ANTARCTIC

Volume 23 Number 1 2011

CONTENTS

Guest Editorial	1	How do Antarctic notothenioid fishes cope with internal ice? A novel function for antifreeze glycoproteins	
BIOLOGICAL SCIENCES		CLIVE W. EVANS, VLADIMIR GUBALA, ROBERT NOONEY,	
Seasonal and growth stage changes in lipid and fatty acid composition in the multigeneration copepod <i>Drepanopus</i>		DAVID E. WILLIAMS, MARGARET A. BRIMBLE & ARTHUR L. DEVRIES	57
pectinatus from Iles Kerguelen P. Mayzaud, S. Lacombre & M. Boutoute	3	Changes in lichen diversity and community structure with fur seal population increase on Signy Island,	
Biology of the Antarctic dragonfish <i>Vomeridens infuscipinnis</i> (Notothenioidei: Bathydraconidae) KRISTEN L. KUHN, THOMAS J. NEAR, H. WILLIAM DETRICH III & JOSEPH T. EASTMAN	18	South Orkney Islands Sergio E. Favero-Longo, Nicoletta Cannone, M. Roger Worland, Peter Convey, Rosanna Piervittori & Mauro Guglielmin	65
Spatial variability models of CO ₂ emissions from soils colonized by grass (<i>Deschampsia antarctica</i>) and moss (<i>Sanionia uncinata</i>) in Admiralty Bay, King George Island Eduardo de Sá Mendonça, Newton La Scala, Jr, Alan Rodrigo Panosso, Felipe N.B. Simas & Carlos E.G.R. Schaefer	27	Potential ammonia emissions from penguin guano, ornithogenic soils and seal colony soils in coastal Antarctica: effects of freezing-thawing cycles and selected environmental variables RENBIN ZHU, JIANJUN SUN, YASHU LIU, ZHIJUN GONG & LIGUANG SUN	78
Silicon isotopes in Antarctic sponges: an interlaboratory comparison KATHARINE R. HENDRY, MELANIE J. LENG,		Short Note: Seasonal distribution of early life stages in squid of the Lazarev Sea, Antarctica JÜRGEN GUERRERO-KOMMRITZ	93
Laura F. Robinson, Hilary J. Sloane, Jerzy Blusztjan, Rosalind E.M. Rickaby, R. Bastian Georg &		EARTH SCIENCES	
ALEX N. HALLIDAY	34	A new high-resolution bathymetry model for the	
Stable isotope (δ^{13} C and δ^{15} N) composition of particulate organic matter, nutrients and dissolved organic matter during spring ice retreat at Terra Nova Bay		Terre Adélie and George V continental margin, East Antarctica ROBIN J. BEAMAN, PHILIP E. O'BRIEN,	
STEFANO COZZI & CAROLINA CANTONI	43	ALEXANDRA L. POST & LAURA DE SANTIS	95

Antarctic Science is abstracted in Current Contents, SciSearch, Research Alert, Geo Abstracts, Current Awareness in Biological Sciences, Mineralogical Abstracts, Meteorological & Geo-astrophysical Abstracts, Current Antarctic Literature, GeoArchive, GeoRef, Biosis, Oceanographic Literature, Environmental Periodicals Bibliography and Polar & Glaciological Abstracts

Cambridge Journals Online

For further information about this journal please go to the journal website at: journals.cambridge.org/ans





Copying. This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA. Organizations in the USA who are also registered with CCC may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to CCC of the per copy fee of \$16.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0954-1020/2011 \$16.00. ISI Tear Sheet Service, 3501 Market Street, Philadelphia, PA 19104, USA, is authorized to supply single copies of separate articles for private use only.

Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions.

For all other use, permission should be sought from Cambridge University Press.

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

Printed in the UK by Cambridge University Press.