Juvenile Salmonid Summary
Dyfi Catchment

This report summarises the findings of the 2018 juvenile salmonid monitoring on the Dyfi catchment. A more detailed assessment of the stocks will be available in 2019 when the Know Your Rivers reports are published.

Juvenile Salmonid Monitoring Programme

In 2018 the temporal (annual) programme consists of 4 sites on the Dyfi. The temporal data is used to look at trends in juvenile salmon and trout densities giving an indication of how successful spawning has been across the whole catchment.

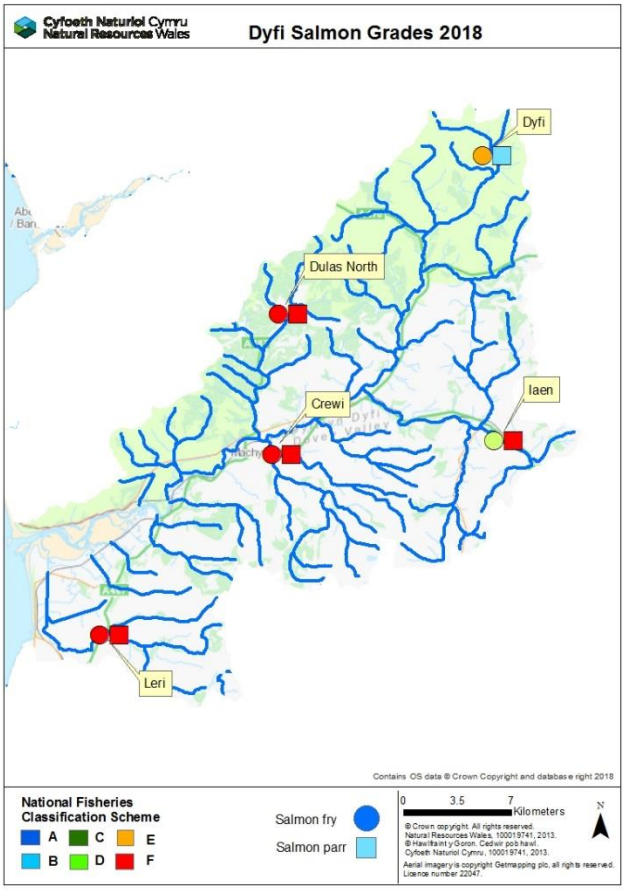
Key Points

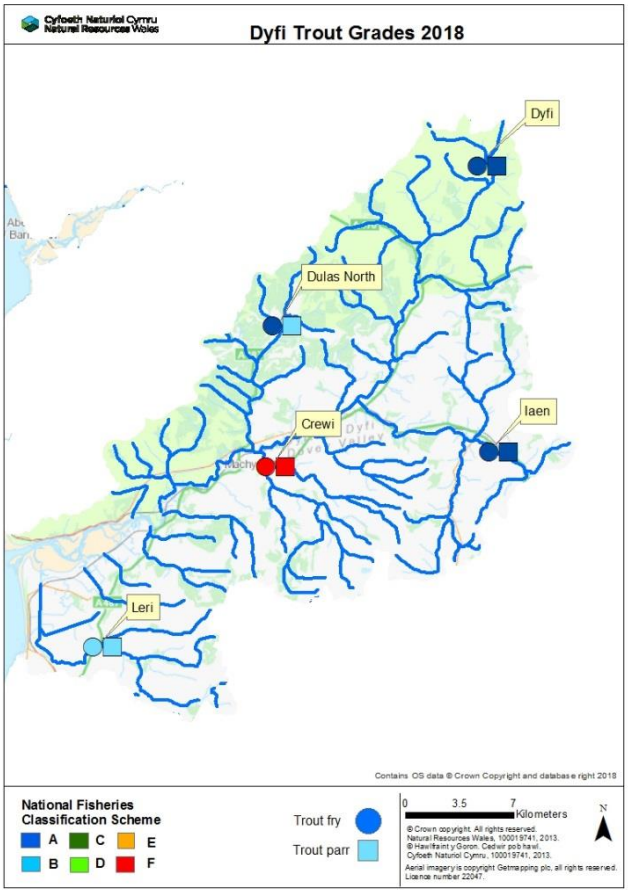
The site that we fish on the Crewi was dry in 2018, due to the exceptionally hot dry summer, and was therefore classed as fishless for both salmon and trout. The Dulas North is not accessible to salmon so the fishless status for salmon is expected.

Juvenile salmon densities across Wales in 2018 have been mixed. The Dyfi was exceptionally poor for salmon fry, with only 4 fry caught across the whole catchment. Salmon parr were only caught at the upper Dyfi site, and the densities were consistent with historic data at this site.

Trout fry & parr densities were excellent in 2018. The upper Dyfi had its best result for trout fry on record, nearly treble the previous highest density (2016 – 81.9, 2018 – 234 trout fry per 100m^2).

Salmon and Trout Classifications





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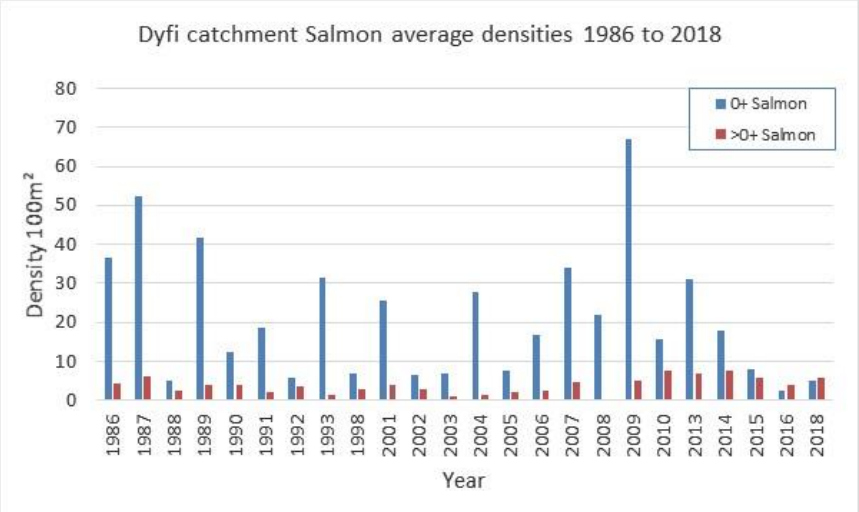
The maps on the previous page show the results of the routine juvenile salmonid population surveys from 2018 on the Dyfi.

The symbols display the National Fish Classification Scheme (NFCS) grades which have been developed to evaluate and compare the results of fish population surveys in a consistent manner. The NFCS ranks survey data by comparing fish abundance at the survey sites with sites across Wales and England where juvenile salmonids are present. Sites are classified into categories A to F, depending on densities of juvenile salmonids at the site. The following table shows the values and classification of NFCS.

Grade	Descriptor	Interpretation
A	Excellent	In the top 20% for a fishery of this type
B	Good	In the top 40% for a fishery of this type
C	Fair	In the middle 20% for a fishery of this type
D	Fair	In the bottom 40% for a fishery of this type
E	Poor	In the bottom 20% for a fishery of this type
F	Fishless	No fish of this type present

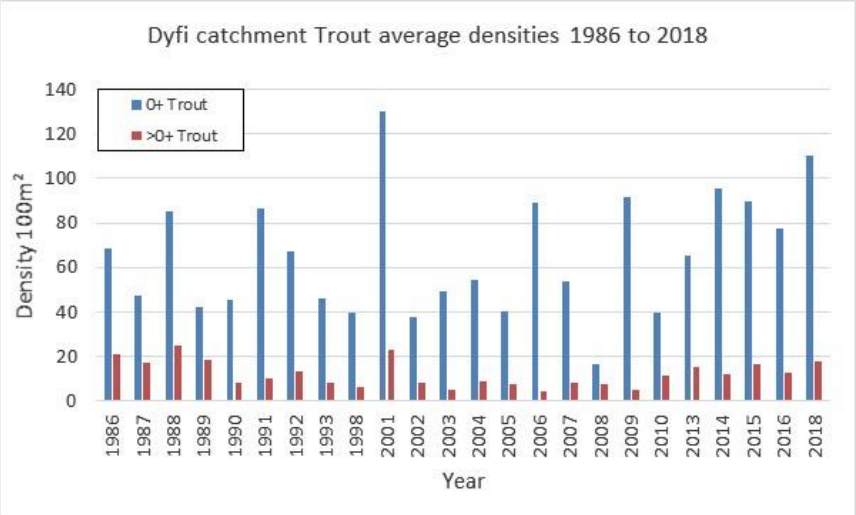
Catchment Population Trends

The graphs below show a simple comparison of average salmon and trout densities on the Dyfi catchment since surveying began in 1986. NB – the data shown here is from Quantitative and Semi Quantitative surveys, the site was not done every year, and no surveys were done from 1994 to 1997, 1999, 2000, 2011/12, and 2017. Historic catch efficiency data allows the semi quantitative figures to be comparable with quantitative data. The data used is from the three historic temporal sites on the Crewi, Iaen & upper Dyfi. The Dulas North is also fished, but the data set only runs from 2009 and it is not accessible to salmon.



Salmon fry and parr densities have varied since 1986. Salmon fry densities appear very inconsistent at the sites we fish. The densities since 2015 are low compared to the historic data. The Crewi drying out may have impacted the results further, however no salmon fry

have been caught on this tributary since 2014. The decline in grilse run across the UK has no doubt impacted the Dyfi.



Brown trout fry & parr densities on the Dyfi remained excellent in 2018 even though the Crewi was fishless due to it drying out. The Dyfi is renowned as being an excellent sea trout river and this can be seen from these results.

The following table shows a simple comparison of the catchment average density of juvenile salmon and trout from 2018, and compares this to 2016 and the 5-year average.

	0+ Salmon	>0+ Salmon	0+ Trout	>0+ Trout
2018 average density	4.9	5.7	110.0	18.0
2016 average density	2.4	4.1	77.4	12.5
Percentage difference to 2016	**106%**	**39%**	**42%**	**44%**
5-yr average (2011-15)	19.0	6.7	83.6	14.7
Percentage difference to 5-yr average	**-74%**	**-14%**	**31%**	**23%**

Juvenile densities for salmon were exceptionally poor on the Dyfi by 2016 so the high percentage of improvement in 2018 is exaggerated. However, the decline against the 5-year average is more revealing. There has been a decline in salmon rod catch since 2012 on the Dyfi with salmon catch dropping from 142 fish in 2012 to 25 salmon in 2014. Rod catch has remained low for salmon, however there has been a slight improvement year on year since 2014. Rod catch in 2017 had reached 67 salmon, however salmon fry densities have continued to decline. The decline in salmon fry density on the Dyfi is quite severe compared to many rivers in North Wales. Studies on the Dee have shown that there has been a notable decline in the numbers of grilse returning. As the Dyfi is predominantly a grilse river this will have impacted rod catch and recruitment. Catch and release levels are also poor on the Dyfi, with only 64% of salmon released in 2017. This must improve with salmon stocks currently being so poor on this catchment.

Trout fry & parr numbers on the Dyfi are currently excellent. This links directly to the superb sea trout rod catch, and the good release rate. During the 2017 season 1906 sea trout were caught, and 80% of these fish were released.