

This report summarises the findings of the 2018 juvenile salmonid monitoring on the Teifi 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 6 sites on the Teifi Catchment. The temporal data is used to look at trends in juvenile salmon and trout densities giving an idea of spawning across the whole catchment.

Due to the exceptionally poor results across Wales in 2016 additional funding has been supplied to investigate the issue further. The Teifi catchment spatial programme (6 yearly programme) was added to this investigation. This meant additional 36 sites were planned in 2018.

Key Points

Weather Conditions

The 2018 monitoring season was hindered by a prolonged period of hot weather and, low rainfall leading to a period of drought. Inevitably, the reduced flows of many watercourses were not ideal habitats for juvenile salmonids, with densities likely to be affected.

Salmon Observations

The historic data for the Teifi indicates salmon fry densities have gradually declined in this catchment however, recent survey years have indicated densities are recovering slowly. The 2018 survey demonstrates a continued recovery from the 2017 fry densities however, this remains significantly below the 5-year average for this catchment. The Teifi catchment salmon parr densities have been continually recorded at low densities which, continues to be the case with the 2018 survey data while, this figure remains slightly below the 5-year average for this catchment. However, the 2018 salmon parr density figure does exhibit a minor increase on the 2017 recording. The recovering densities of salmon in the Teifi, can reflect the recovering rod-catch numbers recorded in 2017 in this catchment.

Trout Observations

Trout fry densities in 2018 demonstrated a considerable reduction when, compared to the results from the previous year. This represents a fall in density figures to below the 5-year average for the Teifi catchment which, corresponds to the lower rod-caught trout figures recorded in 2017. Alternatively, trout parr densities on the Teifi catchment have indicated a significant recovery since the 2017 figures which, takes parr density on the Teifi above the 5-year average for the catchment. The improved trout fry recruitment of 2017, is likely to have led to the increase in trout parr densities recorded in 2018.

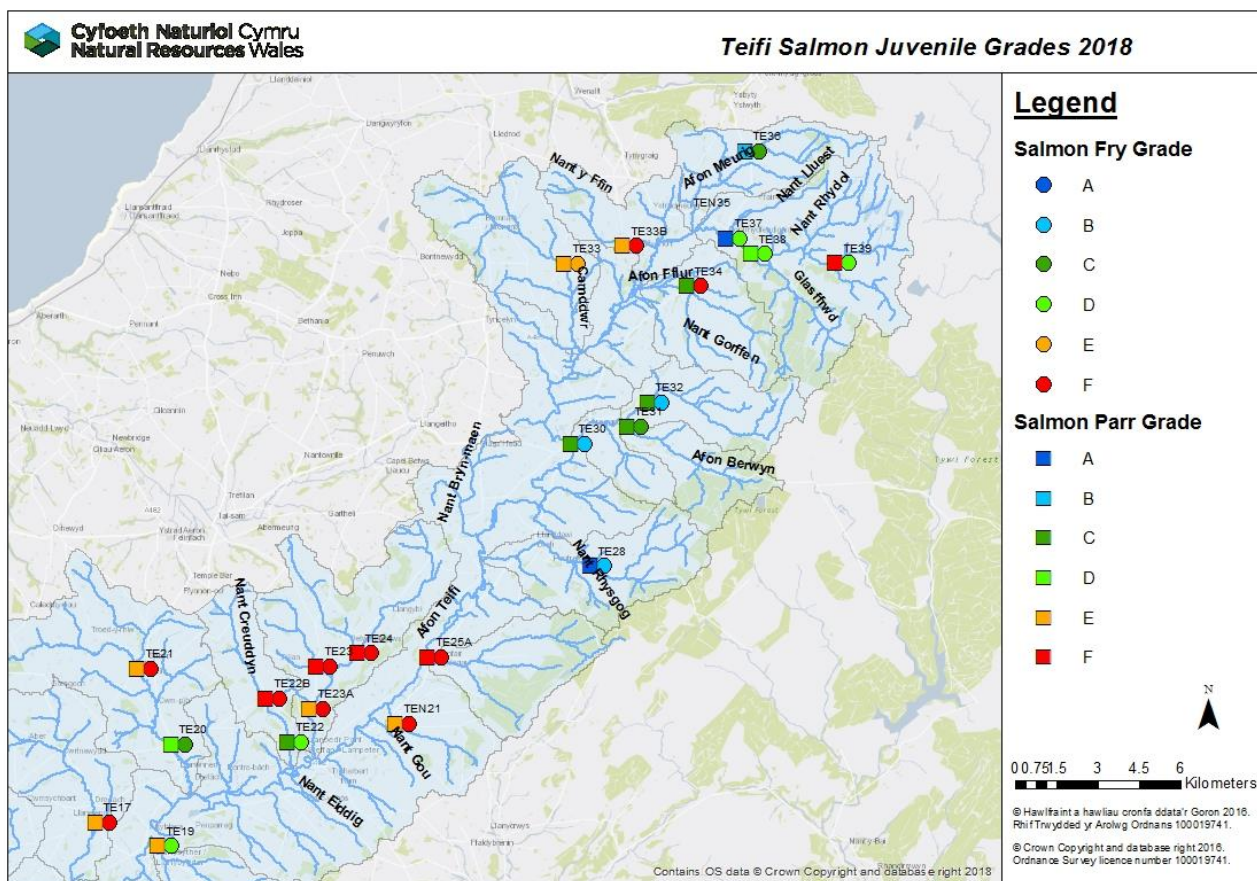
Salmon and Trout Classifications

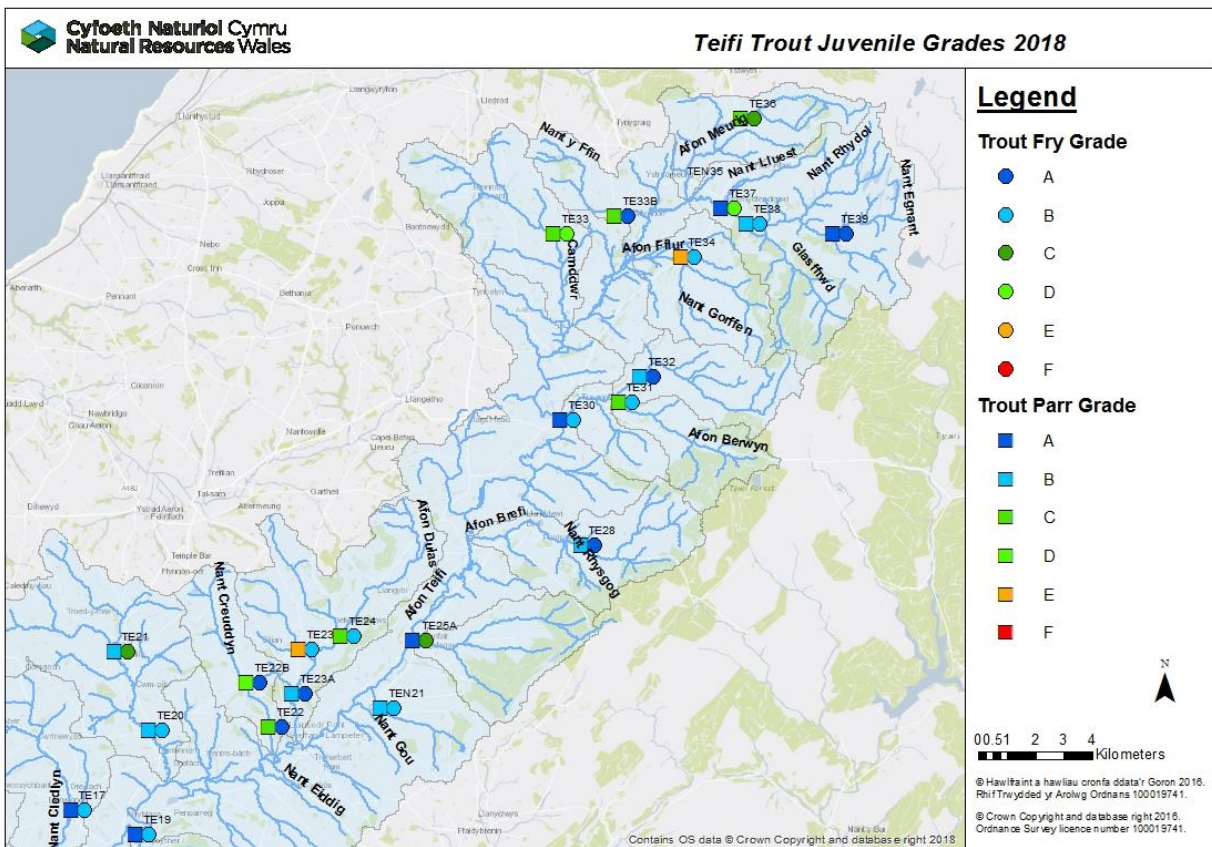
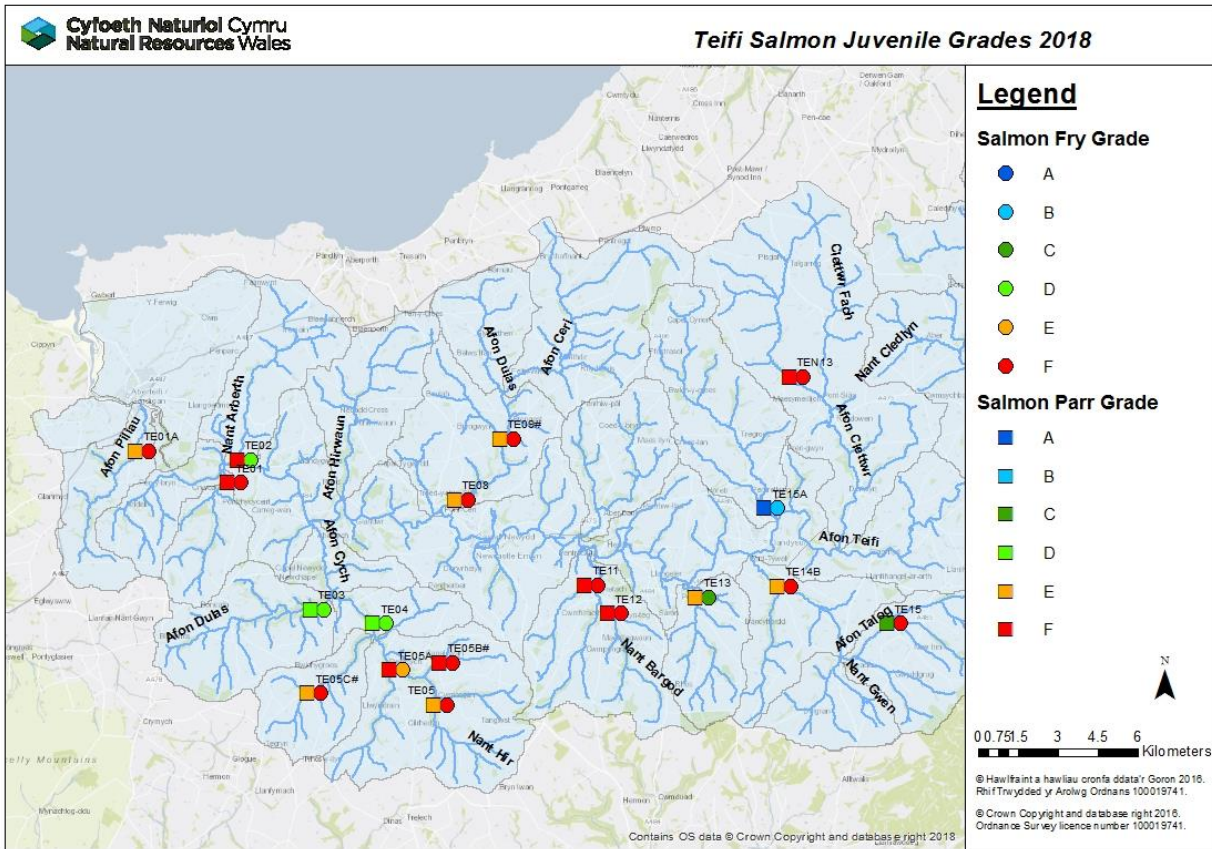
The following maps show the results of the routine juvenile salmonid population surveys from 2018 on the Teifi catchment.

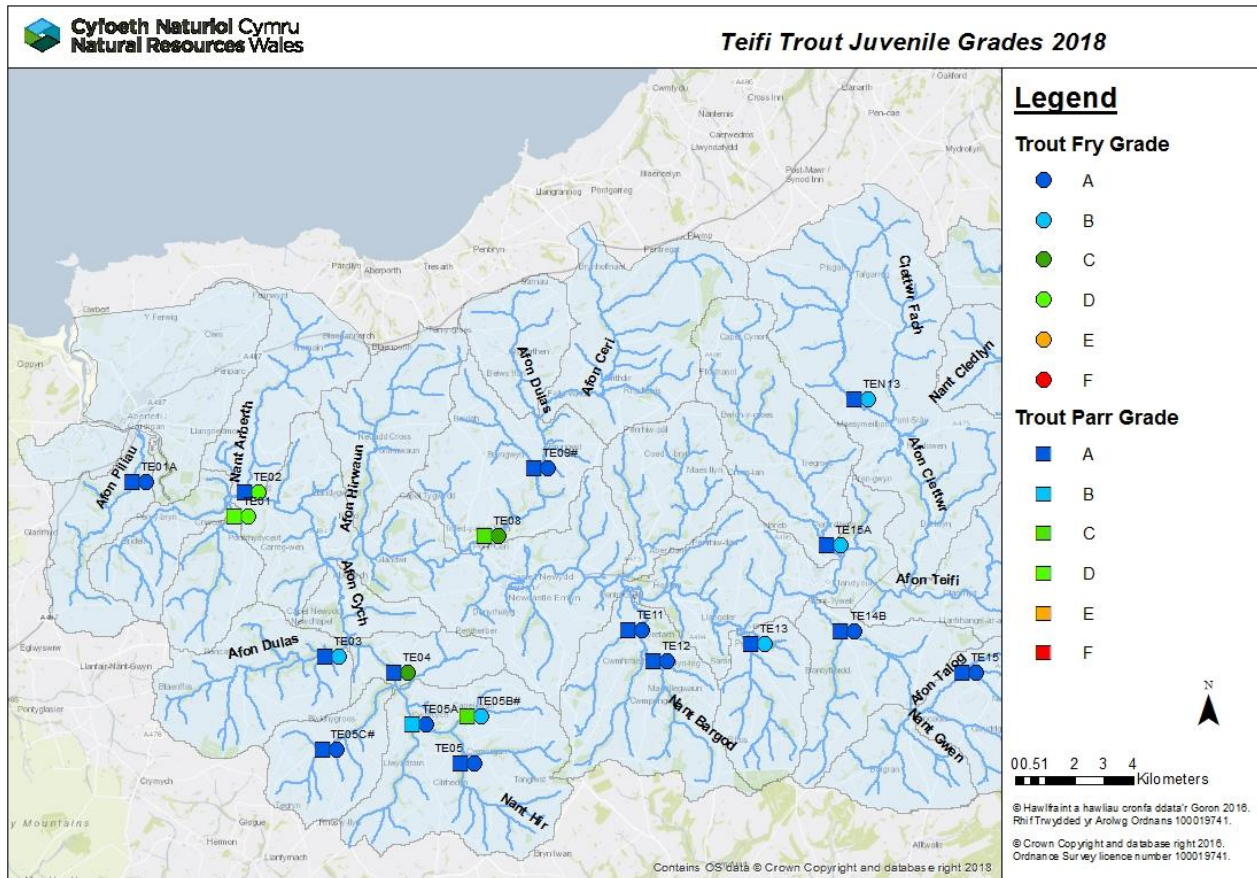
The symbols display the National Fish Classification Scheme (NFCS) grades which have been developed to evaluate and compare the results of fish population surveys in a consistent manner. The NFCS ranks survey data by comparing fish abundance at the survey sites with sites across Wales and England where 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



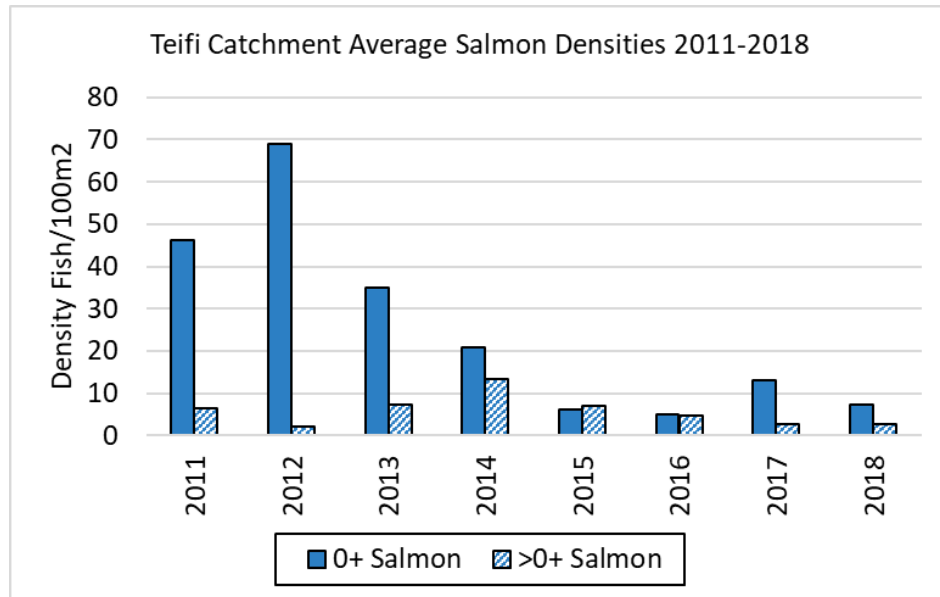




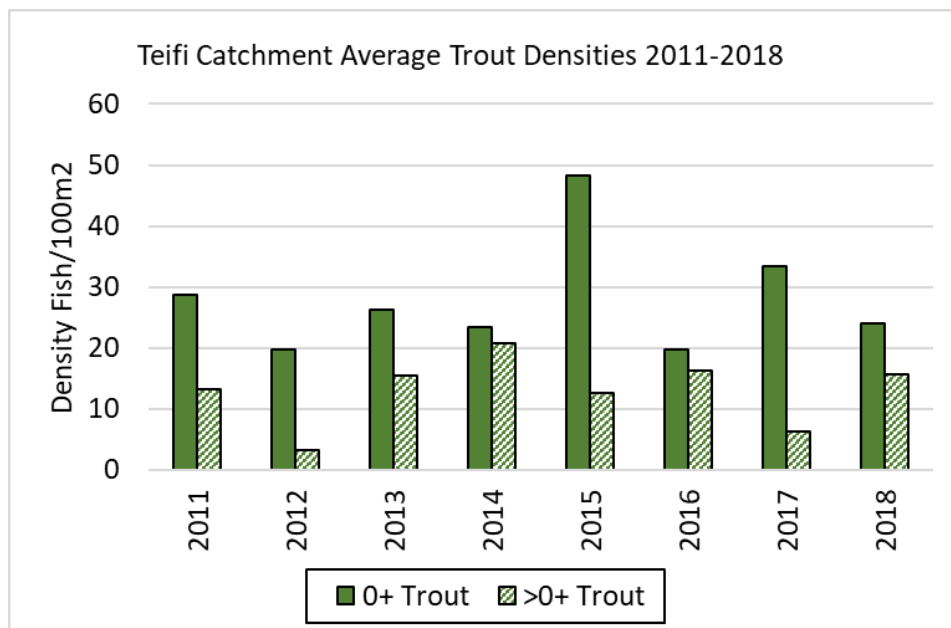
Catchment Population Trends

The graphs below show a simple comparison of average salmon and trout densities across the temporal sites on the Teifi catchment since 2011. NB – the data shown here are from Semi Quantitative surveys while, not every site in the programme was done annually.

The salmon fry densities have declined significantly during the period 2011-2018, from highpoints in 2011 and 2012, to a period low in 2016. Following which, a gradual increase in salmon fry density was recorded in 2017 after which, a decrease was again recorded in 2018. This would corroborate well with gradually increasing rod-caught salmon numbers recorded in the Teifi catchment. Alternatively, salmon parr densities have remained consistently low during the 2011-2018 period however, the 2018 survey data has displayed a nominal increase in parr density. Both salmon and fry densities surveyed in 2018 are recorded as significantly below the five-year average figure which, is a considerable worry for salmon numbers on the Teifi.



The trout fry and parr densities on the Teifi catchment have remained relatively consistent over the 2011-2018 period, with the exception of one unusually high fry density in 2015. This improvement was followed by one of the lowest trout fry densities during the 2011-2018 period, believed to be due to bad weather conditions. The fry results from 2017 have seen densities rise to their second highest figure, before returning to densities in line with previous historic data. The trout parr densities have remained fairly consistent during the 2011-18 period with the exception, of the low densities of 2017 caused by reduced fry returns in the previous season and, a significant recovery in parr densities noted during the 2018 survey year. When compared to the 5-year average for the Teifi catchment, trout fry densities are recorded as slightly below the average and, trout parr are slightly above the average which gives a mixed outlook.



The following table shows a simple comparison of the catchment average density of juvenile salmon and trout from 2018, and compares this against 2017, 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	6.1	4.4	25.3	17.5
2017 average density	13.1	2.7	33.4	6.2
Percentage difference to 2017	-53%	64%	-24%	180%
5-yr average (2011-15)	35.4	7.2	29.3	13.0
Percentage difference to 5-yr average	-83%	-39%	-14%	34%

The salmon fry averages compared to the 2017 results display a sizeable reduction in density in addition, the overall salmon densities are worrying when compared to the five-year averages. The 2018 trout fry densities have significantly reduced since the 2017 figures which, when compared against the 5-year average is concerning however, this average is raised by the exceptional fry density year of 2015. Additionally, the improved trout fry densities of 2017 are believed to have instigated the positive trout parr densities recorded in 2018.