

## **RIVER YTHAN TRUST (RYT) UPDATE 18<sup>th</sup> DECEMBER 2020**

### **Mapping Pressures on Wild Atlantic Salmon in Scotland.**

Fisheries Management Scotland entered into an agreement with Marine Scotland in December 2019 to provide mapping information on issues that could impact wild Atlantic Salmon in Scottish Rivers including the Ythan. Fortunately, the habitat surveys we carried out in 2012 had recorded most of the relevant information, however a significant amount of time was spent by us in to map the various pressures in the format required, before the end of January 2020.

Based on our surveys and personal knowledge we provided details on the following, including status, severity, and confidence, in each case.

The wild Atlantic Salmon Pressures maps for Scotland, based on the responses from salmon fisheries boards and/or rivers trusts have yet to be published, but is expected in the near future.

### **Theme A Catchment Pressures.**

- Illicit Exploitation.
- In River and Estuarine Nets.
- Rod and Line.
- Seal Predation. (in this case severity unknown.)
- Piscivorous Bird Predation.
- Piscivorous Fish.
- Disease.
- Sea Lice.
- Farm Escapees.
- Coastal Nets.
- Marine Developments.
- Other Catchment Pressures – we included diffuse pollution, mainly from the 350 or so livestock waterings – none of which comply with SEPA General Binding Rules.

### **Theme B Predation and Stocking.**

- Piscivorous Birds.
- Piscivorous Fish.
- Other Predation – we included possible seal predation from the mouth of the Ythan to Esslemont – severity unknown.
- Ythan Stocking. Status - historical – last salmon stocking 2002.
- Stocking Continued. Water of Cruden/Laeca Burn and Slains Burn. Status - not applicable – no salmon stocking in living memory.

### Theme C Invasive Non-native Species.

- Crayfish
- Fish.

### Other INNS Pressures.

- Ranunculus, a translocated species – affects the Ythan from Ellon to Methlick and the Ebrie from its mouth, nearly to Auchnagatt.
- There has been control work ongoing on Giant Hogweed in the Ythan catchment since 2014 – now reduced by around 98% - has never been regarded as having a serious impact on salmon production – a small amount of Japanese Knotweed also been present but now almost eliminated. On the Water of Cruden/Laeca and Slains burns we have Himalayan Balsam and a small number of stands of Japanese Knotweed – has been treated by SISI in 2018, 2019 and 2020 – this expected to continue at least until 2021.

### Theme D – Habitat – Water Quality.

- Acidification. Status – not applicable, based on SEPA data – however we know that the upper levels of some tributaries are ochreous and are very unlikely to be suitable for any fish species.
- Point Source Pollution.
- Diffuse Pollution Various bodies – status coloured on maps.
- Eutrophication – status coloured on maps.
- Other Water Quality – nothing known.

### Theme E – Habitat – Water Quantity.

- Abstraction – status not applicable.
- Flow Regulation – status not applicable.
- Upland/agriculture/land use and drainage – no recent changes to these matters.
- Changing rainfall patterns (floods) Not thought to be an issue for salmon smolts – SEPA Classification Hub- Hydrology – med/high flows – high/good. However, recent severe winter floods (2016) have changed some habitats which probably affect fry and parr production.
- Other – Habitat – Water Quantity – none known.

### Tool F – Habitat – Thermal

- Loss of Shading. Status not applicable – no significant changes in last half century.
- Overshading. Linear data tunnel afforestation/overshading provided for the whole of the Ythan, Auchmacoy, Bronie, Forvie, Keithfield/Raxton, Kingsford/Howemill, Little Water/ Black Burn, Stonehouse, and Fordoun/Red/Black burns.
- Changing Temperature Patterns - Scotland River Temperature Monitoring Network suggests that those areas out with the coastal areas and without tree cover, (most of the Ythan catchment) - currently have maximum temperatures of 22 – 23 degrees, may well increase in temperature in the future which could adversely affect salmon production. (Temperatures of 26 degrees and over can prove fatal for salmon.)
- Thermal Discharge. Not applicable.
- Hydro Modification. Not applicable.
- Other Habitat Thermal Pressures. None known.

### Theme G – Habitat - Instream/Riparian

- Loss of Sediment Transfer. Not applicable.
- Lack of Large Woody Debris. Very little, large woody debris exists in the river – above Fyvie Estate and in tributaries, waterways are so narrow these would cause obstacles. The only section of the Ythan that could seriously benefit from the addition of woody debris is in the wooded areas between Methlick and the Little Water, also within Fyvie Estate. (River is very wide and shallow – bed mostly very fine gravel and sand.)
- Canalisation/Dredging/Boulder Removal – a considerable amount of dredging on the Ythan main stem has been carried out in the past between Fyvie and Auchterless , also on a large section of the Asleid Burn, a significant tributary of the Little Water. The above areas are regarded by us to be completely unsuitable for salmon production – riverbed almost all comprises just very fine gravel or sand – virtually no spawning gravel, cobbles, or boulders present
- Loss of Natural Riparian Vegetation. Not applicable - generally, since the catchment is almost all agricultural, riparian/buffer zones are not wide, mostly less than 2.4 metres – not a lot of natural riparian vegetation, other than grasses exists.
- Conifer Afforestation. Linear data has been provided for the whole Ythan, Auchmacoy, Keithfield, Kingsford/Howemill, Little Water/Black Burn and Fordoun/Red/Black burns.
- Other – Habitat – Instream & Riparian. None known.

Theme H – Obstacles to Fish Passage. (Does not include debris obstacles.)

- Foveran Burn. Partial natural fall and manmade weir behind Foveran old Church 398460/824195 - may be passable in high water conditions – not known if salmon are present in the Foveran Burn – historical electrofishing data suggests not.
- Youlie. No changes to map.
- Ebrie Main Stem. Impassable barrier above Mill of Elrick 393326/841285 now eased, however does not look to be effective in low water conditions.
- Ebrie LB Tributary Arnage Burn. Impassable barrier in grounds of Arnage Estate 393473/836677. Not suitable for removal or cost effective to do so, 3 m – 4m falls – tributary upstream has at least one further obstacle and habitat poor.
- Ebrie RB Tributary Coleman Burn. Part obstacle diverts water into lakes near Larach Beg 392113/837554.
- Kelly/Keithfield/Raxton – see below.
- Kelly. So called passable barrier at Kelly Sawmill 388097/835914 is currently not regarded as passable for salmon – electrofishing in 2011 found a tiny number of juveniles upstream, however, electrofishing in 2014 and 2016 found no salmon fry or parr upstream. The barrier at Haddo Lake Outfall 388021/834730 was modified in 2014 – no longer regarded as an obstacle.
- Keithfield. The bypass lade at Keithfield lake 385526/833491 was modified in 2019 to create a new fish pass – now regarded as passable.
- Little Water/Burn of Asleid – see below.
- Little Water. No changes to map.
- Burn of Asleid. Partial barrier, perched pipe bridge at Asleid House 383913/841915, historical electrofishing data confirms salmon present just below this location. No information on salmon presence above.
- Stonehouse Burn. Partial barrier pipe bridge at Little Gight between riverside fields 383427/839477, subject to debris blockages, historical electrofishing data confirms salmon present above.
- Crichtie Burn. No changes to map. Several impassable barriers exist than cannot possibly be considered for easing – the costs would be huge, with very little benefit to fish stocks.
- Fordoun/Red/Black Burns. Partial barrier, two weirs at Bridge of Lewes in Fyvie 367206/837594 – passable for salmon in high water conditions but not in low water conditions. Salmon present above this point.
- Tifty/Monks Burns. See below.
- Tifty Burn. Passage at the old partly demolished old Mill of Tifty dam 377653/840770 has been eased, however it is not known if salmon ascend.

- Monks Burn. Impassable man made barrier in woods at 377878/840410 exists. – however, based on our own habitat surveys in 2012. the burn is not regarded as being suitable for salmon production.
- Downstream Passage. Not applicable.
- Other Obstacle Related Pressure. None known.

#### Theme I Unknown Salmon Pressures.

- None Known.

#### **New River Ythan Website.**

In Late 2019 it was agreed between the Ythan District Salmon Fishery Board (YDSFB) and the River Ythan Trust that a new website be established for the Ythan which was to be for use by both organisations.

Doric Design LLP of Balmedie were commissioned to produce the website from information provided by both the YDSFB and the RYT over several months largely from late May 2020 until September 2020.

Providing Doric Design with the information for designing the website was very time consuming for both the YDSFB and RYT involving the production of many new articles, in the case of the RYT, from work they had been involved with since their formation in 2010.

The website is perhaps slightly different from most other rivers websites in as much as it gives far more detail regarding the habitat and natural environment of the river than most.

We hope you enjoy the content of the website [www.riverythan.org](http://www.riverythan.org) a great amount of interesting information can be accessed.

Both the YDSFB and the RYT wish to thank Doric Design LLP for their patience and what we believe has produced a first class website.

#### **SEPA and Rural Diffuse Pollution.**

Unfortunately, the Ythan SEPA farm inspections have for various reasons including Covid – 19 not yet been completed which is extremely disappointing - this will delay the removal of the 350 or so livestock watering stations in the catchment. The original intention was to complete the farm inspections this year and advise farmers of the items to be rectified and for a follow up series of inspections in 2021/2022 to check the remedial work was carried out. If not completed farmers could have sanctions made against them.

My hope was that following remedial action by farmers, volunteers from Ythan angling clubs could then inspect the various waterways (mainly tributaries) to ease the numerous other (mainly debris) obstacles to improve access for migrating salmon and sea trout. This would be a

slow process over many years but is the only likely way we can try to increase fish numbers (especially sea trout) for our anglers.

A great deal of organisation will be required to identify landowners/tenants on the various waterways and obtain agreement from landowners/tenants before any work can commence in easing these obstacles – unless SEPA can speed up their inspections, it may be 2023/24 before we can proceed with physical work on this matter.

### **Manmade Obstacles**

#### **Bronie Burn Scottiesly Wood Weir. (Esslemont.)**

This weir, low down on the Bronie Burn was identified as being a partial obstacle to salmon and sea trout migration as long ago as 2013. The weir is a very severe obstacle to fish migration in low water conditions, which is now far more common now than it was in the past.

SEPA produced designs and contract documents at very significant costs, for a contractor to remove the weir, all seemed to be going well until the weir owners (two, one on each bank) raised concerns regarding possible erosion issues. This was a matter of huge concern for us - after more than 7 years of trying to persuade SEPA to deal with the fish migration problem, we were advised that if the owners did not agree to the SEPA proposals by the end of 2020, all SEPA funding would be withdrawn and the project abandoned. **However, much to our delight, we can now advise that these difficulties have now been resolved and that the weir removal is now proposed for early summer 2021.** The weir removal project will be carried out at no cost to the owners or the Ythan District Salmon Fishery Board.

#### **Fordoun Burn Bridge of Lewes Weirs (In Fyvie.)**

A Scottish Water sewage pipe has existed under the bed of the burn here, a short distance below the Rothienorman road bridge, for many years and in low water conditions was causing difficulty for migrating salmon and sea trout.

In 1994 Scottish Water installed a second weir using steel piling with a passage slot below this point to raise the water levels above it to help fish migration.

However, the system was badly flawed and due to erosion below the steel piling made the situation worse, creating a fall of around 700 mm. Instead of one partial obstacle, there are now two.

Tests commissioned by the Ythan District Salmon Fishery Board in 2013 confirmed that the two weirs were a significant problem for fish migration, especially in low water conditions.

Recent electrofishing exercises have confirmed that some salmon have been able to spawn above the weirs, also that a number of redds have been seen.

SEPA advised us in 2019 that Scottish Water propose to remove the two weirs on the Fordoun and return the riverbed to what it was before the installation of the sewage pipe and steel piling.

We have received no feedback since then, perhaps due to Covid-19 issues. However due to the location of the properties at the weirs, a garage on the left bank and a private dwelling on the right bank right banks, resolving the problem of getting suitable engineering designs, landowner agreements and SEPA licensing will not be easy – may take years.

### **The Water Framework Directive. (WFD)**

This is an ambitious piece of European Environmental legislation adopted by the UK and Scottish Governments leading to the Water Environment and Water Services (Scotland) Act 2003.

The main aims of the WFD are as follows

- prevent deterioration and enhance status of aquatic ecosystems, including groundwater.
- promote sustainable water use.
- reduce pollution.
- contribute to the mitigation of floods and droughts.
- requires the creation of River Basin Management Plans (RBMPs).

### **River Basin Management Plans (RBMPs)**

RBMPs are the main driver in improving the waterways including the River Ythan Trust/Ythan District Salmon Fishery Board area and include the following. *(My italics.)*

- Identify the actions required and to deliver environmental improvements to water bodies by/in 2027. ***Actions have/are being identified – whether improvements will be carried out by/in 2027 is not known.***
- Remove pollution - rural diffuse pollution (mainly from agriculture) and wastewater discharges. ***SEPA is currently committed to have this completed by/in 2027.***
- Remove man made barriers to fish migration. ***Currently the RMPB is committed to having these eased or removed by 2027.***
- Improve physical modification of waterbodies. ***Nearly all waterbodies in the Ythan catchment have been heavily modified due to agricultural practices mainly in the distant past – SEPA are not expected to do anything about this matter – the costs would be enormous.***
- Try to eliminate Invasive non-native species. ***The main issue in the Ythan catchment is Giant Hogweed plants, although American Mink also exist.***
- Ease pressures on flows and levels e.g. abstraction. ***Abstraction is not an issue in the Ythan catchment.***

## **BREXIT/Water Framework Directive (WFD)/River Basin Management Plans. (RBMPs)**

Currently (Dec. 2020) it is not known if the UK and Scotland Governments will fully adopt the EU WFD and RBMPs, therefore there is a possibility that the content and/or time limits for completing the RBMPs may change and cause havoc regarding the improvement of waterways in the Ythan and other catchments. Also, with the financial debt incurred by the Covid – 19 crisis, will there be government funding to keep the WFD/RBMP programme going?

## **Ythan Biodiversity Volunteers (YBV), Ythan Invasive Non-native (INN) Plant Control 2014 – 2020.**

The RYT have been involved with the YBV and their predecessor, the Ythan Project Volunteers (YPV) since late 2013 in organising INN plant control in the Ythan catchment. The main INN plant problem is Giant Hogweed (GH) which has infected the main stem from Chapel of Seggat, just below Auchterless to and including Gight. Several tributaries including the Rappla/Lownie burns, Skeugh/Tifty/Monks burns, Fordoun/Black/Red burns and the Tarty burn are all affected. Small pockets of Japanese Knotweed also existed. (by 2020 all virtually eliminated).

Physical control work has been carried out each year since 2014 to and including 2020.

**2020 Update. Ythan Biodiversity Volunteers/ Scottish Invasive Species Initiative (SISI)– Ythan Invasive Plant Project (All INN Plants in affected areas of the Ythan tributaries including the Tarty Burn.) Note. SISI became involved in spring 2019 and took over GH control of around 40% of the Ythan catchment.**

The YBV had sufficient funds from previous years to enable the use of their contractor, Handy Gardens, to carry out the same level of GH control as in 2019, all complete by early June.

SISI were delayed in appointing a Seasonal Officer due to uncertainty regarding Covid-19, however, eventually they completed their sections of the Ythan and tributaries except for a short section of the Ythan between Fyvie and Gight.

**2021 Ythan Biodiversity Volunteers/ Scottish Invasive Species Initiative – Ythan Invasive Plant Project (All INN Plants in affected areas of the Ythan tributaries including the Tarty Burn.)**

2021 is supposed to be the last year SISI will be in operation – to finish in late October – currently there is no follow up of funding from the National Lottery/ Nature Scot (formerly Scottish Natural Heritage) however, there is hope that there may be some follow up for 2022, to enable various trusts to adapt to the lack of funding.

The YBV have sufficient funds to use Handy Gardens again in 2021 and this has been confirmed.



**2022 Ythan Biodiversity Volunteers Ythan Invasive Plant Project (All INN Plants in affected areas of the Ythan tributaries including the Tarty Burn.)**

Whilst SISI have been involved with INN plant control in parts of the Ythan catchment the YBV have managed to employ a contractor for their agreed section of the work for between £3000 and £3500 per annum, however assuming SISI are no longer involved they need up to £7000 per annum to carry on for say up to another 6 – 7 years to eliminate GH.

**SISI Water of Cruden/Laeca and Slains burns.**

On these burns there is no GH, but Japanese Knotweed (JK) and Himalayan Balsam (HB) exists.

Since summer 2018, SISI have been treating JK and HB on these burns and will do so in 2021 – we do not have sufficient information at present to know if they have been successful in eliminating these plants.

**Alec Paterson. Secretary. River Ythan Trust. 18<sup>th</sup> December 2020.**