

## ANTARCTIC RECORD Vol. 38 CONTENTS

### No. 1 (March 1994)

#### *Scientific Papers*

- Fine scale distribution of phytoplankton abundance along the cruise track of the icebreaker SHIRASE, from Tokyo to Fremantle, Australia in the 1991 season..... *Tsuneo Odate and Mitsuo Fukuchi*.... 1
- Comparative study on feeding strategy and activity patterns of two Antarctic fish: *Trematomus newnesi* BOULENGER, 1902 and *Gobionotothen gibberifrons* (LÖNNBERG, 1905) (Pisces, Nototheniidae) under different light conditions  
... *Edith Fanta, Ana Aparecida Meyer, Sonia Regina Grötzner and Márcia Fabiana Luvizotto*.... 13

#### *Scientific Notes*

- Methods for *in situ* chemical analyses of snow and ice samples (in Japanese)  
..... *Kokichi Kamiyama, Takeshi Kimoto, Shuichi Ezumi, Eiichiro Nakayama and Okitsugu Watanabe*.... 30
- Gravity survey on the Mizuho Plateau, East Antarctica along the traverse routes to Dome-F from Syowa Station (in Japanese)  
..... *Kokichi Kamiyama, Masaki Kanao, Hideo Maeno and Teruo Furukawa*.... 41

#### *Review*

- Cytotaxonomical aspects of Antarctic mosses, with special reference to the proportion of polyploidy..... *Hiroshi Okada and Hiroshi Kanda*.... 54

#### *Reports*

- Temperature profiles of the Greenland Sea in the summer of 1992: Report of the oceanographic observation on the R/V LANCE cruise  
..... *Shuki Ushio, Meiji Honda and Hajime Ito*.... 63
- Temperature profiles of the Greenland Sea in the summer of 1993: Oceanographic observation on the R/V LANCE cruise  
..... *Hajime Ito, Svein Østerhus and Shuki Ushio*.... 68
- Operation and evaluation of an experimental hovercraft for Antarctic use (in Japanese)..... *Rinichi Murao, Sadao Takeuchi, Minoru Inaba and Masayuki Hosoya*.... 72

### No. 2 (July 1994)

#### *Scientific Papers*

- Development of image data processing system for the conjugate auroral TV data (in Japanese)

.....	<i>Hirokazu Minatoya, Takayuki Ono, Natsuo Sato, Kazuo Makita and Takeo Yoshino</i> ....	113
Relation of electric field and particle precipitation in the polar cap region inferred from Akebono observations (in Japanese)		
.....	<i>Takahiro Obara, Toshifumi Mukai, Hajime Hayakawa, Koichiro Tsuruda, Ayako Matsuoka and Atsuhiko Nishida</i> ....	148
A phytosociological study of the vegetation in the Ny-Ålesund area, Spitsbergen		
.....	<i>Keisuke Kobayashi</i> ....	157

*Scientific Note*

Field measurement of the photosynthesis of mosses with a portable CO <sub>2</sub> porometer at Langhovde, East Antarctica		
.....	<i>Yoshio Ino</i> ....	178

*Symposium/Meeting Report*

Report on workshop "Earth Science Program in Western Enderby Land" (in Japanese)		
.....	<i>Yoichi Motoyoshi</i> ....	185

**No. 3 (November 1994)**

*Scientific Notes*

Ice core hot-fluid drilling		
.....	<i>B.B. Kudryashov and N.G. Menshikov</i> ....	193
Performance test of STS-seismograph in low temperature (in Japanese)		
.....	<i>Masaki Kanao and Katsutada Kaminuma</i> ....	199

*Reviews*

Substances deposited on an inland plateau, Antarctica (in Japanese)		
.....	<i>Kokichi Kamiyama and Okitsugu Watanabe</i> ....	232
A review of the coastal marine ecosystem research at Syowa Station, Antarctica		
.....	<i>Takao Hoshiai</i> ....	243

*Reports*

Activities of the summer party of the 34th Japanese Antarctic Research Expedition in 1992-1993 (in Japanese)		
.....	<i>Renji Naruse</i> ....	252
Meteorological observations at Syowa Station and Asuka Station in 1991 by the 32nd Japanese Antarctic Research Expedition (in Japanese)		
.....	<i>Toyoo Abe, Miyoki Iwamoto, Yoshitaka Sukegawa, Hiroshi Inayoshi and Masamichi Aono</i> ....	268

*Symposium/Meeting Report*

Report on Workshop “Use of a Multi-Purpose Satellite Data Receiving System at Syowa Station” and “Study on the Polar Atmosphere and Hydrosphere Using Satellite Data with Surface Validation Observations” (in Japanese)

..... *Naohiko Hirasawa, Takashi Yamanouchi and Masaki Ejiri*....322