



CRUISE REPORT ON RESEARCH ACTIVITY

M.V.SEAFDEC Cruise No. 95-4/2013

9-20 September 2013

**Fish Larvae Survey at Oil Well Drilling Platforms
in the Gulf of Thailand**

TD/RP/174

This report is base on preliminary data

For readers who may need data in the report, please contact to:

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1. Cruise Summary

Vessel name : M.V.SEAFFDEC
Cruise No : M.V.SEAFFDEC No. 95-4/2013
Period : 09-20 September 2013 (12 days)
Area of Operation : Gulf of Thailand
Port of Call : SEAFFDEC/TD, Samut Prakarn, Thailand
Activities : Collecting fish larvae and juvenile, sediment, and physical oceanographic data using Bongo net, light trap, CTD, Box Corer, and Van Veen

2. List of ship personnel and SEAFFDEC' staffs

No.	Name	Position
1	Mr. Nobphadol Somjit	Captain
2	Mr. Montien Paewsakul	Chief Engineer
3	Mr. Anurak Loog-On	Chief Officer
4	Mr.Suren Pruksarat	Second officer
5	Mr. Vudhirat Vhdhipanyo	Second officer
6	Mr. Theerawat Paiwal	Second Engineer
7	Mr. Kittinai Sukdit	Third Engineer
8	Mr.Anuphap Lorpai	Appt. Navigator
9	Mr. Chainarong Chaopaknam	Assistant Researcher
10	Mr. Somyos Pornparsert	Fishing Assistant
11	Mr. Vanich Chaopaknam	Boatswain
12	Mr. Somkiat Phetrasatien	Steersman
13	Mr. Yuttachai How-harn	Steersman
14	Mr. Jaroon Po-U	Steersman
15	Mr.Pradit Kui-Prasert	Steersman
16	Mr. Huttachai Chuypanit	Steersman
17	Mr. Watchara Panasri	Oiler
18	Dum Tanyacharoen	Oiler
19	Mr.Prew Shodok	Oiler
20	Mr.Adisak Aemsuwan	Oiler
21	Mr.Chanchai Chidudom	Oiler
22	Mr. Veeraphon Vorakun	Cook
23	Mr. Marut Sangphuek	Ship boy
24	Dr.Natinee Sukramongkol	Fishery Oceanographer
25	Mr.Mokkara Phanchuen	Audio-Visual Assistant
26	Mr.Wasit Yimnoi	Audio-Visual Assistant
27	Ms.Chariphon Dueanchamrun	Assistant Oceanographer
28	Ms.Nida Hminhman	Assistant Oceanographer

3. List of scientists

No.	Name	Position	Organization
1	Dr.Pachoenchoke Jintasaeranee	Scientist	Burapha Univ.
2	Dr.Apichart Termvidchakorn	Expert	DOF Thailand
3	Mr.Sucha Munkongsomboon	Graduated Student	Burapha Univ.
4	Ms.Wantaka Thitiphatorn	Senior specialist scientist	Department of Mineral Fuels
5	Ms.Jitruthai Tosati	Environmentalist	Department of Mineral Fuels
6	Ms.Pontipa Luadnakrob	Scientist	Burapha Univ.
7	Mr.Wanchai Wongsudawan	Scientist	Burapha Univ.

4. Survey activities

Date	Time	Activities	Position
09 Sep 2013	0900~	Leaved SEAFDEC/TD for Jasmine station	
	1317-1445	- Calibration of flowmeter and sampling equipments trial	
10 Sep 2013	0630-1155	- Topography and bongo net survey at distance 2,000m from Jasmin station - Topography and bongo net survey at distance 300m from Jasmin station - CTD deployed at sea depth 59m	L11° 19.78'N, λ101° 13.91'E Sea depth 57-59m
11 Sep 2013	0656-1328	- Topography and bongo net survey at distance 2,000m from Bua Luang station - Topography and bongo net survey at distance 300m from Bua Luang station - CTD deployed at sea depth 58m - Bongo net survey at distance 5,000m from Bua Luang station	L10° 31.65'N, λ100° 17.24'E Sea depth 58-60m
12 Sep 2013	0705-1037	- Topography and bongo net survey at distance 2,000m from Benjamas station - Topography and bongo net survey at distance 300m from Benjamas station - CTD deployed at sea depth 65m	L10° 31.50'N, λ101° 16.94'E Sea depth 55-65m
	1432-1605	- Bongo net survey at Reference 1 station - CTD deployed at sea depth 77m	L09° 41.83'N, λ101° 40.47'E
13 Sep 2013	0655-1328	- Topography and bongo net survey at distance 2,000m from Platong station - Topography and bongo net survey at distance 300m from Platong	L10° 41.38'N, λ101° 24.40'E Sea depth 72-74m

		station - CTD deployed at sea depth 74m - Bongo net survey at distance 5,000m from Platong station	
	1730-1830	- CTD deployed at sea depth 58m - Box corer sampling at sea depth 58m	L09° 44.95'N, λ100° 40.47'E
	2108-0023	- Light trap trials at 30m and surface water	
14 Sep 2013	0621-0742	- Bongo net survey at Reference 2 station	L09° 49.95'N, λ100° 34.39'E
	1924-2028	- Light trap trials at 10m	L09° 29.85'N, λ100° 04.35'E
	2231-0100	- Light trap trials at 35m	L09° 23.47'N, λ100° 23.94'E
15 Sep 2013	0654-1055	- Topography and bongo net survey at distance 2,000m from Erawan station - Topography and bongo net survey at distance 300m from Erawan station - CTD deployed at sea depth 64m	L09° 05.29'N, λ101° 18.80'E Sea depth 61-65m
	1402-1612	- Bongo net survey at Reference 3 station - CTD deployed at sea depth 77m	L08° 52.27'N, λ101° 58.35'E
16 Sep 2013	0653-1207	- Topography and bongo net survey at distance 2,000m from Pailin station - Topography and bongo net survey at distance 300m from Pailin station - CTD deployed at sea depth 59m - Bongo net survey at distance 5,000m from Pailin station	L08° 38.38'N, λ101° 20.99'E Sea depth 57-60m
	1556-1718	- Bongo net survey at Reference 4 station - CTD deployed at sea depth 27m	L07° 58.32'N, λ100° 44.02'E
17 Sep 2013	0710-1630	- Topography and bongo net survey at distance 2,000m from Songkla A station - Topography and bongo net survey at distance 300m from Songkla A station - CTD deployed at sea depth 25m - Bongo net survey at distance 5,000m from Songkla A station	L07° 31.54'N, λ100° 42.77'E Sea depth 23-25m
	1632-1721	- Flow meter calibration	
18 Sep 2013	1251-1800	- Topography and bongo net survey at distance 500m from Bongkot station - Topography and bongo net survey at distance 2,000m from Bongkot station	L08° 02.04'N, λ102° 19.56'E Sea depth 23-25m

		- CTD deployed at sea depth 78m - Bongo net survey at distance 5,000m from Bongkot station	
19-20 Sep 2013		Proceeded to SEAFDEC/TD	

5. General summary

The total of 12 survey station was conducted from 10 to 20 September 2013 at the petroleum drilling platforms in the Gulf of Thailand (Figure 1). The survey was employed by Burapha University with the objectives to collect the fish larvae and juvenile specimens including physical characteristic of sea water and sediment sampling at petroleum drilling platforms (Figure 2). Partial details of the survey of each station had shown in Table 1.

The 55 diameter bongo frames were attached with the net mesh size 330 um and 500 um, respectively (Figure 3). Couple flow-meter was attached at the aperture of the net to measure the water volume passing through the net. Bongo net by oblique tow for 30 minutes with ship speed approximately 1-2 knots was conducted at distance 300m, 2,000m, and 5,000m from each petroleum platform. Towing depth was observed using Net SONDE (depth meter). Larvae specimens were preserved in ethyl alcohol 95% immediately.

The mini CTD was deployed from surface water to bottom after conducted the bongo tow at distance 300m from platform (Figure 4). Four sediment sampling station were conducted using box corer and Van Veen (Figure 5) (Table 1). The tidal currents and circulation data were recorded every hour along the cruise track using the Acoustic Doppler Current Profile (ADCP) that mounted with M.V.SEAFFDEC (Figure 6). Trials on light trap to collected larval and juvenile fishes also conducted onboard and at the Songkla A platform (Figure 7) (Table 1).

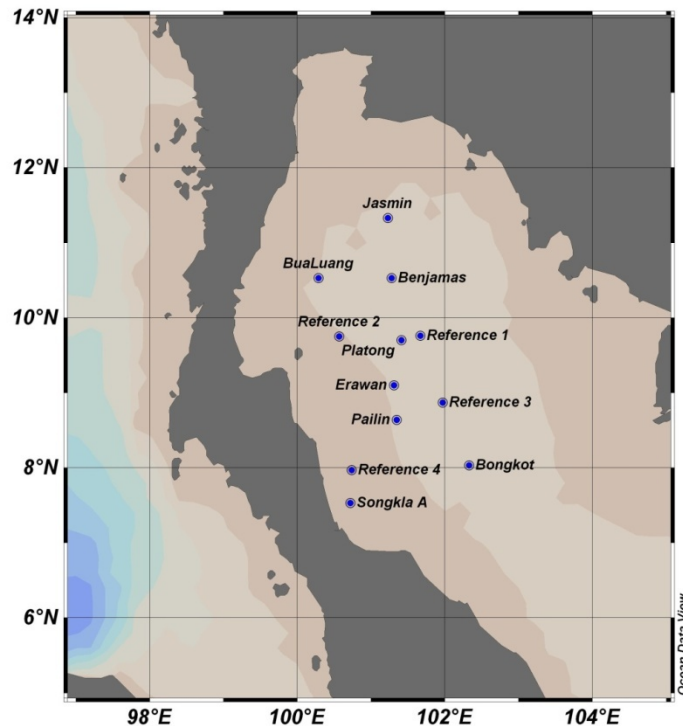


Figure 1 Survey station map.

Table 1. Partial details of the survey

Date	Station	Activities					
		Bongo net towing distance			Mini CTD	Sediment sampling	Light trap
		300m	2,000m	5,000m			
10 Sep 2013	Jasmin	✓	✓		✓		
11 Sep 2013	Bua Luang	✓	✓	✓	✓		
12 Sep 2013	Benjamas	✓	✓		✓		
12 Sep 2013	Reference 1	✓			✓		
13 Sep 2013	Platong	✓	✓	✓	✓		
14 Sep 2013	Reference 2	✓			✓	✓	✓
15 Sep 2013	Erawan	✓	✓		✓	✓	
15 Sep 2013	Reference 3	✓			✓	✓	
16 Sep 2013	Pailin	✓	✓	✓	✓		
16 Sep 2013	Reference 4	✓			✓		
17 Sep 2013	Songkla A	✓	✓	✓	✓	✓	✓
18 Sep 2013	Bongkot	✓	✓	✓	✓		



Figure 2. Oil and gas drilling platforms.



Figure 3. Bongo net towing at starboard and larval specimens collection.

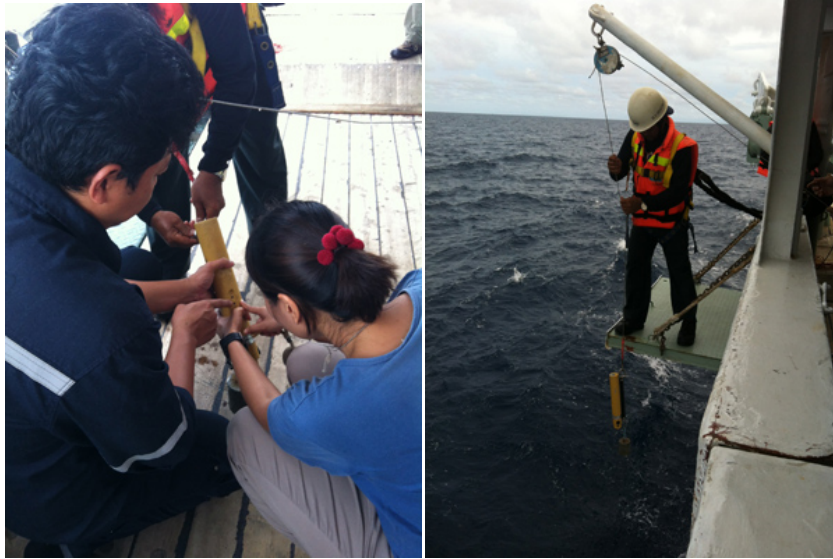


Figure 4. Mini CTD deployment.

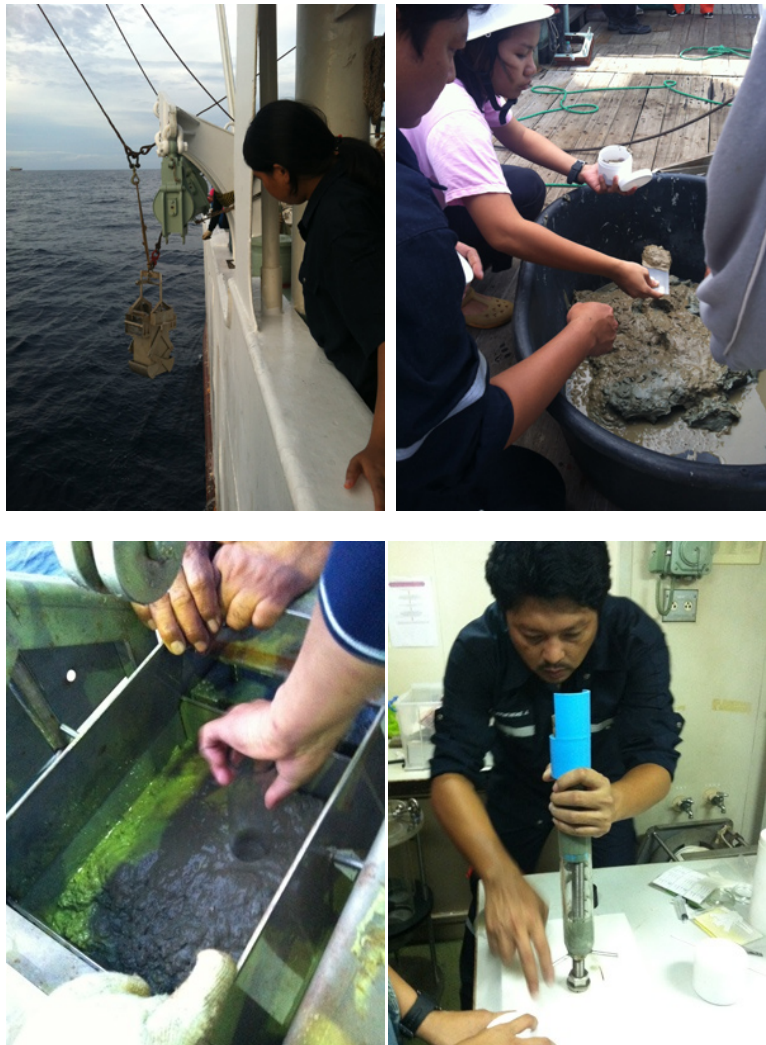


Figure 5. Surface and vertical profiling sediment collection.



Figure 6. Acoustic Doppler Current Profiler (ADCP) recording.



Figure 7. Light trap trials.