

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

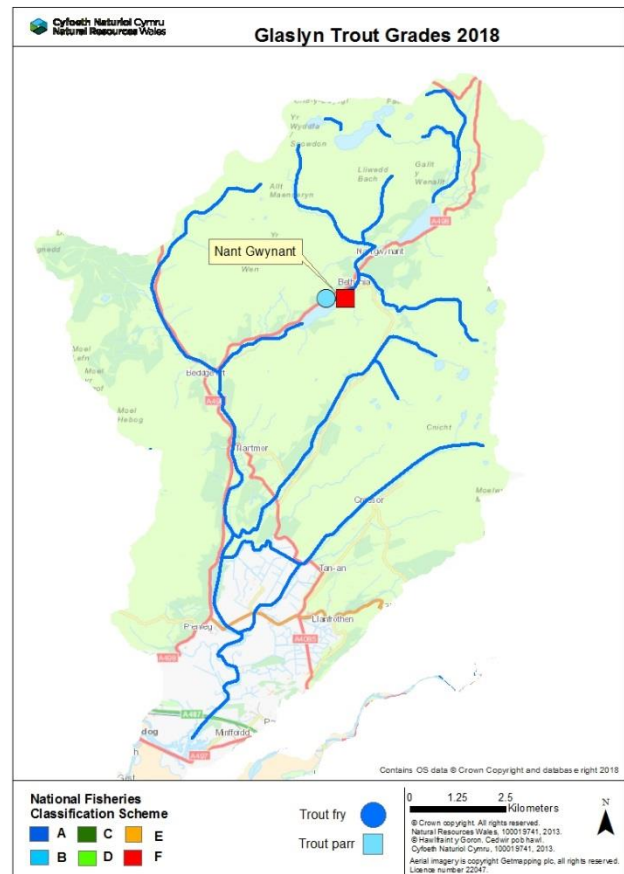
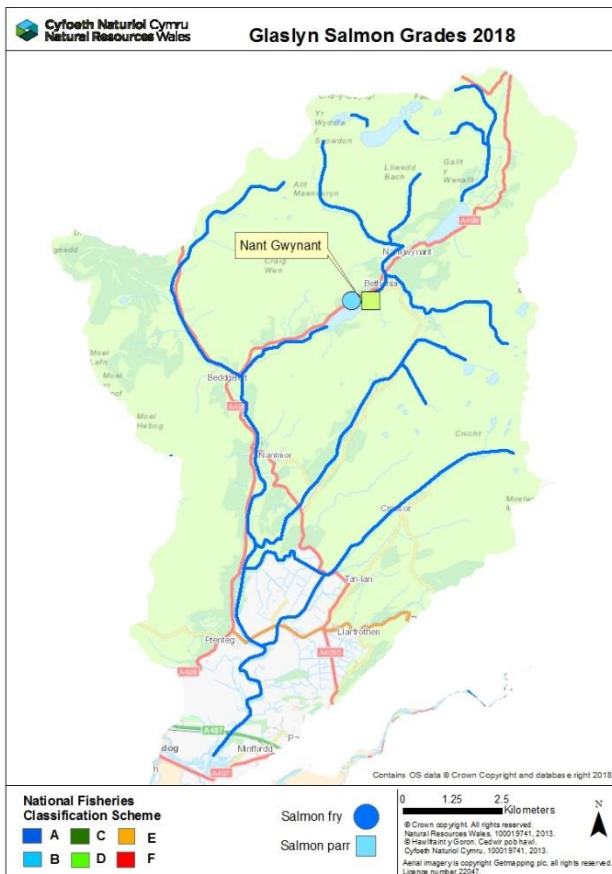
Key Points

Juvenile salmon densities across Wales in 2018 have been mixed. There has been a decline in the density of salmon fry at the Glaslyn site compared to recent years, however the density is consistent with the historic data. Salmon parr densities have remained consistent, however they have always been poor due to the habitat.

Trout fry densities were good in 2018 compared to the historic average which is poor. The lower flows will have created more areas of slack current, beneficial for juvenile trout habitat, which usually isn't available at the site. Trout parr densities are very poor at the site and have always been historically. This is due to a lack of trout parr habitat at the site.

Salmon and Trout Classifications

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



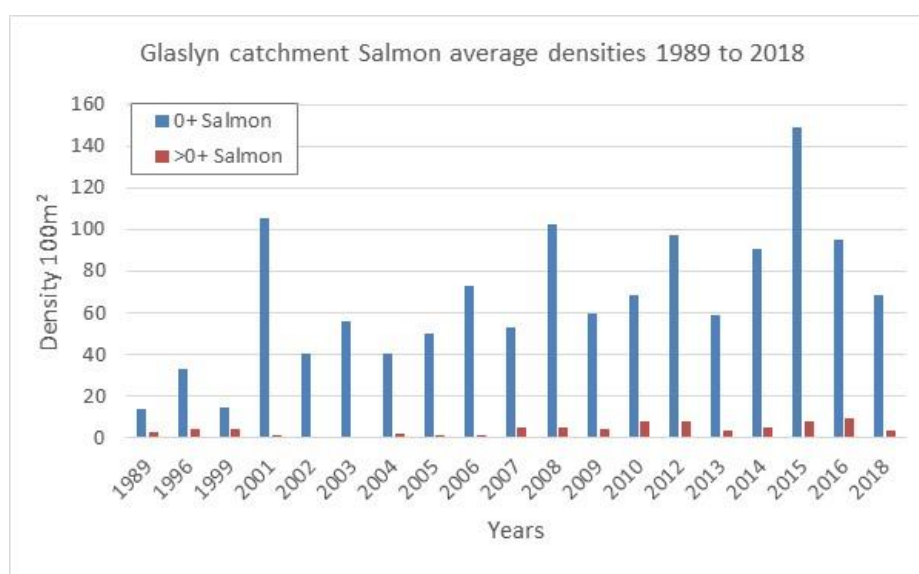
The symbols display the National Fish Classification Scheme (NFCS) grades which have been developed to evaluate and compare the results of fish population surveys in a consistent manner. The NFCS ranks survey data by comparing fish abundance at the survey sites with sites across Wales and England where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

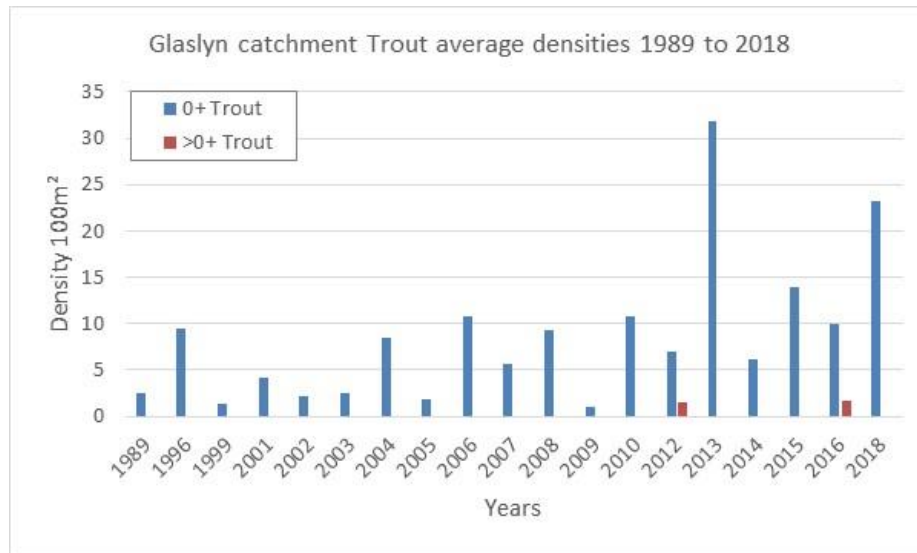
Catchment Population Trends

The graphs below show a simple comparison of average salmon and trout densities for the Glaslyn temporal site since surveying began in 1989. 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 1990 to 1995, 1997, 1998, 2000, 2011, and 2017. Historic catch efficiency data allows the semi quantitative figures to be comparable with quantitative data.

Salmon fry and parr densities have declined slightly in 2018, however they are consistent with the historic data. Salmon rod catch has declined in 2016/17 which can be seen from the salmon fry/parr results in 2018.



Brown trout fry densities were good in 2018. Due to the lower flows in 2018 there was more slower areas of flow, producing habitat for trout fry. No trout parr were caught which follows the historic trend. This is due to a lack of habitat. The annual site contains much more salmon habitat than trout, so does not represent the entire catchment.



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	68.5	3.5	23.2	0.0
2016 average density	95.2	9.1	10.0	1.6
Percentage difference to 2016	-28%	-62%	133%	-100%
5-yr average (2011-15)	99.0	6.2	14.7	0.4
Percentage difference to 5-yr average	-31%	-45%	58%	-100%

Salmon fry and parr are down against the 2016 and 5-year average. This links directly to the decline in rod catch seen in 2016/17. Trout fry densities are up against the 2016 and 5-year average. As stated before, we believe this improvement was due to a slight change in habitat due to the low summer flows in 2018. Trout parr densities are always low at this site due to the habitat.