

Migration of Kuroshio Front and Paleoenvironment during the late Quaternary

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1988 Fiscal Year Final Research Report Summary

Migration of Kuroshio Front and Paleoenvironment during the late Quaternary

Research Project

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62540599

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Stratigraphy/Paleontology

Research Institution

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Kuroshio Front / Paleoceanography / Deep-sea Core / Microfossils / Oxygen-carbon / Isotopic Ratio / Late Quaternary

Research Abstract

The objective of this study is to reconstruct the paleoenvironmental change of the northwestern Pacific Ocean since the late Quaternary in terms of the migration of the Kuroshio front which is discriminated by the microfossil assemblages and oxygen-carbon isotopes of foraminiferal test. Four marine cores were collected from off the Sugaru Bay, Bousou Peninsula, and Kashima-NAda. The detailed analyses of the cores were performed on microfossil assemblages of nannoplankton, diatoms, radiolarians, and foraminifera, as well as oxygen-carbon isotopes of foraminiferal tests. Consequently, it was

revealed that the Kuroshio front had fluctuated as follows:

1. The Kuroshio front reached near the region off the Suruga Bay at 14,000 years B.P.
2. The front retreated to the southwestern region off the Sugaru Bay between 12,000 and 10,000 years B.P.
3. The front passed through the region off the Bousou Peninsula at 10,000 years B.P.
4. The front reached near the region off the Kashima-nada between 7,000 and 5,000 years B.P.
5. The same oceanographic condition as the present one was established after 5,000 years B.P.

In the present study, an important and fundamental study was also carried out concerning the distribution of diatoms and planktonic foraminifera in the sediment trap samples which was recovered from water depth of 8,800 m at the Japan Trench off the Bousou Peninsula.

Research Products (11 results)

All Other

All Publications (11 results)

[Publications] 大場忠道: 第四紀研究. 26. 243-250 (1988) ▼

[Publications] 大場忠道: 地球化学. 22. 13-19 (1988) ▼

[Publications] 大場忠道・魚本和典: 月刊海洋科学. (1989) ▼

[Publications] 佐藤時幸・高山俊昭: 地質学論集. 30. 205-217 (1988) ▼

[Publications] 大村明雄: 地質学論集. 29. 107-127 (1988) ▼

[Publications] 谷村好洋: 月刊海洋科学. (1989) ▼

[Publications] Tadamichi Oba: "Comment for Sea Level Change" The Quaternary Research. 26. 243-250 (1988) ▼

[Publications] Tadamichi Oba: "Oceanic environmental change from the last glacial to postglacial periods." Geochemistry. 22. 13-19 (1988) ▼

[Publications] Tokiyuki Sato and Toshiaki Takayama: "Calcareous nannofossil zones of the Quaternary" Geol. Soc. Japan. 30. 205-217 (1988) ▼

[Publications] Akio Omura: "Uranium-series method of dating" Mem. Geol. Soc. Japan. 29. 107-127 (1988) ▼

[Publications] Tadamichi Oba and Kazunori Uomoto: "Oxygen and carbon isotopic ratios of planktonic foraminifera in sediment trap JT-01 and JT-02 from the Japan Trench." Monthly, Marine Science. (1989) ▼

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