

提出日平成 年 月 日

## クルーズサマリー

- 1 . 航海番号 / レグ名 / 使用船舶 : YK07-15, R/V Yokosuka, Shinkai 6500
- 2 . 研究課題名 :
  - 1) 超深海性近底層性クシクラゲ累 : 新目で生きた化石の可能性について
  - 2) 超深海性近底層性ゼラチン質生物の群集構造・多様性・機能について
  - 3) メタンシープに生息する謎のシンカイスナギンチャクの調査 : 極限環境 (深海) に生息するスナギンチャクの理解に向けて
  - 4) 北西太平洋の新種火山「プチスポット」の成因解明 : 海洋プレート熱物質構造調査  
提案者 / 所属機関 / 課題受付番号 : Dhugal Lindsay, JAMSTEC
- 3 . 首席研究者 / 所属機関 : Dhugal Lindsay, JAMSTEC
- 4 . 乗船研究者 : Dhugal J. Lindsay, James D. Reimer, 森 美由貴 (XBR, JAMSTEC), 阿部 なつ江, 土屋 正史 (地球内部変動研究センター), 三宅 裕志 (北里大学), Jan Pawlowski, Frederic Sinniger (University of Geneva), 高橋 亜夕 (東京大学), 北田 貢 (新江ノ島水族館), 藤井 琢磨, 伊礼 由佳, 城間 枝里子 (琉球大学) & 岡田 聡 (NME)
- 5 . 調査海域 : 三陸沖
- 6 . 実施期間 : 13-28 October 2007

調査航海概要 (目的、背景、実施項目や手法、わかったことなど焦点を絞り明確に記入してください。研究上の confidential 事項については記載する必要はありません。)

YK07-15 Report

11 October 2007

13:00 Boarding R/V Yokosuka (all members accounted for)  
13:30 Dive planning meeting with Shinkai 6500 team and scientists  
14:00 R/V Yokosuka leaves dock  
14:15 Explanation of fire drill and “life aboard the R/V Yokosuka”  
15:00 fire drill on deck  
16:40 “Konpira-san” Ceremony to wish for good weather and a successful cruise.  
17:00 Dinner (for those on the regular meal schedule)  
18:00 Operations explanation for first-time divers inside the Shinkai 6500  
19:30 Scientific party meeting  
0:00 ship time forwarded to 01:00 for the remainder of the cruise

12 October 2007

Dive 6K#1036, Scientist ABE Natsue (geology)

05:30 XBT probe to get water temperature profile  
06:00 Seafloor mapping of dive site  
08:00 Pre-Dive meeting/briefing  
09:00 Start of Dive (aiming for 39°23.7433N, 144°26.3152E, 6500m)  
13:31 Reached Seafloor (39°23.873N, 144°26.2762E, 6457m)  
14:49 Left Bottom (39°24.1603N, 144°26.1275E, 6406m)  
17:10 Surfaced

Remarks:

8 rock samples, 2 core samples.

Slurp gun tested and functioned well at 6406m depth though no samples were obtained.

HDV camera malfunctioned and no HDV record exists of dive. Hard drive problems?

13 October 2007

[Dive 6K#1037, Scientist LINDSAY, Dhugal (midwater & benthopelagic ecology)]

06:00 XBT probe to get water temperature profile (warm core ring)  
06:30 Seafloor mapping of dive site (aiming for 38°15.0N, 147°00.0E, 5500m)  
09:00 Large swell but wind dropping. Ready and waiting.  
10:00 Large swell but wind dropping. Ready and waiting.  
10:45 Dive cancelled due to large swell.  
11:00 Surface plankton sampling  
11:30 Seabeam mapping start  
SeaBeamは、下記の点を結ぶ測線で走っています。  
明日の朝、潜航までに#1037へ戻れるように、途中で引き返すこともある。

- 1 ) 38。 11.5N, 146。 54E
- 2 ) 37。 48N, 148。 55E
- 3 ) 37。 42N, 148。 55E
- 4 ) 38。 05.5N, 146。 53E
- 5 ) 38。 15N, 147。 00E (Dive #1037)

14 October 2007

Dive 6K#1037, Scientist LINDSAY, Dhugal (midwater & benthopelagic ecology)

09:00 Pre-Dive meeting/briefing  
10:00 Start of Dive (aiming for 38°15.0N, 147°00.0E, 5500m)  
10:00-12:30 Midwater Observations  
12:31 Seafloor  
14:58 Left Bottom  
17:05 Surfaced

Remarks:

HDV camera functioned ok.

2 core samples, one with xenophyophore and one next to it.

1 jellyfish (new species of Sigiweddellia)

3 holothurians (2 species)

1 pycnogonid with hydroids attached

1 mysid

1 benthopelagic polychaete

1 plastic bag with associated fauna

15 October 2007

[Dive 6K#1038, Scientist ABE Natsue (geology)]

05:30 XBT probe to get water temperature profile

06:00 Seafloor mapping of dive site

08:00 Pre-Dive meeting/briefing

09:00 Start of Dive (aiming for 37°29.6', 149°44.5'E, 6000m)

10:10 Dive Cancelled. Hydraulics faulty. Unable to dive.

10:30 Recovery of Shinkai on deck

10:45 Surface plankton sampling

18:00 Surface plankton Sampling

19:30 Science Meeting

16 October 2007

[Dive 6K#1038, Scientist ABE Natsue (geology)]

08:15 Dive Cancelled. Gale-force wind warning for today and tomorrow.

08:30 Surface plankton sampling

09:00 Steaming towards westernmost site (39°05'N-39°08'N, 143°52'E-143°55'E)

17 October 2007

[Dive 6K#1038, Scientist James REIMER (benthos)]

05:30 XBT probe to get water temperature profile

06:00 Seafloor mapping of dive site

09:00 Pre-Dive meeting/briefing

09:45 Dive Cancelled. Swell too high for deployment.

09:50 Science Meeting

10:00 Surface plankton sampling

12:30 X-CTD probe deployment (39°15'N, 143°30'E)

18:00 X-CTD probe deployment (38°54'N, 144°45'E)

18 October 2007

[Dive 6K#1038, Scientist James REIMER (benthos)]

07:00 Dive Cancelled. Swell too high for deployment.

07:05 Surface plankton sampling (39°06.5'N, 143°53.4'E)

12:30 Surface plankton sampling (39°4.0'N, 143°00.0'E)

13:00 X-CTD probe deployment (39°4.0'N, 143°00.0'E)

19:00 Surface plankton sampling (39°4.0'N, 143°00.0'E)

19 October 2007

[Dive 6K#1038, Scientist James REIMER (benthos)]

08:00 Dive Cancelled. Swell too high for deployment.

08:05 Surface plankton sampling (39°06.5'N, 143°53.4'E)

16:00 Surface plankton sampling (39°30.0'N, 142°40.0'E)

18:30 Surface plankton sampling (39°30.0'N, 142°40.0'E)

20 October 2007

Sheltering from bad weather in Miyako Bay

21 October 2007

Sheltering from bad weather in Miyako Bay

13:00 Surface plankton sampling

15:00 Left Miyako Bay. Anchored outside.

15:30 Surface plankton sampling

19:00 Surface plankton sampling

23:00 Sailing for 39°06.5'N, 143°53.4'E

22 October 2007

Dive 6K#1038, Scientist REIMER, Jamie (benthic biology, zoanthid taxonomy)

08:00 Pre-Dive meeting/briefing

08:15 Dive delayed for weather observation

09:15 Start of Dive (aiming for 39°06.356'N, 143°53.5619'E, 5350m)

11:23 time reached bottom

12:36 time left bottom

14:50 time surfaced

16:15 time back on ship

19:00 science meeting

#### SAMPLES

zoanthids: 5 (Abyssoanthus - five large rocks - approx. 300 polyps)

plankton: 6 (1000m intervals plus 0~500m and 500~1000m)

MBARI cores: 2

sponge: 1

core bacteria samples: (from core 1 - 3 samples)

23 October 2007

Dive 6K#1039, Scientist LINDSAY, Dhugal (midwater & benthopelagic ecology)

08:00 Pre-Dive meeting/briefing

09:00 Start of Dive (aiming for 39°06.356'N, 143°53.5619'E, 5350m)

09:00-11:39 Midwater Observations

11:39 Seafloor

14:02 Found Calyptogena colony with vestimentiferans (39°06.3404'N, 143°53.4897'E)

14:28 Retrieved trap

14:37 Left Bottom

14:37-16:33 Midwater Observations

16:33 Surfaced

17:00 Back on board

#### SAMPLES

3 core samples (1 with asellote isopod, 1 with scyphopolyp, 1 normal seafloor)

3 jellyfish (1 new species of Sigiweddella, 2 inds. of new genus?)

2 benthic ctenophores sampled. Both lost-destroyed during ascent and retrieval. (Some tissue from one frozen)

several amphipods in trap

24 October 2007

Dive 6K#1040, Scientist ABE Natsue (geology)

08:00 Pre-Dive meeting/briefing

09:00 Start of Dive (aiming for 39°23.7433N, 144°26.3152E, 6500m)

11:42 Reached bottom at 637m

14:06 Left bottom

16:29 Reached surface

17:10 Back on board

19:00 Surface plankton sampling

19:30 Science meeting

## SAMPLES

many rocks

2 MBARI cores

25 October 2007

Dive 6K#1041, Scientist SINNIGER, Frederic (benthic biology, zoanthid taxonomy)

08:00 Pre-Dive meeting/briefing

09:00 Start of Dive (aiming for 39°06.356'N, 143°53.5619'E, 5350m)

11:10 Reached bottom at 5352m

14:29 Left bottom at 5359m

16:30 Reached surface

17:10 Back on board

19:00 Surface plankton sampling

## SAMPLES

2 cores

some zoanthids

1 benthic ctenophore

26 October 2007

[Dive6K#1042, Scientist MIYAKE, Hiroshi (midwater biology)]

08:00 Pre-Dive meeting/briefing

08:30 Dive cancelled due to bad weather

09:05 Steaming towards Yokosuka

27 October 2007

late morning Reach JAMSTEC pier

afternoon Offload ship