SOUTH WEST CHARTERING

continuing to specialize in Polar Chartering

Over 40 years providing ice-strengthened ships for expeditions to the Arctic and

Antarctic — for charter — for purchase

Our service includes all other types of survey vessels



Contact: Polar Department, South West Chartering (UK) Limited, Suite Five, Lloyds Wharf, Mill Street, London SE5 2BA Tel 01 231 8565 Telex 886819 Fax 01 231 3712 Member of the Baltic Exchange

ANNOUNCEMENTS

POLAR RECORD BACK NUMBERS 1931-87 (1–147) are available from Bluntisham Books, Oak House, East Street, Bluntisham PE17 3LS, UK, Tel (1487) 840 449. Prices: Pre-1982 (1-129) £2.50 each; 1982–85 (130–141) £5.00 each; 1986–87 (142–47) £10.00 each. Postage extra.

ADVERTISING IN Polar Record

Quarter page (118 x 81 mm) : £50.00 (US\$90.00) Half page (240 x 81 mm or 118 x 165) : £70.00 (US\$130.00)

Whole page (240 mm x 165 mm): £100.00 (US\$180.00)

Flier (A4 or A5): £100.00 (US\$180.00) Announcements: £2.00 per column line.

VAT of 15% is payable on all UK orders. Please send payment or an official order form with your order. There are negotiable discounts for running the same advertisment in three successive issues. We make up advertisments (from £20.00) and print fliers (from £50.00) by arrangement.

Contact the Editor, *Polar Record*, Scott PolarResearch Institute, Lensfield Road, Cambridge CB2 1ER, UK.

Polar and Glaciological Abstracts

A new abstracting journal produced by the Scott Polar Research Institute, replacing *Recent Polar* and Glaciological Literature, the widest-circulation bibliography devoted to polar subjects

- * provides wide, annotated coverage of books, papers, reports and reviews on all aspects of polar life and science, both Arctic and Antarctic
- * subject, author and geographic indexes will cumulate annually
- * for further details contact:
 Journals Publicity Department
 Cambridge University Press
 FREEPOST
 Edinburgh Building
 Shaftesbury Road
 Cambridge CB2 1ER

SPRI POLAR BOOKSHOP

The following polar books can be bought by mail order direct from the Scott Polar Research Institute

Polar ecology, Bernard Stonehouse, 1988. Glasgow, Blackie (Tertiary Level Biology Series). Soft cover £12.95 Hard cover £27.00

Chronological list of Antarctic expeditions and related historical events. Robert K. Headland. 1990. Cambridge, Cambridge University Press. £65.00

The frozen earth: fundamentals of geocryology. P. J. Williams and M. W. Smith. 1989. Cambridge, Cambridge University Press. £37.50

South Pole odyssey. Edited by H. G. R. King. 1982. Selections from the Antarctic diaries of Edward Wilson. London, Blandford Press. £3.95

Dlary of the Terra Nova expedition to the Antarctic 1910-12. Edward Wilson, edited by H. G. R. King. Scott's last expedition, from original manuscripts in the Scott Polar Research Institute and British Museum. London, Blandford Press. £12.95

Antarctic obsession. The British National Antarctic Expedition 1901–04, by Sir Clements Markham, edited by Clive Holland1986. Bluntisham, Bluntisham Books and Erskine Press. £14.95

Southern lights. The story of the British Graham Land Expedition 1934–37. John Rymill. 1986. Colwall, Knell Press. £11.00

The Island of South Georgia. Robert K. Headland. 1984. Cambridge, Cambridge University Press. £19.50 The circumpolar north. T. E. Armstrong, G. Rogers and G. Rowley. 1978. London, Methuen. Soft cover £3.00 Hard cover. £6.00

The wicked mate. Antarctic diary of Victor Campbell. Edited by H. G. R. King. 1988. Bluntisham, Bluntisham Books and Erskine Press. £19.95

Birds of the Antarctic. By Edward Wilson, edited by Brian Roberts. 1987. London, Blandford Press. £12.5

Ross in the Antarctic. M. J. Ross. 1982. Whitby, Caedmon. £12.50

Breaking the Ice. Rowan Butler. 1988. London, Albatross Books. £12.95

A concise account of Signy Island. David Rootes. 1989. Cambridge, British Antarctic Survey. £3.50

Polar deserts. Wally Herbert (signed). 1971. London, Collins £4.95

Eskimos. Wally Herbert (signed). 1976. London, Collins £4.95

FOR YOUNG READERS

Living at the poles. Bernard Stonehouse. 1986. London, Macdonald Educational. £5.99

ORDER from Irene Lawton, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER. MAILING CHARGES: UK addresses: add 15% to cover postage and packing; overseas addresses: add 20%. Books will be sent sea mail. Insurance: add £5.00. Non-sterling cheques: add £3.00. PLEASE MAKE OUT YOUR CHEQUE TO SCOTT POLAR RESEARCH INSTI-TUTE (BOOKS)

SCOTT POLAR RESEARCH INSTITUTE UNIVERSITY OF CAMBRIDGE Opportunities in Graduate Studies

M. Phil in Polar Studies

A one-year post-graduate course leading to the degree if Master of Philosophy, providing a broad background of polar knowledge and opportunity to study one topic in depth. Some 60 seminars cover the natural environment, peoples, history, resources, development and administration of the Arctic and Antarctic regions.

Ph.D and M.Sc studies

Courses leading to Ph.D and M.Sc are available. Many programmes relate to current research areas within the Institute. Options include glaciology, polar oceanography, marine biology, geophysics, remote sensing, history, anthropology, native rights and northern affairs.

Visiting scholars

The Institute provides facilities for advanced scholars wishing to pursue their own courses of study and research for periods of between a few weeks and one year.

Facilities

The Institute's research facilities include the world's finest polar library, outstanding archival collections and specialized laboratories, including two cold rooms (-40°C).

Cambridge University

The University now accommodates some 12,000 undergraduate and graduate students and has a long tradition of excellence in teaching and research.

FOR FURTHER PARTICULARS APPLY TO: THE DIRECTOR, SCOTT POLAR RESEARCH INSTITUTE, UNIVERSITY OF CAMBRIDGE **CAMBRIDGE CB2 1ER UK**

As the only continent entirely dedicated to scientific use, Antarctica occupies a special place in international relations. In recent years scientific activities in and around the continent have markedly increased, resulting in a rapidly growing but increasingly diffuse literature. Antarctic Science, launched in 1989, was conceived both as a response to this trend and as an attempt to provide a focus for many of the interdisciplinary interests that characterize Antarctic studies.

Editor in Chief:

David W H Walton Life Sciences & Oceanography

Editors:

Michael J Rycroft Atmospheric Sciences Michael R A Thomson Earth Sciences & Glaciology

Editorial Office:

British Antarctic Survey, Natural Environment Research Council, High Cross, Madingley Road, Cambridge CB3 0ET, United Kingdom Telephone: Cambridge (0223) 61188 Telex: 817725 BASCAM G: Fax: (0223) 62616

Editorial Advisory Board includes:

A Clarke British Antarctic Survey, UK K D Cole La Troba University, Australia J A Crame British Antarctic Survey, UK R Gendrin CRPE/CNEI, France H Gernandt Meteorological Institute, East Germany L Kappen University of Kiel, West Germany Y Kristofferson University of Bergen, Norway S S Jacobs Columbia University, USA M G Laird Geological Survey, New Zealand

D A Peel British Antarctic Survey, UK J W Sheraton Bureau of Mineral Resources, Australia

W R Siegfried University of Cape Town, South Africa

V Smetacek Alfred Wegener Institute, West Germany

L Somme University of Oslo, Norway V A Squire University of Otago, New Zealand

R A J Trouw Federal University of Rio de Ianeiro, Brazil

W F Vincent DSIR, New Zealand Y Yoshida National Institute of Polar Research, Japan

Submission of articles

All articles should be sent to the Editorial Assistant at the Editorial Office, British Antarctic Survey. All submissions must be in English. Authors whose first language is not English are advised to seek assistance with their articles before submission. Articles submitted should not be under consideration for publication elsewhere. There is no fixed length for contributions but all should be as concise as possible. The acceptance of all articles will be subject to comments from two independent reviewers.

Subscription Information

Antarctic Science is published quarterly. Institutional subscription rates for 1990 are £55.00 (UK), £66.00 (overseas) and US\$115.00 (USA & Canada). Personal subscription rates for 1990 are £31.50 (UK), £39.00 (overseas) and US\$68.00 (USA & Canada). All rates include postage plus accelerated delivery to subscribers in all areas of the world outside Europe. All orders and requests for specimen copies should be sent to Blackwell Scientific Publications Ltd., PO Box 88, Oxford, UK.



BLACKWELL SCIENTIFIC PUBLICATIONS LTD

P. O. Box 88, Oxford, UK Tel: Oxford (44) 0865 240201

From Cambridge Journals

Announcing Polar and Glaciological Abstracts

Editor: William Mills, Scott Polar Research Institute, University of Cambridge

This **NEW** journal is the first specialist publication to offer comprehensive coverage of the world's polar regions. Produced by the library of the Scott Polar Research Institute, it provides comprehensive and convenient access to the rapidly growing research and scholarship of all relevant disciplines.

Polar and Glaciological Abstracts covers a wide range of subject areas including:

- Geology and soil sciences
 Hydrography and oceanography
- Atmospheric sciences
 Biology
 Botany
 Medicine and health
- Social sciences Economics Communication and transportation
- Engineering and construction
 Arts
 Literature and language
- Archaeology and much more!

It scans over 900 series, plus relevant books, reports and theses. Each issue contains author, subject and geographic indexes. These indexes are cumulated annually.

1990 subscription, Volume 1, 4 parts: £40 for institutions; £30 for individuals; £12 for single parts; airmail £11 per year extra ISSN 0957-5073

To **subscribe**, or for **further information**, please contact:
Journals Publicity, Cambridge University Press,
FREEPOST*, The Edinburgh Building,
Shaftesbury Road,
Cambridge CB2 1BR, England
(* No postage needed in the UK)

postage. POSTMASTER: send address changes in the USA and Canada to *Polar Record*, Cambridge University Press, 110 Midland Avenue, Port Chester, New York, NY 10573.

Claims for missing issues can be considered only if made immediately after receipt of the subsequent issue.

Back issues

For vols 1-23 inclusive apply to Bluntisham Books, Oak House, East Street, Bluntisham, Huntingdon, PE17 3LS, UK. For vols 24 onward apply to Cambridge University Press, UK or USA.

Advertising

Prices appear in the advertisements section; for details apply to the Editor or to the publishers.

Advice to contributors

Polar Record publishes original articles (2000 to 8000 words) and notes (usually less than 2000 words) of current and historic polar interest. Manuscripts, maps and photographs are accepted on the understanding that they are original, do not infringe copyright, and are not currently being offered elsewhere. Receipt is acknowledged; manuscripts are submitted to referees and any rejected will normally be returned to the author within six to eight weeks. Where the subject matter is appropriate, the Editor is usually prepared to advise authors on ways of making their material acceptable.

Presentation

Typescripts should be double-spaced with 3 cm margins, on one side only of A4 or similar paper. Send two copies and keep one for reference. Give name, affiliation and address of each author on the title page, noting which author the Editor corresponds with. Follow the style of articles and notes in the most recent issue of *Polar Record*.

Articles should start with an abstract of 150-250 words and a table of major headings; secondary and tertiary headings are not listed. Indicate in margins where tables and illustrations fit. Footnotes are discouraged; places where they are considered essential are marked in text with a superscript number, and the footnotes are listed at the end before the References.

Notes are short articles, generally of less than 2000 words. They do not require an abstract or table of headings, but either the first or the final paragraph should summarize the content.

References (essential ones only, please) are cited in text; full references appear in the listing under References at the end; for forms of citations and references see the most recent issue of *Polar Record*. Authors alone are responsible for the accuracy of their references. References to privately printed or other unpublished reports and data are not accepted unless copies of the material are freely available from a named library or similar repository. Tables should be kept as simple as possible and typed on separate sheets. They will normally be fitted across the single- or double-column page, only exceptionally lengthwise.

Illustrations. Drawings, maps and diagrams must be of professional standard, with lettering and numbers pencilled in clearly. Authors may be charged for re-drawing if an illustration is inadequate. They should if possible allow for about one-third reduction in width to fit a column (7.8 cm) or page (16.4 cm). Photographs (black and white only) that add substantially to the material are welcome. Glossy prints with high contrast, about one-third oversize, generally reproduce well.

Contributions on disc

The Editor welcomes contributions on floppy discs. The most suitable format is Apple Macintosh 3.5" disc. Output from a wide variety of word processing packages can be accepted, but in case of doubt, a MacWrite-compatible document should be produced. Diagrams also can be transferred on Macintosh discs. Discs from other microcomputers may be acceptable if the text is in the form of an ASCII file, with no word processing codes. TAB characters are acceptable. Currently, *Polar Record* can accept discs from Acorn BBC and Torch microcomputers, Amstrad PCW series microcomputers and, less readily, IBM PC compatible machines (5.25" discs only). If in doubt, please consult the Editor.

ISSN 0032-2474

POLAR RECORD

VOLUME 26 NUMBER 158 JULY 1990

CONTENTS

ARTICLES

The Scoresby ship mirage of 1822. W. H. Lehn and W. G. Rees p 181 Summer weather at Royal bay, South Georgia, 1882–83 and 1981–82. H. Craig and J. E. Gordon p 187

Australia and the Convention for the Regulation of Antarctic Mineral Resource Activities (CRAMRA). S. K. N. Blay and B. M. Tsamenyi p 195

The Coordinated Eastern Arctic Experiment: SPRI sea-ice studies. R. G. Williams, N. R. Davis and S. C. Moore p 203

Henry Grinnell and the American Franklin searches. L. Cruwys p 211 Profile: Herbert G. Ponting. D. Lynch p 217

Frederick Cook's polar journey: a reconstruction. R. J. Osczevski p 225

NOTES

Forty-first Annual Meeting of the International Whaling Commission, June 1989. G. P. Donovan p 233

SS *Triune*: The loss of a Dundee whaler. M. A. Nuttall p 235
Health and the late mediaeval population of Greenland. I. Whitaker p 236
Soviet cruise liner in collision with an ice floe near Svalbard, June 1989. W. Barr p 238

Animal rights and Greenlandic sealing: a threat to culture survival. M. Nuttall p 240 Feeding of birds near a glacier in Svalbard. F. C. Stott p 243

CORRESPONDENCE

British polar expeditions 1919–39: a comment. A. Glen p 244 Two further British expeditions. G. Hattersley-Smith p 244

REVIEWS

Poles apart. J. Flegg. R. K. Headland p 245. Antarctica, the last frontier. R. M. Laws. R. K. Headland p 245. Sadie Broweer Neakok: an Inupiaq woman. M. B. Blackman. H. Huntington p 245. Children of the ice age: climate and human origins. J. and M. Gribbin. H. G. R. King p 246. The Inupiat and Arctic Alaska: an ethnography of development. N. A. Chance. M. Nuttall p 246. The age of the Arctic. G. Osherenko and O. R. Young. Bernard Stonehouse p 247. Antarctic sector of the Pacific. G. P. Glasby (editor). Bernard Stonehouse p 247. Brief reviews p 248.

IN BRIEF

Royal Geographical Society awards: Crabeater seal feeding mechanism: Future of the Yukon: New Swedish icebreaker: Labrador exports caribou meat: p 249

OBITUARY

J. E. Giles Kershaw p 250

SCAR BULLETIN No 98

Managers of National Antarctic Programmes (COMNAP) together with the Standing Committee on Antarctic Logistics and Operations (SCALOP): summary report of meeting p 251

SCAR publications currently available: July 1990 p 255

CAMBRIDGE UNIVERSITY PRESS

Published by the Press Syndicate of the University of Cambridge
The Pitt Building, Trumpington Street, Cambridge CB2 1RP UK
40 West 20th Street, New York NY 10011 USA
10 Stamford Road, Oakleigh, Melbourne 3166 Australia

Printed in Great Britain at the University Press, Cambridge.