

Pendrell Sound Monitoring Project – data from 15 August 2010 samples

Report date 17 August 2010

COMMERCIAL-SCALE SPAT SETTLEMENT PREDICTED FOR THIS WEEK AND NEXT WEEK!!!

(MORE SAMPLES - SEE DETAILS BELOW)

Note: These samples were taken by Yves, and previous reported samples were taken by Ed – many thanks to you both!

(A) Qualitative Pacific Oyster larval summary

One 5-minute plankton tow at a depth of 1-2 m at each station was collected by pulling a plankton net slowly beside a boat at a rate of 0.5 m/s.

Biomass (low, medium, high)			
Station	Station 2	Station 4	Station 6
D hinge	Low	Low	Low
Umbone	High	Med	Med
Eyed	Med	Med	Low

In terms of percentages of different stages present at each station:

Station 2

- 0% late straight hinge stage
- 8% early umbo stage (10 to 14 days to settlement from sample date)
- 22% mid umbo stage (6 to 10 days to settlement from sample date)
- 46% late umbo (3 to 4 days to settlement from sample date)
- 24% eyed larvae

Station 4

- 0% late straight hinge stage
- 12% early umbo stage (10 to 14 days to settlement from sample date)
- 21% mid umbo stage (6 to 10 days to settlement from sample date)
- 36% late umbo (3 to 4 days to settlement from sample date)
- 31% eyed larvae

Station 6

- 0% late straight hinge stage
- 8% early umbo stage (10 to 14 days to settlement from sample date)
- 39% mid umbo stage (6 to 10 days to settlement from sample date)
- 47% late umbo (3 to 4 days to settlement from sample date)
- 6% eyed larvae

Again the majority should be settling this week and next, if temperatures remain high and conditions good for settlement. There were also small numbers of mussel and competent barnacle larvae present, so keep in mind that gear may also receive settlement of these animals.

The vast majority of bivalves present in the samples were Pacific oyster larvae, with a few mussels and clams also present in small numbers.

This information, previous reports and project details can also be found at

<http://www.viu.ca/csr/PendrellSoundMonitoringProject2010.asp>

and

<http://www.bcsqa.ca/>

Please see below for details of the phytoplankton report, settlement data, site conditions and also quantitative phytoplankton sample analysis.

(B) Phytoplankton report

The phytoplankton report will be forthcoming, scheduled for delivery in a separate report on 18th August 2010.

(C) Settlement plates

Settlement plate collectors are located at Site 2 and 4. Each week one plate from each site will be removed and the number of spat on the upper and lower surface of the plate will be counted.

Station 2 plate upper surface (code 2U-5) = 1 mussel. Lower surface = no settlement
 Station 4 plate upper surface (code 4U-22) = 1 Pacific oyster, 1 barnacle. Lower surface = no settlement

Note: The plate surfaces were not protected, therefore these results are not considered an accurate account of settlement, but as some settlement was seen it is included in the report.

(D) Site conditions

<u>Sampling Date:</u>		<u>Crew:</u>		<u>Current Weather:</u>		<u>Weather Past week:</u>		
15 Aug 2010		Yves Perreault		Calm, smoky		Calm, warm to hot		
Site	Salinity	Oxygen	Wind	Waves	Air Temp (°C)	Water Temp (°C)	Secchi Disk Down	Secchi Disk Up
2	25 ppt	105%	Light NW	Ripples	21.7	20.9		
4	25 ppt	102%	Light NW	Ripples	22.4	21.3		
6	25 ppt	101%	None	None	21.6	21.1		

Adult Oyster Condition:

Oyster 1	30% spent	70% ripe / mature	0% maturing
Oyster 2	50% spent	50% ripe / mature	0% maturing

General Comments:
 Only one tow per station. Could not find settlement plates at Station 6 (note to Yves / samplers – no plates are located at Station 6).

(E) Quantitative plankton results (numbers of individuals per 5 minute tow)

	Station 2	Station 4	Station 6
Time:	8:04	7:30	8:50
<u>Zooplankton</u>			
Cladocerans	800	240	360
Copepods	25120	21280	17960
Crab Larvae	520	400	80
Ctenophores	0	320	120
Eggs	0	0	0
Fish	0	0	0
Foraminifera	0	0	0
Gastropods	0	0	0
Jellyfish	0	0	40
Polycheates	0	0	0
Rotifers	0	0	0
Spirorbis	40	0	0
Larvaceans	40	0	0
Bryozoans	40	40	0
Barnacles	0	40	40
<u>Bankia setacea (shipworms)</u>			
Early	0	0	0
Mid	0	0	0
Late	0	0	0
<u>Mytilus edulis (mussel)</u>			
Early	0	80	40
Mid	120	40	160
Late	160	240	40
<u>Ostrea lurida (native oyster)</u>			
Early	0	0	0
Mid	0	0	0
Late	0	0	0
<u>Clams</u>			
Early	0	0	40
Mid	120	120	80
Late	0	0	0
<u>Crassostrea gigas (Pacific oyster)</u>			
SH	0	40	0
EU	560	280	160
MU	1120	1000	640
LU	1640	1080	720
Eyed	680	640	160

Biomass (low, medium, high)			
D hinge	Low	Low	Low
Umbone	High	Med	Med
Eyed	Med	Med	Low