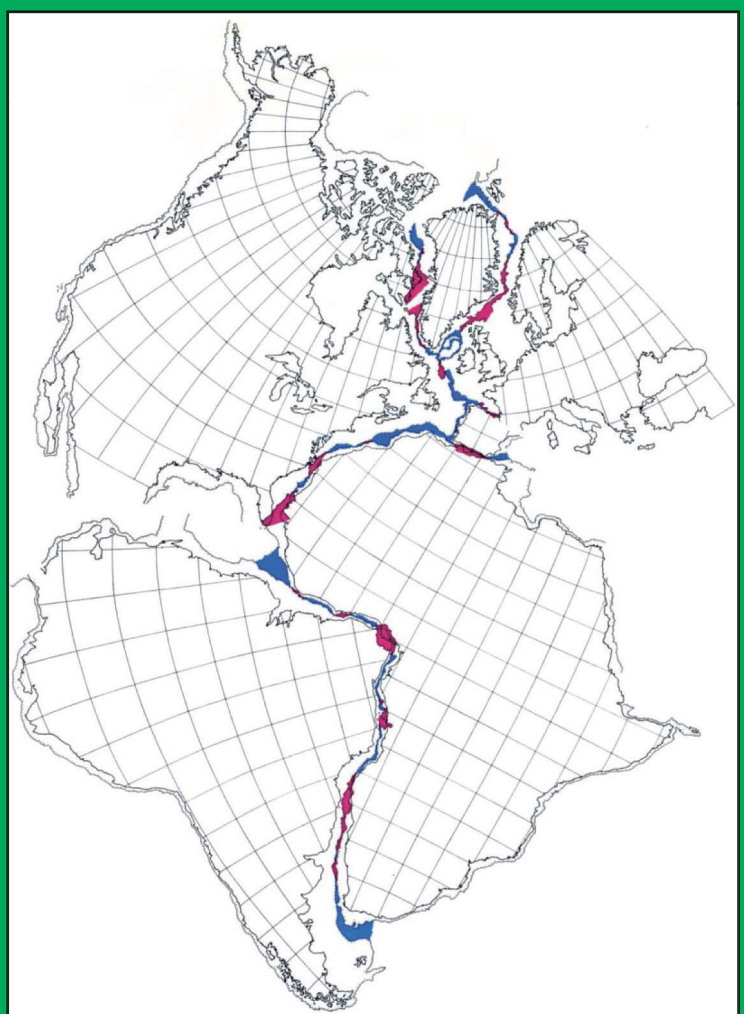
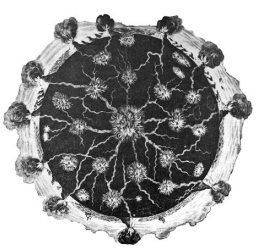
EARTH SCIENCES HISTORY

JOURNAL OF THE HISTORY OF THE EARTH SCIENCES SOCIETY





Volume 27, Number 1

2008

EARTH SCIENCES HISTORY

Journal of the History of Earth Sciences Society

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Changes of address: please notify the Society's Treasurer, Dr 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 prophylaciorum*—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).

 ISSN 0736-6234

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EDITORIAL:
A DIFFERENT HAND AT THE HELM

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It is an honour and a pleasure take over the editorship of *Earth Sciences History* from my predecessor Patrick Wyse-Jackson; and I hope that I may able to do the job as capably as he has been doing it. He bequeathed me all the papers in the present issue, and one might have supposed therefore that my initial task would be simple and straightforward. But in fact I have found the editor's workload to be considerable. Being now retired from the University of New South Wales, I have a reasonable amount of time to devote to editorial and production tasks. How Patrick was able to find time for all such things when he also had so many duties at the geology museum at Trinity College Dublin, research on bryozoans, his historical writing, and the obligations involved in bringing up a family, I just do not know. I salute him!

Patrick has also found time to give me a helping hand and advice, when needed, and that has been greatly appreciated. Moreover, he is remaining a member of the *ESH* Editorial Board, so we shall continue to benefit from his counsel. In this connection, readers should note the return of another former editor, Gregory Good, to the Board, which is an additional blessing. Institutional memory is most important in the running of any society or journal. There have been a few departures from the Board, for a variety of reasons—none (so far as I know) related to the change of editor. We (speaking editorially and collectively) welcome the new members of the Board and hope that their collaboration with *Earth Sciences History* will be both fruitful and agreeable.

I should also like here to take the opportunity to acknowledge the very considerable assistance rendered by the Society's Treasurer, Emma Rainforth, on whose back a great deal of HESS's work seems to have been loaded recently.

I have taken the decision that in future all submissions shall be made electronically. The various reasons for this change need not be stated here, but one obvious factor is the distance of Australia from most other parts of the Anglophone world, including, of course, the United States, which is the home base for HESS. Editorial business cannot be conducted satisfactorily at such a distance by the usual postal services. However, while the journal will be printed in Australia for perhaps the next three years, copies will be posted out by air delivery, so readers need not anticipate great delays in receiving their copies.

Along with the changes to the handling of editorial business, the journal is also 'going online'. It is too soon to say what the overall effects, financial and intellectual, will turn out to be, but they will be carefully monitored. I anticipate that the availability of electronic access will, overall, increase the journal's readership. Anyway, HESS has taken the plunge.

I (or 'we'!) have also undertaken a revision of the journal's Guidelines for contributors. There are no major changes to the 'house style', but I have given more precise information as to the way in which papers should be prepared before submission, as relating to (*non*-trivial) matters such as dates, tenses, names, hyphens, dashes various, and so on. (A sample article can also be downloaded from the web.) Articles that do not conform to the

journal's conventions will not be refereed until they do . . . An abbreviated version of the Guidelines will be printed at the back of each issue. But prospective authors should also consult the full document, available at the Society's website. If readers find any deficiencies in the Guidelines they are cordially invited to contact me.

I should apologise here for the small number of book reviews in the present issue. I have determined to keep to a permanent schedule of publication: March and September each year. This brought forward the date when the reviews were required, and some were not ready in time. We hope to 'catch up' in the September issue.

The present collection of papers is, I think, both varied and interesting. **Jim Everret** and **Alan Smith** were research students at Cambridge during the time of the plate-tectonics revolution, and did much of the work with Edward Bullard that led to the production of the famous 'fit' of the coast-lines on the opposite side of the Atlantic, and which did so much to persuade people of the reality of lateral movements of the continents. The authors give a summary of their actual mode of reasoning and how, in broad terms, the calculations were performed. This should be a definitive account of this matter! Readers may be interested to note the extent to which the ideas of the Australian Earth expansion theorist Warren Carey were utilized.

Peter Worsley provides a valuable account of the work of the early glacial theorist, the Dane Jens Esmark (who spent much of his life in Norway), who has long been recognized as a forerunner of the thinking of Louis Agassiz. Yet Esmark's actual works are but little known to Anglophones. Worsley's paper is a somewhat modified version of a paper previously published by him in the English local geological journal *Mercian Geologist*, where it may well be missed by historians of geology. We are grateful to the past-President of HESS, Martin Rudwick, for recommending that it be published also in *Earth Sciences History*, and to the editor of *Mercian Geologist* for permission so to do.

Norway is also the focus of attention for a paper by **John Diemer** on Murchison's work in that country. It shows *how* Murchison operated in the field, gaining information about travel arrangements from local residents, and the best available information from Norwegian geologists. It also shows how Murchison spread his Silurian 'kingdom' into Scandinavia and moved Norwegian geology in the direction of using the notion of paleontologically defined 'systems' for stratigraphic work, rather than the lithostratigraphy that was commonly used there prior to Murchison's visit. In looking for a referee for Diemer's paper, I contacted the biologist, geologist and historian of science and ideas, Geir Hestmark, in Oslo. From this contact it emerged that Hestmark himself also had a paper on the very same topic as Diemer's, under consideration with the *Norwegian Journal of Geology*. Its title was "'A primitive country of rocks and people': R. I. Murchison's Silurian campaign in Norway, 1844".

There was thus a Mertonian 'multiple discovery' in the style of Darwin and Wallace! Having read the two papers, I concluded that I would have been happy to publish them alongside one another in *Earth Sciences History* as they complemented each other nicely. However, Hestmark's paper will, in fact, be appearing soon in his Norwegian journal. Diemer did not see the paper at any time before its publication and Hestmark did not see Diemer's paper either before publication. I'm delighted to know, however, that at some future time Hestmark may offer a paper to *Earth Sciences History* on Lyell's work in Scandinavia. Readers interested in Murchison are advised to keep their eyes on the *Norwegian Journal of Geology* as well as the present issue of *ESH*.

Kenneth Aalto discusses the contributions of von Richthofen, King and Dutton in the nineteenth-century American West to ideas about the formation of different kinds of igneous rocks. The notion of a regular succession stemmed from von Richthofen when he was working in California and was based on a misconception that there was a distinctive igneous rock type, dubbed 'propylite' (actually an altered andesite). Despite this

misapprehension, von Richthofen's model caught on for a time amongst American geologists, perhaps under the spell of the influence of prominent German petrologists, and the story forms an interesting episode in the history of igneous petrology, with a theory that was for a time quite influential.

Probably all readers will have heard of Marie Stopes, the great pioneer of family planning. But many may be unaware of her remarkable early work in coal geology and palaeobotany in London and Manchester, and her willingness to work in the male domain of coal mines (not to mention her liaison with a Japanese gentleman). Her special contribution to geoscience concerned the study of the plant remains in 'coal balls', sometimes found on the tops of coal seams, which provide striking evidence of the nature of the plant origin of coals. **Howard Falcon-Lang** gives a sympathetic and fascinating account of the geological work of a remarkable pioneer of paleobotany, who later devoted her career to a quite different, and perhaps even more important, cause.

Readers will presumably all have heard of Oppel zones and the use of zonation techniques in biostratigraphy. Many will also be familiar with **William Berry**'s widely used little book, *Growth of a Prehistoric Timescale* (1968). In his present paper, Berry gives an account of how one of his former colleagues at the University of California, Robert Kleinpell, used the 'Oppelian methodology' to excellent effect in the study of foraminifera in western America, with considerable benefit to the petroleum industry. Here, then, we have a 'semi-first-hand' account of the use and the utility of 'Oppelian methodology'.

We remain in the American west, with **Richard Francaviglia**'s account of the pioneer survey work in Texas of a mining engineer, William Gordon, in the late nineteenth century. Gordon engaged in a coal-prospecting survey in a remote part of western Texas, in a region where it was by no means easy to understand the geology in terms of the geological ideas available at the time. Francaviglia has examined Gordon's original field notes as well as his reports, and has retraced his footsteps in a manner that I have myself practised on occasions in my studies of the history of geology. It is a way of proceeding long ago advocated by the British historian R. G. Collingwood (exemplified by his visit to Hadrian's Wall, to try to discover what was its *real* purpose or function); and Francaviglia shows how useful this kind of exercise may be for those studying the history of geology. However, perhaps his main finding is that prospecting work could sometimes tell mining entrepreneurs where *not* to waste their money. This has not always been the case and in the past good money has sometimes been lost in geologically uninformed mining ventures.

Finally, we have a short note by the Australian geomorphologists **Jennifer Bourne** and **Rowl Twidale** on the work of the early twentieth-century American geologist Eleanor Bliss-Knopf, who had ideas that related to the cutting back of river valleys into tablelands that can account for rivers maintaining their courses through resistant strata and the preservation of paleosurfaces—ideas that were later propounded in Colin Crickmay's 'hypothesis of unequal activity'. I trust that readers will find here an interesting mix of papers and will be encouraged to submit material l of their own for future issues.