

This report summarises the findings of the 2018 juvenile salmonid monitoring on the Tawe 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 2 sites on the Tawe 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. Additionally, a number of spatial sites are surveyed which, are carried out every 6 years on a rolling programme.

### **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 Tawe catchment has performed poorly in 2018 for salmon fry, with 1 site recording no salmon fry present and, the other demonstrating fry at fair levels. Additionally, the salmon parr densities caught across the entire catchment indicate, that the results for the Tawe lay between poor and fishless. This reflects the reduced salmon fry results in 2017.

#### Trout Observations

Trout fry densities remained at moderate levels in 2018 although, this catchment did demonstrate a slight decline from 2017 however, the results were comparable to the 5-year average. Juvenile trout densities are very positive when considering, sea trout rod-catch was at its lowest compared to the historic data. The marginally improved densities of trout parr recorded in 2018, can be attributed to the recovered trout fry densities recorded in 2017.

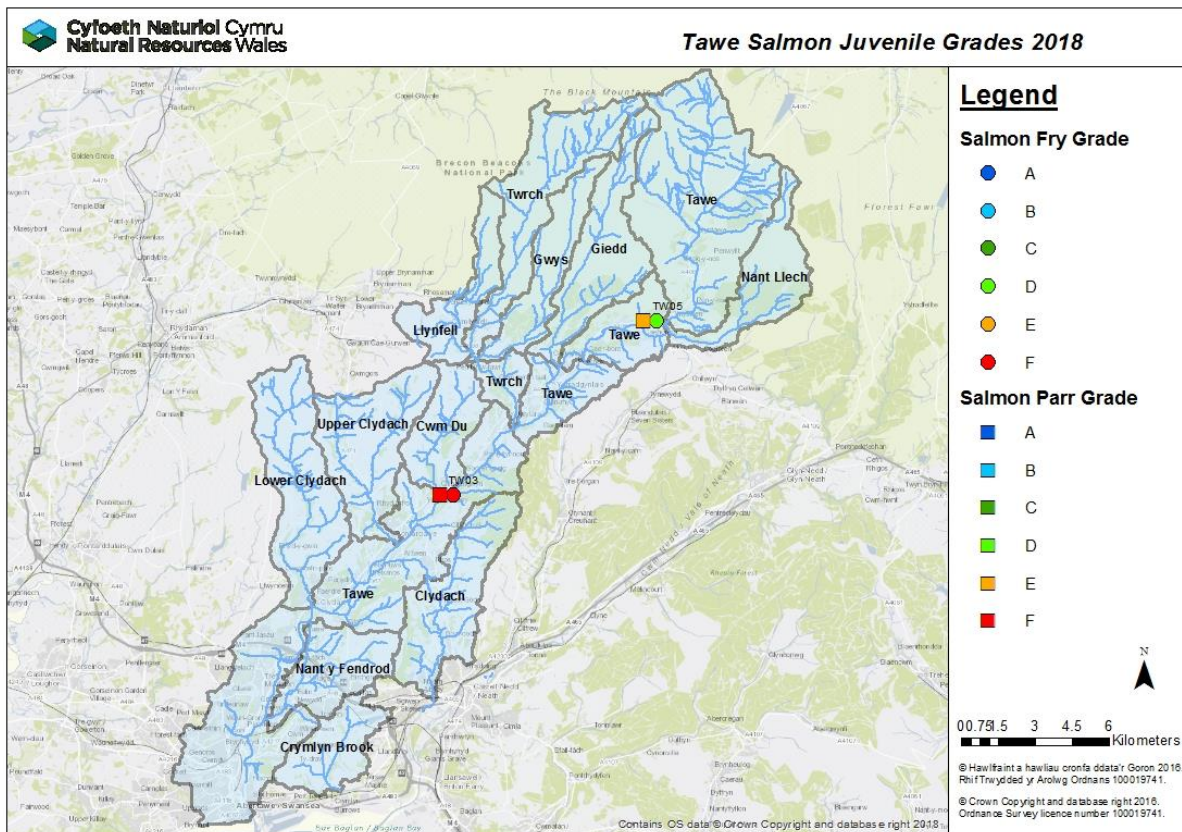
### **Salmon and Trout Classifications**

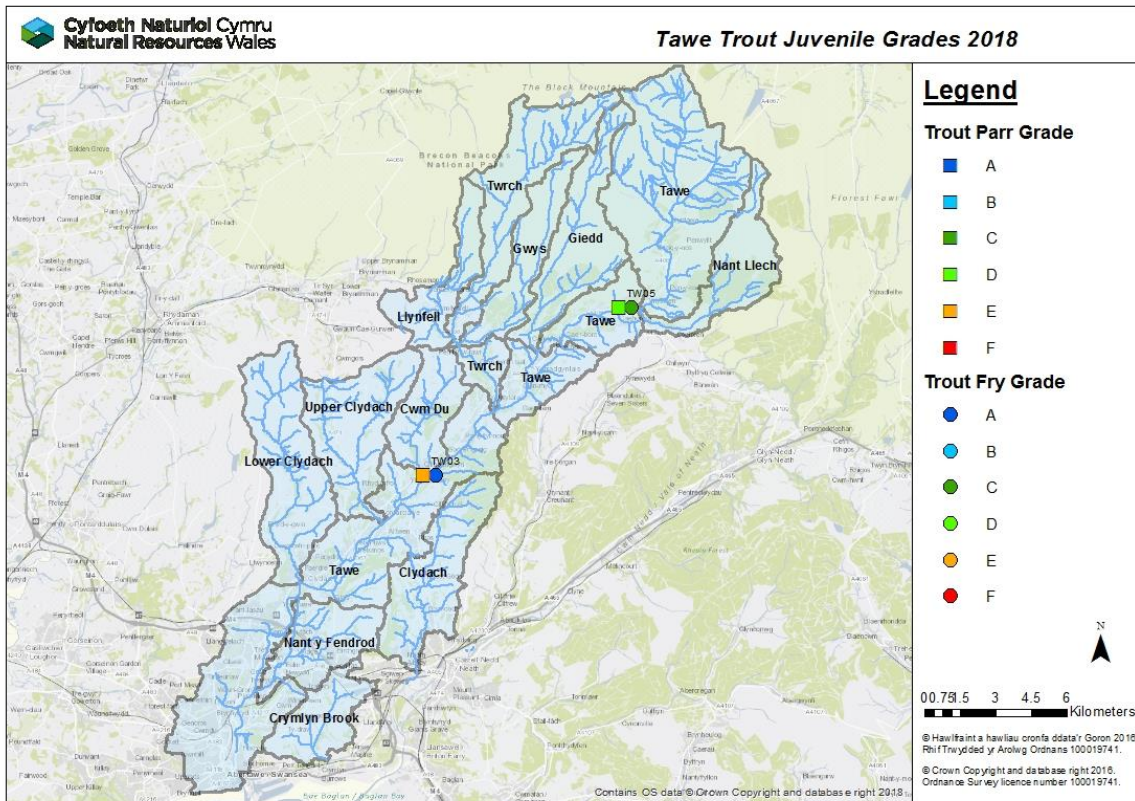
The following maps show the results of the routine juvenile salmonid population surveys from 2018 on the Tawe catchment.

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

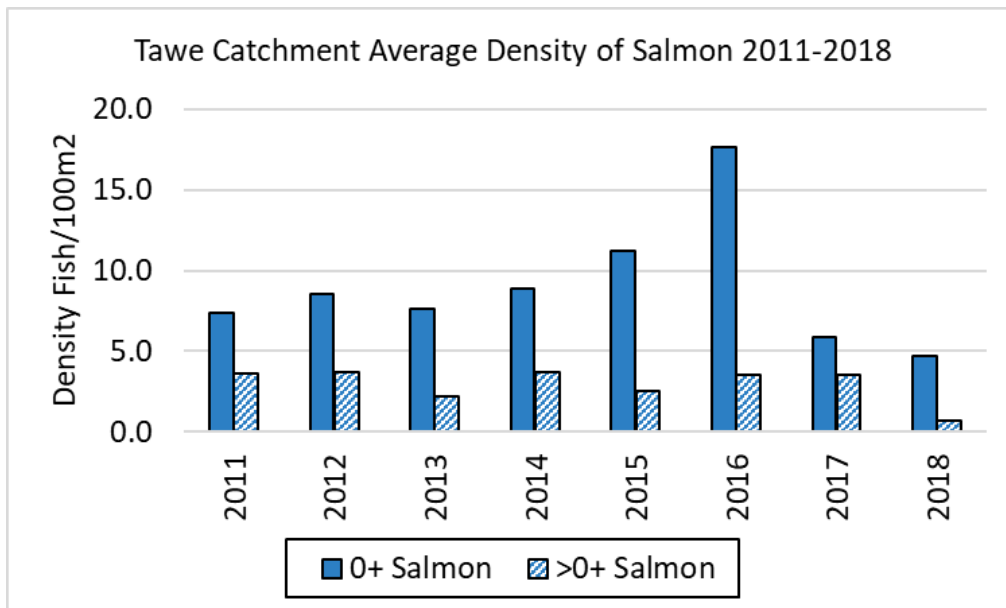




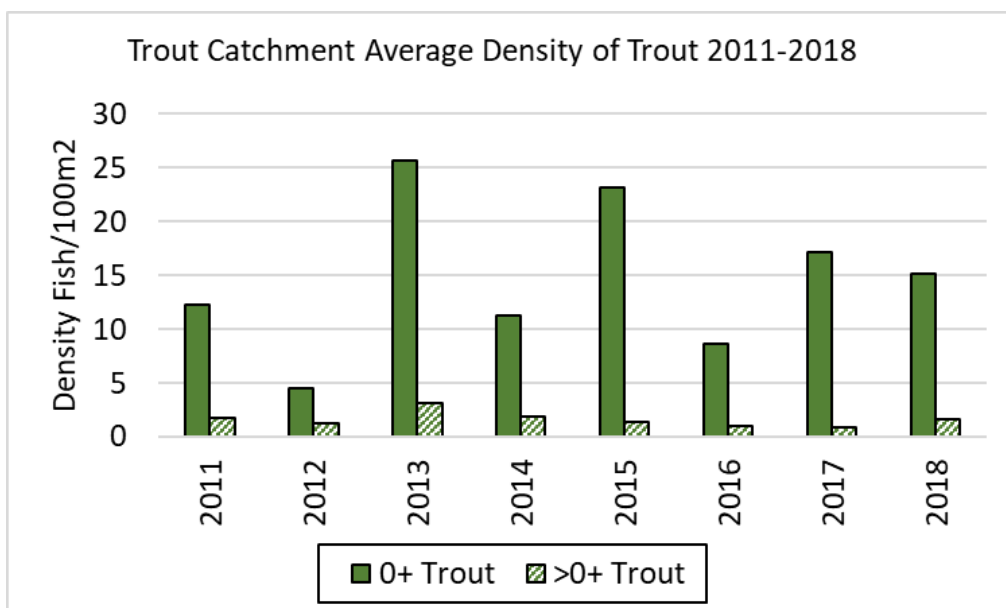
### Catchment Population Trends

The graphs below show a simple comparison of average salmon and trout densities across the temporal sites on the Tawe 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 displayed varied results during the period 2011-2018 but, there appeared to be an improving trend up until the highest recorded fry density in 2016. Following 2016, salmon fry densities recorded their two lowest densities in 2017 and 2018 which, are slightly below the 5-year average figures. Alternatively, the salmon parr densities have declined further in 2018 to low levels, below the 5-year average.



Trout fry densities on the Tawe catchment have fluctuated regularly during the period 2011-2018 where, there were moderate to low densities of trout fry recorded. The 2017 and 2018 densities of trout fry recorded on the Tawe catchment, could represent the beginning of a consistent period of trout fry densities following the fluctuations of previous years. The 2018 survey data indicates a small decline since 2017 in fry density which, falls just below the 5-year average for this catchment consequently, correlating with a minor reduction in rod-catch figures. Alternatively, the trout parr densities found on this catchment have demonstrated very consistent figures although, they have remained at very low levels. The 2018 survey data indicates a minor improvement in trout parr density which, remains nominally below the 5-year average on the Tawe catchment.





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.

	<b>0+ Salmon</b>	<b>&gt;0+ Salmon</b>	<b>0+ Trout</b>	<b>&gt;0+ Trout</b>
2018 average density	2.3	0.3	15.2	1.7
2017 average density	5.9	3.5	17.1	0.9
<b>Percentage difference to 2017</b>	<b>-60%</b>	<b>-91%</b>	<b>-12%</b>	<b>90%</b>
5-yr average (2011-15)	8.7	3.1	15.4	1.9
<b>Percentage difference to 5-yr average</b>	<b>-73%</b>	<b>-89%</b>	<b>-2%</b>	<b>-10%</b>

The salmon fry densities of 2018 are of considerable concern, as they continue to decline to minimal levels following a decline in 2017. When compared to the 5-year averages for the catchment, it is clear to see the Tawe has fallen below these figures. Furthermore, the poor trout fry densities in 2017 can be attributed to the decline in trout parr evident in 2018 which, appear to have remained at quite consistent levels since 2011.