

Natsushima Cruise Report

NT09-09

"Hyper Dolphin" 's Dive for
the video material for shooting, such as Science Channel

Hatoma Knoll, Southern Okinawa Trough

July 2, 2009 – July 7, 2009

Japan Agency for Marine-Earth Science and technology

(JAMSTEC)

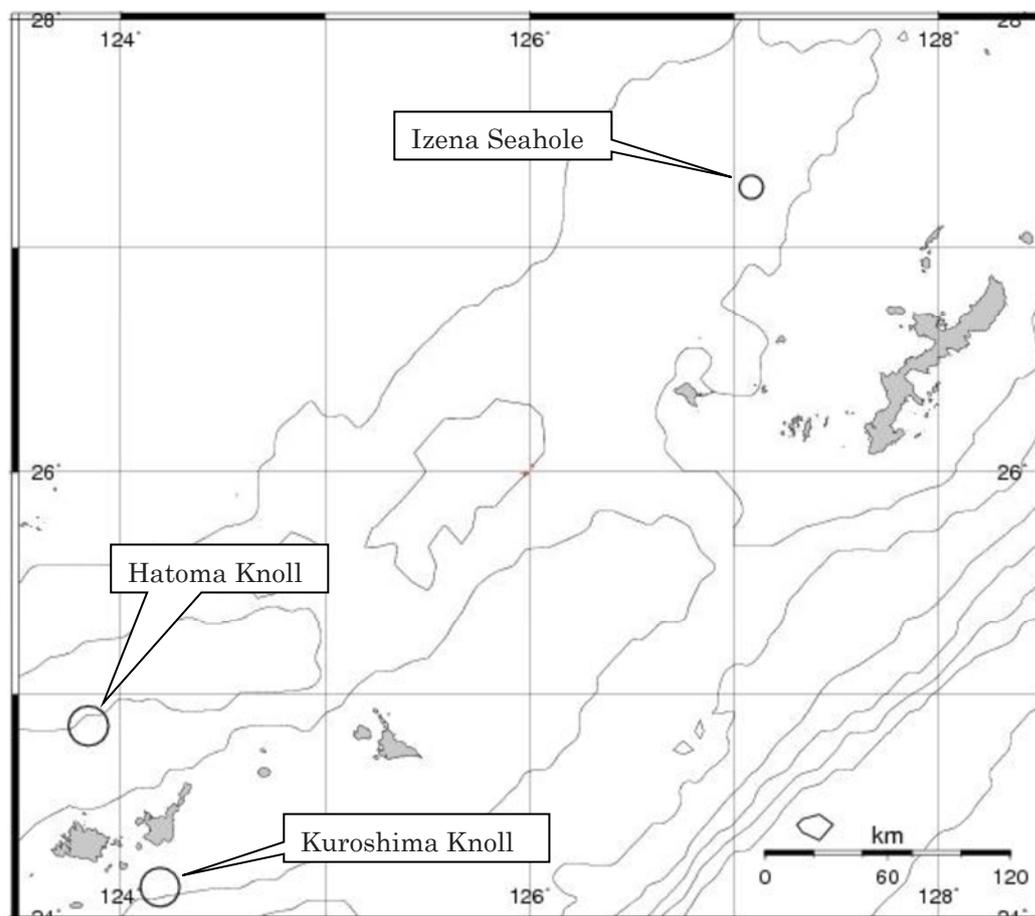
Content

1. Cruise Information	3
2. Researchers	5
3. Observation	5
3-1 Purpose	5
3-2 Duration	5
3-3 Implementation detail	6
3-4 Consideration	7
3-5 Acknowledgement	7
4. Notice on Using	8

1. Cruise Information

Cruise number : NT09-09
Ship name : Natsushima
Title of the cruise : "Hyper Dolphin" 's Dive for the video material for shooting, such as Science Channel
Chief scientist[Affiliation] : Shinichi Suzuki [JAMSTEC]
Representative of the Science Party [Affiliation] : Shozo Tashiro [JAMSTEC]
Cruise period : July 2, 2009 – July 7, 2009
Port call : Okinawa, Naha-Ishigaki
Dive area : Hatoma Knoll, Southern Okinawa Trough

Overall view



Diving point :

- 1) Hatoma Knoll (1,400-1,900m)
Inside the circle of 5 miles in radius that centers on
24° 51.5'N 123° 50.5'E
- 2) Kuroshima Knoll (600-800m)

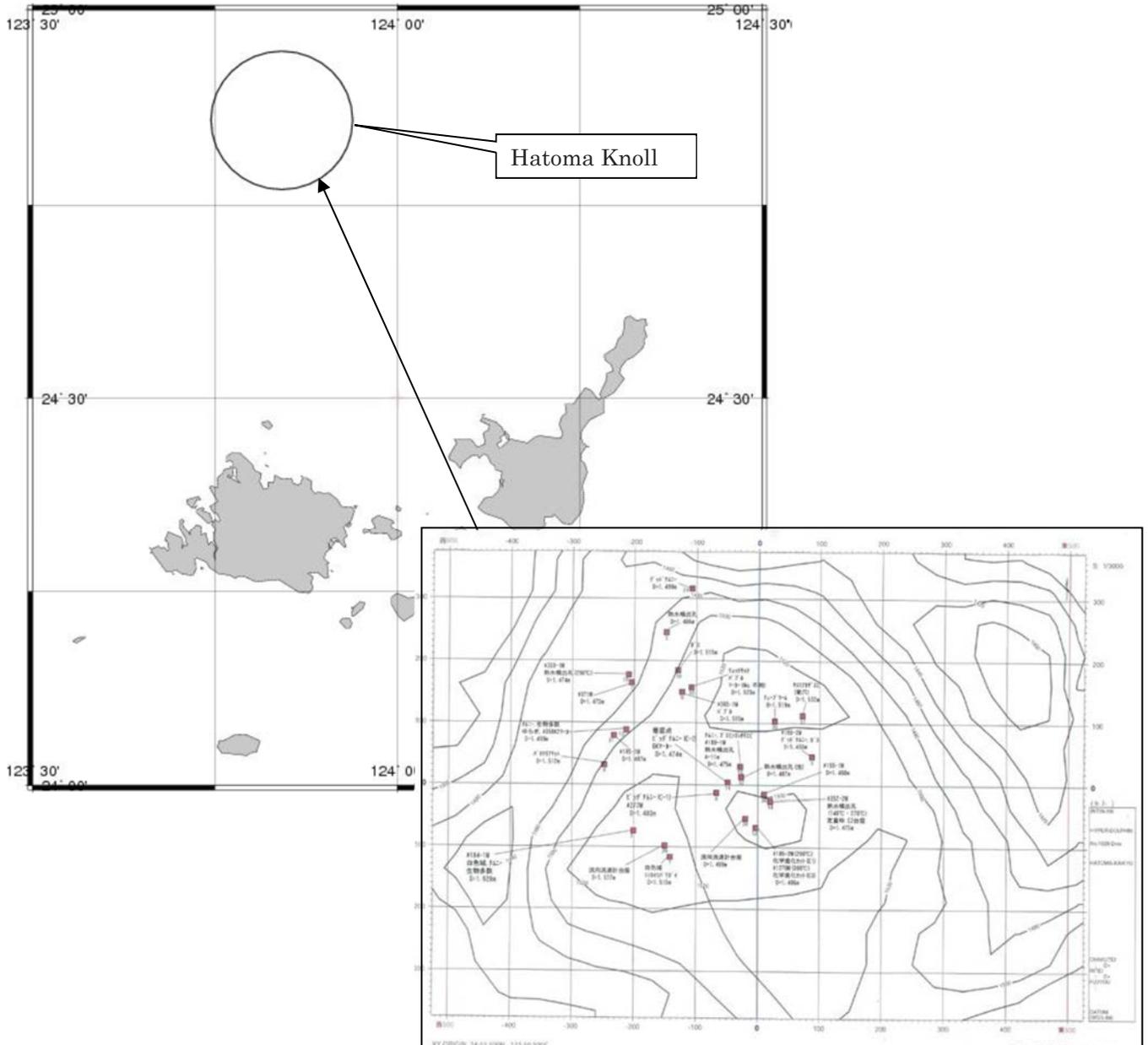
Inside the circle of 5 miles in radius that centers on
24° 08.0'N 124° 11.5'E

Preliminary sea area :

1) Izena Seahole (900-1,200m)

Inside the circle of 3 miles in radius that centers on
27° 16.0'N 127° 05.0'E

Dive map :



Hatoma Knoll (1,400-1,900m)

Inside the circle of 5 miles in radius that centers on
24° 51.5'N 123° 50.5'E

2. Researchers

Chief scientist [Affiliation] : Shinichi Suzuki [JAMSTEC]

Representative of the Science Party [Affiliation]:

Shozo Tashiro [JAMSTEC]

Science party (List) [Affiliation, assignment etc.] :

Saori Nakagawa [JAMSTEC]	Kazunobu Gomi [JAMSTEC]	
Noriaki Fujimoto [JAMSTEC]	Chihiro Baba [JAMSTEC]	
Tetsuya Komuku [JAMSTEC]	Kenzaburo Sawano [JAMSTEC]	
Takahiro Arai [JAMSTEC]	Yuki Takaesu [JAMSTEC]	
Keiichi Saito [Churaumi Aquarium]	Naosshi Murata [Nago Museum]	
Yasunori Adachi [NHK]	Masashi Wada [NHK]	Tomoki Matsubara [NHK]

3. Observation

3-1 Purpose :

This cruise was conducted to make a shot of PR for video material as a main object. In implementing, it was carried out a video shooting of high quality by the technical cooperation with NHK which has the world's leading video shooting technology. Technical cooperation with NHK to MARITEC corresponds, was boarding the staff of GODAC for the purpose of expansion of marine science and technology understanding promotion business of exhibition such as the improvement of image processing technology. Also, 'Churaumi Aquarium' and 'Nago Museum' invited participants on board to promote understanding of marine science and contribute to the local community. In addition, as part of a video shot, and shooting the sampling scenery, it was exhibited for sample.

3-2 Duration:

Date and time: Thursday, July 2, 2009 to Tuesday, July 7, 2009, 07:00 to 20:00

Location: Okinawa Prefecture, Naha Port - Hatoma Kikou - Ishigaki Port

with making boiled eggs using hot water.

(3) Third dive

- Return to normal settings and dive to photograph creatures in the middle layer.
- Payload is JAMSTEC signboard, boiled egg
- He photographed living creatures at mid-levels between 400m and 900m (shrimp larvae that coexist with Kappa jellyfish, red beetle jellyfish, a type of house, etc.). We also photographed the JAMSTEC signboard and conducted a boiled egg experiment on the ocean floor.

(4) Deliverables are as follows.

- “Hyper Dolphin” video (chimney video with perspective and shadow, hydrothermal ecosystem organisms, mesophore organisms, JAMSTEC signboard, boiled egg experiment, etc.), logs from 3 dives
- “Hyper Dolphin” still images (Sea-max, high-definition and CCD capture)

(5) Biological samples

- Collected ‘Gokakuezoibaragani(Vermilion crab)’, ‘Goemonkoshoriebi’, ‘Oharaebi(Hydrothermal vent shrimp)’, and ‘Shinkaihibarigai(Deep-sea mussels)’ from two locations, as well as rock samples (a few rocks from the hydrothermal eruption area).

3-4 Consideration

When photographing the deep-sea floor for public relations purposes, it is necessary to shoot three-dimensional images that highlight shadows and shadows to create a sense of realism. This time, we took advantage of NHK's filming know-how by changing the light mounting position of ‘Hyper Dolphin’ and the position of the HD camera from the usual settings, making it possible to photograph scenes never seen before. ing. Although the number of dives was three, we believe that we were able to obtain very meaningful video materials.

It can also be considered that it may be useful as a resource for future underwater video shooting methods, improvements in the functionality of cameras such as manned submersibles and unmanned exploration vehicles, and the placement of underwater lights.

3-5 Acknowledgement

I would like to express our sincere gratitude to Mr. Adachi, Mr. Wada, and Mr. Matsubara of NHK for their cooperation, who provided appropriate instructions and advice regarding the installation of the video equipment for ‘Hyper Dolphin’

and underwater lighting.

I would also like to take this opportunity to express my heartfelt gratitude to Mr. Sato of 'Churaumi Aquarium' and Mr. Murata of 'Nago Museum' for their cooperation not only in analyzing and organizing the video materials but also in setting up the 'Hyper Dolphin'.

I would like to express our sincere gratitude to Mr. Sawano, Mr. Arai, and Mr. Takaesu of GODAC for their cooperation in organizing the materials and videos of the dive.

I would like to express our sincere gratitude to Mr. Komuku of MARITEC for his great cooperation in setting up 'Hyper Dolphin' and considering it.

Finally, I would like to express my sincere gratitude to Captain Ishida and all the crew members of 'Natsushima', who were asked to maneuver the ship in a difficult manner due to the large number of orders.

I would also like to express my heartfelt gratitude to the entire 'Hyper Dolphin' operation team, including Operations Manager Mitsufuji, who was asked to make delicate and difficult settings every day and worked late to adjust.

4. Notice on Using

This cruise report is a preliminary documentation as of the end of cruise.

This report is not necessarily corrected even if there is any inaccurate description (i.e. taxonomic classifications). This report is subject to be revised without notice. Some data on this report may be raw or unprocessed. If you are going to use or refer the data on this report, it is recommended to ask the Chief Scientist for latest status.

Users of information on this report are requested to submit Publication Report to JAMSTEC.

<http://www.godac.jamstec.go.jp/darwin/explain/1/e#report>

E-mail: submit-rv-cruise@jamstec.go.jp