

This report summarises the findings of the 2018 juvenile salmonid monitoring on the Conwy 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 Conwy. 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.

Due to the exceptionally poor results across Wales in 2016 additional funding was supplied to investigate the issue further. Sites within the Conwy spatial programme (6 yearly programme) that have historically had good numbers of salmon were re-surveyed, and several historic sites. This meant an additional 22 sites were planned in 2018.

Key Points

Juvenile salmon densities across Wales in 2018 have been mixed. The Conwy however has been very good in 2018, with most of the sites being good or consistent with the historic data for salmon fry and parr. The only two sites which appeared poor were the Nant y Goron and Oaklands (Afon Gallt-y-gwg). We believe these tributaries were influenced by the exceptionally hot and dry conditions that continued through much of the summer. The Nant y Goron was very low and the Oaklands tributary dried in certain sections. In previous years the upper Conwy has outperformed the lower tributaries for salmon production, but this year it is good across the catchment.

The excellent salmon fry results in the upper catchment also link directly to the high numbers of fish using the Conwy falls fish pass in 2017 (433 up counts). The improved salmon fry densities are due to the increase in salmon running the river, highlighted by the rod catch. The cold settled weather over the winter of 2017/18 will have also led to higher egg survival.

Trout fry and parr densities were also either good or consistent with the historic data. Some poor grades were noted on the Oaklands tributary, Cadnant, and Ceunant Tyn y Ddol. As stated above, the Oaklands tributary had dried in certain sections, so any fish we caught will have migrated from pools upstream. The Cadnant had no trout parr and this has happened before due to the habitat at the site. The Ceunant Tyn y Ddol had poor densities however this has also occurred historically. The general good results relate to the improved sea trout rod catch.

The Conwy is performing exceptionally well compared to most catchments in North Wales. The general trend across North Wales is highlighting a decline in salmon numbers, however the Conwy appears to be improving. The sea trout numbers were also exceptional good on the Conwy during the 2017 fishing season.

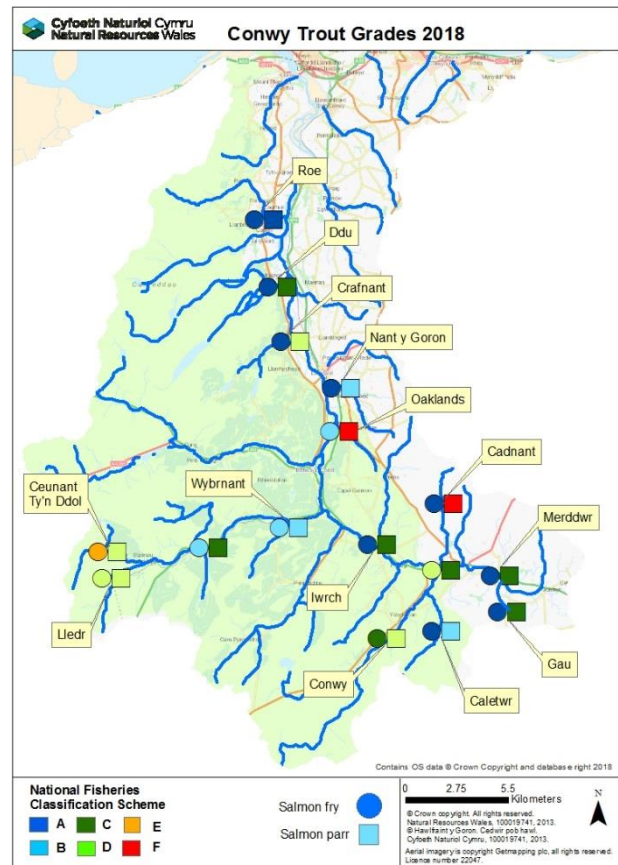
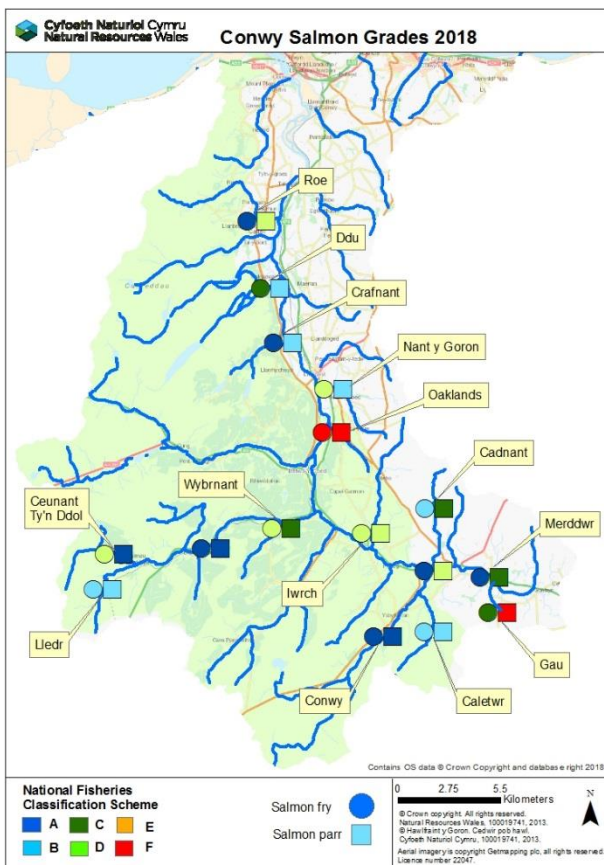
Salmon and Trout Classifications

The following maps show the results of the routine juvenile salmonid population surveys from 2018 on the Conwy.

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.

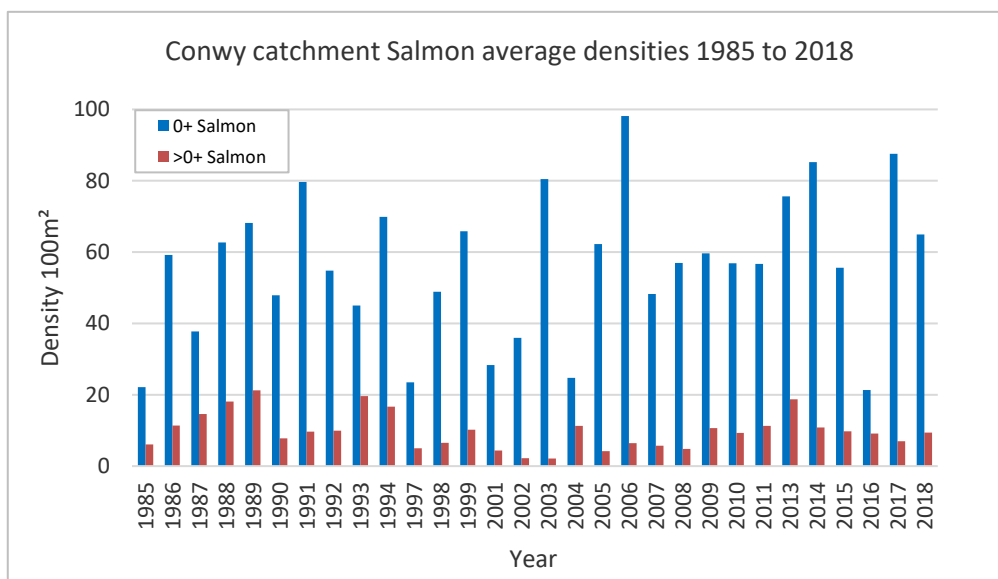
Grade	Descriptor	Interpretation
A	Excellent	In the top 20% for a fishery of this type
B	Good	In the top 40% for a fishery of this type
C	Fair	In the middle 20% for a fishery of this type
D	Fair	In the bottom 40% for a fishery of this type
E	Poor	In the bottom 20% for a fishery of this type
F	Fishless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



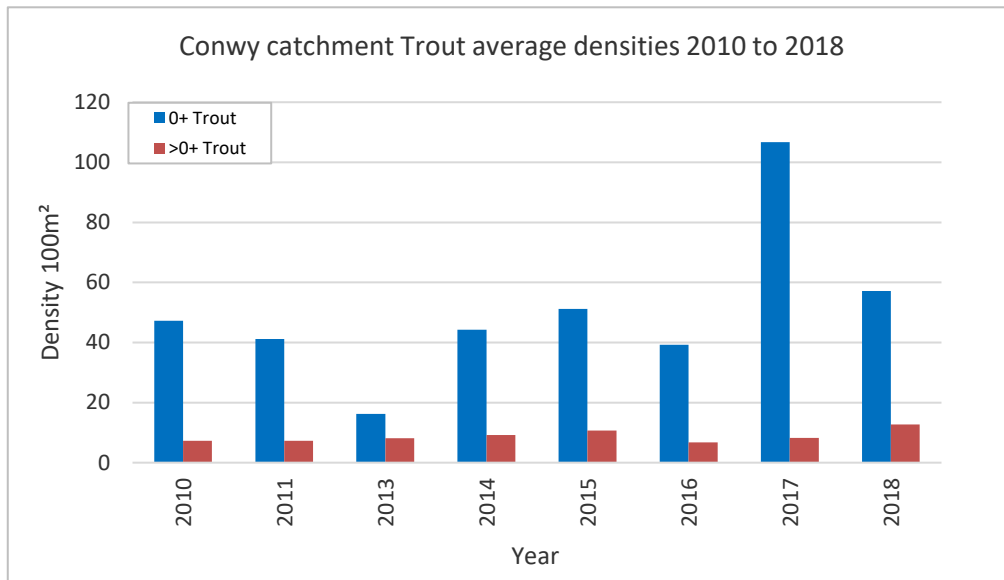


Catchment Population Trends

The graphs on the following page show a simple comparison of average salmon and trout densities across the Conwy catchment since surveying began in 1985. NB – the data shown here are from Quantitative and Semi Quantitative surveys, not every site in the programme was done every year, and no surveys were done in 1995, 1996, 2000 & 2012. Historic catch efficiency data allows semi quantitative results to be comparable with quantitative. Trout data begins at 2010 due to a change in the programme.



Salmon fry densities are good in 2018 compared to the historic data, and they are excellent compared to the poor results in 2016, which were recorded nationwide. Parr densities have improved in 2018, and this correlates to the improved salmon fry densities in 2017. Salmon rod catch on the Conwy improved in 2017 with 150 fish caught, compared to 89 salmon in 2016. Rod catch in 2017 is in line with the 10-year average.



Brown trout fry densities at the Conwy temporal sites were generally consistent in 2018. Only the Roe had high trout fry densities in 2018. In 2017 the sea trout rod catch declined compared to 2016 (2017 – 774, 2016 – 961), however the 2017 rod catch is still way above the five year average (5-year average – 524). Trout parr densities have remained consistent compared to the historic data.

The following table shows a simple comparison of the catchment average density of juvenile salmon and trout from 2018, and compares this against 2016, and the 5-year average. NB - The five year average has been set from 2011 to 2015 as 2016 was a poor year.

	0+ Salmon	>0+ Salmon	0+ Trout	>0+ Trout
2018 average density	65.0	9.4	57.2	12.7
2016 average density	21.3	9.2	39.2	6.7
Percentage difference to 2016	204%	3%	46%	90%
5-yr average (2011-15)	68.3	12.7	38.2	8.8
Percentage difference to 5-yr average	-5%	-26%	50%	44%

The salmon fry densities in 2018 are excellent compared to 2016, however they are slightly below the 5-year average. Salmon parr densities are similar to the 2016 results and down on the 5-year average. Trout fry densities are improved against the 2016 results and the 5-year average. Trout parr densities are also good against the historic data.

Conwy fall fish pass

During 2016 and 2017 the Conwy falls fish pass recorded some of the best overall up counts on record. In 2018 early runs of fish on the Conwy were hindered due to the hot and dry summer. However once there was some rain there were reports from the Conwy anglers that good numbers of fish were present. When higher flows occurred in September and October we expected to see more fish using the pass however this did not occur.

This year the number of fish through the Conwy falls fish pass has been exceptionally poor. Only 118 up counts were recorded compared to 433 in 2017. The reason for this is being investigated, however access to the counter itself is difficult due to health and safety requirements.

The graph below highlights the variation of fish using the pass since it opened in 1994. NB – counter was broken in 2009/10/12. The counter broke in early September during 2011. In 2013 the counter was broken till mid-August.

