

Sea lice monitoring report for River Kanaird estuary sampling, 20 Jun 2024.

Peter Cunningham, Biologist, WRFT. 24 Jun 2024 info@wrft.org.uk

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](https://www.researchgate.net/publication/266672998)) [Risk assessment of the environmental impact of Norwegian Atlantic salmon farming \(researchgate.net\)](https://www.researchgate.net/publication/266672998)

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 of fish in sample %
1	No	0.000	>0.3	100%	1	21	4.76	4.76	
2	No	0.000	0.2-0.3	50%	1		4.76	2.38	
3	Yes	0.929	0.1-0.2	20%	0		0.00	0.00	
4	No	0.000	<0.1	0%	19		90.48	0.00	7.14
5	No	0.017							
6	No	0.011							
7	No	0.000							
8	No	0.009							
9	No	0.009							
10	No	0.038							
11	No	0.000							
12	No	0.000							
13	No	0.063							
14	No	0.000							
15	No	0.000							
16	Yes	0.288							
17	No	0.000							
18	No	0.000							
19	No	0.000							
20	No	0.000							
21	No	0.000							

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.									
https://www.researchgate.net/publication/266672998 Risk assessment of the environmental impact of Norwegian Atlantic salmon farming									

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Other fish in sample:

Abbreviations. 3spstbk: 3-spined stickleback

Other fish in sample						
No						
22	Kanaird	20-Jun-24	Sweep Net	est	flounder	180
23	Kanaird	20-Jun-24	Sweep Net	est	flounder	180
24	Kanaird	20-Jun-24	Sweep Net	est	flounder	175
25	Kanaird	20-Jun-24	Sweep Net	est	flounder	228
26	Kanaird	20-Jun-24	Sweep Net	est	flounder	95
27	Kanaird	20-Jun-24	Sweep Net	est	flounder	167
28	Kanaird	20-Jun-24	Sweep Net	est	3spstbk	85
29	Kanaird	20-Jun-24	Sweep Net	est	3spstbk	80
30	Kanaird	20-Jun-24	Sweep Net	est	3spstbk	75
31	Kanaird	20-Jun-24	Sweep Net	est	3spstbk	77
32	Kanaird	20-Jun-24	Sweep Net	est	3spstbk	80
33	Kanaird	20-Jun-24	Sweep Net	est	3spstbk	95
34	Kanaird	20-Jun-24	Sweep Net	est	pollack	58

Acknowledgements

Sampling carried out as part of the WRF Ardmair Salmon Farm EMP wild fish monitoring programme supported by MOWI to inform the WRASFB, The Highland Council and The Scottish Government

Thank you to Kanchulish Estate for permission and support; thank you to Ardmair salmon farm for two staff to support sampling

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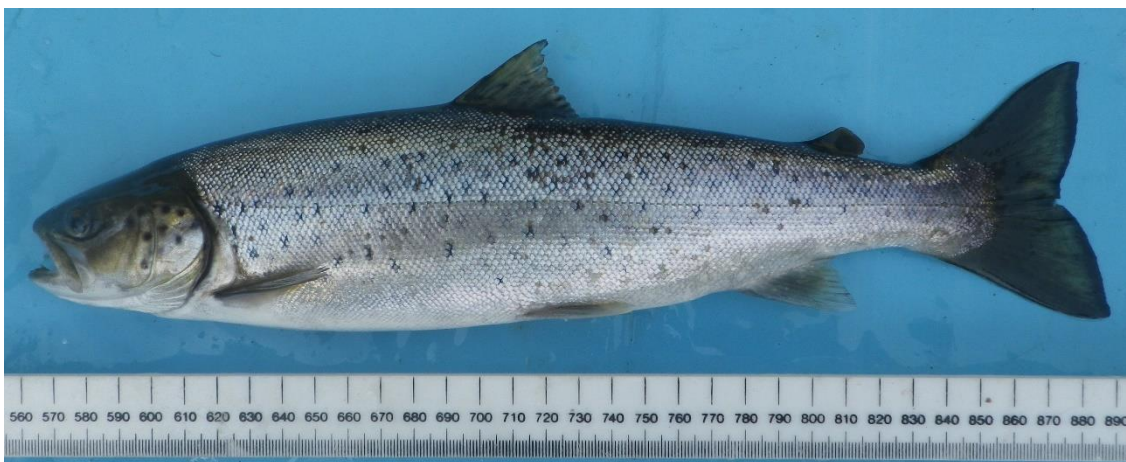
(all photos WRFT) Team photo



Sea trout of 147mm with sandeel it choked on



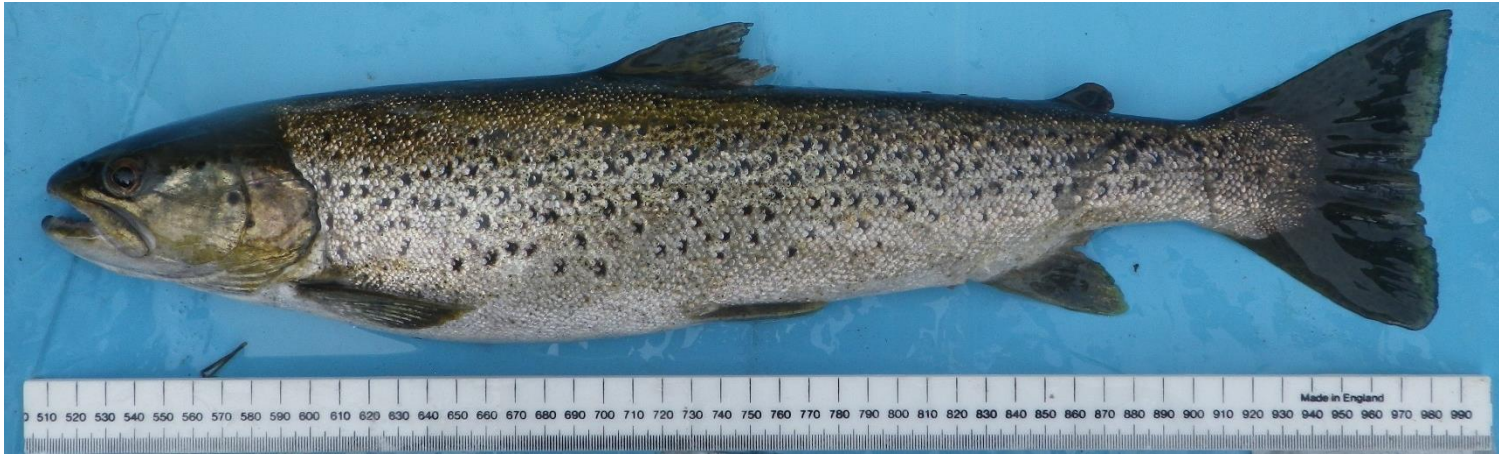
Sea trout of 325mm



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Sea trout 470mm – lots of *Cryptocotyle ligua* (black spot)



Dorsal fin of sea trout 470mm (above) to show healing sea lice damage

Caudal fin of sea trout of 470mm to show lots of black spot

