

Salmon counter update

Test & Itchen Jan-April, 2023



A brief report on Test & Itchen salmon counter developments & results.

Introduction:

This is the first update issued in 2023 and reports on fish counter developments and results for January to April. All three counters have been running effectively throughout the period. Gaters (Itchen) and Conegar (Little River Test) have been spring-cleaned but high flow has prevented this at Nursling (Great Test) to date, reducing the quality of images recorded, but not affecting fish detection. The first deep-clean is scheduled for next week.

Counter developments:

- A steel walkway and wooden roof were installed at Conegar counter in February in order to provide safe access to the cameras and lights, as well as greatly reducing the rate of algal growth on the sensor panel; the effects of the project were immediate and exceeded expectations.
- Prototype removeable sensor panels have been fabricated for the three sluices adjacent to Gaters counter – once deployed, and if effective, these will vastly reduce the capability for salmon to bypass the main counter (*NB this “leakage” is currently accounted for in the stock assessment calculations*).



A grayling heading upstream, high in the water at Gaters.

Confirmation of 2022 stock assessments:

A detailed review of counter data and video was completed in January, resulting in only minor adjustment of the adult salmon stock estimates presented in our 2022 end of year counter update.

In summary, the assessments are as follows:

Test:

- Returning Stock Estimate: **506**
- Compliance with Conservation Limit (minimum stock target): **49.5%**
- 1990-2022 rank: **4th lowest.**

Itchen:

- Returning Stock Estimate: **133**
- Compliance with Conservation Limit: **20.3%**
- 1990-2022 rank: **Lowest.**

Figure 1 shows the Returning Stock Estimates for the Test and Itchen for 1990-2022.

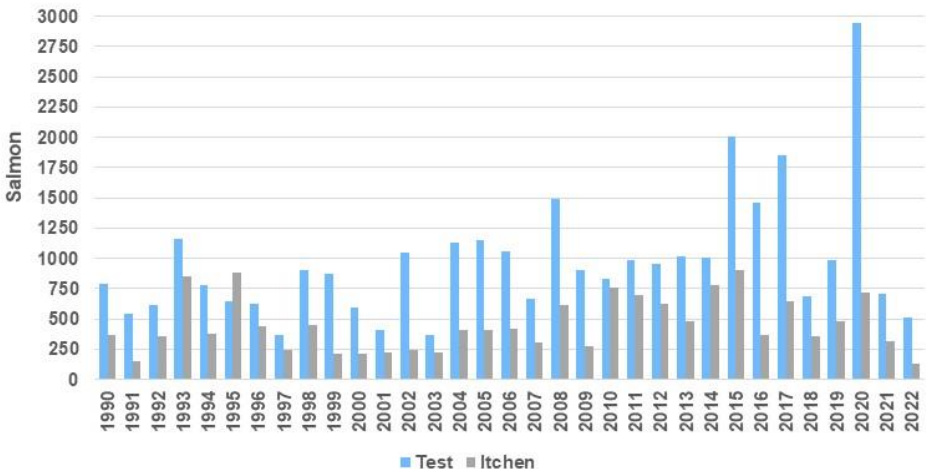


Figure 1: Salmon Returning Stock Estimates, 1990-2022

Jan–April 2023 results:

- The following graphs present salmon and trout counts to date for Nursling, Conegar and Gaters counters, as well as daily average river flow.
- Salmon average and range values have been updated to include 2022 results, as have the 10 year mean flow values.
- Because of the regular downstream passage of salmon kelts (last year’s returning adults, post-spawning), raw upstream salmon counts are presented (as opposed to upstream minus downstream).
- Graphs for trout counts are no longer labelled “sea trout”, due to the high frequency of stocked trout (farm-origin trout released into the river for angling) and non-migratory wild trout; only a small proportion of trout counts yield images clear enough to allow differentiation. Therefore, all forms of trout are collated and we make the assumption that the nett upstream count is likely to reflect wild sea trout upstream migration

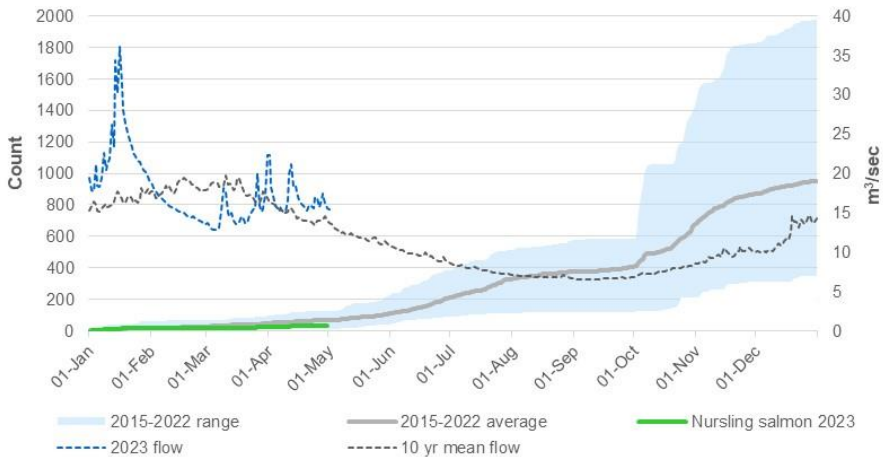


Figure 2: Great Test (Nursling) salmon upstream counts and flow.

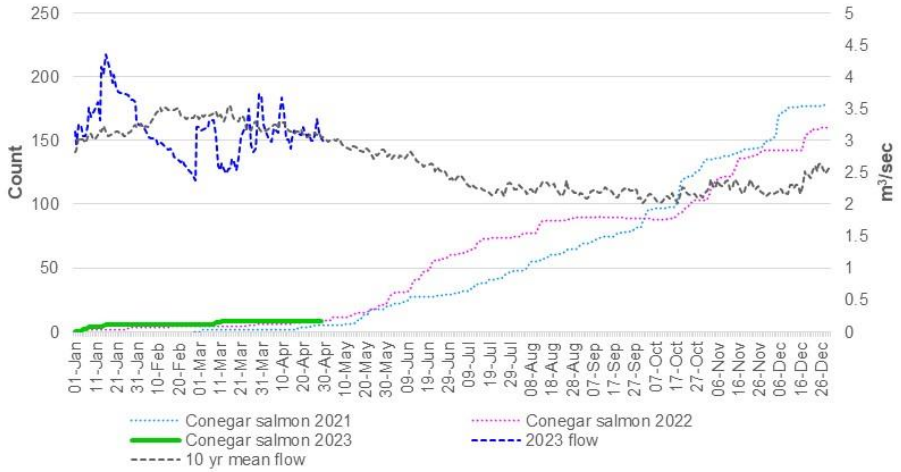


Figure 3: Little River Test (Conegar) salmon upstream counts and flow.

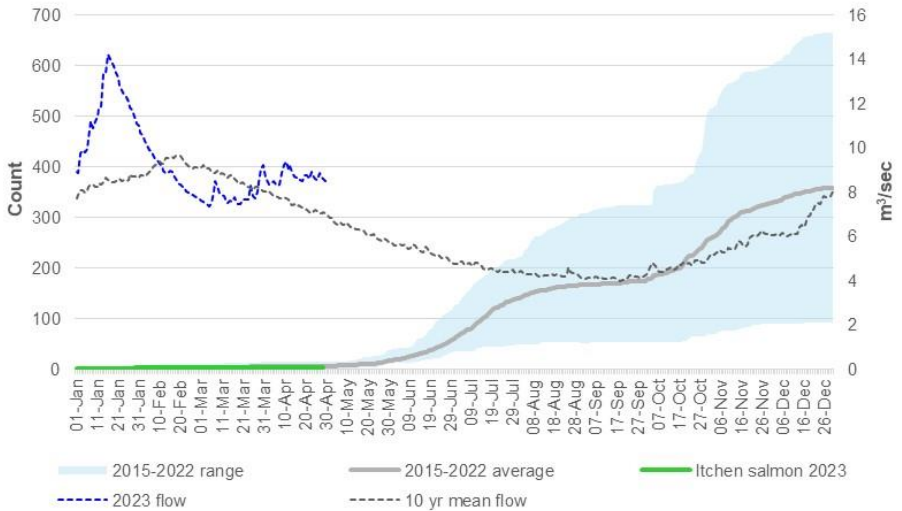


Figure 4: River Itchen (Gaters Mill) salmon upstream counts and flow.

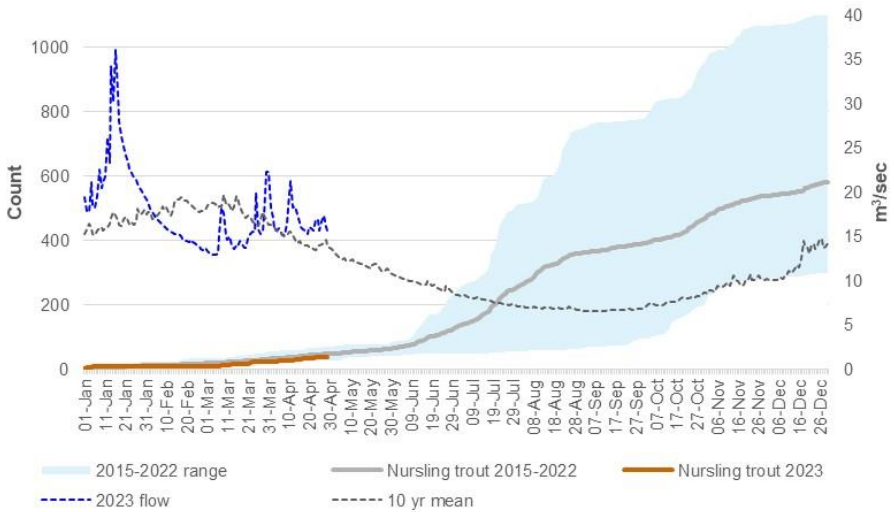


Figure 5: River Test (Nursling Mill) trout nett upstream counts and flow.

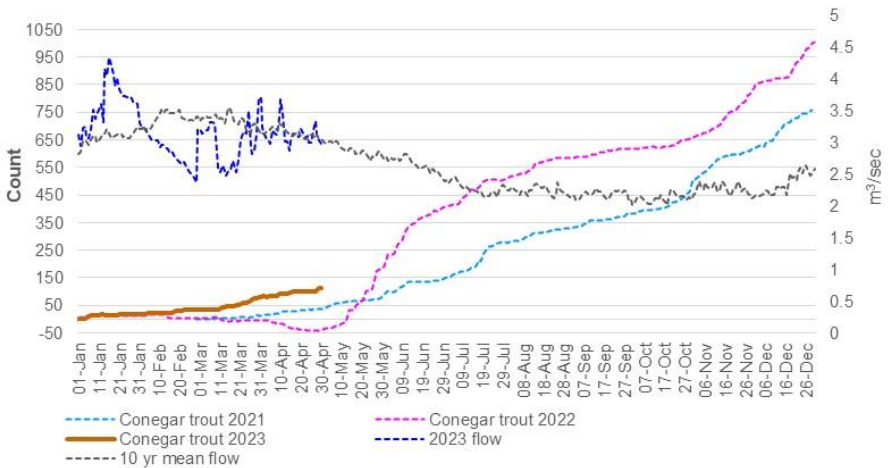


Figure 6: Little River Test (Conegar) trout nett upstream counts and flow.

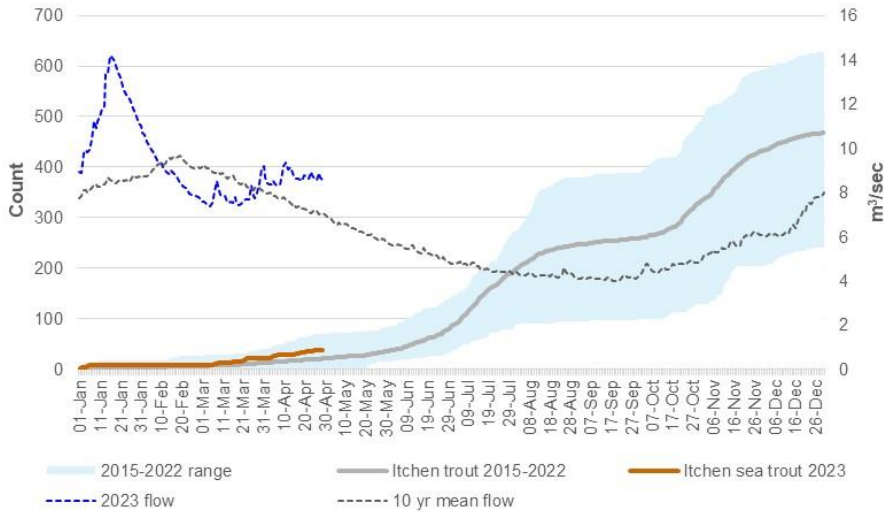


Figure 7: River Itchen (Gaters Mill) trout nett upstream counts and flow.

Counter images:

One of many salmon kelts recorded drifting downstream at Conegar.



A large salmon moving upstream at Conegar on 5th Jan; is this a very late 2022 arrival, or a very early 2023 springer? We can only speculate, making late winter & early spring a tricky time to count salmon.



Spring sees a lot of pike movement as they congregate to spawn in weedy bays. Large fish, sometimes in pairs, have been recorded at all three counters recently. Here, both side and overhead cameras at Conegar recorded this large pike passing through.



The intended quarry of these counters: a large, powerful spring salmon at Nursling in early March.



Nursling's underwater side cameras have been hampered by turbid water & heavy algal growth recently but in these two sequences they captured some glimpses of spring salmon:



A grayling in late march, and a chub at the end of April, both moving upstream at Gaters, prior to their respective spawning periods.



Observations of displaced stocked trout moving upstream after overwintering in the lower Test & Itchen, or their estuaries, have become a regular feature in early spring on all three counters. There is concern about the abundance of these fish in general & the potential for predation on salmon & sea trout smolts and fry, which may be vulnerable at this time of year.



Below: an overwintered stocked trout caught at Mansbridge in late April.



Otters are active at Conegar, almost on a nightly basis – here a large adult glides downstream over the sensor panel.



Please see an important message from the Solent & South Downs Fisheries, Biodiversity & Geomorphology Team on the next page, regarding salmon catch & release sessions.

For more information on the Test & Itchen salmon counters, contact:

["dominic.longley@environment-agency.gov.uk"](mailto:dominic.longley@environment-agency.gov.uk)

From the Fisheries, Biodiversity & Geomorphology Team:

As you will have seen in the end of year update, data from our fish counters on the Test and Itchen present a picture of Atlantic salmon populations in crisis and at risk of functional extinction. We've observed declines since 2015 and in 2022, the number of returning adults on the Itchen, a mere 133 fish, was the lowest since records began in 1990. On the Test, the run was the 4th lowest at 506 fish. In recognition of the need for immediate action and prior to this year's main salmon fishing season, one key step is ensuring that angling practices optimise the chances of salmon successfully surviving to spawn, which is particularly important given the status of stocks and the likelihood of hot summer conditions.

*The Environment Agency are seeking your support to further promote best-practice catch and release and encourage methods that are known to cause minimal post-catch and release mortality. To do this, the Environment Agency are delivering 'Catch and Release Best Practice' sessions. These sessions will be held at Woodmill Activity Centre on **4th June 2023 at 13:30-14:30** and **17th June 2023 at 11:00-12:00**.*

The Environment Agency would like to invite all salmon anglers, river keepers and fishery owners to attend these sessions and ask if you could please circulate this invitation amongst your club and/or members.

The session will look to cover:

- *The latest population data on Itchen and Test salmon*
- *Key risk and stress factors related to catch and release*
- *Ways and tips to reduce / address the main risks*

We are asking interested parties to please sign up via the Doodle Poll link <https://doodle.com/meeting/organize/id/dBP9JRXa> and select the session they are able to attend. Alternatively please feel free to get in touch with Vicki Gravestock directly via email (vicki.gravestock@environment-agency.gov.uk). This will allow us to get an idea of numbers and we will use details provided to directly contact those interested nearer the time with exact venue details.

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