

Roaringwater Bay

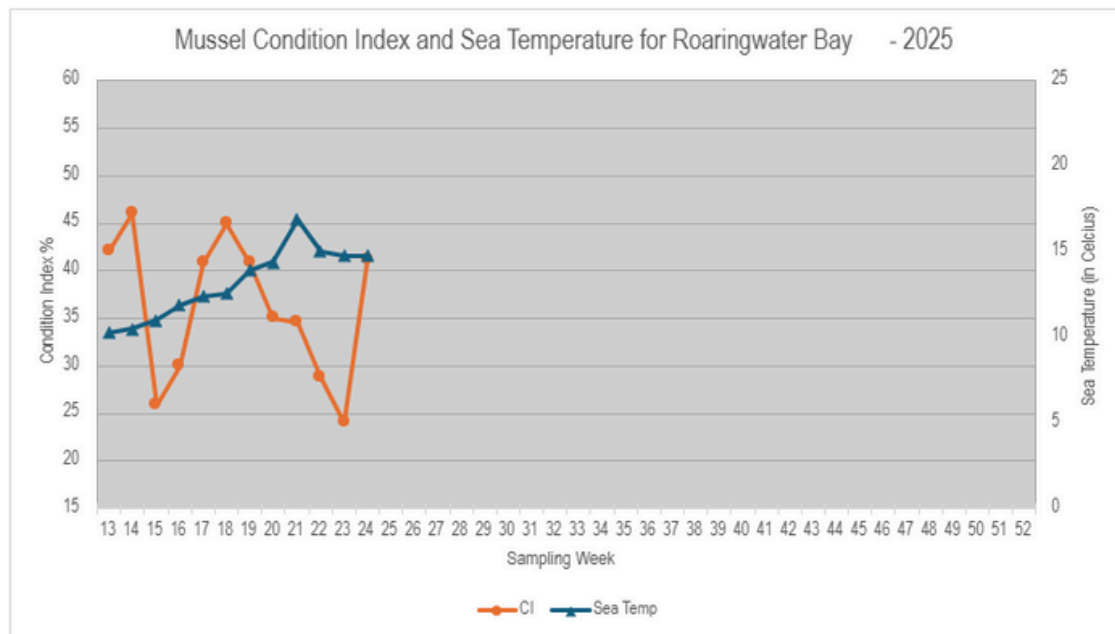
Southwest Mussel Larvae sampling

18th June 2025

Week 24 (9/06/2025 to 15/06/2025)



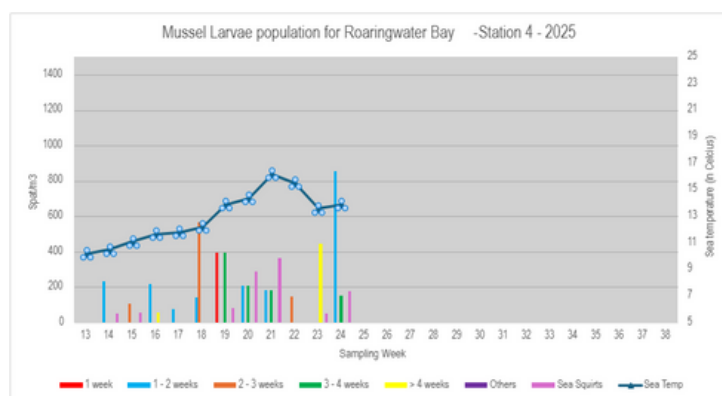
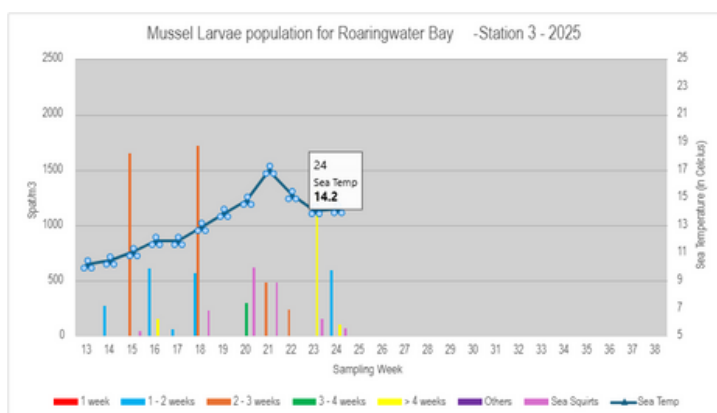
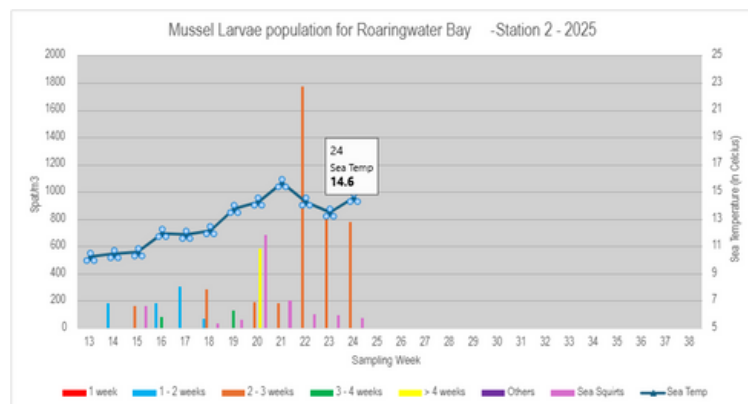
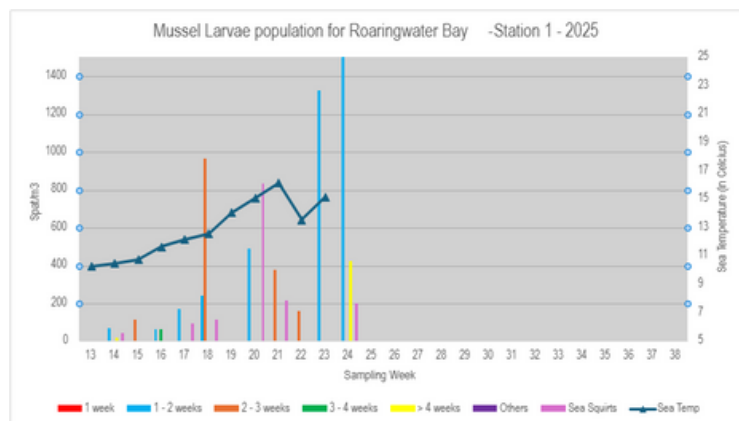
Condition Index (CI) for Roaringwater Bay



From last weeks low (24% in Week 22), the Condition Index in Roaringwater has increased dramatically to 41.1%. The sea temperature is stable at 14.8.

Larvae population evolution in Roaringwater Bay (4 stations)

For each sample, mussel larvae are classed by age: 1 week old, 1 to 2 weeks old, 2 to 3 weeks old, 3 to 4 weeks old, over 4 weeks old and others (younger or older).



Commentary

Station 1's larvae numbers increased a little further to 2119. 85% of the larvae are estimated to be 1-2 weeks old.

Station 2's larvae numbers remained at the same level with 776 (Week 23 was 804 and Week 22 was a high of 1774. 100% of these larvae are estimated to be less than 3 weeks old.

Station 3's larvae Week 24 count dropped to 699, from the previous high 1342 figure. 85% are 1-2 weeks old and 15% are in the older 3-5 week range.

Station 4 had a high count of 1004 up from previous low figures of 445 spat / m3 for week 23 and 144 for week 22.

A big increase in the CI is indicating that spawning occurred in the previous weeks. The larval counts vary widely in the 4 different stations but young mussel larvae are widespread and in good numbers.

The change in sea temperature varies between the stations. However, all 4 stations were between 13.9 and 14.9 degrees. Good levels of phytoplankton feed are in the water.



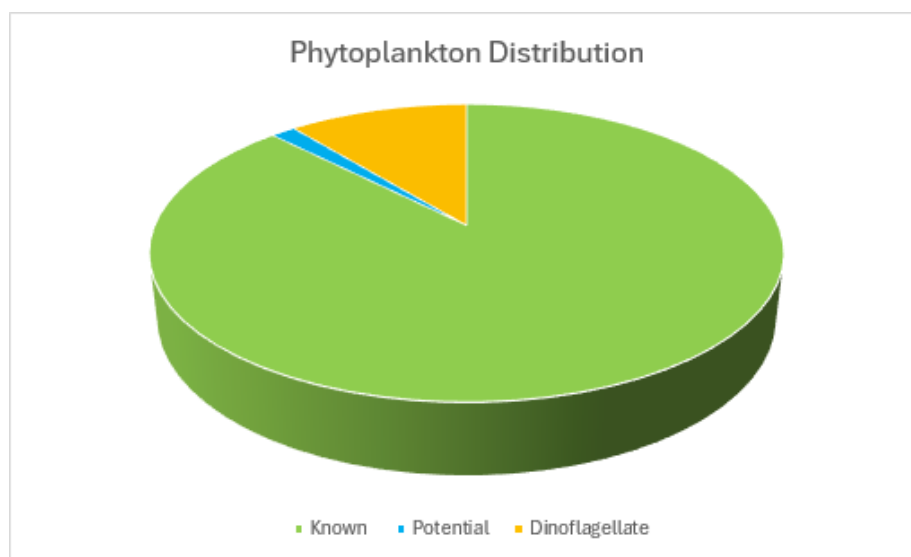
Further observations from analysis:

- Station 1: 199 sea squirts were found in the samples. Previous week's sample was zero. P.n.serjata grp dominant. Low copepods, crab and 2nd bivalve sp.
- Station 2: The sample presented a moderate level of sea squirt with 74 previous count was 94 ind./m³. Low phytoplankton, P.n.serjata grp and Rhizosolenia sp. dominant. v. low copepods.
- Station 3: 71 sea squirt individuals were found, down from the previous weeks level of 155 sea squirts. Low copepods, crab and starfish. Low phytoplankton- Rhizosolenia dominant.

Station 4: 175 sea squirts counted in Week 24 compared to 48 sea squirts in Week 23. Low phytoplankton, Rhizosolenia and P.n.serjata grp dominant. Potential eggs and starfish low.

Week 24 had higher levels of sea squirt larvae concentration across the stations compared to Week 23. Hopefully this means that mussel larvae spawned in previous weeks can settle now, before the sea squirts.

The phytoplankton concentration is stable (8040) from the previous week (8040) cells per litre). Also the level of known food sources for larvae is stable too at 81% compared to Week 23's 88%.



Summary Tables

Condition Index for the last 5 weeks

SAMPLING WEEK	CONDITION INDEX %	WATER TEMPERATURE (°C)	CI VARIATION	SEA TEMPERATURE VARIATION
WEEK 20	35	14.4	5.8	0.5
WEEK 21	34.6	16.9	-0.4	+2.5
WEEK 22	28.8	15	-5.8	-1.9
WEEK 23	24	14.8	-4.8	-0.2
WEEK 24	41.1	14.8	17.1	0.00

Larvae population distribution for the 4 sampling Stations:

Week 24	Spat/m3	Larvae Stage	Sea Temperature	Sea Squirts/m3
Roaringwater Bay 1	2119	1-2 weeks (80%). 20% 5-6 weeks	14.9	199
Roaringwater Bay 2	776	1-3 weeks (100%)	14.6	74
Roaringwater Bay 3	699	1-2 weeks (85%) 3-5 weeks (15%)	14.2	71
Roaringwater Bay 4	1004	1-2 weeks (85%) 3-5 weeks (15%)	13.9	175

