

Sea lice monitoring report for Applecross 13th June 2025

Peter Cunningham (WRFT Biologist) 16th June 2025

info@wrft.org.uk

Sea trout data

Location:	Applecross River estuary																			
Date:	13-Jun-25		Time:		10:45															
*Counts:	Peter Cunningham																			
Team:	5 helpers																			
Weather:	overcast, still, dry. Cool (~10C)																			
River	medium flow; mild; fresh breeze																			
Other notes:	1 sweep of top of sea pool																			
	2 snorkellers to move net over stones on river bed of pool																			
	tide full in at first - about 30cm above river level; halocline																			
	about 100 fish in net, random 29 fish subsampled, plus the largest fish in the sweep																			
	eels and flounder seen by snorkellers																			
									Caligus	Lepeophtheirus salmonis										
No.	Location	Date	Method	Riv/Est/B each	Fish	length (mm)	weight (g)	condition factor	total	Copepodid & Chalimus (estimate)	Pre-adult & adult	Ov. female	Total L. salmonis sea lice	*estimated lice/ g fish weight	Dorsal fin damage	Cryptocotyle ligua spots per cm2 of caudal fin	Predator damage	Photo	scale sample?	Comments
1	Applecross	13-Jun-25	Sweep Net	est	Sea trout	300	280	1.04	0	50	17	0	67	0.239	2.0	1	N	Y	y	raw fin
2	Applecross	13-Jun-25	Sweep Net	est	Sea trout	193	57	0.79	0	8	3	0	11	0.193	0.5	2	N	Y	y	
3	Applecross	13-Jun-25	Sweep Net	est	Sea trout	330	308	0.86	0	0	3	0	3	0.010	1.0	0	N	Y	y	
4	Applecross	13-Jun-25	Sweep Net	est	Sea trout	450	1032	1.13	0	3	13	1	17	0.016	2.0	0	N	Y	y	
5	Applecross	13-Jun-25	Sweep Net	est	Sea trout	188	68	1.02	0	8	10	0	18	0.265	1.0	0	N	Y	y	
6	Applecross	13-Jun-25	Sweep Net	est	Sea trout	349	400	0.94	0	0	2	0	2	0.005	2.0	2	Y	Y	y	bird beak; has had lice
7	Applecross	13-Jun-25	Sweep Net	est	Sea trout	246	160	1.07	0	10	11	0	21	0.131	1.0	0	N	Y	y	
8	Applecross	13-Jun-25	Sweep Net	est	Sea trout	200	85	1.06	0	8	3	0	11	0.129	0.5	1	N	Y	y	
9	Applecross	13-Jun-25	Sweep Net	est	Sea trout	183	54	0.88	0	15	7	1	23	0.426	1.0	0	N	Y	y	
10	Applecross	13-Jun-25	Sweep Net	est	Sea trout	194	80	1.10	0	21	2	0	23	0.288	1.0	3	N	Y	y	
11	Applecross	13-Jun-25	Sweep Net	est	Sea trout	171	48	0.96	0	3	0	0	3	0.063	0.0	2	N	Y	y	
12	Applecross	13-Jun-25	Sweep Net	est	Sea trout	223	105	0.95	0	0	0	0	0	0.000	1.5	1	N	Y	y	has had many lice
13	Applecross	13-Jun-25	Sweep Net	est	Sea trout	193	52	0.72	0	13	1	0	14	0.269	0.5	0	N	Y	y	split ail
14	Applecross	13-Jun-25	Sweep Net	est	Sea trout	206	68	0.78	0	53	0	0	53	0.779	2.0	1	Y	Y	y	lice pics; old pred damage
15	Applecross	13-Jun-25	Sweep Net	est	Sea trout	251	145	0.92	0	2	1	0	3	0.021	2.0	0	N	Y	y	
16	Applecross	13-Jun-25	Sweep Net	est	Sea trout	215	90	0.91	0	0	0	0	0	0.000	2.0	0	N	Y	y	
17	Applecross	13-Jun-25	Sweep Net	est	Sea trout	180	56	0.96	0	40	5	0	45	0.804	1.0	0	N	Y	y	dorsal fin pic
18	Applecross	13-Jun-25	Sweep Net	est	Sea trout	332	390	1.07	0	3	20	0	23	0.059	1.0	0	N	Y	y	has been heavily liced
19	Applecross	13-Jun-25	Sweep Net	est	Sea trout	195	60	0.81	0	24	1	0	25	0.417	0.5	0	N	Y	y	has had 100+ lice
20	Applecross	13-Jun-25	Sweep Net	est	Sea trout	197	79	1.03	0	16	0	0	16	0.203	1.0	0	N	Y	y	caudal fin damage
21	Applecross	13-Jun-25	Sweep Net	est	Sea trout	207	96	1.08	0	37	3	0	40	0.417	1.0	0	N	Y	y	
22	Applecross	13-Jun-25	Sweep Net	est	Sea trout	165	47	1.05	0	85	0	0	85	1.809	0.2	0	N	Y	y	Lice pics
23	Applecross	13-Jun-25	Sweep Net	est	Sea trout	335	395	1.05	0	2	2	1	5	0.013	2.0	0	N	Y	y	raw dorsal fin
24	Applecross	13-Jun-25	Sweep Net	est	Sea trout	163	45	1.04	0	2	0	0	2	0.044	0.5	1	N	Y	y	
25	Applecross	13-Jun-25	Sweep Net	est	Sea trout	178	50	0.89	0	8	4	0	12	0.240	0.5	2	N	Y	y	
26	Applecross	13-Jun-25	Sweep Net	est	Sea trout	170	44	0.90	0	15	3	0	18	0.409	0.5	0	N	Y	y	
27	Applecross	13-Jun-25	Sweep Net	est	Sea trout	175	51	0.95	0	14	0	0	14	0.275	1.0	0	N	Y	y	
28	Applecross	13-Jun-25	Sweep Net	est	Sea trout	165	45	1.00	0	8	0	0	8	0.178	0.0	0	N	Y	y	Net damage
29	Applecross	13-Jun-25	Sweep Net	est	Sea trout	173	51	0.98	0	37	0	0	37	0.725	0.2	0	N	Y	y	
30	Applecross	13-Jun-25	Sweep Net	est	Sea trout	158	42	1.06	0	0	0	0	0	0.000	0.2	0	N	Y	y	
Averages						222.83	149.43	0.97	0.00	16.17	3.70	0.10	19.97	0.28	0.99	0.53				

Sea lice monitoring report for Applecross 13th June 2025

Peter Cunningham (WRFT Biologist) 16th June 2025

info@wrft.org.uk

Summary

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 of fish in sample %
1	Yes	0.239	>0.3	100%	8	30	26.67	26.67	
2	No	0.193	0.2-0.3	50%	7		23.33	11.67	
3	No	0.010	0.1-0.2	20%	4		13.33	2.67	
4	Yes	0.016	<0.1	0%	11		36.67	0.00	41.00
5	Yes	0.265							
6	No	0.005							
7	Yes	0.131							
8	No	0.129							
9	Yes	0.426							
10	Yes	0.288							
11	No	0.063							
12	No	0.000							
13	Yes	0.269							
14	Yes	0.779							
15	No	0.021							
16	No	0.000							
17	Yes	0.804							
18	Yes	0.059							
19	Yes	0.417							
20	Yes	0.203							
21	Yes	0.417							
22	Yes	1.809							
23	No	0.013							
24	No	0.044							
25	No	0.240							
26	Yes	0.409							
27	Yes	0.275							
28	No	0.178							
29	Yes	0.725							
30	No	0.000							

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 \(researchgate.net\)](#)

total lice	599
number of sea trout	30
number infested	28
prevalence	93%
total lice	599
abundance	19.97
intensity	21.39
fish with >0.3 lice / g	8
fish with >0.3 lice / g	29%

Acknowledgements

Monitoring to inform the Caol Mor (East of Skye) Salmon farms Environment Management Plan supported by MOWI

For permissions to sweep net for sea trout and support, thank you to the Applecross Trust

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
https://www.researchgate.net/publication/266672998_Risk_assessment_of_the_environmental_impact_of_Norwegian_Atlantic_salmon_farming	>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

Sea lice monitoring report for Applecross 13th June 2025

Peter Cunningham (WRFT Biologist) 16th June 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.

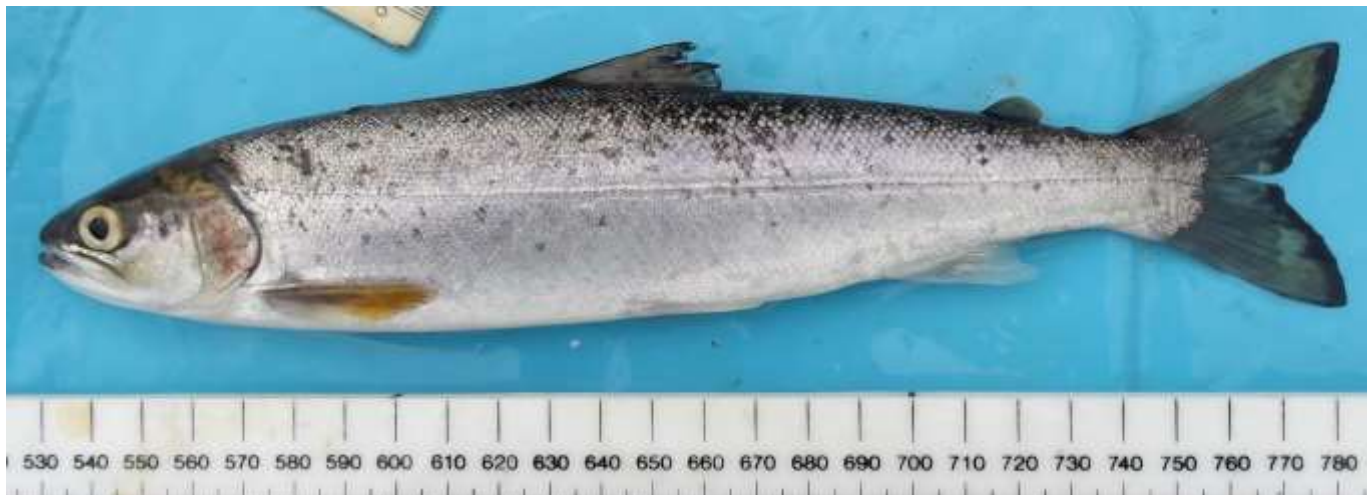
Sea trout 206mm, Applecross 13 June 2025. 53 copepodid and chalimus lice



Sea lice monitoring report for Applecross 13th June 2025

Peter Cunningham (WRFT Biologist) 16th June 2025 info@wrft.org.uk

Sea trout 251mm, Applecross, 13 June 2025. 2 copepodid and chalimus lice, 1 adult and preadult lice; (below) lice scarring on dorsal fin and on operculum of this fish



Sea lice monitoring report for Applecross 13th June 2025

Peter Cunningham (WRFT Biologist) 16th June 2025 info@wrft.org.uk

Sea trout 450mm, Applecross, 13 June 2025. 3 copepodid and chalimus lice, 13 adult and preadult lice. Dorsal fin damage score 2 (over 1/3 of fin damaged)

