Juvenile Salmonid Summary
Dwyryd Catchment

This report summarises the findings of the 2018 juvenile salmonid monitoring on the Dwyryd 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 1 site on the Dwyryd. 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.

Spatial surveys were also carried out on the Dwyryd in 2018 which included an additional 8 sites. Spatial monitoring identifies changes in the distribution of fish and provides a basic level of surveillance monitoring over the widest practical area.

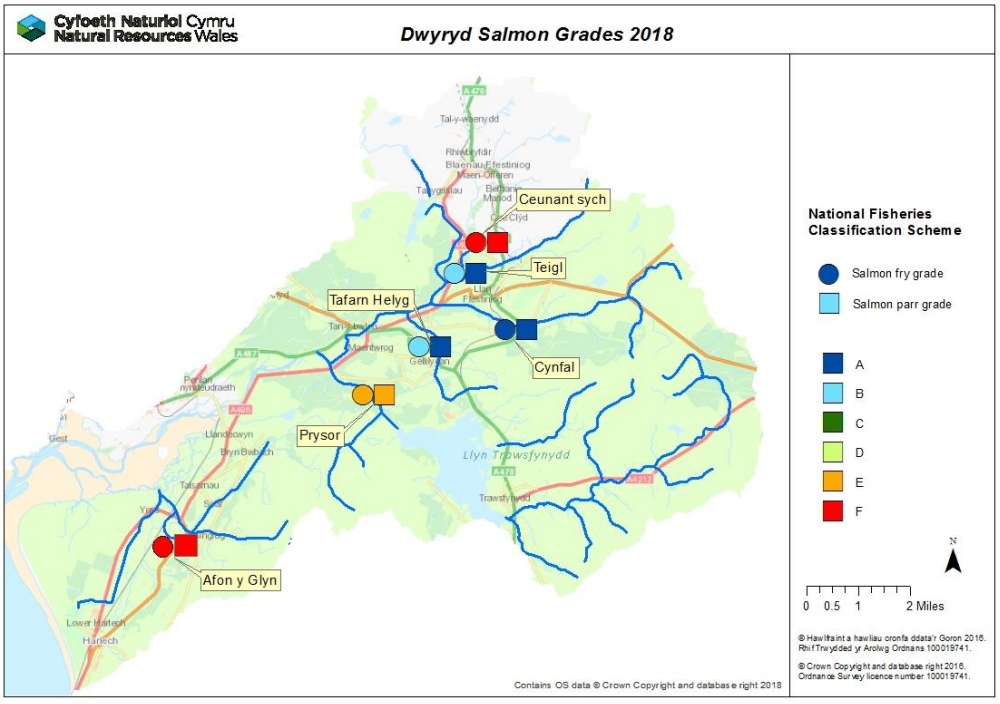
Key Points

The Afon y Glyn which discharges into the estuary had dried up due to the weather conditions. Therefore, the site was fishless for both salmon and trout.

Juvenile salmon densities across Wales in 2018 have been mixed. The Dwyryd results for salmon fry and parr are excellent. We believe these results are influenced by the lower flows and therefore higher fishing efficiencies. However, the densities are so high there is no doubt that 2016 and 2017 were good spawning years. The Ceunant Sych did not have salmon, however it is a very small tributary, and only a handful of salmon have been caught there historically. The lower Prysor was also poor for salmon, however there is limited spawning, and the section is influenced by the hydro-power and tide.

Trout fry and parr densities have also been good across the catchment. Although the Barlwyd densities are relatively low it is positive that we are catching trout on this catchment when considering the impact from the slate quarries. The lower Prysor is also relatively poor, due to the issues explained in the juvenile salmon section.

Salmon and Trout Classifications



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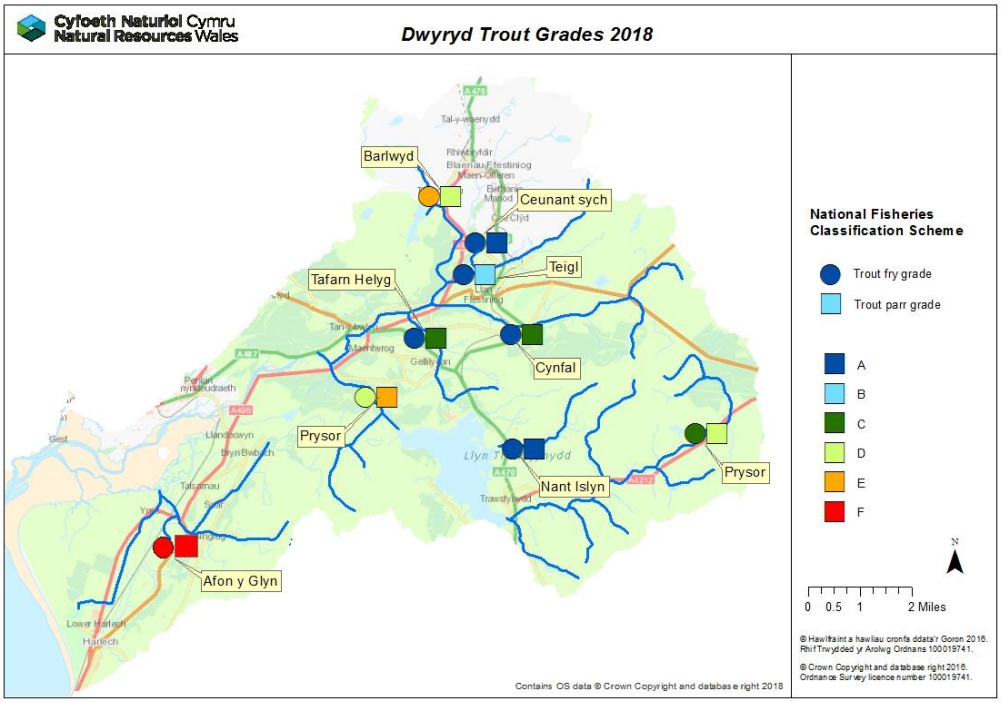


The maps above show the results of the routine juvenile salmonid population surveys from 2018 on the Dwyryd.

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.

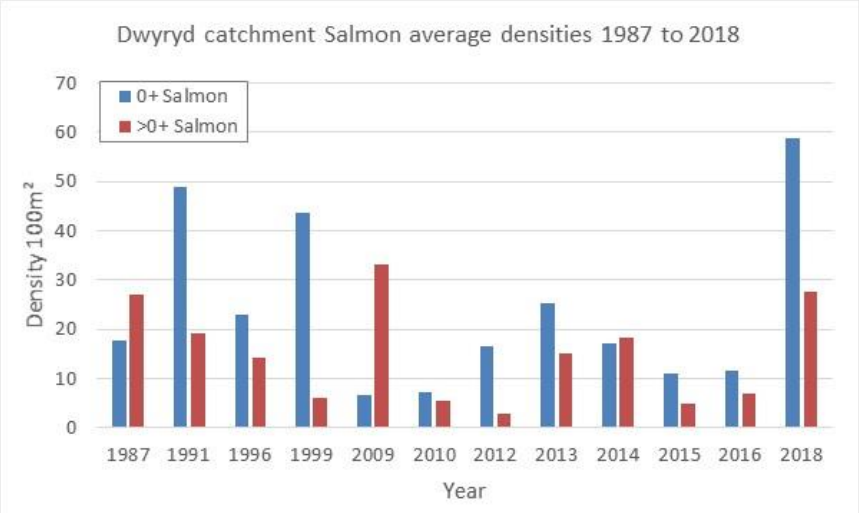
Grade	Descriptor	Interpretation
A	Excellent	In the top 20% for a fishery of this type
B	Good	In the top 40% for a fishery of this type
C	Fair	In the middle 20% for a fishery of this type
D	Fair	In the bottom 40% for a fishery of this type
E	Poor	In the bottom 20% for a fishery of this type
F	Fishless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

Five-minute fry surveys

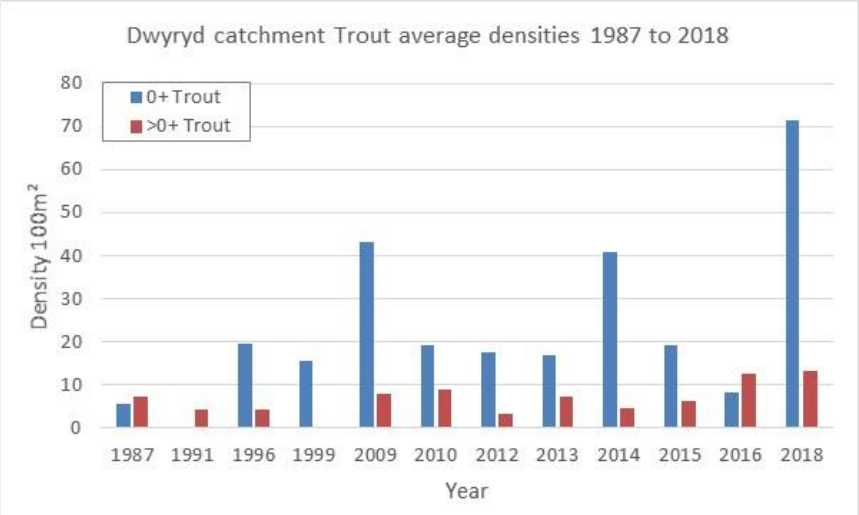
One five-minute fry survey was carried out on the main river. The results are based on how many salmon fry were caught during the five-minute survey. The classification scheme is based on historic data from North Wales.

Catchment Population Trends

The graphs below show a simple comparison of average salmon and trout densities for the temporal site on the Dwyryd catchment (Teigl) since surveying began in 1987. NB – all results are from semi quantitative surveys which have been multiplied up using historic catch efficiencies to give population estimates. The site was not done every year, and no surveys were done from 1988 to 1990, 1992 to 1995 1997/98, 2000 to 2008, 2011, and 2017.



Salmon fry and parr densities were excellent in 2018, with the highest salmon fry densities on record and very good salmon parr densities.



Brown trout fry and parr densities were excellent in 2018, with the highest densities on record.

The following table shows a simple comparison of the temporal average density of juvenile salmon and trout for 2018 (Teigl), and compares it to 2016 (no survey was complete in 2017) and the 5-year average.

	0+ Salmon	>0+ Salmon	0+ Trout	>0+ Trout
2018 average density	58.9	27.8	71.4	13.2
2016 average density	11.5	6.9	8.3	12.6
Percentage difference to 2016	**412%**	**304%**	**760%**	**4%**
5-yr average (2011-15)	17.5	10.2	23.6	5.4
Percentage difference to 5-yr average	**236%**	**171%**	**202%**	**145%**

As you can see from the above table the results on the Teigl this year were excellent, clearly exceeding the results from 2016 and the 5-year average for salmon and trout.

Salmon rod catch was up slightly in 2017, going from only 3 salmon in 2016 to 12 salmon in 2017. Effort has also slightly improved in 2017. The average days fished between 2009 and 2016 was 142 days, and this increased to 238 days in 2017. The catch per unit effort has therefore improved, insinuating that there were more salmon present in 2017 and therefore more spawning.

Sea trout rod catch was consistent between 2017 and 2016, so it was unexpected that the juvenile results were so good (Rod catch 2016 – 40, 2017 – 38).

As stated earlier we believe the results are influenced by the lower flows and therefore higher fishing efficiencies, however densities are so high there is no doubt that spawning was very successful in 2017.