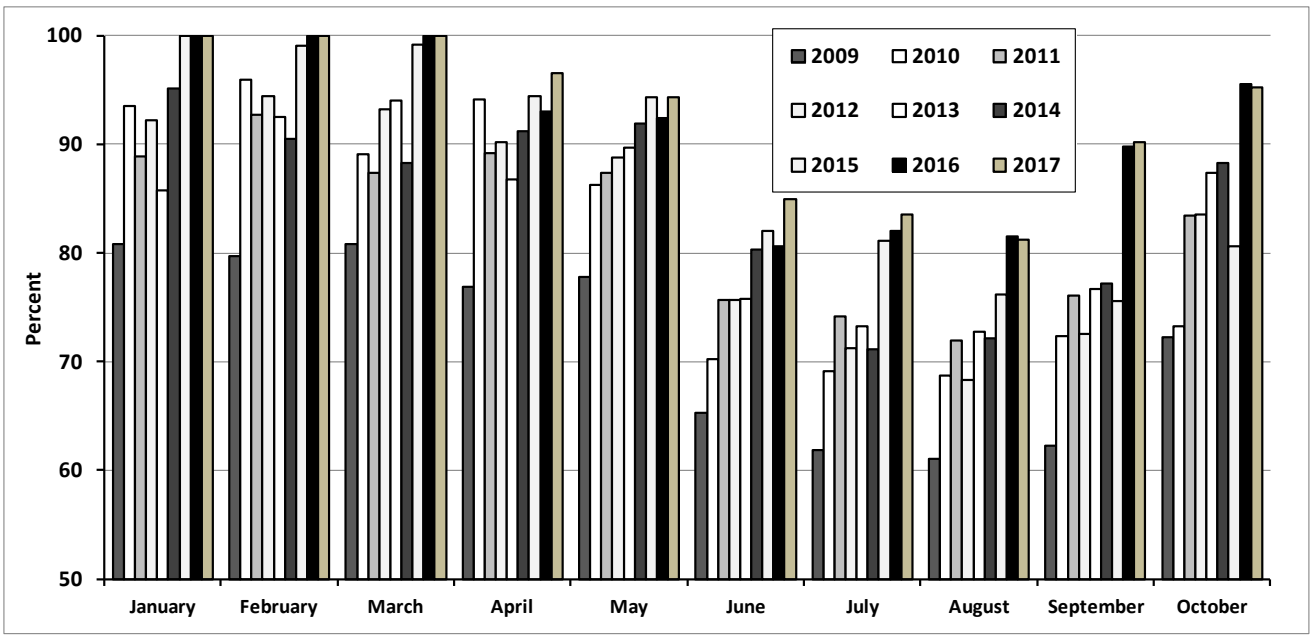


Figure 1. *Percentage of the Tay district salmon and grilse catch released by month in each year from 2009 to 2017. The data used in this graph are Crown copyright, used with the permission of Marine Scotland Science. Marine Scotland is not responsible for interpretation of these data by third parties.*

In 2017 more spring salmon were caught in the Tay district than any other Scottish district (Figure 2). This was the fifth year in succession the Tay has held this position. While very few spring salmon were killed, once again more were still killed in the Tay district than any other district in 2017.

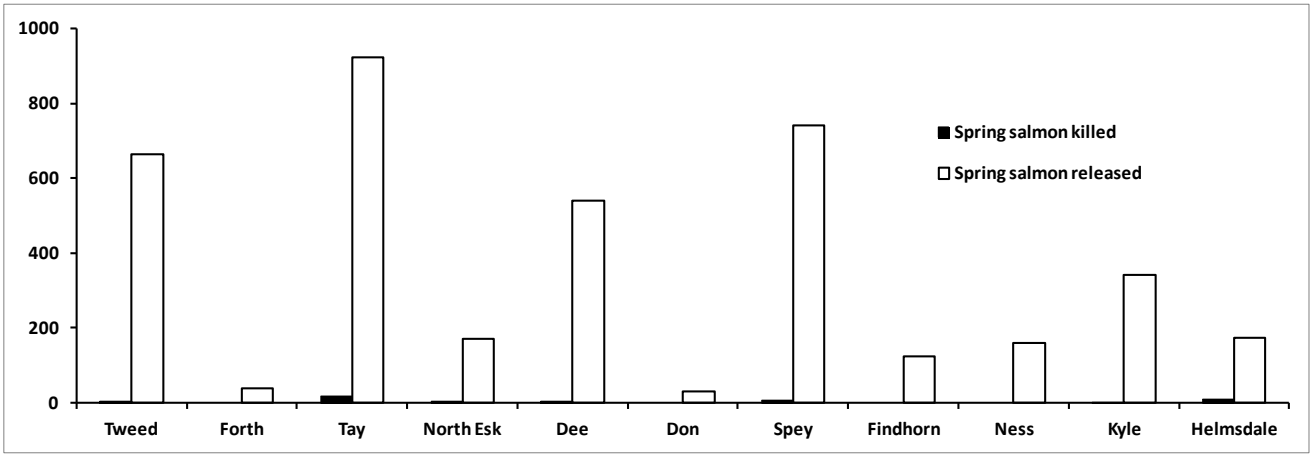


Figure 2. *Numbers of salmon killed and released by anglers to 30 April 2017 on Scotland's major spring salmon rivers. Data from Marine Scotland Science.*

Catch and release rates in different parts of the district in 2017

From Figure 3 it can be seen that, in 2017, a percentage of release was achieved in most parts of the district up to the end of May. The biggest exception was the River Dochart. Loch Tay and the Isla also lagged slightly behind the main pack. There was more percentage variation between areas later in the season. However, because more fish were caught in the main stem of the Tay, particularly the lower Tay, more spring salmon were killed there than percentages imply (Figure 4). However, over the season as a whole, the great majority of fish reported killed, were from the lower Tay (Figure 5).

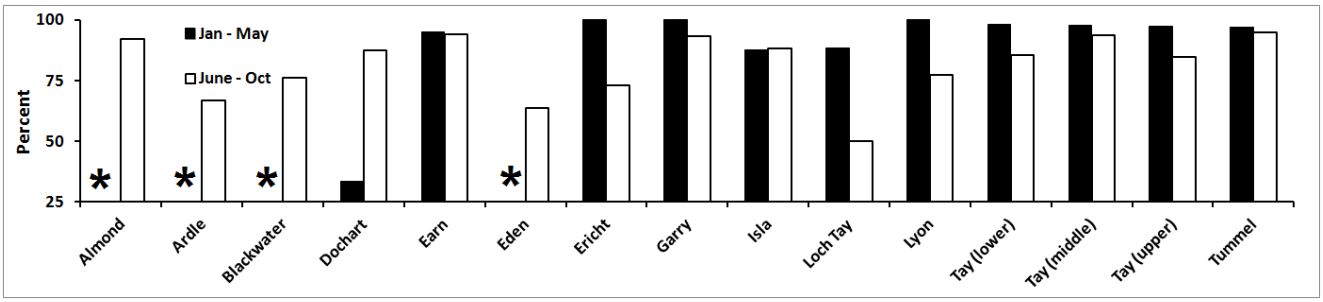


Figure 3. *Percentages of salmon released in different parts of the Tay district during the periods January – May 2017 and June – October 2017. Tributaries which did not produce any spring fish are marked with *.*

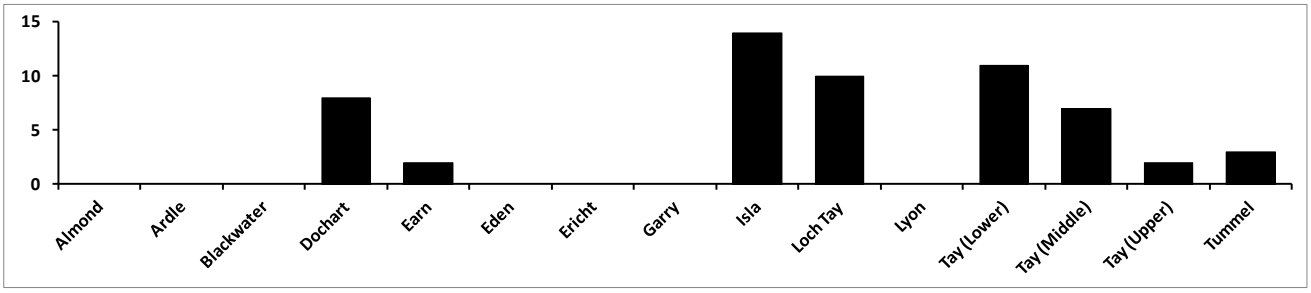


Figure 4. *Numbers of reported retained salmon from different parts of the Tay district, Jan – May 2017.*

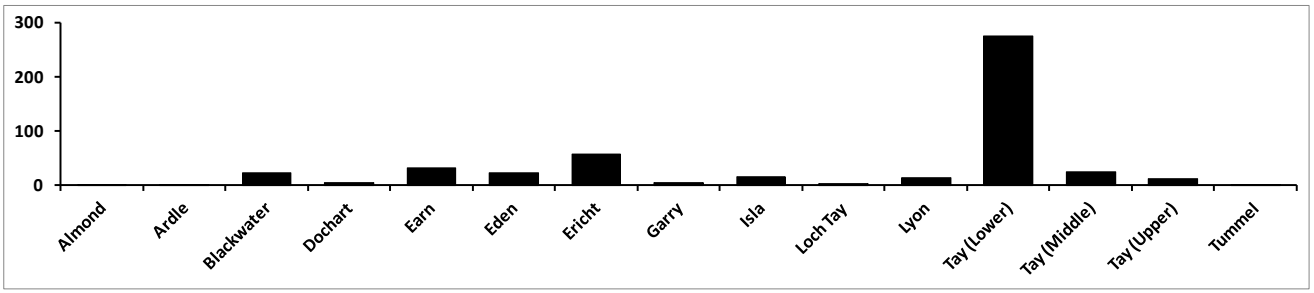


Figure 5. *Numbers of reported retained salmon from different parts of the Tay district, June – October 2017.*

Sea trout conservation

In 2009, the Board first recommended that, following a long decline in their numbers, all sea trout should be released without exception. This policy has been maintained thereafter. Since the introduction of the policy, the great majority of the catch has continued to be released (Figure 6). While 2017 was a better year for sea trout, catches have continued to fluctuate in recent years, indicating that a continuation of this policy is the most sensible course of action.

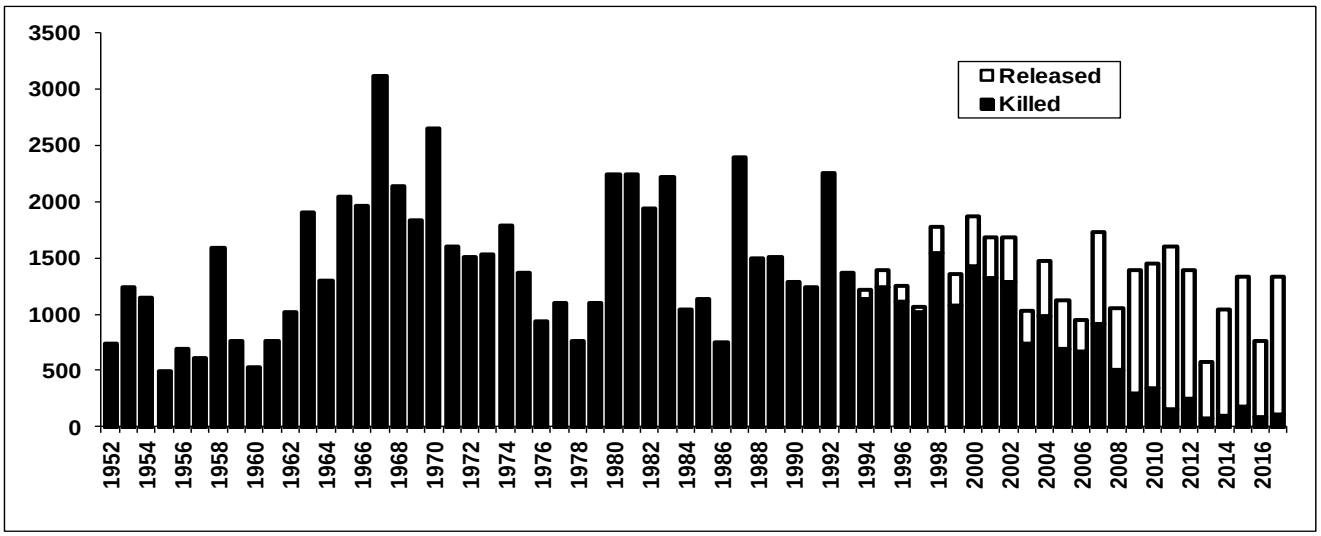


Figure 6. *Tay District rod & line catch of sea trout, 1952 – 2017. (Data obtained from Marine Scotland's Statistical Bulletins of Scottish Salmon and Sea Trout Catches)*

Mandatory Spring Catch and Release Regulations

2018 was the fourth year of regulations introduced by Scottish Ministers requiring the mandatory release of all salmon caught up to the end of March. As shown in Figure 1, the measures have had a significant impact on the overall spring release rate since 2015. The measures were introduced for a period of five years, but are reviewed annually by Scottish Ministers.

Enforcement

In 2018, no cases initiated by Board staff were sent to the Procurator Fiscal, although a number of suspected instances of illegal fishing were investigated. The relatively low numbers of fish around and their limited distribution because of weather conditions may have been a factor. However, while undertaking these duties, staff received assistance from time to time from Police Scotland and once again, the Board wishes to express its thanks to Police Scotland, particularly local offices, who are always extremely helpful.

Health and Safety at Work

Health and safety at work is a major consideration for the Board. The Board's staff are frequently required to work in situations where potential hazards are present. Therefore the Board is insistent that health and safety provision is of the highest standard. As described in the last *Annual Report*, the Board concluded a major health and safety review in 2017, therefore no major changes were required in 2018. However, in 2018, where necessary, staff received relevant health and safety training, which included refresher first aid courses for all staff.

At the time of writing (November 2018), no incidents have been reported to the HSE under RIDDOR.

TDSFB Annual Public Meeting 2018

The Board held its 2018 Annual Public Meeting on 22 March. The meeting was held in the Perth Museum lecture theatre and attracted both proprietors and anglers. Presentations on the work of the Board were given by the Chairman, Clerk, Fisheries Director and Operations Manager with questions and answers following. The minutes of the meeting can be found at www.tdsfb.org/reports.html.

Annual Bailiffs' Conference

The annual Scottish bailiffs' conference is held in a different location each year. In 2018 it was hosted by Fisheries Management Scotland and the Board at the Birnam Hotel on 21/22 March. The first day took the form of a series of presentations on fisheries management matters and on the second visits were made to the Board's Almondbank hatchery, which always, proves popular, and the rotary screw smolt trap in the Errochty Water.

Fisheries Management Scotland

Fisheries Management Scotland is the representative body of Scotland's DSFBs and fisheries trusts, replacing the Association of Salmon Fishery Boards and the Rivers and Fisheries Trusts of Scotland. The Board's Fisheries Director, David Summers, holds one of the six positions for elected representatives of DSFBs on the FMS Board. In 2018, FMS became a company limited by guarantee, the previous board members becoming directors of the company. More information on the work of Fisheries Management Scotland can be found on its website www.fms.scot. The minutes of its regular meetings can be found at http://fms.scot/board/ and presentations from its annual conference which several board representatives attended can be found at http://fms.scot/events/annual-conference/.

Hatchery report 2017/18

As described in recent *Annual Reports*, the Board's stocking activities are now centered around the Kelt Reconditioning Project. This entails the keeping and feeding of captive salmon kelts following stripping. Such fish can live in captivity for several years on average, producing eggs each year with the great advantage of not impacting on the source population. The Board has run the kelt reconditioning project since 2011 when it took over the former Marine Scotland Science hatchery at Almondbank.

After taking on the Almondbank facility in 2011, the Board expanded its capacity, but last year's *Annual Report* explained that this had never been the fully used because insufficient broodstock had been caught in most years. However, in October / November 2017, two broodstock teams were used and more broodstock were caught. Therefore, the number of eggs from new wild fish counted in early 2018 was the largest yet (Table 1). Since that followed another relatively good broodstock fishing in 2016/17, the total number of eggs produced exceeded 1 million for the first time and ought to be even higher in 2019.

	2011/12	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**
Eggs from new broodstock			300,211	189,021	312,421	436,787	622,458
Eggs from reconditioned broodstock			354,722	421,379	316,204	222,810	425,936
Total	779,000	582,000	654,933	610,400	629,225	659,597	1,048,394

Table 1. *Numbers of eyed ova produced annually by the kelt reconditioning facility since 2011. Note, no split between "new" and "reconditioned" eggs is available for the first two years.*

Most of the produce of the hatchery in 2018 was stocked out in February / March as eyed ova and most of the remainder as unfed fry. Owing to protracted lower than usual temperatures, the alevins took longer to absorb their yolk sacs than normal and, when they did, the weather turned warm,

meaning fry had to be stocked out in higher temperatures, making the process more challenging. A relatively small number of fry were kept on as fed parr and stocked out in the autumn.

The numbers stocked out at various life stages are given below according to tributary. It should be noted that the high numbers stocked in the River Tilt reflect the relatively large number of new broodstock caught there in autumn 2017 as well as reconditioned eggs. Eggs from new broodstock are returned to their tributary of origin in the first year. However, since reconditioned fish would mostly be dead otherwise, their eggs may be used to restock other areas where limited successful spawning has been shown to exist.

Tributary stocked	**Eyed ova / unfed fry**	**Parr**
River Tilt	214,829	
River Garry (restored section)	189,824	
River Garry (below Struan)	13,418	
Allt Glas Choire (above SSE intake)	83,828	
Allt Glas Choire (below SSE intake)	75,992	
Errochty Water	73,686	
Bruar Water and Banvie Burn	8,728	
Fillan tributaries	99,050	
Cononish	72,434	
Lochay		2585
Ruchill Water (upper reaches)	123,274	
Beich Burn	30,000	
Lyon tributaries	45,220	
River Lyon (Chesthill)		3546
River Tay (Pitcastle)		4,017
Totals	**1,030,283**	**10,148**

Proposed increase in parr rearing capacity

The amount of parr that can be reared in the hatchery is greatly constrained by the small number of suitable tanks in the hatchery. It has been decided to add an additional ten parr tanks over the winter 2018/19. In order to make the required space, the old experimental flume will have to be removed first. This will more than double the parr rearing capacity.

Horseshoe Weir and Hatchery Intake Lade

For several years the Board has been concerned by a hole that had developed in the “Horseshoe” Weir, the weir that diverts from into the lade from which the hatchery obtains its water supply. However, in July 2018, taking advantage of the low water, the lade owner from whom the Board obtains the water, had contractors fill the hole in successfully. The Board also contributed to the cost of the project. The work should have prevented a need for much more costly intervention in future.

Salmon in the Classroom

Salmon in the classroom is a joint project coordinated by the Tay Foundation, but delivered by several partners including Perth and Kinross Council Ranger Services, Loch Lomond and Trossachs National Park Ranger Services, Atholl Estates Ranger Services and the Tay District Salmon Fisheries Board. In 2018, salmon eggs were provided from the Board's hatchery at Almondbank to six local schools (Luncarty, Dunning, Dunkeld, Moncrieff, St. Johns and Killin) which participated in the project. Several of the schools visited the Board's hatchery and had tours and presentations on our work.

Pitcastle Archimedean Screw Turbine

In 2016, an Archimedean Screw hydro turbine was constructed on Pitcastle Estate. The Board was contracted by Natural Power Ltd to try to establish whether salmon smolts enter the lade which supplies the turbine. On several nights a week over a period of four weeks in April/May 2018, Board staff operated a trap (fyke net) in the lade for this purpose.

Low flows and fish migration

Low flows in the late spring of 2018 and even more so in late June and July 2018, caused significant problems for migrating salmon in parts of the district.

The most prominent issue arose, once again, on the River Ericht at Blairgowrie. There, flow is diverted into a lade to supply a fish farm and this reduces the flow in the main river over a stretch of 4 km immediately downstream of the "Brig o' Blair". Flows first became low in this stretch in late May and some adult salmon were observed trapped in some pools in this reach, some having developed fungal infections. Representations were made to SEPA which regulates water abstraction.

The issue was further exacerbated during the latter part of June and through July, as flows reduced even further. By early July, the issue was considered serious enough to obtain coverage in both the *Courier* and STV News while the Blairgowrie and Rattray Angling Association raised the issue with local MSPs. It is understood that SEPA entered discussions with the abstractors and some voluntary reduction in abstraction was achieved by using partial pumped water recirculation through the fish farm. While that helped maintain at least some flow in the main river, it was not enough to allow adult fish to move on upstream out of the affected reach. However, on the morning of Monday 23 July, following, it is understood, an issue with the recirculation system, the flow in the main river was reduced almost to nothing. It was the lowest flow staff had ever seen in the main river at Blairgowrie. Some dead adult salmon were observed and large numbers of stressed juveniles were observed in remaining pockets of water. Later in the day, the partial recirculation system was apparently restarted and some flow was restored.

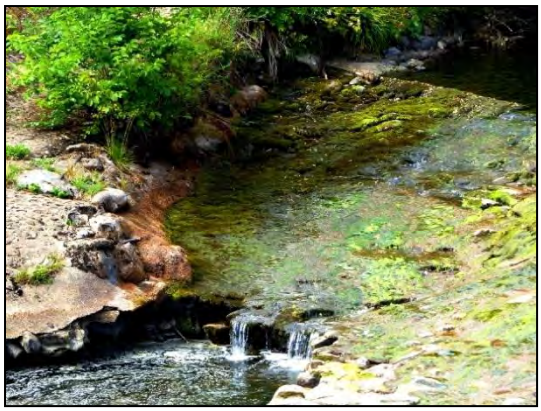
On 30 July, a meeting was convened between John Swinney MSP and representatives of SEPA, the Blairgowrie AC and the Board. Various potential solutions were discussed and SEPA confirmed an

intention to review the abstraction licence by the spring. John Swinney MSP undertook to have a discussion with the abstractors.









On 23 July, almost all of the flow was abstracted from a stretch of the River Ericht in the middle of Blairgowrie. Board staff had never seen anything as extreme as this previously.

In late June, on the River Lochay, Board staff observed a problem with the Borland fish lift at Lochay Falls. The flow was so low that there was insufficient water to fill the lifting chamber during each filling cycle. Some salmon were observed seeking the lift entrance, but were unable to move upstream. An alternative might have been to increase the duration of the lifting cycle, but that would have periodically reduced the flow in the pool below the fish lift. Furthermore, fish would only have got stuck in the next pool upstream anyway. It was decided between SEPA, SSE and the Board that the filling cycle should not be extended, but the situation should be kept under observation. The Lochay is, of course, partly abstracted for hydro purposes.

Pacific Pink Salmon

Following the unprecedented numbers of pink salmon caught around the NE Atlantic area in 2017, few were reported in 2018 and non in the Tay district, despite publicity to look out for them. However, pink salmon are noted for having two year cycles of abundance, therefore 2019 might prove to be a more informative year with regards to the spread of this species.

Stronuich Fish Pass, River Lyon

As mentioned in last year's *Annual Report*, SSE conducted a short term repair to the upper gate of the Borland fish pass at Stronuich Dam in the upper reaches of the River Lyon in 2017. However, in November 2018, after any spawning salmon should have ascended the pass for the year, SSE commenced works to completely replace the upper and lower gates. The refurbished fish pass should be in operation by spring 2019 before salmon might be expected to ascend.

Scone Game Fair

In 2018, for the second year in succession, Board staff shared a fish conservation stand at the Scone Game Fair with the Game and Wildlife Conservation Trust, Atlantic Salmon Trust and Marine Scotland Science.

Drone water temperature sensing PhD project

The Board is a partner in an Aberdeen University PhD project along with SSE and others which will use drones fitted with temperature sensors to investigate how water temperatures may be affected downstream of hydro dams. Allied studies will investigate ecological implications of any issues found. The project commenced in autumn 2018 with the appointment of a student. The project is therefore still in an early development phase but the Errochty Water is being considered as a potential main study site.

Beavers

It is Scottish Ministers' stated intention to give beavers European Protected Status in Scotland. Their policy is that the beavers living in Tayside are to be allowed to remain and ultimately spread elsewhere. As part of this process, SNH commissioned researchers from Exeter University to conduct a re-survey of the beaver population in 2017/18. This revealed an estimated 114 occupied territories compared to 38 territories identified in 2012.

From December 2017 to March 2018, Scottish Ministers sought views on a Strategic Environmental Assessment on beavers in Scotland, to which the Board responded. Scottish Ministers published an analysis of the consultation in October 2018 which can be found at https://www.gov.scot/publications/report-consultation-beavers-scotland-strategic-environment-assessment-environmental-report-analysis-responses-june-2018/pages/2/. The Board's Fisheries Director and the Director of Fisheries Management Scotland attended several meetings over the year of the Scottish Beaver Forum, which is chaired by SNH. At a meeting in August, a spokesman for Scottish Ministers indicated that the only remaining step in the EPS process was for Scottish Ministers to introduce a draft Statutory Instrument to the Scottish Parliament. However, as of late November 2018, it is understood this decision has been deferred until 2019.

SNH have been developing a management / licensing scheme for mitigating beaver impacts if EPS status is in place. This may include the ability of land / fisheries managers to remove recently built



As shown by this beaver dam which appeared on the Lunan Burn over the summer, the presence of beavers means that important spawning burns now need to be surveyed twice a year (before smolts leave in spring and adults ascend in autumn) for impassable dams.

dams without licence, but licences may be required in some circumstances and for shooting where necessary. A fund for trialling beaver impact mitigation ideas is also anticipated in the Tayside area and some work has already begun.

While it is anticipated that fisheries managers should continue to be able to remove problem dams, the Board and Fisheries Management Scotland have continually stressed that the practicability and resources required to find these dams prior to the spawning season will be a major problem.

Scottish Invasive Species Initiative

The Board is a partner in the Scottish Invasive Species Initiative (SISI), a new four-year partnership project in northern Scotland to control invasive plants and mink. It is led by SNH and involves a number of fishery boards and trusts and Aberdeen University. SISI is funded by the Heritage Lottery Fund and Scottish Natural Heritage.

In spring 2018, a project officer (Mark Purrman-Charles) was appointed, to be shared between the Tay and Esks boards. Mark is formally employed by the Esks DSFB and based in Brechin but will spend part time in the Tay district where he also has a base in the board's store at Almondbank. This project covers approximately half the Tay district, essentially everything east of the main stem of the Tay between Perth and Kenmore.

SISI will deliver control and management of mink and invasive plants such as Giant Hogweed, Japanese knotweed and Himalayan balsam using contractors and by working closely with and supporting volunteers and community groups and partners. Anyone seeking to get involved should contact Mark using the details below. The project is able to offer training and equipment to individuals and groups for use (markeskrivers@gmail.com, Tel: 07741 639556).

The main priority this first year has been to establish the presence of giant hogweed and Japanese knotweed on the main stem of the Tay with a view to extensive treatments commencing from spring 2019. More information can be found at https://www.invasivespecies.scot/.

Environment Agency Consultation on Salmon Conservation Measures

In 2012, DEFRA announced that the Northumbrian / Yorkshire salmon drift net fishery would be reviewed in 2017 and closed in 2022. In 2017, the Environment Agency did consult on the future of this and other salmon fisheries in England, proposing several options, including immediate closure. Then, in March 2018, DEFRA published draft byelaws which included closure of drift net fishing in NE England from 2018 and that, from 2019, fixed beach T and J nets would only be allowed to fish for sea trout. Any salmon would have to be released. Fishing would no longer be allowed at night and, north of the Tyne, the season would be restricted to the period when sea trout are apparently most dominant. The Board again responded to these proposals, welcoming those for drift netting but stressing that it was not possible to release fish which have been caught in a gill net.

However, in May 2018, the Environment Agency announced that, because it was then so close to 1 June when the closure would come into force, it was unreasonable on the fishermen to close the fishery in such short notice. Therefore, the decision was deferred. The EA said it planned to submit the proposed byelaws to DEFRA in better time for 2019. Therefore, 2018 may have been the last year the Northumbrian drift net fishery operated.

New road bridge over the Tay at Broxie

The Board was informed in 2018 that the proposed new road bridge over the Tay north of Perth would have a single span over the river with pillars on the banks, not in the river. That is to be preferred over other options that were considered. The Board was contracted to conduct fish surveys in both the rivers Tay and Almond in the vicinity of the proposed bridge location and in two tributary burns.

2018 Salmon Conservation Regulations

Marine Scotland's proposed gradings for the 2018 season were published in autumn of 2017. The Tay remained category 1, but the Earn and Eden returned to category 3, having been category 2 in 2017. However, in response to the accompanying consultation, the Board pointed out that substantial flaws still existed in the model and that changes to the model had actually made it more unrepresentative of rivers like the Earn, causing the downgrade. Significant representation was made to Marine Scotland and politicians by anglers from the Earn and rivers elsewhere.

When the proposed Statutory Instrument was considered by the Scottish Parliament's Environment, Climate Change and Rural Affairs Committee on 20 March 2018, a motion to annul was introduced by local MSP Liz Smith. This was defeated by 6 votes to 5. However, during the evidence sessions, Marine Scotland officials stated that work on the model was continuing and that a complementary juvenile electrofishing model was also being developed. Some changes were expected for the 2019 round.

Proposed Conservation Regulations 2019

During 2018, Marine Scotland Science did alter the river categorization model to include regional variations in the egg requirement, rather than a one size fits all for the whole country. The Board and others had argued for this for several years. This resulted in the egg requirement for Tay district rivers reducing from the previous year. Marine Scotland published the proposed 2019 river gradings on 25 October 2018. The Tay and its tributaries remained Category 1, the Earn moved from Category 3 to 2, but the Eden remained in Category 3. That is, mandatory catch and release for the full season will only apply to the Eden in 2019. It will no longer apply on the Earn. The announcement of the new river grading consultation was made by Roseanna Cunningham MSP, Cabinet Secretary for Environment, Climate Change and Land Reform, by the River Earn with local Board members in attendance.



The Board's Vice Chairman, Jim Perrett, with Cabinet Secretary, Roseanna Cunningham MSP, Professor Kim Suam and Joannes Hansen, President of NASCO, marking the start of the International Year of the Salmon by the River Earn.

Further details can be found at https://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/Licence/status.

Proposed Offshore Wind Farms

In 2018 two applications for windfarms off the mouth of the Firth of Tay were made to Marine Scotland. The applications were altered resubmissions for the previously consented Neart na Gaoithe and Inchcape windfarms following a delay caused by a judicial review brought by the RSPB. Bearing in mind that knowledge of inshore movements of salmon and potential effects of activities like piling have not greatly increased since the original applications in 2014, objections were submitted to both on the grounds that the developments should not go ahead unless there was an express condition that there should be a requirement to monitor any impacts on salmon, as had been a condition of the original consents.

River Garry Flow Restoration

As described in last year's *Annual Report*, flow was restored to the formerly dry part of the River Garry and Allt Glas Choire tributary in 2017. A number of adult salmon were observed spawning in the Garry in the Dalnamein area that autumn.

A plan has been agreed between SEPA, SSE and the Board for monitoring the recovery of the river, including the salmon population. This monitoring plan will inform any "adaptive management", i.e. adjustments, that might be required at a later date. The plan accepted the stocking of salmon eggs in spring 2018, as long as areas where wild salmon had spawned were avoided. Therefore, eggs were only to be stocked in the Garry between the location of the uppermost redd observed (halfway between Dalnacardoch and Dalnamein) and Garry Intake and in the Allt Glas Choire tributary. Allowing for stocking at approximately 5 eggs per square metre of river bed, this equated to at least 175,000 eggs in the Garry and at least 155,000 in the Allt Glas Choire. This was duly done in February/March 2018. The Board was particularly keen for stocking to continue to ensure a run of returning salmon in future years so that the ability of salmon to ascend falls at Struan under the new flow regime can be tested

An important part of the plan is to monitor the success of wild spawning that takes place in the Garry. However, the presence of stocked juveniles prevents this using conventional survey techniques. Therefore, it was agreed that genetic analysis should be used to tell stocked and wild spawned juveniles apart. Firstly, tissue samples were obtained in autumn 2017 from all the adult broodstock that contributed to Garry stocking in 2018. These will be genetically typed at the University of the Highlands and Islands in Inverness. Then, in the autumn of 2018, tissue samples were taken from over 700 salmon fry caught by electrofishing every 10 to 15 metres along the length of river. By matching the genetic profiles of the fry with the broodstock, it will be possible to identify fry of hatchery origin, meaning any others must have been wild spawned. It will also be possible to tell how many distinct families of wild fry there are, showing how many adults spawned in November 2017. This information should be available in early 2019 to inform the next stocking cycle. While Board staff provided the tissue samples, the genetic processing is being funded by SSE.

The results of the genetic analyses will inform the results of electrofishing surveys which the Board will conduct each year at set sites along the Garry. However, while not designed for longer term monitoring, the fry sampling electrofishing indicated relatively high fry numbers throughout most of the stocked areas in the Garry and Glas Choire. Fry were also found, but in lesser numbers, in the main area where redds had been previously observed near Dalnamein. They were then largely absent for a stretch below but, further downstream near Clunes Lodge which was not stocked, relatively high numbers were found again. It is presumed these must have been wild fry. Encouragingly, they were upstream of the largest waterfalls.

As also described on page 28, a rotary screw smolt trap was operated in the Garry at Struan in spring 2018 to capture smolts from previous stocking. At total of 1,266 smolts were caught. However, the trap only intercepts a proportion of migrating smolts. Based on the recapture rate of tagged smolts released again above the trap and the fact that high water sometimes prevented the trap's use, the total run may have been in excess of 6,000. Those smolts would principally have been derived from the 215,000 eggs from reconditioned kelts planted upstream in 2016, suggesting an egg to smolt survival of the order of at least 3%.

It had been hoped during the course of 2018 to monitor salmon presence at the falls at Struan, to try to establish what flows are most suitable for getting fish over. However, the summer and much

of the autumn was so dry there was very little opportunity to do this. In November, only one pair of adult salmon was observed at spawning time in the Dalnamein area. That was disappointing compared to the previous year's observations. However, the 2SW salmon returning to the Garry in 2018 would have been the product of the 2014 stocked fry year class which turned out very poor (Figure 13, page 29). Due to that and the poor return of fish from the sea, it is perhaps not surprising that few spawners were seen in 2018. Based on juvenile survey data, much better numbers should be expected next year and thereafter.

Allt Glas Choire Intake

In 2017, SSE conducted work on an intake to release a flow into the Allt Glas Choire, a tributary of the Garry. While salmon might be able to get up as far as this intake, it was not considered feasible to construct a fish pass and allow salmon to access all of their former habitat. But, in order to allow salmon production from upstream, a screen has been installed to allow passage of smolts produced by artificial stocking. The first eggs were planted in spring 2018 and the first smolts likely in spring 2020.

Along with staff from SSE and SEPA, Board staff visited the site to consider how to optimize smolt passage. There were concerns that because the flow delivery pipe discharged straight onto flat rock, smolts might be damaged. Later in the year SSE extended the pipe to alleviate this potential issue. It was also considered that some adjustments would be necessary on the screen array to ensure there is a sufficient flow over the screens to deflect smolts to where they need to go. This will also be completed before any are due in 2020.





The restored flow from the Allt Glas Choire intake is delivered via this pipe installed in 2017 (left photo). The pipe was extended in 2018 to ensure smolts derived from stocking above the intake land in a pool (right photo).

Marine Scotland Juvenile Salmon Electrofishing Model Development

In March 2018, Scottish Ministers announced that part of a £700,000 fund being made available for salmon related issues would be used to develop a national juvenile salmon electrofishing model. This would be used in the annual river categorisation process, complementing the existing model based on catch data.

Data gathering commenced in the summer of 2018. Boards or trusts throughout Scotland were commissioned by Marine Scotland to fish a range of sites that had been selected as part of an overall Scotland randomised model. TDSFB was asked to fish 30 sites and these were duly completed and data supplied to Marine Scotland Science. Each participating board/trust will be paid in the region of £12,000. SEPA and SNH also contributed to the funding.

SSE refurbishment of Dunalastair Screens

Dunalastair Dam on the upper River Tummel diverts flow into a long aqueduct which supplies Tummel Bridge power station. Smolts were prevented from entering the aqueduct by means of a large screen array made of 1 inch x ½ inch steel mesh. These screens were deteriorating and needed replacing. Over the summer and autumn of 2018, SSE replaced these old screens with an array made of vertical steel bars of 12mm spacing. These new screens can be cleaned more easily than mesh.

As a first stage in the process, Board staff assisted SSE by transporting fish to safety (trout, char and perch) caught during the drain down of the aqueduct. Thereafter, for the duration of the works, the main Tummel flow had to be passed through Dunalastair Dam, which meant that the dam's adult salmon pass might be less attractive to migrating adults. A number of adult salmon were seen at the dam and, on one occasion in August, Board and SSE staff tried to catch up these fish and move them over the dam. This did not prove easy and only three fish were moved. However, the work was completed successfully, normal flows restored and the other fish hopefully moved on.

Hydro consultation

In the early 2000s, the then Government permitted old hydro power stations with an "installed capacity" under 20MW to receive subsidies on electricity generated ("ROCs") after refurbishment. That led to a number of power stations with over 20MW capacity being modified to get below the threshold on refurbishment. Locally, this applied to Finlarig and St Fillans power stations.

In 2018, Scottish Ministers consulted on proposals to allow these power stations to continue to qualify for ROCs if their installed generation capacity was increased again. The Board responded to the effect that, if companies generated more electricity as a result, then there should be a quid pro quo in terms of more flow released for Water Framework Directive river restoration purposes.

River Eden fish kill

Following a report, some Board staff attended a fish kill on the River Eden near Cupar in the early autumn. Significant numbers of dead fish were seen. SEPA were in attendance and it is understood proceedings are to follow.

Marine Scotland Online Pressures Mapping Tool

While the Scottish Government's Wild Fisheries Reform programme has largely been shelved, Marine Scotland continues to see value in DSFBs developing standardized fisheries management plans across the country for the benefit of both the boards and Marine Scotland. A map based tool that can highlight the location of and severity of fisheries related problems across the country is seen as particularly useful. Marine Scotland, in conjunction with the Scottish Fisheries Coordination Centre, has produced a trial web based tool for mapping different types of pressures on rivers. The Tay has been invited as one of six districts to pilot the tool.

Consultation on conservation of pike

In June 2018, Scottish Ministers launched a consultation on proposed conservation measures for pike. These included a requirement of a bag limit of one pike per day under 60 cm, the return of all pike above that size and a ban on the sale of pike. The Board objected to these proposals. The views of all respondents, including the Board, can be found at https://consult.gov.scot/marine-scotland/pike-conservation/.

Meetings attended

During the course of 2018, Board staff attended numerous meetings in addition to any previously referred to.

The Fisheries Director attended Biologists/MSS Salmon Liaison Group (https://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/licence/MSBiologist), an information sharing workshop with SEPA in Aberdeen, the River Garry Technical Working Group with SEPA and SSE and a meeting convened by Fisheries Management Scotland and SEPA to discuss potential ways of improving adult salmon and smolt passage around large hydro dams.

The Fisheries Director and Operations Manager attended the annual Scottish Fisheries Coordination Centre biologists' meeting. Craig Duncan attended several meetings of the Wildlife and Rural Crime Steering Group and Fisheries Management Scotland's Enforcement Committee.

Opening Day 2018 celebrations at Meikleour

In 2018 the Board once again supported the opening day ceremony at Meikleour. The event, organized by Board member, Claire Mercer Nairne, went extremely well. The weather was good for 15 January and there was an excellent turnout supported by the Perthshire Chamber of Commerce.

Following speeches by the Board's Chairman, Iain McLaren, and Dennis Melloy, Lord Provost of Perth and Kinross, Provost Melloy blessed the river in traditional style with a Quaich of whisky. The first cast of the season was then performed by angling personality, Marina Gibson. Tom Bonniwell was also presented with the Malloch Trophy awarded for the largest salmon caught and released on fly in Scotland in 2017 (from the River Awe).









Claire Mercer-Nairne and Board Chairman, Iain McLaren, lead the procession of anglers to the river (above), Provost Dennis Melloy blesses the river (top right) and the first cast of the season is performed by Marina Gibson (right).

FISH COUNTER RESULTS 2018

Pitlochry Dam

The net upstream salmon count for 2018 at Pitlochry Dam (2682) was well down on recent years, in fact the second lowest ever (Figure 7). Fish were initially slow to ascend on account of lower temperatures but, even so, May proved to be the best month of the year. The total count to end June was lower than recent years, indicating a reduced MSW salmon run, but, significantly, still greater than the previous year's grilse run. However, the main cause of the low overall count, was very poor summer / autumn counts, suggesting yet again another poor run of grilse (Figure 8).

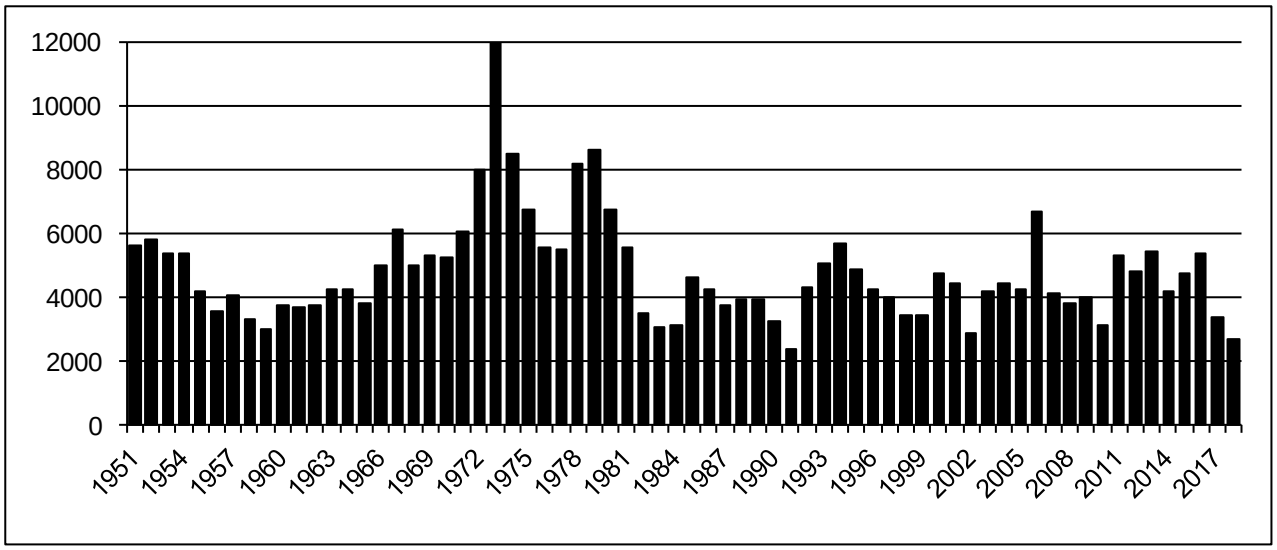


Figure 7. *Annual net upstream counts (that is down counts are subtracted from up-counts on a daily basis) through Pitlochry Dam fish ladder, 1951 – 2018. (Data courtesy of SSE)*

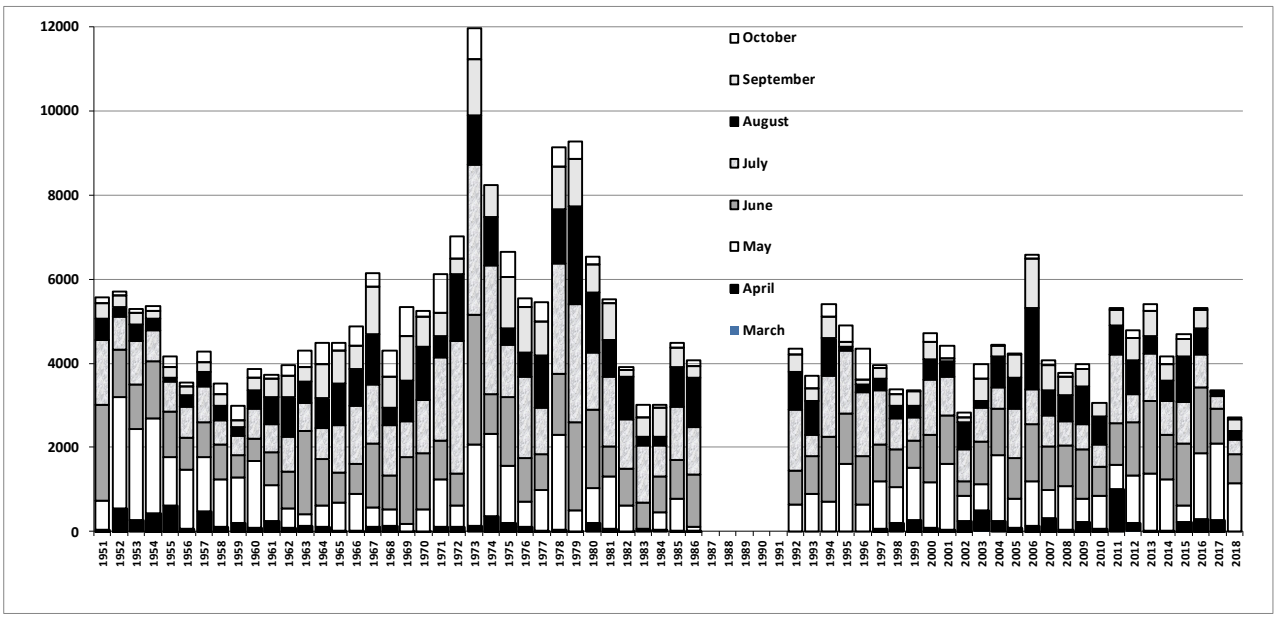


Figure 8. *Monthly net upstream counts, Pitlochry Dam, 1951 to 2018. (Data courtesy of the late Michael Gardner, David Stewart, Ross Gardiner and SSE)*

Clunie Dam

Unfortunately, owing to a technical issue, no data are available for this counter before mid July 2018 which means care should be taken in interpreting the greatly reduced overall count (Figure 9). Compared to the recent pattern of monthly counts (Figure 10), August was well down and probably July too, given the hot weather. September had a more normal count, but that may have been a reflection on the weather holding up fish earlier. Since the majority of fish normally ascend after June, it would seem safe to say that, even allowing for the missing data, the overall count is likely to be down.

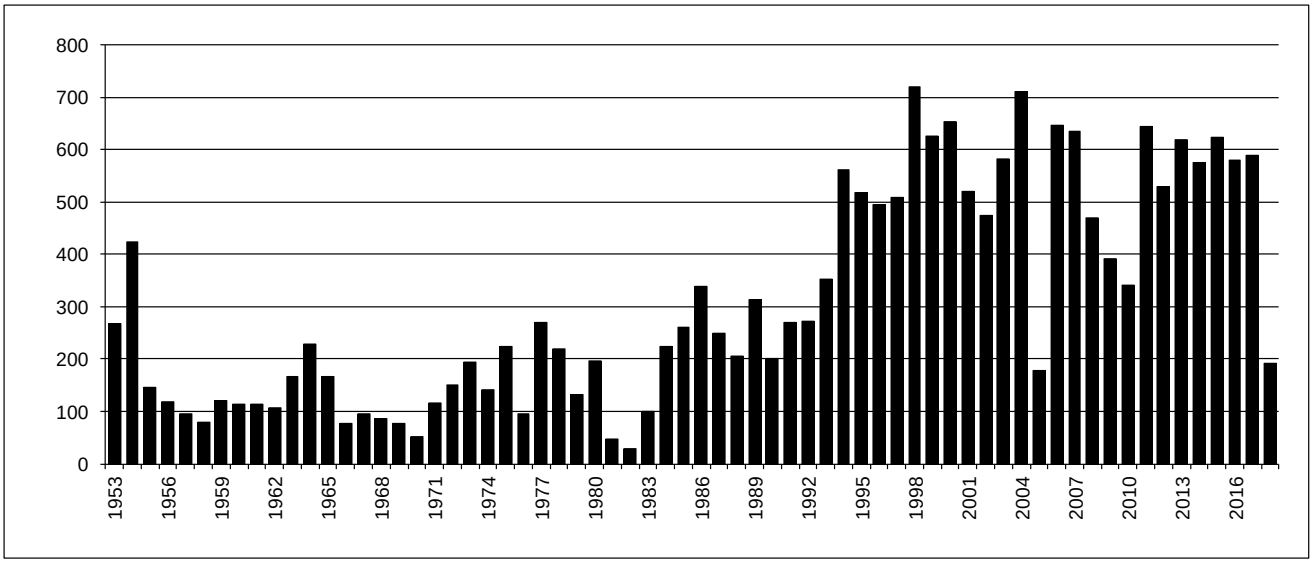


Figure 9. *Net annual upstream counts through Clunie Dam fish ladder, 1953 to 2018. (Data courtesy of SSE) (Note: 2018 count data only start in mid July)*

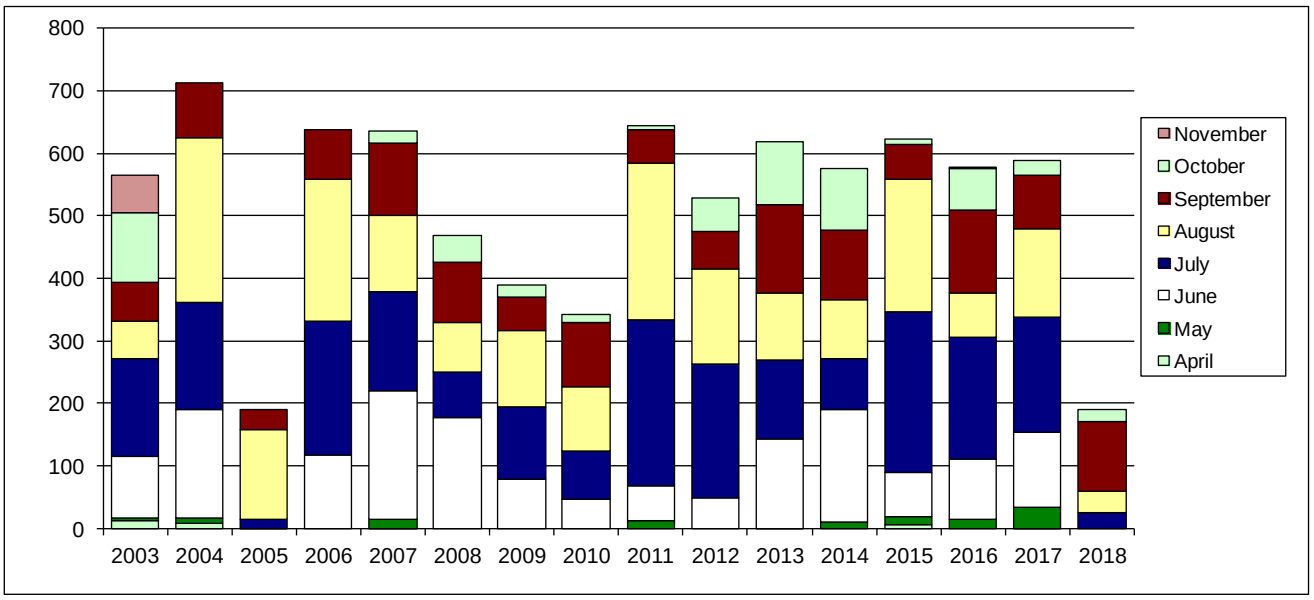


Figure 10. *Monthly net upstream counts, Clunie Dam fish ladder, 2003 – 2018. (Data courtesy of SSE) (Note: 2018 count data only start in mid July)*

Lochay Falls

The Lochay Falls are a naturally insurmountable barrier to salmon on the lower reaches of the River Lochay near Killin. The North of Scotland Hydro Electric Board installed a Borland fish lift to allow salmon access to the Lochay. SSE now operate a fish counter on the upstream exit of the fish pass. There was a major drop in the count in 2018 (Figure 11). The very low count in July (Figure 12) would have resulted from the low flow issues described on page 15. However, the fact that the May count was not high or there was no compensatory major run in September or October suggests a genuinely reduced run of fish, or that some fish were lost during the low flow period.

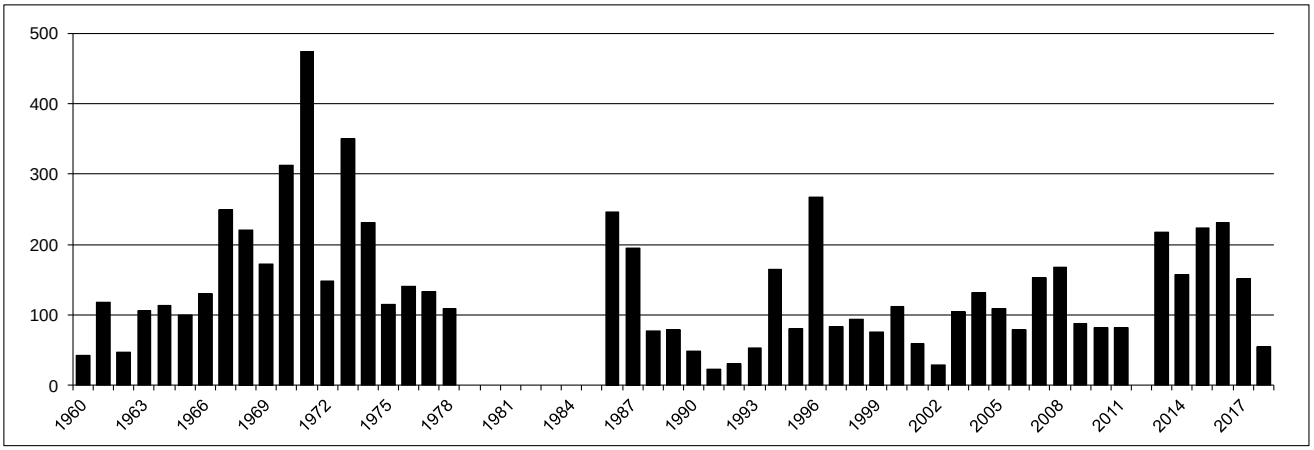


Figure 11. *Net annual upstream counts through Lochay Falls Fish Pass, 1960 to 2018. (Note: there was a malfunction in 2012). (Data courtesy of SSE)*

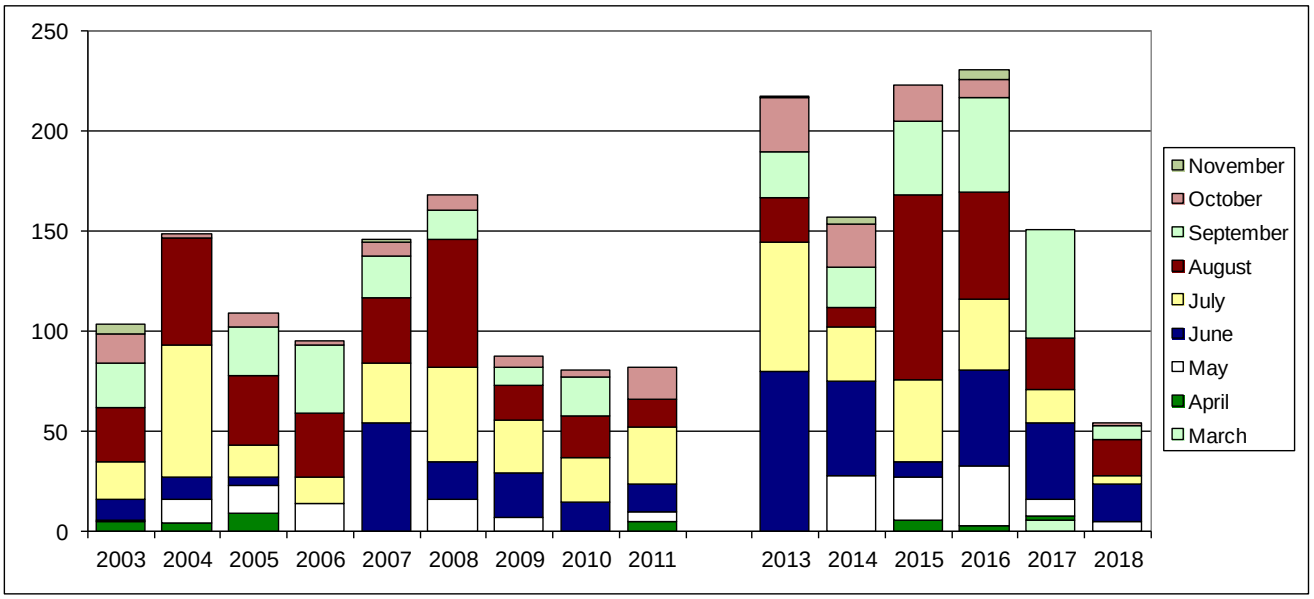


Figure 12. *Monthly net upstream counts, Lochay Falls Fish Pass, 2003 – 2018. (Data courtesy of SSE)*

RIVER TUMMEL SMOLT TAGGING PROJECT

The River Tummel smolt project hopes to provide a) annual estimates of the survival rate of salmon between migrating as smolts and returning as adults to the River Tummel and b) to determine whether Pitlochry Dam poses a problem for smolts. 2018 was the third year of the project, but only the first to start to reveal really meaningful results.

This project involves capturing migrating smolts upstream of Pitlochry Dam, wherever it is practicable to do so, using something called rotary screw traps. These are floating devices into which smolts can be funneled, if placed below some point of concentration in the flow. The smolts are then tagged with Passive Inductive Transformer (PIT) tags, tiny "chips" inserted into the body cavities of the smolts through very small incisions. Each PIT tag is coded with a unique number which can be read by a detector located in the fish pass at Pitlochry Dam if and when the fish returns as an adult salmon.

In 2018, one trap was deployed again in the Errochty Water below a weir at Struan, which was found to be a good trapping location in 2016 and 2017. A second trap was tried in the Garry below Blair Atholl in 2017, but, as trapping was inefficient there, this second trap was deployed in the newly rewatered section of the Garry at Struan in 2018. There was an expectation that smolts might be caught there, as stocking had taken place upstream for some years and electrofishing had shown salmon parr present in 2017. A trap there would also serve the secondary purpose of monitoring the recovery of the Garry salmon population.

In both the Errochty and Garry, a proportion of tagged smolts were released some distance upstream of the traps to allow trapping efficiency to be estimated through recapture rates. Others were released immediately upstream and downstream of Pitlochry Dam to test for any difference in adult return of smolts that had to pass through the turbines.

The numbers of smolts caught and tagged in 2018 are shown in Table 2. 569 of the tagged smolts were released just above Pitlochry Dam and 733 below it. The recapture trial showed the Errochty to again be the more effective trapping location, but the Garry trap was quite effective too. However, it should also be noted that, for some of the time, the Garry trap was inoperable due to spates. As smolts often move then, the total number of smolts leaving the Garry will have been higher than that estimated. The Errochty flow is much more controlled. Also, though not shown, the Garry smolts were on average bigger than Errochty smolts, a finding consistent with juvenile electrofishing results.

	No. caught	No. tagged	% Recaptured	Overall river smolt estimate
Errochty Trap	2,074	1,491	32.6%	6,334
Garry Trap	1,266	729	24.1%	5,191

Table 2. *Numbers of smolts caught in the Errochty and Garry smolt traps, spring 2018.*

The number of smolts produced from the Garry, which was nearly dry a year before, is particularly interesting. For several previous autumns, Board staff electrofished juvenile salmon at two sites on the Garry, in areas where stocking of eggs or fry had taken place annually despite the very low flow. In the three years before 2017, the density of parr was always relatively low (Figure 13). This may have reflected the very limited flow, although the low number of parr in 2015 might just have been the result of very poor fry numbers in 2014. However, in 2017, when higher flows persisted from April onwards, the autumn parr density was much higher. Those 2017 parr became the 2018 smolt run.

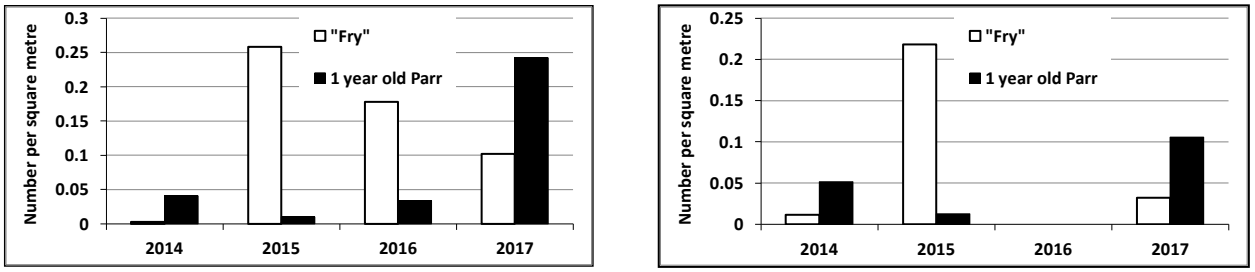


Figure 13. *Densities of juvenile salmon caught using single pass electrofishing on the River Garry near Dalnamein (left) and Clunes (right), 2014 – 2017 (Clunes was not fished in 2016).*

Adult return rates

Now that the project has been running for three years, there is at last some information on returning adults. The first smolts were tagged in 2016, but only 388 of them. As reported last year, only three returning grilse were detected out of the 388, a much lower number than originally envisaged. Then, in 2018, three 2SW salmon were detected from the same release, bringing the total return to just over 1.5%. A return of 5% - 10% was originally envisaged.

In 2017, 1,940 tagged smolts were released in total. Of those, 14 were detected as grilse ascending Pitlochry Dam in 2018, which turns out to be a very a similar percentage to the previous year.

As stated in last year's report, an immediate reaction might be to question the tagging procedure etc. But, the 2018 summer count through Pitlochry Dam was the second lowest ever, even compared to the era when nets operated (2017 was the only one lower). Catches also show an apparent reduction in grilse. Therefore, this is consistent with a real low rate of return.

However, a significant finding of 2018 was that as many 2SW salmon returned from the 2016 release as grilse. As recent as little over a decade ago, for every 2SW salmon that ascended the River Tummel, two or even three grilse might have been expected. The Pitlochry fish counter confirms such a change. More fish were counted ascending Piltochry Dam in May/June 2018 than during the summer of 2017, indicating a similar or bigger 2SW salmon run in 2018 compared to 2017's grilse run. Catches, both in the Tay district and elsewhere also seem to bear this out.

Thus, at a time of sudden decrease in salmon, this Tummel project is proving central in providing evidence as to where the main problems may lie. The irony, however, is that such low rates of return make it harder to test for any effects of Pitlochry Dam.

THE RECENT SALMON DECLINE. WHERE MIGHT THE PROBLEM LIE?

Introduction

The big question of 2018, is what has happened to the salmon? The spring salmon run was down overall, although there were more big 3SW fish early on. The summer grilse run was down too, and like 2017, there were few fresh fish of any age in the autumn. However, it's not clear when the colouring larger fish that were caught in September came in or where exactly they had been hiding.

In last year's *Annual Report*, following the reduced 2017 grilse run, we speculated that 2018 might be something of a pivotal year. For some years, there has been a trend for successful returners to have spent longer at sea before maturing, i.e. increasing salmon and decreasing grilse. Was the poorer 2017 grilse run just another stage in this process? Would it be compensated for with more salmon in 2018 or might the whole year class have just failed?

In the event, it looks as if the 2SW run did reduce in 2018, suggesting an overall poorer year class. However, as shown by the Tummel PIT tagging, a greater percentage of fish does appear to be coming back as 2SW salmon compared to a few years ago. The answer, then, may have been a bit of both. As suggested last year, the PIT tagging results and the fact this trend appears to be common to a large area of eastern Scotland, indicates the main problem is in the sea. But, exactly what?

Growth rates

Another change, which is very relevant, is in the rate at which salmon grow at sea. A number of studies have found both the weight of salmon of a given age and their "condition" has declined. For example, Figure 14 shows the average weight of a grilse reported from beats on the lower Tay for the months of August and October, over the years 1986 – 2017. The lower Tay is considered to reduce the complication of coloured grilse being present in catches. There has been a general decline in the reported weight of grilse in recent years (the same is true of other months, not shown). In fact, the decline might be even steeper because many larger grilse may have been misclassified as "salmon" in returns from the autumns of the early years. It is interesting to note that, in 2016 and 2017, when there was a lack of fresh run autumn grilse, reported weights in August and October closed up.

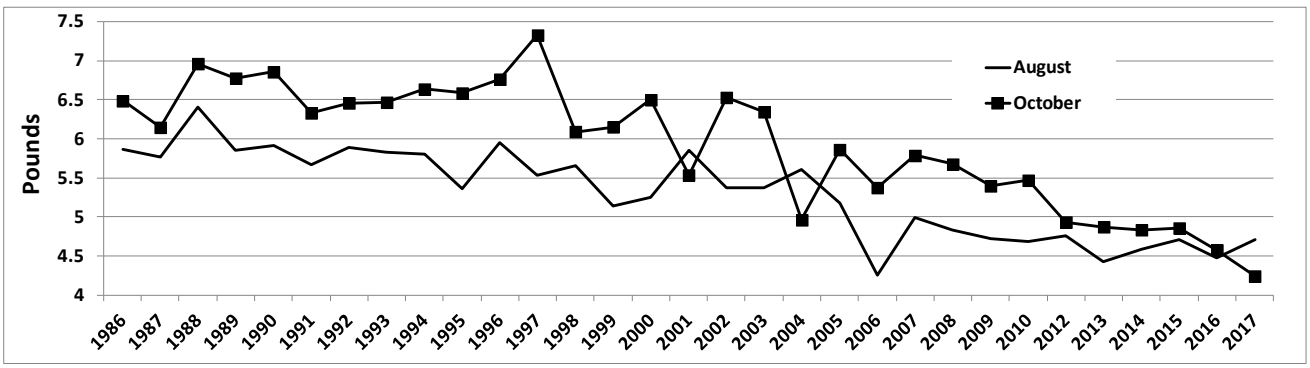


***Figure 14**. Mean weight of grilse reported by anglers on the lower Tay in the months of August and October, 1986 – 2017. (Note, no data for 2011) (Data pre-2010 collected by Marine Scotland and later by TDSFB.)*

However, while grilse have been getting smaller, the mean weight of spring salmon reported before the end of March has been increasing after a low period in the 1990s and early 2000s (Figure 15). This is not because of an increased growth rate, rather a reducing one. The increase in average weight reflects an increase in the proportion of 3SW salmon in the catch. 3SW salmon, which were formerly a big feature of the Tay became a rarity by the 1990s, but have been starting to make a comeback. This delayed maturation may be a response to reduced feeding opportunity at sea. And, if marine feeding opportunities are reducing, that may be part of why less fish are returning overall.

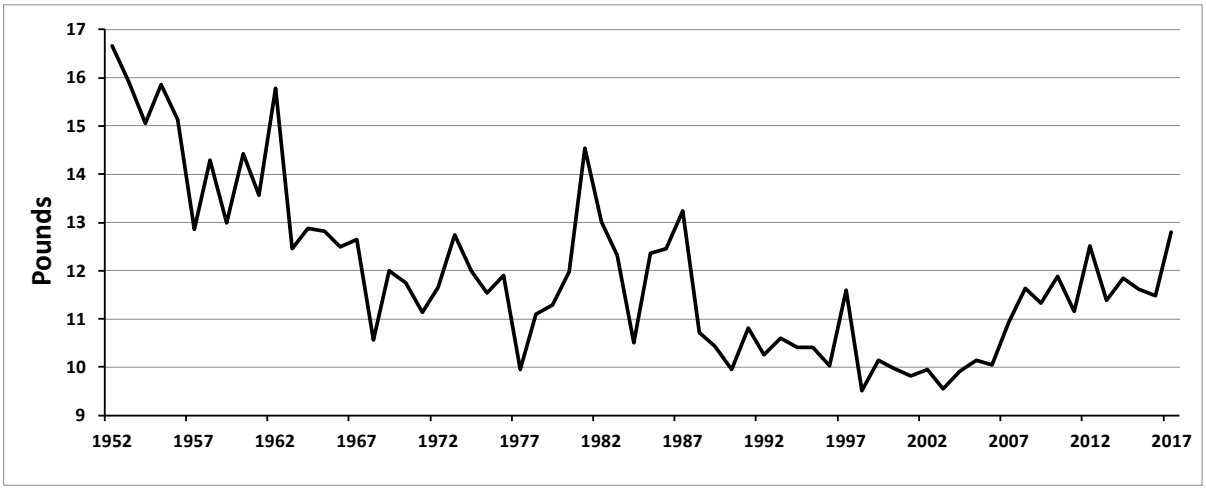


Figure 15. *The mean weight of salmon reported by anglers in the Tay district between 15 January and 31 March, from 1952 to 2017. (Data from Marine Scotland)*

Changes at sea

If reduced feeding is a problem, where in the salmon's sea life might this be occurring? Inshore or much further away?

Considering inshore first, research has shown that the abundance of small pelagic fish has declined in the North Sea. For example, a recently published analysis of the diet of shags on the Isle of May suggest that sandeel abundance has declined progressively since 1988. Sea trout have also declined and they are assumed to be a coastal species. But, while feeding opportunities may have reduced in coastal areas, recent acoustic tracking studies in the Moray Firth and in Aberdeen Bay confirmed that salmon smolts move away from the coast very quickly and may therefore only spend a very short part of their sea-life inshore. Almost all of their sea life is spent far to the north, in the Norwegian Sea area.

However, problems affecting the feeding of certain sea birds have been reported from western Norway, the Faroes and even southern Iceland. Thus, this problem is widespread and not just confined to Scottish coastal areas. It is now well established there have also been massive, perhaps unprecedented, shifts in the distribution and abundance of some species of fish across this region in recent years. No species, as well known, illustrates this better than mackerel.

Mackerel, in the main, spawn in the Atlantic to the west of the Hebrides / Ireland in spring and thereafter move north on a feeding migration. Since the 1970s, their spawning area has stretched

further north and, in summer, the fish have ranged further and further north and west into areas where they have never been known, even as far as Greenland. In recent summers, they have been widespread in the Norwegian Sea, overlapping the distribution of salmon to a considerable extent. Also, in the last 10 to 15 years, as they have moved north, their growth rate has reduced, just like grilse.

It is argued by Jens Christian Holst, a Norwegian scientist, that competition from mackerel may now be a significant part of the problem for post-smolts and that early post-smolts might even be eaten by them. Whether this is the case or not remains to be demonstrated one way or the other. Perhaps this should be a priority for international bodies to investigate.

Should mackerel and salmon interact, the effect might be expected to be greatest on pre-grilse when they are of similar size. However, for those salmon that do survive and grow big enough, those same mackerel and herring, which have also increased in the Norwegian Sea, might then become the prey. That scenario would be consistent with an increasing proportion returning as MSW salmon, even as overall return rates decline, which is exactly what is happening. Indeed, some of the larger spring salmon caught in 2018 were in excellent order.



Some of the larger salmon caught this spring were in excellent condition, like this 23 pounder from Cargill.

Even if mackerel do not significantly compete with salmon, the expanding range of shrinking mackerel still confirms that there has been a massive ecological change to the north of Scotland. It would be hard not to conclude that both species must have been affected by the same fundamental factors impacting on productivity.

So to conclude, it seems that salmon may be affected by poor feeding opportunities that could impact them right from leaving their rivers to the northern feeding grounds. If the main driver of this ultimately is climate induced changes in plankton production, we may have little direct influence over this process. However, if spreading mackerel or other pelagic species are found to contribute by reducing food available to post smolts, then, perhaps, something potentially, might be done, if there was an international will to do so.

AQUACULTURE AND FISHERIES (SCOTLAND) ACT 2013

The Aquaculture and Fisheries (Scotland) Act 2013, placed a number of new duties on DSFBs relating to openness and accountability. It requires that the Annual Report should include:

1) A summary of what the board has done in carrying out its statutory functions during the year to which the report relates.
2) A summary of what the board propose to do in carrying out those functions in the following year.
3) Information about complaints made to the Board during the year, including: the number of complaints; and a statement of the nature of each complaint and how it was disposed of.
4) A statement as to how the Board have complied during the year with the good governance requirements and propose to comply with those requirements in the following year.

Point 1) has been covered by the main body of this report. 2) has partly been summarised by the main body of the report but might be further summarised by saying that the Board intends to continue to work on the same issues covered in 2018. It particularly intends to expand the parr rearing capacity of the hatchery and remove weirs and barriers to fish movement in 2019. It will continue to develop the River Tummel Smolt Tagging Project and the River Garry Adaptive Management Monitoring Plan also.

Regarding point 3), as of the time of writing (November 2018), two complaints were received in 2018.

The first complaint was of an estate management nature and was dealt with promptly in line with the adopted complaints procedure. The second complaint was made against the professional conduct of fisheries staff. Responses were made in line with the complaints procedure and the complainant did not wish to take it further.

New governance requirements

The Act placed a number of governance requirements on DSFBs, as indicated in point 4) above.

Meetings

All meetings of the Board, including Board meetings and the annual meeting of qualified proprietors, were open to the public as observers, and will continue to be so, although some items of business at Board meetings may be taken in private.

There was an annual public meeting on 22 March 2018, which was separate from the annual meeting of proprietors. Members of the public participated fully and minutes of the meeting can be found at www.tdsfb.org/reports.html. There will be another such meeting in 2019.

The dates and details of forthcoming meetings can also be found at www.tdsfb.org/reports.html.

The minutes of Board meetings have also been published at www.tdsfb.org/reports.html where they will continue to be published. Hard copies can also be obtained from the Clerk on request.

Annual Report and Accounts

The Annual Report with accounts for 2016/17 was published at www.tdsfb.org/reports.html and hard copies were sent to all qualified proprietors in the district and a copy sent to Scottish Ministers. This report and subsequent Annual Reports will also be published on the same basis and a copy will be sent to Scottish Ministers.

Complaints procedure

The Board has set up and maintains a complaints procedure which can be viewed at www.tdsfb.org/governance.html.

Board members' interests

The Board has set up a register of members interests. This can be viewed on request at the Board's office. We have included 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.

TAY DISTRICT SALMON FISHERIES BOARD

Minutes of Annual Meeting of the Proprietors within the Tay District held in terms of Section 44(1) of the Salmon & Freshwater Fisheries (Consolidation) (Scotland) Act 2003 held at Birnam Institute, Birnam, Dunkeld at 11am on Tuesday, 12th December 2017.

Present:
Iain McLaren (Prospective Chairman)
Bob Band
Wattie Barbour
Geoff Coates
Alan Dunnet
Edward Eadie
Alasdair Gilbert
David Godfrey
Simon Hill
Bill Jack
Francis Jennings
John Lessels
Lord Mansfield
Claire Mercer Nairne
John Milligan
Gordon Nichol
Jim Perrett
Mike Smith
Patrick Steuart Fothringham
Grant Tigwell
Duncan Twigg
Iain Wood
Katrina Wood

In Attendance:
Dr. David Summers, Fisheries Director
Inga McGown, Clerk to the Board
David Brown
Mike Brown
Bob Mason
Stephen Mannion
Tom Monaghan
Cohn O'Dea
Davie Seaton
Fraser Smith
Geordie Stewart
Bob White
John Wood

Apologies: John Apthorp
Simon Furniss
Alastair Riddell

The prospective Chairman welcomed the attendees, and made a short presentation to the outgoing Chairman, Bill Jack, thanking him for all his hard work over the years.

Minutes of Annual Meeting of Proprietors held on 13th December 2016:

The Minutes of the 2016 Annual Meeting of Proprietors were previously circulated in the Annual Report and taken as read. There were no matters arising, and on a proposal by Bobby White, and seconded by Geoff Coates, were approved.

Accounts for the Year Ended 31st December, 2016

The Accounts for the year ended 31st December 2016, which were incorporated into the Annual Report, had been circulated and were taken as read.

The Clerk gave a brief overview of the accounts and the main variances year on year. 2016 saw a surplus of £28,578. There was a question regarding the make up of the website figure, which the Clerk answered.

There were no further questions, and on a proposal from John Wood, and seconded by David Godfrey, the Accounts were approved.

Annual Report 2016/7

The Annual Report 2016/7 had been previously circulated and was taken as read. On a proposal by Patrick Steuart Fothringham, and seconded by Iain Wood, the Annual Report was approved.

Board Activities for 2017 season and beyond

Dr. David Summers gave an overview of the events of 2017, highlighting enforcement issues, lack of grilse, Wild Fisheries Review, Hatchery Work, re-watering of the Garry, and the main activities of the Board throughout the year.

Enforcement

Dr. Summers highlighted the fact that there are still enforcement issues in certain areas

Lack of Grilse

The lack of grilse and autumn fish is a worrying issue.

Salmon Conservation Regulations 2018

Dr. Summers explained that the Eden and the Earn had been re-categorised as Category 3 for the

2018 season, and reminded the room that compulsory Catch & Release was still in operation everywhere until the end of March 2018.

Rewatering of the Garry

Dr. Summers explained the whole history of the Garry project, from the 2000 EU Water Framework Directive, to the SSE proposal in 2006, to the 2010 SSE revisit of their prior plan, right up to the opening of the Garry this year, and the proposed Adaptive Management Plan.

Any Other Business

River Garry:

Mike Smith stated that ten years ago in the Annual report Dr. Summers had pointed out that fish might struggle to get up the waterfalls at Clunes Lodge, and perhaps something should be done about it. Dr. Summers replied that there had been a lot of work undertaken by many parties to get the Garry project to its current position, and that it was not just a salmon project, but more about a restoration of a river, which these falls are a natural part of. Both the TDSFB and SSE had raised this issue in the past, but had failed to gain traction. Assessing the ability of salmon to ascend these falls under the restored flow regime was a major element in the Adaptive Management Monitoring Plan. The issue was certainly not being overlooked.

Vitality Damage:

Duncan Twigg stated that scientists should become better communicators and instead of describing fish stock problems as genetic damage due to overharvesting, they should use the term vitality damage. The prospective Chairman thanked him for his comment.

Invasives Project:

Tom Monaghan explained that the treatment of invasive plants on the River Earn was being paid for through REIA member subs, and this money was dwindling. He stated that the Tay Foundation used to provide match funding but had stopped last year, and he wondered whether there was any funding to be had. Dr. Summers replied that regarding Tay Foundation funding, the REIA had been asked to submit a proposal for funding but had yet to do this. As far as the SISI project was concerned, Dr. Summers explained that it didn't take in the Eden or the Earn due to its boundaries, which had not been under the Board's influence. However, he was more than willing to sit down and discuss a way forward.

Garry Habitat:

Patrick Steuart Fothringham asked if fish had enough food to sustain them in the Garry and was this issue being addressed, to which Dr. Summers replied that SEPA were undertaking surveys of invertebrates and algae amongst other things. He went on to explain that the Board had been stocking and electrofishing the Garry and had found that fry grew surprisingly fast but in low densities. He would expect to find fry growing more slowly but in greater densities with the increased flow of water.

There was no other business and the Prospective Chairman closed the meeting.

TAY DISTRICT SALMON FISHERIES BOARD

Triennial Election of the Tay District Salmon Fisheries Board held under the Salmon & Freshwater Fisheries (Consolidation) (Scotland) Act 2003 held at Birnam Institute, Birnam, Dunkeld on Tuesday, 12th December 2017.

Present: Those proprietors present at the earlier Annual General Meeting, together with Mandatories

In Attendance: Dr. David Summers, Fisheries Director
Inga McGown, Clerk to the Board
David Brown
Mike Brown
Bob Mason
Stephen Mannion
Tom Monaghan
Cohn O'Dea
Davie Seaton
Fraser Smith
Geordie Stewart
Bob White

1. The prospective Chairman of the outgoing Board, Iain McLaren, opened the meeting by intimating that he and the outgoing Board resigned. He then handed over the meeting to the Clerk.

2. The Clerk welcomed the proprietors present to the Election under the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003. She stated that the only business to be conducted at the meeting of proprietors was the election of representatives of proprietors. She reminded the assembled group that there were no maximum number of Board members, but that the outgoing Board had recommended a maximum of 2 Lower Proprietors and 5 Upper Proprietors. The meeting agreed to this proposal unanimously.

3. The outgoing Board had served 3 years. In terms of Section 43 of the 2003 Act the meeting of Upper and Lower proprietors had been called for the purpose of forming an Association of Proprietors of Salmon Fisheries within the Tay District, and for the purpose of electing a Committee to act on behalf of the Association, which Committee would then become the District Salmon Fisheries Board for the Tay District.

4. The Clerk stated that Notice had been given to each proprietor on the roll of proprietors in terms of the 2003 Act, and also by advertisement in the press.

5. The meeting unanimously agreed that the Clerk should conduct the election.

6. The Clerk then called the Election in terms of the 2003 Act and called for the nominations from those qualified proprietors present for representatives of Lower and Upper Proprietors.

   The following nominations were received for Lower Proprietors:

   1. David Godfrey as Mandatory for Tay Salmon Fishing Co Ltd proposed by Perth & Kinross Council (Mandatory Bob Band), and seconded by the Tay Foundation (Mandatory David Summers)

   2. Bob Band as Mandatory for Perth & Kinross Council proposed by the Tay Foundation (Mandatory David Summers) and seconded by the Tay Salmon Fishing Co Ltd (Mandatory David Godfrey)

   The following nominations were received for Upper Proprietors:

   1. Geoff Coates as Mandatory for Taymount proposed by Claire Mercer Nairne (Mandatory for Meikleour) and seconded by Iain Wood (Mandatory for Stobhall)

   2. Lord Mansfield proposed by David Godfrey (Mandatory for the Tay Salmon Fishing Co Ltd), and seconded by Allan Dunnet (Mandatory for Dunnet Holdings)

   3. Claire Mercer Nairne as Mandatory for Meikleour proposed by Geoff Coates (Mandatory for Taymount) and seconded by Allan Dunnet (Mandatory for Dunnet Holdings)

   4. Alistair Riddell proposed by Geoff Coates (Mandatory for Taymount), and seconded by Wattie Barbour (Mandatory for various fishings)

   5. Mike Smith proposed by Wattie Barbour (Mandatory for various fishings), and seconded by John Lessels (Mandatory for Crawford Priory).

   6. Jim Perrett as Mandatory for REIA, proposed by Tom Monaghan and seconded by Wattie Barbour (Mandatory for various fishings)

   7. Iain McLaren as Mandatory for Kinnaird Estate, proposed by David Godfrey (Mandatory for Tay Salmon Fishing Co Ltd), and seconded by Patrick Steuart Fothringham.

   8. Simon Furniss as Mandatory for Clayfield Investments, proposed by Claire Mercer Nairne (Mandatory for Meikleour) and seconded by Geoff Coates (Mandatory for Taymount)

There being no further nominations, the Clerk called for a vote among the Upper representatives. The result of the vote was that the following nominees were elected as representatives of the proprietors to serve on the Committee as follows:

Upper Proprietors:
Iain McLaren, Claire Mercer Nairne, Jim Perrett, Mike Smith and Lord Mansfield

Lower Proprietors:
David Godfrey and Bob Band

The Clerk then thanked the representatives for their time and concluded that the formal business of the meeting was now closed, as she asked the elected representatives to remain behind for the first meeting of the new District Salmon Fisheries Board.

INDEPENDENT AUDITOR'S REPORT TO THE PROPRIETORS OF SALMON FISHERIES IN THE TAY DISTRICT

In accordance with the Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003, section 44, we have audited the financial statements of Tay District Salmon Fisheries Board (the 'Board') for the year ended 31 December 2017 which comprise the Income and Expenditure Account, the Balance Sheet and the related notes. The financial reporting framework that has been applied in their preparation is United Kingdom Accounting Standards including Financial Reporting Standard 102, the Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

This report is made solely to the proprietors of Salmon Fisheries in the Tay District as a body. Our audit work has been undertaken so that we might state to the Board's proprietors those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the proprietors, for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of duly elected and duly co-opted board members

Section 44 of the Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003 require the Board to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Board and of the income and expenditure of the Board for that period. In preparing these financial statements, the Board's proprietors are required to:

i select suitable accounting policies and then apply them consistently;
ii make judgements and estimates that are reasonable and prudent;
iii prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Board will continue in business.

The Board's proprietors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Board and to enable it to ensure that the financial statements comply with the Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003. It has general responsibility for taking reasonable steps to safeguard the assets of the Board and to prevent and detect fraud and other irregularities.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Board's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Board members; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

Opinion on financial statements

In our opinion the financial statements:

- give a true and fair view of the state of the Board's affairs as at 31 December 2017 and of its income and expenditure for the year then ended; and

- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice.

Alan Taylor (Senior Statutory Auditor)
For and on behalf of Campbell Dallas Audit Services
Statutory Auditors
5 Whitefriars Crescent
Perth
Perthshire
PH2 0PA
12th December 2018

TAY DISTRICT SALMON FISHERIES BOARD
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2017

	NOTES	£	2017 £	2016 £
INCOME				
Fishery assessments	2		506,596	467,681
Revaluation Appeals			(40,808)	(5,559)
Bad debts, changes to provision for doubtful debts etc			-	-
			465,788	462,122
Compensation Received (SSE)			7,158	6,984
Rent			10,873	602
Consultancy			3,060	390
Other			-	679
			486,879	470,777
EXPENDITURE				
Salaries and National Insurance		209,485		211,563
Pension plus Death in Service- Board's contribution		28,020		13,142
Recruitment & Training		139		3,366
Employee Expenses		948		-
Road Maintenance		-		-
Bank Charges		244		214
Motor cars and boats running costs, incl insurance		20,946		26,130
Rent, rates and general insurance		32,240		30,640
Heat & light		21,395		17,281
Repairs&maintenance - General		5,878		8,709
Telephone & Communications		9,069		9,855
Printing, Stationery, Postage & Advertising		2,873		4,014
Annual Report Costs		677		702
Meetings and other statutory costs		3,587		1,391
Ghillies lunch and meeting		594		653
Legal fees		713		4,393
Audit and accounts fees		1,730		2,698
Depreciation		18,223		19,449
Subscriptions and levies		19,116		11,418
I T costs		30		651
Health & Safety implementation incl clothing		8,154		11,872
Hatchery Running Costs		56,449		51,317
Project Work		1,362		1,598
Websites		10,024		11,528
Opening Day		554		35
Gifts & Presentations		1,784		40
			454,234	442,659
			32,645	28,118
Gain on sale of fixed assets			-	-
			32,645	28,118
Interest received	3		298	460
			32,943	28,578
Transfers to reserves: NASF(UK)	5		-	-
Surplus for the year			32,943	28,578

The notes on pages 44 to 46 form part of these accounts.

TAY DISTRICT SALMON FISHERIES BOARD

BALANCE SHEET
AS AT 31 DECEMBER 2017

	NOTES	£	2017 £	2016 £
FIXED ASSETS				
Tangible assets	4		92,798	111,022
			92,798	111,022
CURRENT ASSETS				
Debtors & prepayments		134,237		42,060
Cash at Bank and in Hand		429,908		412,950
		564,145		455,010
CURRENT LIABILITIES				
Other creditors & accruals		177,470		119,501
Net current assets			386,675	335,509
NET ASSETS			479,473	446,531
Representing:				
Reserves	5		83,434	83,434
General Fund	6		396,039	363,097
			479,473	446,531

These accounts were approved on 12th December 2018

IAIN McLAREN
..... BOARD MEMBER

JIM PERRETT
..... BOARD MEMBER

The notes on pages 44 to 46 form part of these accounts.

NOTES TO THE ACCOUNTS
AT 31 DECEMBER 2017

1 ACCOUNTING POLICIES

The accounts have been prepared under the historical cost convention and are in accordance with the United Kingdom Generally Accepted Accounting Practice. The following accounting policies have been applied:

Fixed assets and depreciation

The cost of fixed assets is stated at the net amount after deducting grants available. Donations relating to expenditure on fixed assets are credited to the Profit and Loss Account in the year of receipt, where there are no conditions attaching to the donation.
Depreciation is provided on all fixed assets, at rates calculated to write off the cost over the expected useful lives of the assets concerned as follows:

Hatchery	Over term of the lease
Motor vehicles	25% per annum straight line
Boats	25% per annum reducing balance
Plant and Equipment	25% per annum reducing balance
Computer equipment	33.3 % straight line

Taxation

No taxation is provided due to the fact that HM Revenue and Customs has agreed that the Board is not liable for corporation tax.

Death in service scheme

Contributions to the Board's scheme are charged to the Income and Expenditure account in the year in which they become payable.

2 FISHERY ASSESSMENTS

		2017		2016
	Rateable Value	Assessment	Rateable Value	Assessment
	£	£	£	£
Upper proprietors	1,096,030	504,174	875,774	468,679
Lower proprietors	15,450	7,107	4,425	2,354
	1,111,480	511,281	880,199	471,033
Less River Shee		115		93
Estuarial netting stations		4,106		3,259
		507,060		467,681

The assessments are based on 46% of Rateable Value (2016 – 53.2%)

3 INTEREST RECEIVED	2017	2016
	£	£
Bank interest	298	460
	298	460

4 FIXED ASSETS

	Leasehold Property	Motor Vehicles	Boats	Plant & Equipment	Office and Computer Equipment	Total
	£	£	£	£	£	£
Cost:						
At 1 January 2017	191,468	93,418	42,671	186,517	20,028	534,102
Additions	-	-	-	-	-	-
Disposals	-	-	-	-	-	-
At 31 December 2017	191,468	93,418	42,671	186,517	20,028	534,102
Depreciation:						
At 1 January 2017	103,832	73,027	42,535	183,658	20,028	423,080
Charge for year	8,763	8,708	36	716	-	18,223
Eliminated for disposals	-	-	-	-	-	-
At 31 December 2017	112,595	81,735	42,571	184,374	20,028	441,303
Net book amounts:						
At 31 December 2017	78,873	11,683	100	2,143	-	92,799
At 31 December 2016	87,636	20,391	136	2,859	-	111,022

5 RESERVES

	GENERAL	NASF(UK)	TOTAL
	£	£	£
At 1 January 2017	83,434	-	83,434
Provision in year	-	-	-
	83,434	-	83,434
Expenditure in year	-	-	-
At 31 December 2017	83,434	-	83,434

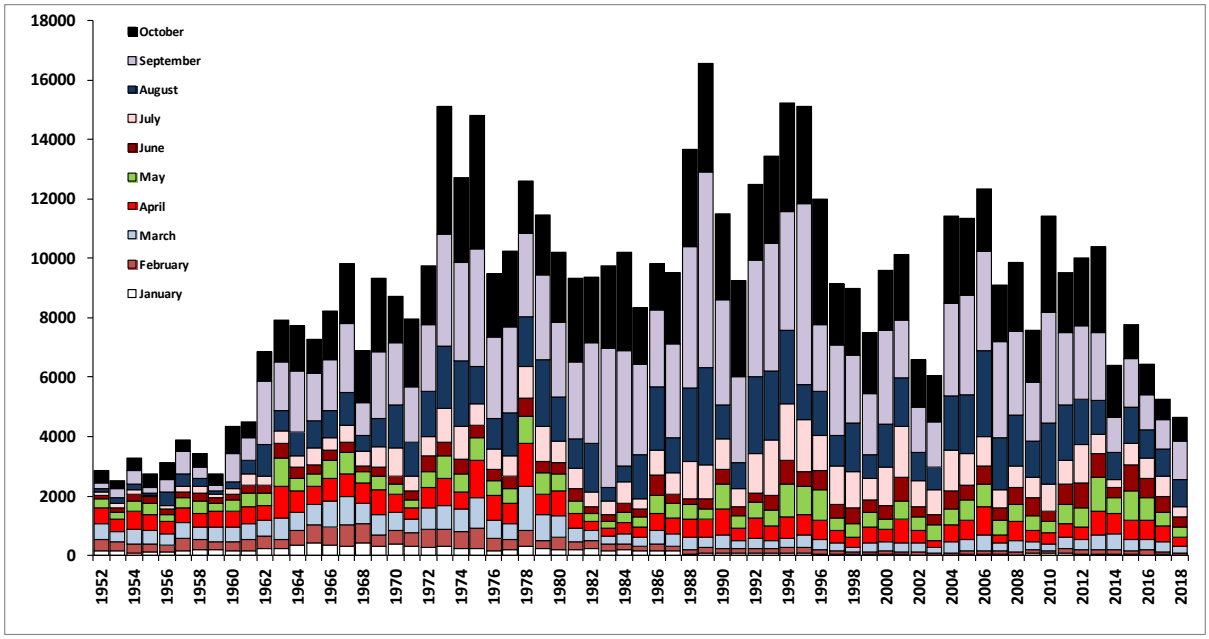
NOTES TO THE ACCOUNTS (cont'd)
AT 31DECEMBER 2017

6 GENERAL FUND

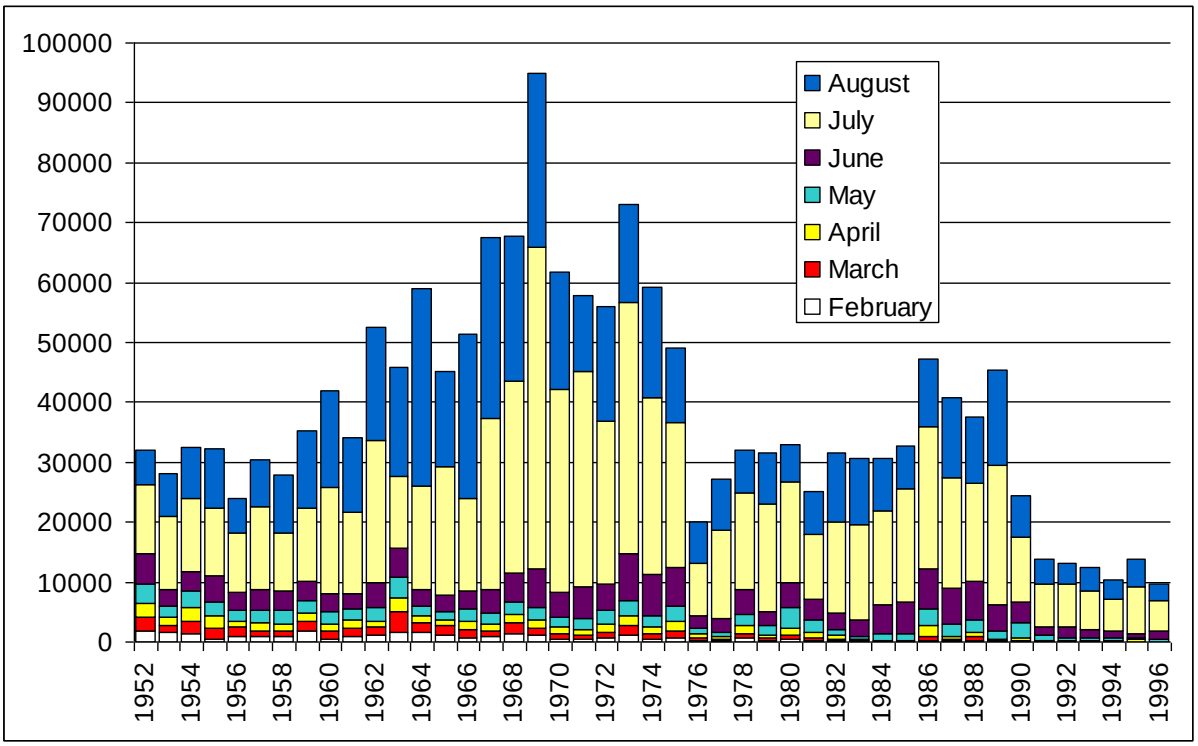
	2017	2016
	£	£
At 1 January 2017	363,097	334,519
Surplus for year	32,942	28,578
At 31 December 2017	396,039	363,097
	======	======

7 CAPITAL COMMITMENT

There were no capital commitments as at 31st December 2017.



Monthly angling catch for the Tay District 1952 – 2018 (including released fish). The 1952 – 2010 data used in this graph are Crown copyright, used with the permission of Marine Scotland Science, Aberdeen. Marine Scotland is not responsible for interpretation of these data by third parties. 2011 to 2017 data were collected by the Board and 2018 is based on a preliminary analysis of www.fishtay.co.uk catches.



Monthly net and coble catch, Tay District 1952 – 1996 (netting largely ceased in 1996). The data used in this graph are Crown copyright, used with the permission of Marine Scotland Science, Aberdeen. Marine Scotland is not responsible for interpretation of these data by third parties.

BOARD MEMBERS ATTENDANCE FOR 2017

	14 February	18 April	13 June	8 August	17 October	12 December
W. Jack	X	X	X	X	X	-
S. Furniss	X	-	X	-	X	-
D. Godfrey	X	X	-	X	X	X
G. Coates	X	X	X	X	X	X
C. Mercer Nairne	X	X	X	-	X	X
S. Mannion	-	-	-	X	X	X
D. Brown	X	X	-	-	X	X
A. Riddell	X	X	X	X	X	-
I. McLaren	X	X	-	-	X	X
J. M. Wood	X	X	X	X	X	X
A. Munro/ R. Band	-	-	-	-	X	X
C. O'Dea	-	X	X	-	X	X

X Present - Apologised for non-attendance

ACKNOWLEDGEMENTS

The Tay District Salmon Fisheries Board wishes to acknowledge the following people, organisations and companies for their very kind assistance and support in 2017 and 2018.

All Proprietors within the Tay District
Andrew Graham-Stewart
All Honorary Bailiffs
All Ghillies and Boatmen
All Tay Board staff
The Tay Ghillies Association
The Tay Foundation
The River Earn Improvement Association
Scottish Environment Protection Agency
The staff of Marine Scotland at:
Victoria Quay, Edinburgh
Freshwater Fisheries Laboratory, Pitlochry
Montrose Research Station
Fisheries Management Scotland
Rivers and Lochs Institute, UHI
Fishlegal
Scottish Natural Heritage
SSE plc
Police Scotland