MUSSEL CONDITION INDEX AND LARVAE MONITORING

Weekly Bulletin

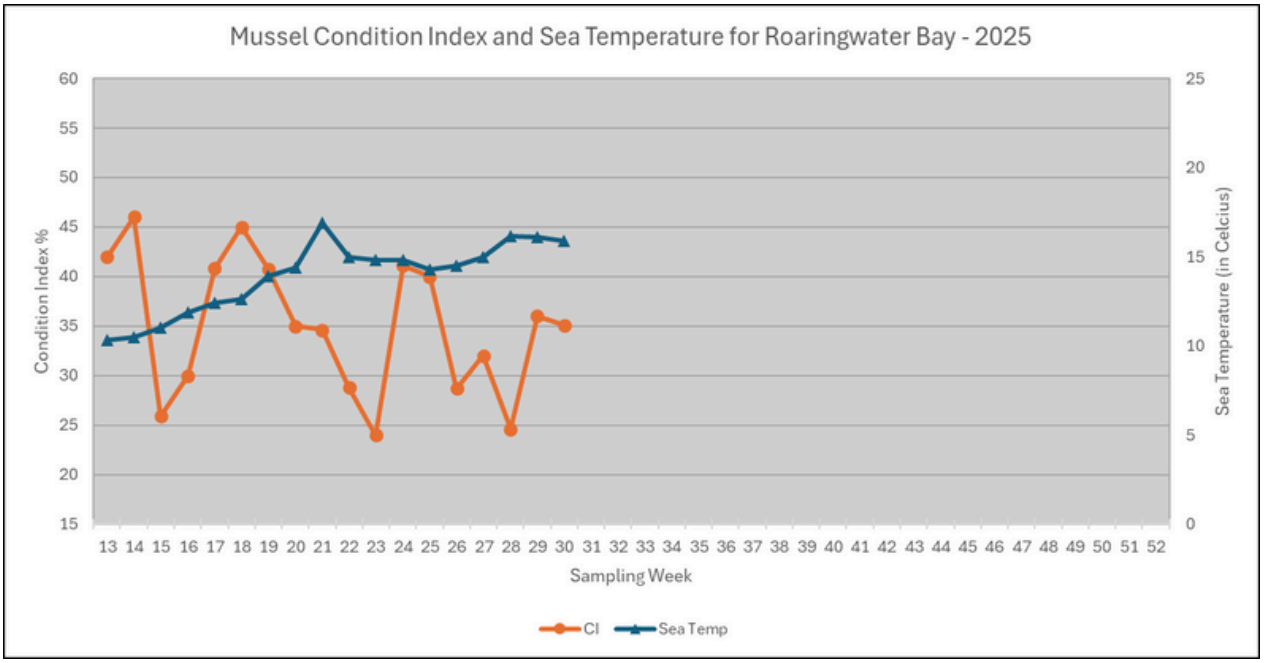
Roaringwater Bay

Southwest Mussel Larvae sampling

28th July 2025

Week 30 (21/07/2025 to 27/07/2025)

Condition Index (CI) for Roaringwater Bay



The Condition Index in Roaringwater stabilised on Week 30 (down by 0.9% to 35.1%), while the sea temperature was stable at 15.9ºC (- 0.2ºC from the previous week). The Aquatroll deployed in the bay recorded sea temperature varying between 14.1 and 17.3ºC during the sampling period.

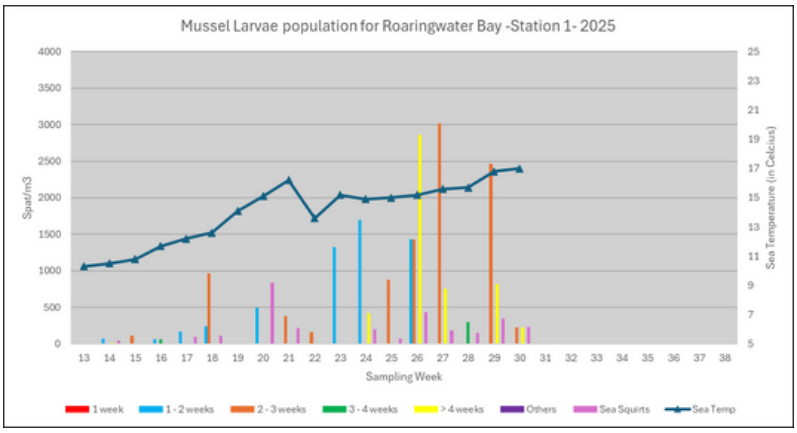
Rialtas na hÉireann
Government of Ireland

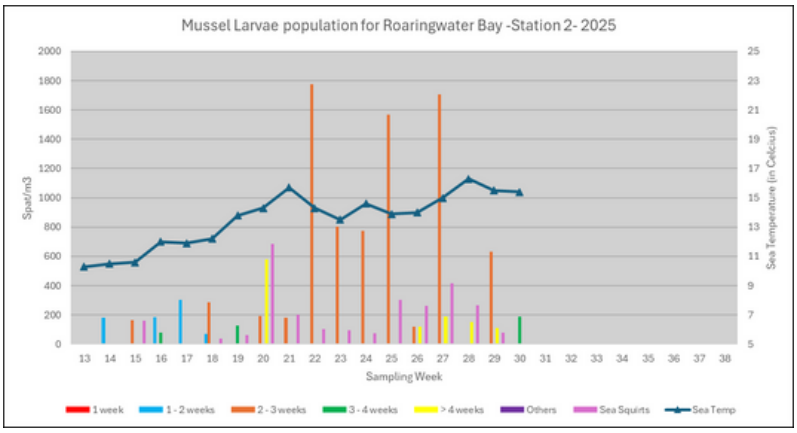
Arna chomhchistiú ag an Aontas Eorpach

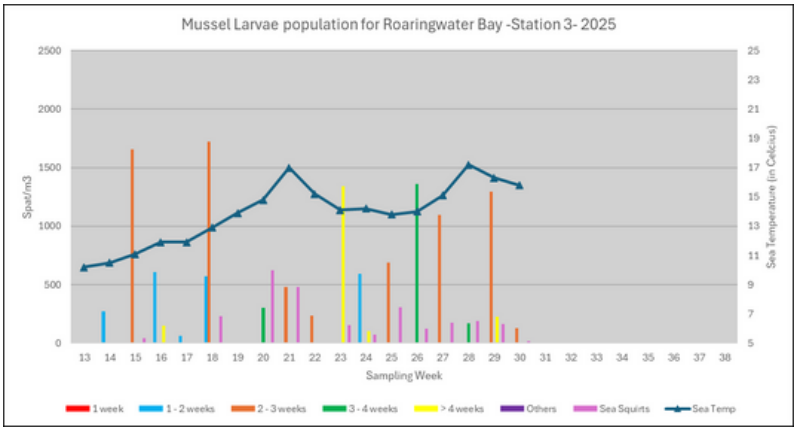
Co-Funded by the European Union

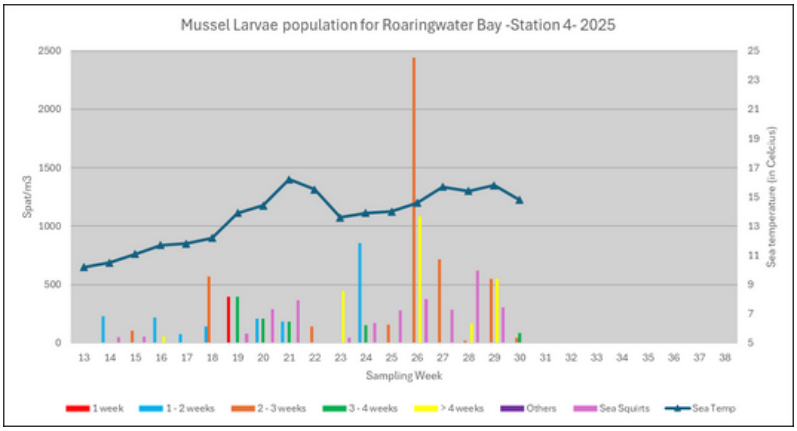
Larvae population evolution in Roaringwater Bay (4 stations)

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

The overall larvae population in Roaringwater Bay significantly decrease on Week 30: down to 905 spat/m^3 (total across the 4 stations). Each sampling station has seen sharp decrease of its larvae population, with Station 1 seeing the most important one (from 3283 spat/m^3 on Week 29 to 452 on Week 30). Considering the age of the larvae from the previous week at this station (2 to 3 weeks old), this decrease is unlikely due to settlement.

Sea temperature is decreasing slightly from previous weeks with an average of 15.75°C.

- Station 1: +0.2°C at 17°C
- Station 2: - 0.1°C at 15.4°C
- Station 3: - 0.5°C at 15.8°C
- Station 4: -1°C at 14.8°C

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach
Co-Funded by the European Union

Further observations from analysis:

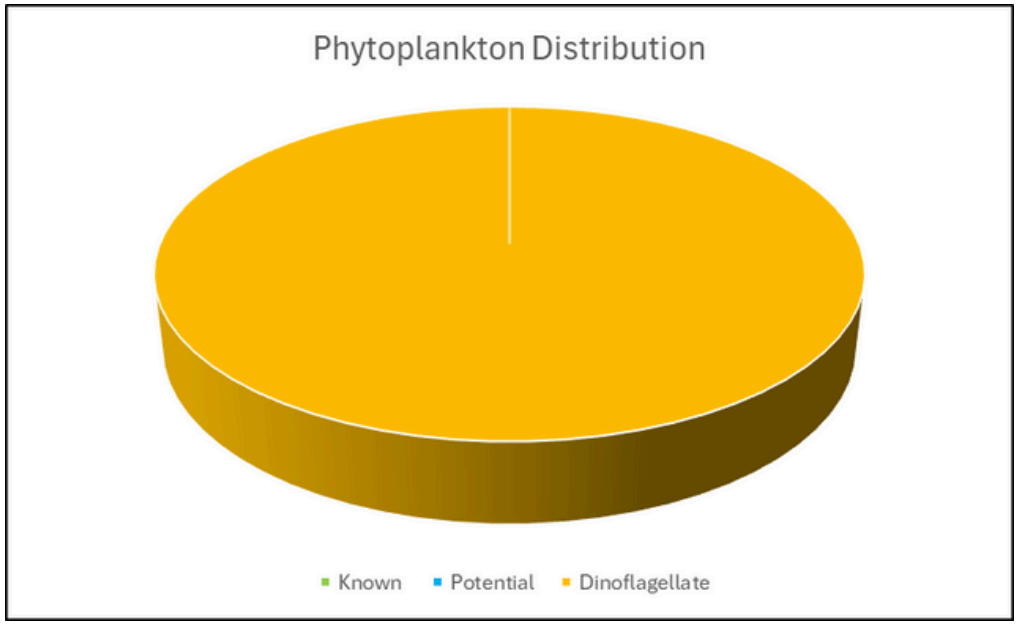
- Station 1: The concentration of sea squirt in the sample was 233 ind./m^3. The levels of copepods were very low. The phytoplankton biomass in the sample was moderate with Coscinodiscus, Rhizosolenia and Ceratium dominating the species. Karenia mikimotoi was also present.

- Station 2: There were no sea squirts in the sample. The levels of copepods were very low. Th e phytoplankton biomass was moderate with Coscinodiscus and L. danicus dominant. In addition, D. acuta, Karenia mikimotoi and Noctiluca were present in low concentrations.

- Station 3: The level of sea squirt in the sample was low with only 15 ind./m^3. Again, the copepods levels were very low. The phytoplankton biomass was moderate to high with Coscinodiscus and L. danicus dominant. D. acuta and K. mikimotoi were also present.

- Station 4: There were no sea squirts in the sample and very low levels of copepods. The phytoplankton biomass in the sample was moderate with Coscinodiscus, Rhizosolenia dominating. K. mikimotoi and Dinophysis were also present.

The phytoplankton concentration further decreased significantly in Week 30 to 840 cells/litre composed entirely of dinoflagellate.



Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach
Co-Funded by the European Union

Summary Tables

Condition Index for the last 5 weeks

SAMPLING WEEK	CONDITION INDEX %	WATER TEMPERATURE (°C)	CI VARIATION	SEA TEMEPRATURE VARIATION
WEEK 26	28.7	14.5	-11.3	+0.2
WEEK 27	32	15	+3.3	+0.5
WEEK 28	24.6	16.2	-7.4	+1.2
WEEK 29	36	16.1	+11.4	-0.1
WEEK 30	35.1	15.9	-0.9	-0.2

Larvae population distribution for the 4 sampling Stations:

Week 24	Spat/m3	Larvae Stage	Sea Temperature	Sea Squirts/m3
Roaringwater Bay 1	452	50% 2 to 3 weeks, 50% 4 to 6 weeks	17	233
Roaringwater Bay 2	190	3 to 5 weeks	15.4	0
Roaringwater Bay 3	129	2 to 4 weeks	15.8	15
Roaringwater Bay 4	134	65% 3 to 5 weeks, 35% 2 to 4 weeks	14.8	0

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach
Co-Funded by the European Union