

## Short Description of GDP-1, GDP-3 and -14 Cruises

Tsunemasa SHIKI

*Faculty of Science, Kyoto University*

A few cruises were carried out for some composite or comprehensive researches including dredge and piston coring in and out of the Philippine Sea during the time of the Geodynamics project. Little mention is made of these in the articles in this volume. However, It seems better to give here short descriptions of these cruises.

### GDP-1

This was the first cruise of the Japanese Geodynamics Project and was carried out from July 30 to August 14 in 1972, using Tokai-Daigaku-Maru II commanded by Captain M. SATO. The main objectives of the cruise were seismic profiling, O.B.S., geomagnetic force measurement, heat flow measurement, and dredging in the western margin of the Pacific basin off Kwanto District, Central Japan. Scientists aboard were S. NAGUMO (Chief Scientist), T. ASADA, K. KOBAYASHI and many others. Several geologists, T. SHIKI, I. KONDA, S. NISHIDA, M. MUSASHINO, S. YASUMATSU, and S. TOKUHASHI participated in the cruise.

For the results of the bottom sampling from the Izu-Ogasawara Trench, and the Takuyo Seamount II, readers should refer to SHIKI *et al.* (1974). NISHIDA describes briefly in this volume the Nanno-plankton fossils which occurred from the sediment samples of this cruise.

### GDP-3

Cruise GDP-3 is identical with KH-72-2 of Hakuho-Maru (Captain, Ichiro TADAMA) of the Ocean Research Institute of University of Tokyo, which was made from Oct. 24 to Dec. 15, 1972 under the direction of H. KAGAMI of the Ocean Research Institute. Scientists aboard consisted of 11 scientists from the Ocean Research Institute including C. BOWIN, a visiting researcher from Woods Hole Oceanographic Institute, USA, 21 scientists from various universities, and 2 scientists from the National Science Museum.

The objectives of this cruise were, rock dredging, sediment coring, seismic profiling, geomagnetic measurement, gravity measurement, ocean bottom earthquake observation, etc., in the fore-arc region of the Southwest Japan, the sea around the Ryukyu Islands, Northwest Philippine Sea, and the region off Izu Islands. It is to be noted that from the geological results obtained from the Northwestern Philippine Sea, the island arc-like character of the Daito Ridge Group had already been revealed in this cruise by dredging of andesitic pebbles involved as nuclei in manganese nodules (Table 2). For further details, readers may refer to "Preliminary Report of the Hakuho Maru Cruise KH-72-2 (1975)" of the Ocean Research Institute, University of Tokyo.

## GDP-14

Cruise GDP-14 is identical with KH-74-4 of Hakuho-Maru, made under direction of N. NASU, from November 5, to December 7, 1974. Other principal members on board were K. KAGAMI and K. KOBAYASHI.

The Main objectives of this cruise were also synthetic, and the area of investigation included the Emperor Seamount, Magellan Seamount, and Shikoku Basin. The most remarkable geological result obtained concerning the Northern Philippine Sea was a collection of pillow basalt from the "Hakuho Seamount" (tentatively so named), one of the seamounts of the Kinan Seamount Chain. Detailed feature of texture and chemical composition of the rocks were studied by TOKUYAMA and FUJIOKA (1976).

## References

- KAGAMI, H. (ed.), 1976: Preliminary report of the Hakuho-Maru Cruise KH-72-2. Ocean Research Institute, Univ. Tokyo, Tokyo 144p.
- SHIKI, T., I. KONDA, M. MUSASHINO, S. NISHIDA, and S. YASUMATSU, 1974: Some geological results of the bottom sampling from the sea off Kwanton district, western margin of the Northern Pacific (Report of the cruise GDP-1, 1972). *Mem. Fac. Sci., Kyoto Univ., Ser. Geol. Mine.*, **40**, 95–102.
- TOKUYAMA, M. and K. FUJIOKA 1976: The petrological study on basalt from Kinan Seamount and DSDP Site 54. *Marine Sciences/Monthly*, **8**, 184–191. (in Japanese with English abstract).