

Roaringwater Bay

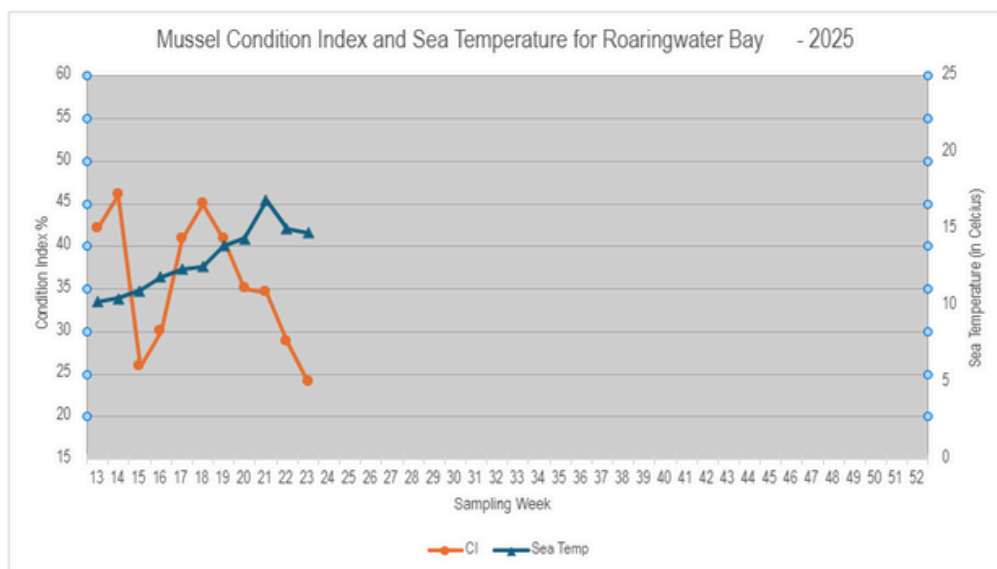
Southwest Mussel Larvae sampling

11th June 2025

Week 23 (2/06/2025 to 8/06/2025)



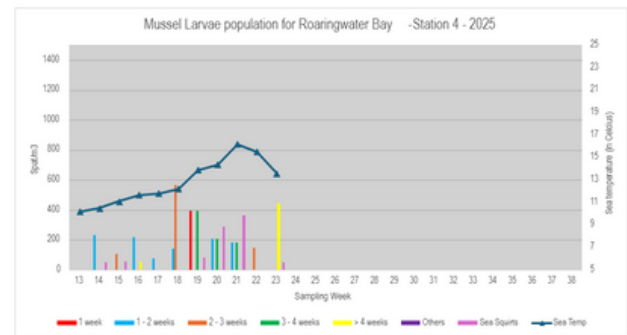
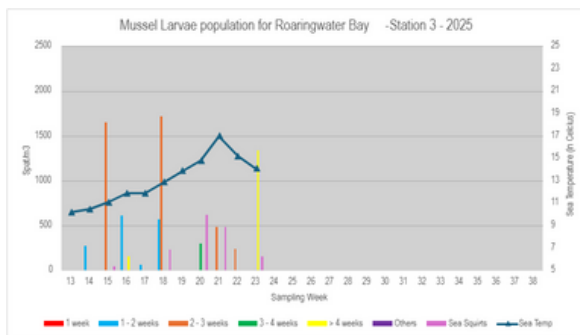
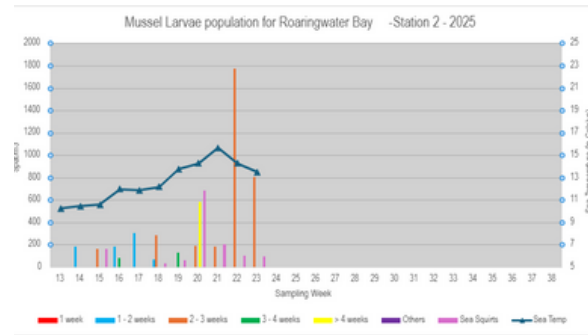
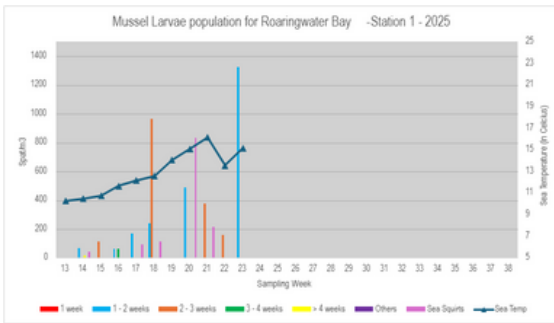
Condition Index (CI) for Roaringwater Bay



The Condition Index in Roaringwater has dropped further to 24 % (-4.8% from Week 22). The sea temperature is down a little bit to 14.8 (from 15°C).

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 from 161 to 1327. 85% of the larvae are estimated to be 1-3 weeks old.

Station 2's larvae numbers reduced from Week 22's high (1774) to 804. 100% of the larvae are estimated to be less than 3 weeks old.

Station 3's larvae count increased to 1342 from the previous 237 figure. 50% are 1-3 weeks old and 50% are in the oldest 4-6 week range.

Station 4 has the lowest amount of spat / m3 (445) for week 23.

A further decrease in the CI is indicating a likely spawning. The larval counts vary widely in the 4 different stations.

The change in sea temperature varies between the stations. Station 1 increased to 15.2°C from 13.6°C. The other three stations had decreasing temperatures. -0.8°C for Station 2 to 14.3°C, -1.1°C for Station 3 to 14.1°C, and -0.9°C for Station 4 to 13.6°C from 15.5°C.

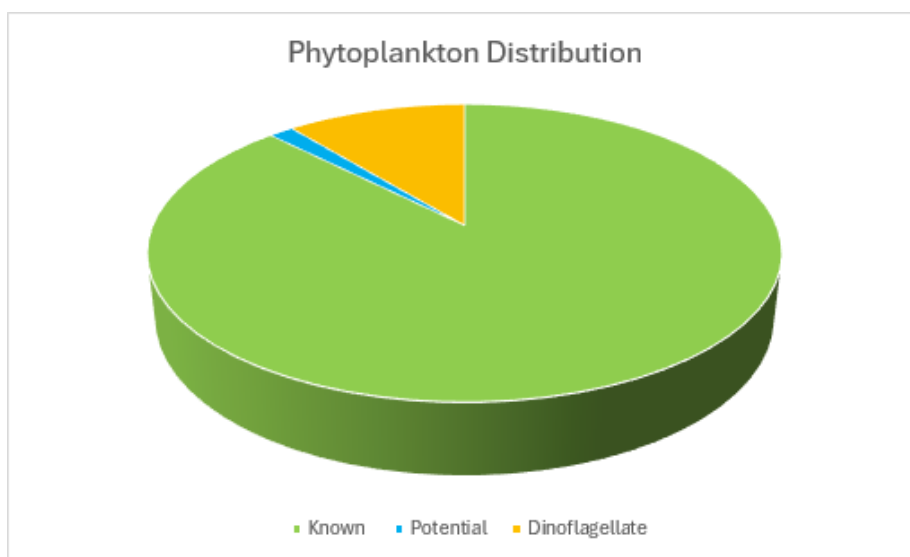


Further observations from analysis:

- Station 1: No sea squirts were observed in the sample. Copepods were moderate. Secondary bi-valve species were low.
- Station 2: The sample presented a moderate level of sea squirt with 94 ind./m³. Low phyto - L.danicus, Rhizo, Guinardia dominant.
- Station 3: 155 sea squirts were observed in the sample. Copepods were low in concentration. Rhizosolenia, Ceratulina , Guinardia dominant, phyto high.
- Station 4: 48 sea squirts were observed in the sample. L.danicus,Ceratulina sp.dominant.Moderate biomass. Copepods were very low.

Low level of sea squirt larvae concentration across the stations could indicate substantial fouling on the collectors is occurring.

The phytoplankton concentration has moved down in the count (8040) from the previous week (132,680 cells per litre). But the sample was composed mainly of known food sources for larvae at (88%).



Summary Tables

Condition Index for the last 5 weeks

SAMPLING WEEK	CONDITION INDEX %	WATER TEMPERATURE (°C)	CI VARIATION	SEA TEMPERATURE VARIATION
WEEK 19	40.8	13.9	-4.2	+1.3
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

Larvae population distribution for the 4 sampling Stations:

Week 22	Spat/m3	Larvae Stage	Sea Temperature	Sea Squirts/m3
Roaringwater Bay 1	1327	1-3 weeks (85%)	15.2	0
Roaringwater Bay 2	804	1-3 weeks (100%)	13.5	94
Roaringwater Bay 3	1342	2 to 3 weeks (50%) 5-6 weeks (50%)	14.1	155
Roaringwater Bay 4	445	1 to 3 weeks (50%) 4-6 weeks (50%)	13.6	48

