

## Nearshore Larval Transport: Spring-Summer 2014 Sampling Report

Jesus Pineda, Woods Hole Oceanographic Institution

Nathalie Reyns, University of San Diego

Steven Lentz, Woods Hole Oceanographic Institution

All nearshore research was conducted on a 7m Parker with a davit (University of San Diego, R/V Gaia).

### Instrument deployment logs (physical data collections):

#### 8m subsurface temperature mooring deployment:

Date Deployed: April 18, 2014

Time Deployed: 10:04 am local then moved at 10:46 (local, PST) (GPS entered time)

Date/Time retrieved: July 16, 2014 at 10:45 am (local, PST)

Deployment location: 32° 48. 621 N, 117° 16. 685 W (final spot)

Water depth: 9.4-9.5 m at final spot

Instrument	Serial #	Turned on (GMT)	Height (meters above bottom)	Sample interval	Depth (after loggers on, meters above bottom)
SBE 56 T	3845	12:00 4/18/2014	7.2	5 sec	7.09
SBE 39 T&P	6784	12:00 4/18/2014	7.0	60 s	6.7
SBE 56 T	3843	12:00 4/18/2014	6.0	5 s	5.925
SBE 56 T	3842	12:00 4/18/2014	4.8	5 s	4.74
SBE 56 T	3841	12:00 4/18/2014	3.6	5 s	3.57
SBE 56 T	3840	12:00 4/18/2014	2.4	5 s	2.365
SBE 56 T	3839	12:00 4/18/2014	1.2	5 s	1.2

#### 8m bottom tripod deployment:

Date Deployed: April 18, 2014

Time Deployed: 10:37 (local, PST) final spot

Date/Time retrieved: July 16, 2014 at 11:09 am (local, PST)

Deployment location: 32° 48.621 N, 117°16.674 W

Instrument	Serial #	Turned on (GMT)	Height measured (meters above bottom)	Sample interval	Comments
RDI ADCP		12:00 4/17/2014	0.52	2 sec sample interval	100 days duration, 22 number of depth cells 0.4m depth cell size
Seagauge P	361	21:00 4/16/2014	0.1	10 min	Wave-burst every 3 hrs 1024 samples at 0.25 s
SBE 56 T	3838	12:00 4/18/2014	0.3	5 sec	

8m surface temperature telemetry mooring deployment:

Date Deployed: 21 April 2014

Time Deployed: 10:31 am (local, PST)

Date/Time retrieved: July 15, 2014 at 11:33 am (local, PST)

Deployment location: 32° 48.595 N; 117° 16.677W

Water depth: 9.1 m

Instrument	Serial #	Turned on (GMT)	Depth (below surface)	Sample interval	Comments
SBE 56	3846	12:00 4/18/2014	25 cm	5 sec	
T- Hobo		19 April 2014	1.92 m	60 sec	
T-Hobo		19 April 2014	3.92 m	60 sec	Lost logger 5/9/14
T-Hobo		19 April 2014	6.0 m	60 sec	Lost logger 5/2/14

4m bottom frame deployment:

Date Deployed: May 2, 2014 Time Deployed: ~15:00 GMT

Date/Time retrieved: July 15, 2014 at 10:35 am (local, PST)

Deployment location: 32° 48.623 N, 117° 16.370 W

Water depth: 4.3m

Instrument	Serial #	Turned on (GMT)	Height (above bottom)	Sample interval	Comments
Aquadopp	5329	12:00 4/24/2014	31 cmab	90 sec	10 of 0.5 m bins
Seagauge P	360	21:00 4/21/2014	15.5 cmab	10 min	Wave bursts – 1024 samples at 4 Hz and 4 samples a second every three hours.
SBE 56 T	3835	12:00 4/18/2014	2 cmab	5 sec	
SBE 56 T	3836	12:00 4/18/2014	1 mab	5 sec	

Intertidal instruments:

1m site deployment:

Date Deployed: May 1, 2014 Time Deployed: 14:00 GMT

Date/Time retrieved: July 16, 2014 at 7:22 am (local, PST)

Deployment location: 32.8102 N, 117.2699 W

Water depth: 0.97m during a negative tide

0.5m site deployment:

Date Deployed: May 1, 2014 Time Deployed: 15:00 GMT

Date/Time retrieved: July 16, 2014 ~ 7:00 am (local, PST)

Deployment location: 32.8098 N, 117.2700 W

Water depth: 0.64m during a negative tide (though tide was coming up at time)

Instrument	Serial #	Turned on (GMT)	Depth deployed	Sample interval	Comments
SBE 39 T&P	6783	12:00 4/18/2014	0.97m	60 sec	In 2 cinder blocks
SBE 56 T	3834	12:00 4/18/2014	0.64m	5 sec	In 2 cinder blocks

Near settlement plates:

Date Deployed: April 18, 2014

Date/Time retrieved: July 16, 2014 between 7:10-7:14 am (local, PST)

Time Deployed: about 10:00 local time (PST)

Instrument	Serial #	Turned on (GMT)	Depth	Sample interval	Water depth
SBE 56 T	3819	12:00 4/18/2014	Rocky intertidal	5 sec	Bottom under rock #2
SBE 56 T	3828	12:00 4/18/2014	Rocky intertidal	5 sec	Bottom under rock # 11
SBE 56 T	3833	12:00 4/18/2014	Rocky intertidal	5 sec	Deployed under rock #11 from 7/3/14-7/16/14

**Biological collections:**

Settlement plates:

-deployed settlement plates 23 April, 2014-June 16, 2014 (replaced daily during low tide)

Larval traps:

-deployed traps June 15, 2014- July 16, 2014 (replaced daily during low tide)

Offshore plankton samples:

Plankton samples were collected using an Ebara semivortex pump (300 liters/minute) fitted with a 5 cm diameter hose that filtered ~2 m<sup>3</sup> through a 112 µm mesh net. Pump sampling locations were determined after examining a CTD cast taken by YSI Castaway. Generally, during non-internal wave conditions, samples were collected in 2m-bin increments at five stations: location where temperature in

the water column indicated well-mixed conditions (isothermal temperature; usually at 4m and 6m water depth), where the thermocline intersected the bottom (usually between 6-8m water depth), and offshore (10m and 14m). An adaptive sampling approach was used to pump plankton during internal wave conditions. Larvae were sampled at 4 depths before, during, and after the passage of associated warm fronts at stations located between 6-3m in depth.

All pump sampling locations (latitude and longitude) and cruise dates are indicated in the file: `cruise_log_nearshore_transport_spring2014.xls`.