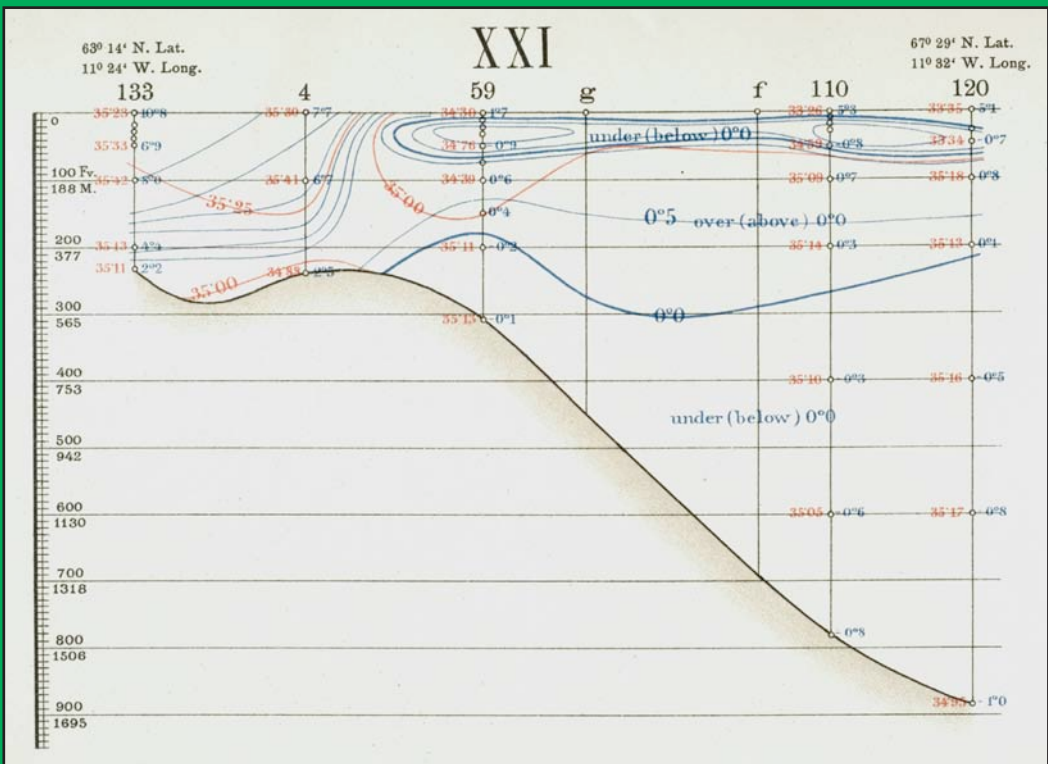


EARTH SCIENCES HISTORY

**JOURNAL OF THE HISTORY
OF THE EARTH SCIENCES SOCIETY**



Volume 27, Number 2

2008

EARTH SCIENCES HISTORY

Journal of the History of Earth Sciences Society

EDITOR: David R. Oldroyd, University of New South Wales. Postal address: 28 Cassandra Avenue, St Ives, NSW 2075, Australia. Tel: 61 2 9449 5559. Fax: 61 2 9402 7635.
esh@historyearthscience.org

JOURNAL/SOCIETY WEBSITE: www.historyearthscience.org

BOOK REVIEWS EDITOR: Vic Baker, Department of Hydrology and Water Resources
The University of Arizona, Tucson, AZ 85721, USA. Tel: 1 520-621-7875
baker@hwr.arizona.edu

FOUNDING EDITOR: Gerald M. Friedman, 1982–1993

PAST EDITORS: Mott T. Greene, 1994–1998; Gregory A. Good, 1999–2004; Patrick Wyse Jackson, 2005–2007

ASSOCIATE EDITORS

American geology; stratigraphy
Kennard Bork
Denison University
Granville, OH 43023
USA
bork@denison.edu

Mineralogy and petrology; petroleum geology
William Brice
University of Pittsburgh at Johnstown
Johnstown, PA 15904
USA
wbrice@pitt.edu

*Mineralogy and geology; history, sociology
and philosophy of geoscience; European
geology*
Bernhard Fritscher
Munich Center for the History of Science and
Technology
Museuminsel 1
D-80306 Munich
Germany
b.fritscher@lrz.uni-muenchen.de

Geophysics
Gregory Good
West Virginia University
Morgantown, WV 26506-6303
USA
ggood@wvu.edu

Tectonics
Homer Le Grand
Monash University
Caulfield East
Victoria 3145
Australia
homer.legrand@arts.monash.edu.au

Paleontology; Latin America
Maria Margaret Lopes
Universidade Estadual de Campinas
Campinas, São Paulo
Brazil
mmlopes@ige.unicamp.br

Oceanography
Eric Mills
Dalhousie University
Halifax, Nova Scotia
B3H 4J1 Canada
e.mills@dal.ca

18th and 19th centuries; American geology
Julie R. Newell
Southern Polytechnic State University
1100 S. Marietta Parkway,
Marietta, GA 30060
USA
jnewell@spsu.edu

Geomorphology and Quaternary geology
Antony Orme
University of California, Los Angeles
CA 90095-1524
USA
orme@geog.ucla.edu

History of Fieldwork; paleontology
Irina Podgorny
Carlos Pellegrini 1219, 8vo. B
C1009ABY, Buenos Aires
Argentina
podgorny@mail.retina.ar

Geology in Britain
James Secord
Cambridge University
Cambridge CB2 3RH
UK
jas1010@hermes.cam.ac.uk

*Vertebrate paleontology; geological education,
conservation, Canada*
David Spalding
1105 Ogden Rd
Pender Island BC
V0N 2M1 Canada
david@davidspalding.com

18th and 19th centuries; European geology
Ezio Vaccari
Università dell'Insubria
21100 Varese
Italy
ezio.vaccari@uninsubria.it

*Invertebrate paleontology; stratigraphy;
museums; Ireland*
Patrick Wyse Jackson
Department of Geology
Trinity College, Dublin 2
Ireland
wysjcknp@tcd.ie

Earth Sciences History is published twice a year. Manuscripts are refereed by at least two reviewers.

To submit a manuscript, or to subscribe to the journal, visit the HESS website at www.historyearthscience.org. Intending authors are invited to contact an Associate Editor or the Editor in advance. Manuscripts *must* conform to the journal's Guidelines (see website) and papers that do not do so will not be refereed.

Changes of address: please notify the Society's Treasurer, Dr Emma Rainforth, by email: treasurer@historyearthscience.org.

To join HESS: use the form at the back of the journal or visit the website.

HESS logo: Athanasius Kircher's (1602–1680) *Systema ideale prophyliaciorum*—imagined view of subterranean fires and surface volcanoes, from *Mundus subterraneus*, 1678, Vol. 1, between pp. 186 and 187.

Front-cover image: fit of the continents around the Atlantic at the 500m contour, transverse Mercator projection. From Bullard, Everett and Smith (1965) (reproduced by courtesy of Everett and Smith).

EARTH SCIENCES HISTORY

Volume 27, Number 2, 2008

CONTENTS

Editor's Introduction David Oldroyd	iii
Hydrographic work of the <i>Ingolf</i> expedition (1895 and 1896) to Icelandic and West Greenland waters Jens Smed	151
The first Danish deep-sea expedition on the <i>Ingolf</i> : 1895 and 1896 Torben Wolff	164
Origin of the American quantitative igneous rock classification: Part 1 Davis A. Young	188
Lyell's journey in Catalonia Enric Aragonès	220
The Heringen Collection of the US Geological Survey Library, Reston, Virginia R. Lee Hadden	242
J. D. Falconer and his geomorphological interpretations in Northern Nigeria C. Rowland Twidale	266
Hugo Rühle von Lilienstern and his palaeobotanical collection: an East–West German story Barbara A. R. Mohr, Evelyn Kustatscher, Cornelia Hiller and Gottfried Böhme	278
Book reviews, edited by Vic Baker	297
Interesting publications, compiled by Gerald Friedman	312
Notes on contributors	321
<i>Earth Sciences History</i>: Guidelines for authors	323
HESS subscription details and back issues	325
Erratum	326

EDITOR'S INTRODUCTION

DAVID R. OLDROYD

*The University of New South Wales
28 Cassandra Avenue, St Ives
NSW 2075, Australia
esh@historyearthscience.org*

The present issue has regard to the fact that *Earth Sciences History* has, as part of its terms of reference and as evidenced by the presence of Eric Mills on the Editorial Board, the publication from time to time of papers on the history of oceanography. So here we publish two complementary papers by Danish authors on the history of the *Ingolf* expedition in the waters of the North Atlantic at the end of the nineteenth century—Denmark's response to the *Challenger* expedition! **Jan Smed**'s paper deals particularly with the analytical aspects of the studies of the physical properties of the ocean waters, while **Torben Wolff** focuses on the expedition's biological results and the publications that were generated by the *Ingolf*'s work. Photographs provide interesting views of the work conditions aboard the research vessel. A discovery of special importance was the existence of two 'biological provinces' north and south of the North Atlantic Ridge, running between Greenland and the Faroes, producing a kind of submarine 'Wallace Line'.

Quite different in character is **Davis Young**'s paper on the background to the emergence of the well-known 'CIPW' system of classification in igneous petrology. We see the intense social negotiations that preceded this well-known and important, but cumbersome and ultimately ill-fated, system. We understand that a follow-up paper discussing the later development and use of the system is intended, but we are not at present aware of the possible contents of such a paper.

Then **Enric Aragonès** from Catalonia provides a detailed account of Charles Lyell's visit to his part of the world in 1830, which was obviously important for the development of his thinking, given that a picture of the volcanic province near Orlot was used as a frontispiece for Volume 3 of *Principles of Geology*.

There follows a paper by **Lee Hadden** that is somewhat unusual for *Earth Sciences History*. It describes in detail the remarkable story of how geological documents that had been acquired as 'war booty' by the German forces in World War II eventually found their way into the library of the US Geological Survey as the 'Heringen Collection'. (Whether that makes them a kind of 'second-order war booty' is a question that may occur to readers?)

Next **Rowland Twidale** describes the work in Nigeria of John Downie Falconer, a colonial Survey Director, and the original geomorphological ideas that he developed as a result of his observations in Africa.

Finally, in a nicely illustrated paper, **Barbara Mohr** from Berlin, with several coauthors, describes the work of the German amateur collector, Hugo Rüchle Von Lilienstern, who amassed a large collection of Triassic plants from Thuringia in the interwar years. His specimens eventually found their way from his private museum to the Natural History Museum in Berlin, where they are all now well conserved, forming a valuable resource for the study of palaeobotany.

The issue is topped off by book reviews and further bibliographical information from **Gerald Friedman** in his 'Interesting Publications' section.

