

Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Sea trout data (see page 3 for other fish)

Location:	Flowerdale Estuary																			
Date:	11-Apr-25		Time:	net in about 11.30																
*Counts:	Peter Cunningham																			
Team:	5 assistants																			
Weather:	bright , sunny spells, light sw breeze																			
Other notes:	usual 46m seine net used																			
	one sweep of Flowerdale estuary by Gairloch Harbour (NG 80880 74991 approx)																			
	fish processed in estuary. First 30 sea trout were examined for lice, dorsal fin damage and black spots																			
	had been dry, warm and sunny for previous two weeks. Breezy - weights +/- 10g																			
	Many of the larger sea trout were heavily liced with raw dorsal fin																			

Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Summary

total lice	2470
number of trout	30
number infested	30
prevalence	100%
total lice	2470
abundance	82.33
intensity	82.33
fish with >0.3 lice / g	10
% of fish with >0.3 lice / g	33%

Mortality / early returned estimates for sea trout in sample based on method from Taranger et al 2015, Risk assessment for the environmental impact of Norwegian salmon farming ([PDF](#)) [Risk assessment of the environmental impact of Norwegian Atlantic salmon farming \(researchgate.net\)](#)

Fish No.	≥13 lice/fish?	Lice/g fish weight	Range	Mortality category	Number of fish in category	Total number of fish in sample	% of sample in category	projected mortality for category %	Projected mortality %
1	Yes	0.834	>0.3	100%	10	30	33.33	33.33	
2	Yes	0.151	0.2-0.3	50%	5		16.67	8.33	
3	Yes	0.141	0.1-0.2	20%	11		36.67	7.33	
4	Yes	0.125	<0.1	0%	4		13.33	0.00	49
5	Yes	0.702							
6	Yes	0.224							
7	Yes	0.160							
8	Yes	0.025							
9	Yes	0.104							
10	Yes	0.125							
11	Yes	0.140							
12	Yes	0.219							
13	Yes	0.151							
14	Yes	0.337							
15	Yes	0.695							
16	Yes	0.052							
17	Yes	0.345							
18	Yes	0.300							
19	Yes	0.442							
20	Yes	0.151							
21	Yes	0.016							
22	Yes	0.751							
23	Yes	0.174							
24	Yes	0.330							
25	Yes	0.343							
26	No	0.080							
27	Yes	0.316							
28	Yes	0.229							
29	Yes	0.210							
30	Yes	0.176							

Notes:	
based on the assumption that small salmonid post-smolts (<150g body weight) will suffer 100% lice-related marine mortality, or return prematurely to freshwater for sea trout in the wild if the are infected with >0.3 lice per g of fish weight.	
Furthermore, the lice related marine mortality is estimated to 50%, if the infection is between 0.2 and 0.3 lice per g fish weight, 20% if the infection rate is between 0.1 and 0.2 lice per g fish weight, and finally 0% if the salmon lice infection is <0.1 g fish weight.	
0.05 and 0.1 lice per g fish weight, 20% for lice infections between 0.05 and 0.01 lice per g fish weight, and finally 0% if the salmon lice infection is <0.01 lice g fish weight.	
	colour code
Taranger, G. L., Karlsen, Ø., Bannister, R. J., Glover, K. A., Husa, V., Karlsbakk, E., Kvamme, B. O., Boxaspen, K. K., Bjørn, P. A., Finstad, B., Madhun, A. S., Morton, H. C., and Sva'sand, T. (2014) Risk assessment of the environmental impact of Norwegian Atlantic salmon farming. – ICES Journal of Marine Science, doi: 10.1093/icesjms/fsu132.	100% sea lice related mortality or early return to freshwater
	>50% to 99% sea lice related mortality or early return to freshwater
	>20% to 50% sea lice related mortality or early return to freshwater
	<20% sea lice related mortality or early return to freshwater
https://www.researchgate.net/publication/266672998_Risk_assessment_of_the_environmental_impact_of_Norwegian_Atlantic_salmon_farming	

Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Other fish in sample:

Fish No.	Location	Date	Method	Riv/Est/ Beach	Fish	length (mm)
31	Flowerdale	11-Apr-25	Sweep Net	est	Plaice?	182
32	Flowerdale	11-Apr-25	Sweep Net	est	Flounder ?	135
33	Flowerdale	11-Apr-25	Sweep Net	est	Gurnard sp.	148
34	Flowerdale	11-Apr-25	Sweep Net	est	Seascorp. sp.	113

Acknowledgements

Monitoring to inform the Loch Torridon Salmon farms Environment Management Plan supported by MOWI and Bakkafrøst

Thank you to Gairloch Estate for permission.

Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Photos: all ©WRFT unless otherwise indicated. All fish in photos were lightly sedated for inspection then returned to the sea after recovery.

Sea trout 345mm, 355g Flowerdale 11 Apr 25. Sea lice estimates: 260 copepodid and chalimus, 35 adult and preadult, 1 ovigerous female



Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

ST368mm, 440g, Flowerdale 11 Apr 2025. Est. 300 copepodid and chalimus lice, 8 preadult and adult lice, 1 ovigerous female

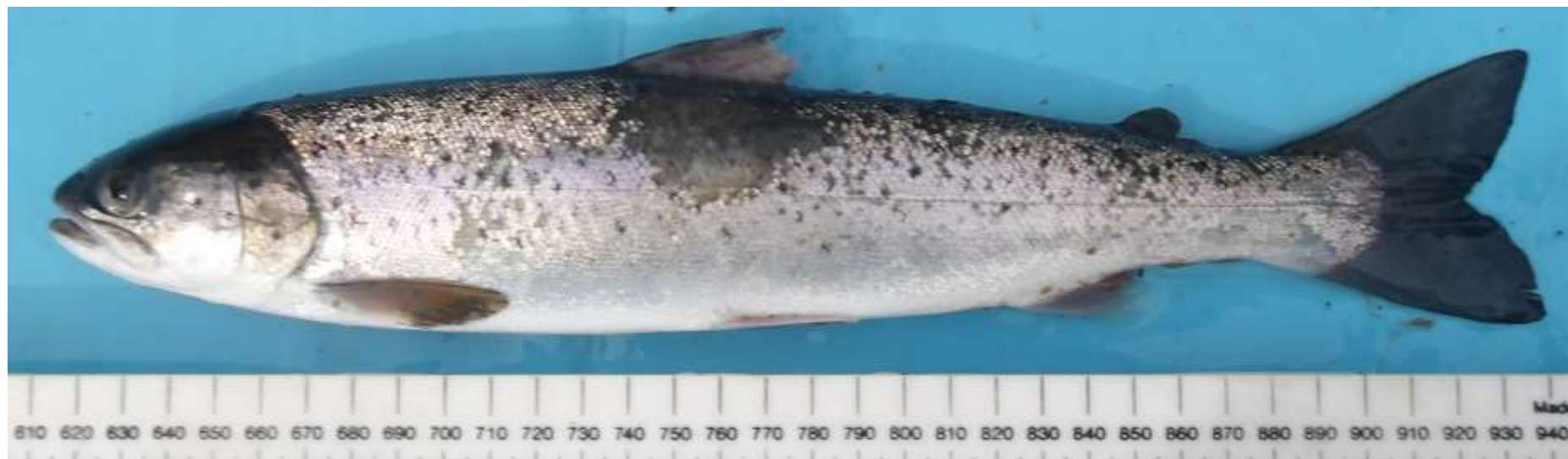


Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Sea trout 325mm, 334g Flowerdale 11 April 2025. est. 210 copepodid and chalimus, 40 preadult and adult lice and 1 ovigerous female

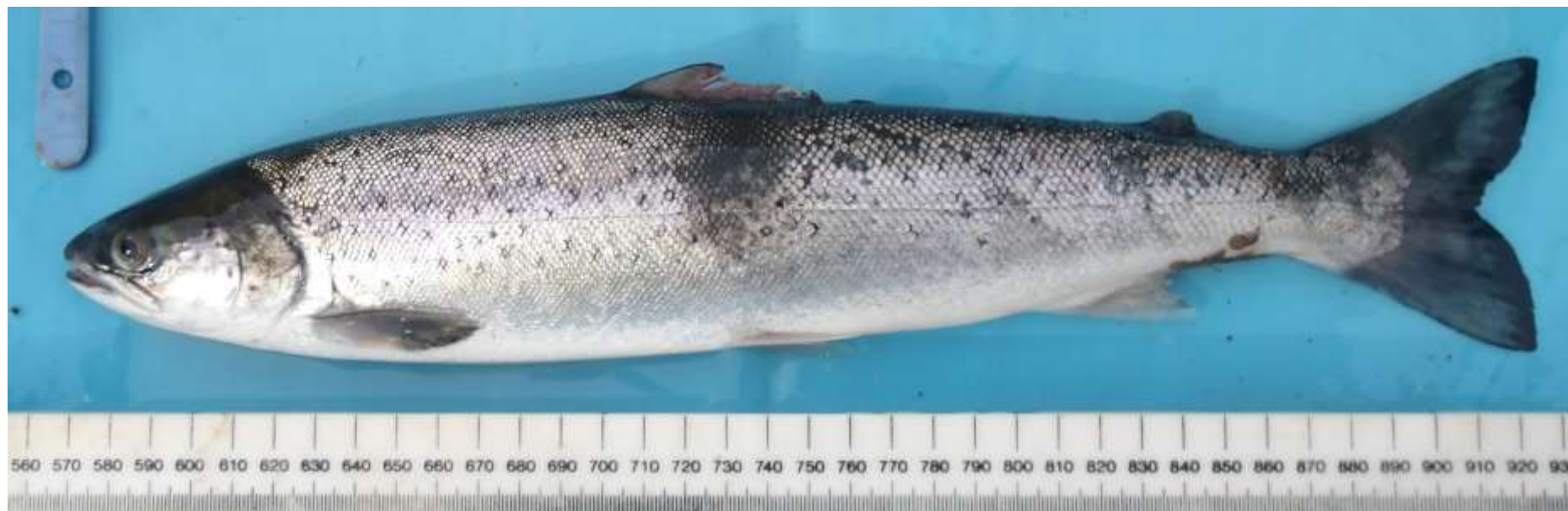


Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Sea trout 360mm, 440g, Flowerdale 11 April 2025



Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

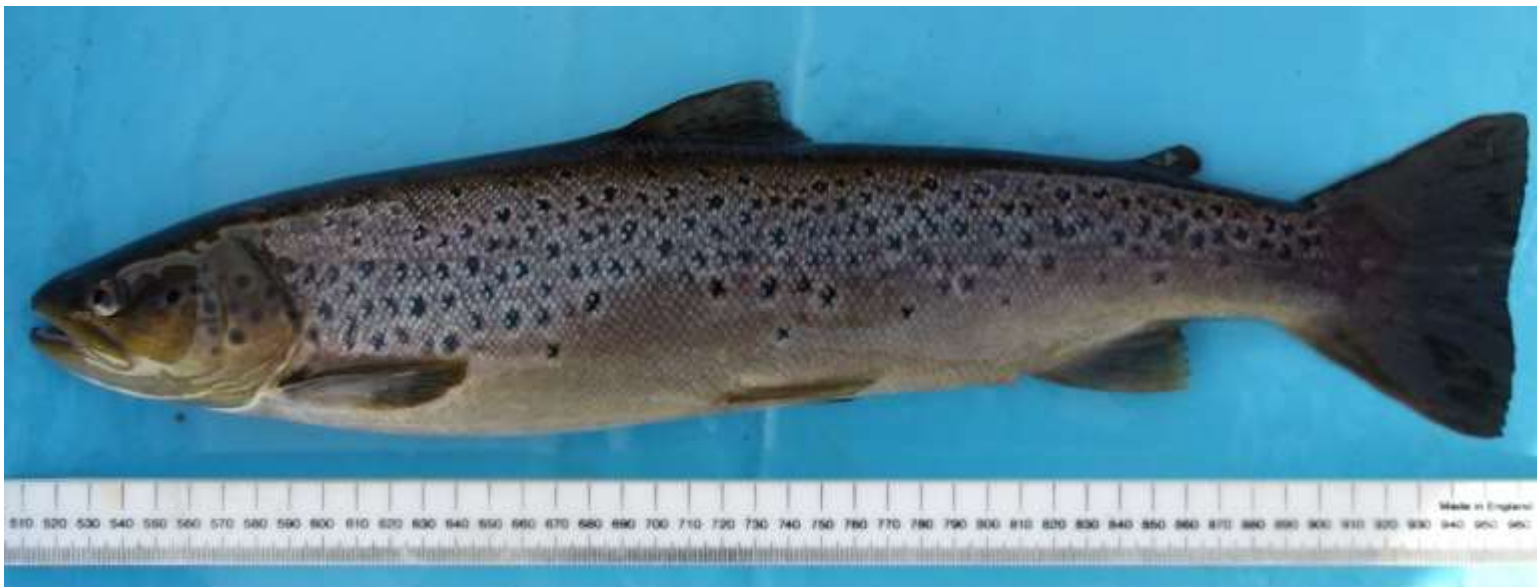
Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Recaptured Sea trout 473mm, 935g, Flowerdale 11 April 2025 with 0 chalimus and copepodid, 13 preadult and adult lice, 2 ovigerous females



Recaptured Sea trout 450mm, 968g, Flowerdale 3 October 2024 (same fish as above)



Sea lice monitoring report for Flowerdale Burn estuary, Loch Gairloch, 11th April 2025

Peter Cunningham (WRFT Biologist) 14th April 2025, typos corrected 1st May 2025

info@wrft.org.uk

Sea trout 385mm, 675g, Flowerdale 26 April 2024 (same fish as above)

