

ANTARCTIC RECORD No. 74

CONTENTS

Scientific Papers

- Characteristics of field-aligned currents deduced from preliminary data analysis of MAGSAT observations.....*Masaki Ejiri, Ryoichi Fujii, Haruo Sakurai, Takesi Iijima and Naoshi Fukushima*..... 1
- Arrival direction finding for narrow-band auroral hiss at Syowa Station (in Japanese).....*Masanori Nishino, Yoshihito Tanaka and Takeo Hirasawa*..... 10
- Geomagnetic secular variation in the Antarctic region during 1960–1975*Takesi Nagata*..... 27
- Nomenclature and classification of the basement metamorphic and plutonic rocks around the Lützow-Holm Bay region, East Antarctica.....*Takashi Kanō*..... 45
- Seasonal variations in water structure under fast ice near Syowa Station, Antarctica, in 1976.....*Masaaki Wakatsuchi*..... 85
- Nutrient matters in saline lakes of McMurdo Oasis in the 1976–77 summer season.....*Genki Matsumoto, Yoshiki Tanaka and Tetsuya Torii*.....109
- Centric diatom communities found in the Antarctic sea ice...*Kentaro Watanabe*.....119
- Vertical distribution of chlorophyll *a* in the Indian sector of the Antarctic Ocean in 1972–1973.....*Kazunori Kuroda and Mitsuo Fukuchi*.....127
- Chlorophyll *a* distribution in the Indian sector of the Antarctic Ocean in 1978–1979.....*Mitsuo Fukuchi and Seiichi Tamura*.....143
- Mechanical properties of gypsum as the structural material with the advance of inflammability of building at Syowa Station (in Japanese).....*Toshio Sato, Zenkichi Hirayama and Mituru Okada*.....163

Reports

- Report on oceanographic observation by the 20th Japanese Antarctic Research Expedition 1978–1979.....*Motoyuki Suzuki and Takao Kurano*.....249
- Report on tidal observation of the 19th Japanese Antarctic Research Expedition (from January to December 1978) (in Japanese)*Motoyuki Suzuki and Takao Kurano*.....290
- Report of the wintering party of the 19th Japanese Antarctic Research Expedition in 1978–1979 (in Japanese).....*Takeo Hirasawa*.....300
- Activities in the Dry Valleys area during the 1980–1981 field season (in Japanese).....*Shyu Nakaya, Tetsuya Torii, Tsurahide Cho, Eitarou Wada and Genki Matsumoto*.....324