

Editorial

It is a great pleasure and honour for me to take over the reins as chief editor of the Journal of the Geological Society (JGS). My pride stems in no small measure from the prestige of the society, the long pedigree of its flagship journal and its recent resurgence through the ranks of the world's geoscience journals. With this editorial, I would like to invite comparison between the state of our science today and that during the heady days of the first half of the nineteenth century when JGS first appeared in something approaching its modern form. As well as simply being a fun thing to do, gaining an historical perspective might help to keep perspective as we navigate an increasingly challenging publishing environment.

Although the Geological Society (of London) was founded in 1807, its quarterly journal (JGS) was only launched in February 1845 following a "*great influx of original papers*". JGS was the first scientific journal to be devoted entirely to fundamental geoscience. With obvious parallels today, it was introduced for reasons of timely and inexpensive publication of novel findings from all over the world.

The first issue parades a 'Who's Who' of Victorian geology, starting appropriately with Adam Sedgwick describing the lower Palaeozoic rocks of Wales. Following often rancorous debate during the ensuing decades, those rocks would in 1879 become the piece that completed the Phanerozoic jigsaw: the Ordovician System. In the following pages, leading lights Richard Owen, Charles Lyell, Roderick Murchison, Hugh Falconer and many others provided summaries of papers, which had been read aloud at recent society meetings. Such 'Proceedings' were first published in 1827 and were intended to circulate information more rapidly than could be achieved by the less immediate, but more detailed 'Transactions'. The quality and diversity of those early proceedings hint at the extraordinary pace of discovery of those pioneering decades.

It was in the pages of JGS that readers could also be brought up to date with the latest books. Gideon Mantell's palaeontological *tour de force* 'The Medals of Creation', James Nicoll's 'Geology of Scotland', Charles Lyell's 'Travels in North America' and the voluminous works of Charles Darwin were all reviewed in 1845. In exquisitely worded prose, the journal's first 'editor' David T. Ansted (then professor of geology at King's College, University of London and vice-secretary of the society) wrote in relation to Darwin's writings that it was "*to be regretted that the publication of these volumes was delayed in consequence of the ill health of the author [but] we have reason to rejoice that the works themselves require no apology for the state in which they appear*". It was in 'The Geology of the Voyage of the Beagle' that Darwin first hypothesised that coral atolls form around sinking volcanoes.

In 1845, scientists and the educated public alike could scarcely wait for the much-anticipated publication that year of the first of a series of books entitled *Kosmos (Entwurf einer physischen Weltbeschreibung)* by the renowned explorer Alexander von Humboldt. JGS readers were kept abreast of such literary events in its second section, which was originally devoted to translations or abstracts of papers published elsewhere, and on a wide range of topics that would now be referred more to chemistry, anthropology, ecology or zoology. In this, the 250th anniversary of Humboldt's birth, there has been a revival of interest in the man who first championed the holistic view of science, nature, environment and society. Current debate

about the definition of the Anthropocene Epoch, the start of which pinpoints when humans first left a permanent imprint on the planet, revives his memory.

Nothing says 'holism' quite like Gaia and this year will also mark the 100th birthday of James Lovelock who for many has epitomised the spirit of pure and holistic (geo)scientific enquiry. Gaia as a subject of planetary physiology has morphed more prosaically into 'Earth system science'. Curiously, Earth system science can also be said to have its roots in 1845 for it was in that year that the great ceramicist Jacques-Joseph Ebelmen published the first ever accurate account of the geological carbon cycle. His prescient account appeared within the pages of the *Annales des Mines*, a mining journal that was already 50 not out when JGS came out to bat. Too far ahead of its time, Ebelmen's work sadly escaped the attentions of the Geological Society, and everyone else it seems. The principles behind the long-term carbon cycle were rediscovered only in the 1970's by Bob Garrels among others.

Today's integrative geoscience embraces the holism of Darwin, Humboldt, Ebelmen and Lovelock. Indeed, it is the interconnectedness of the various parts of the Earth system that provide some of the greatest challenges to today's geologists who have recently had to come to grips with mineral evolution, the deep carbon cycle, planetary geology, the Anthropocene and climate change. Modern geoscience pioneers many of the technological advances that mark our age; big data, modelling, isotopes, dating, artificial intelligence, and are also helping to widen the spectrum of publishing media to disseminate new ideas, while retaining as much information as possible by developing integrative databases. The usefulness of our work to future generations is increasingly being guarded through the use of unique sample identifiers for both rocks and fossils.

JGS is at the forefront of these collaborative and holistic ventures. But there are challenges. In the current, dynamic publishing environment, society journals stand at the edge of a precipice, in danger of losing their subscription income, while at the same time less able to compete with the global players, which by virtue of scale can negotiate with entire countries. The challenge for JGS going forward is to improve its currently very high standards, including rigorous scientific and language editing, broaden its readership, while continuing to be a standard bearer for open access and pre-print services. The 2020's will be every bit as exciting as the 1840's, and for the same reasons of scientific and publishing innovation.

As chief editor I would like to thank my predecessor Andrew Carter for the assuredness and professionalism of his stint at the helm and our expert JGS subject editors who have all been instrumental in improving our standing among the world's journals. In the spirit of its beginnings and this year's celebrations of scientific holism, JGS stands ready to welcome tomorrow's more open publishing environment, while guarding the high quality and impact of our publishing output. We especially welcome contributions from members of the wider Earth science community to be JGS authors and editors particularly if they feel that their field is currently inadequately represented by the society's flagship journal. The key to our continued success relies on continually striving to improve not only the quality but also the diversity of the science we highlight in line with the prestigious history, immediacy and accessibility of the Journal of the Geological Society.