The PGA illustrated

By the end of this year, 2008, which marks the 150th anniversary of the Geologists' Association, the volumes of The Proceedings of the Geologists' Association (PGA), which was first published in 1859, will contain close to 50,000 pages of articles. Detailed commentary on its content was first given by John Kirkaldy (physical geology and geomorphology); George Sweeting (overview; 'stratigraphical geology'); James Stubblefield (palaeontology); Herbert Read ('petrological geology'); and Gilbert Wilson (structural geology) in Sweeting (1958), published to celebrate the first 100 years of the existence of the Association. Subsequently, in the 100th volume of the PGA (1989), Eric Robinson discussed its origin and early years; Christopher Green described the many Field Meeting Reports which had appeared up to that time and, in a separate article, the evolution of the technology involved in the reproduction of both photographic and line drawing illustrations; and Frank Middlemiss gave an updated account of some 360 papers published during the lifetime of the PGA, broadly categorised under the headings: geomorphology, engineering and economic geology, the Weald, stratigraphical geology, petrology, palaeontology, and structural geology. For anyone interested in the evolution of our journal, all these contributions are very well worth revisiting. Consequently, when (only nineteen volumes later) I was invited to write a 150th year article on the PGA for GA, it seemed at first sight that there was little to add to these excellent previous reviews. However, no-one had attempted an actual quantitative summary of how its contents had varied with time. Such an analysis is made feasible only as a result of the dedicated work of the compilers of the successive cumulative indices. The first of these was compiled by George Young and William Wright for 1859-1908 and published in 1910; but thereafter they were issued for each decade: George Sweeting (1909-19, 1920-29, 1930-39), Albert Reeley and Cyril Castell (1940-49), Margaret Ainsley (1950-59, 1960-69), Sheila Dellow (1970-79), and Margaret Dobson (1980-89, 1990-99). In the early years (circa 1919-49), the index cards, on which the hundreds of name and topic references were painstakingly written, were provided by the current Professor of Geology in the Department of Geology at the Imperial College of Science and Technology, London, and were subsequently housed in the departmental library (which now, sadly, no longer exists). The onerous, meticulous (and undoubtedly tedious) work involved in the compilation of the indices, and the eventual difficulty of finding willing compilers, is attested to by the fact that while Young, Wright and Sweeting managed to complete their indices within three years, several of the later ones only appeared some ten to twenty years after the decade to which they applied. Readers of the PGA owe a considerable debt to this dedicated band of people.

The parts which make up Volume 1 of the PGA appeared irregularly between 1859 and 1865. There was then a long gap, until 1870, as a result of a publishing policy which saw a number of articles appear in another journal, the Geological and Natural History Repertory, edited by Samuel Mackie, one of the founders of the Association (see Freeman, 1996), but this proved unsatisfactory, and regular publication of the PGA resumed with Vol. 2, commencing in April 1871. A number of papers which had been printed separately by the Association in the intervening years were gathered together as a Supplement to Vol. 1. Subsequently, each volume of the PGA was issued over periods of two years until 1910 (Vol. 21), but from 1911 (Vol. 22) onwards each volume corresponds to a year. The variation in the number of article text pages per volume per year is shown in Fig. 1 (in this, and succeeding figures, the data points are plotted at the closing year of each volume). The major peaks fall at the Centenary Vol. 21 and its accompanying Jubilee Volume of field guides (1910); Vol. 81 (1970); and Vol. 100 (1989); the troughs correspond to the First and Second World Wars and to the years 1954-60.

From 1980 onwards, publication has, for financial reasons, stabilised at around 380 pages per annum. Fig. 2 shows the number of unpaginated photographic plates and fold-out illustrations (generally maps), and the number of pages with colour illustrations in each volume. These expensive additions gradually rose to a peak with the Centenary volumes and while the appearance of coloured maps was not unusual

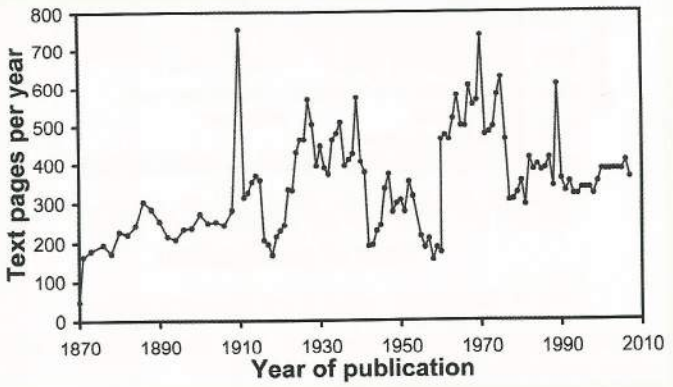

Fig. 1. Pages per volume

between 1910 and 1950, increasing costs made colour a rarity thereafter. The introduction of offset lithography meant that photographs could be incorporated within the text (Green 1989b) and publication of unpaginated plates and foldouts essentially ceased in 1975. However, the use of colour is now begun to revive as a result of modern computer-based technology.

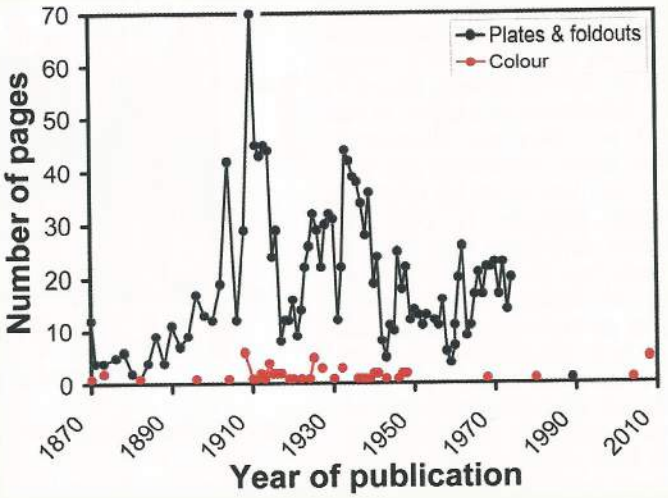

Fig. 2. Unpaginated plates, foldout maps and tables; colour pages

For the purpose of comparison of article content, raw counts of occurrences in each of a number of categories in each volume have been aggregated and averaged over 10 year periods to 1910, thereafter over 5 years to 2005 and, lastly, 2.5 years to include the first two parts for 2008. Content counts have generally been based on article titles, apart from geological time Periods, which have been based on the individual index entries. The content of a single article could, of course, give rise to an occurrence in more than one geographic, time or subject category.

As is to be expected, geographical coverage of articles is dominated by Great Britain (Fig. 3). Articles on aspects of Scottish geology, although irregular, have continued throughout, and were seemingly unaffected by the introduction of the Scottish Journal of Geology in 1965. So far as time-intervals are concerned, articles have continued to appear on all Periods (Fig. 4), broadly dominated by the Mesozoic, although interest appears to have shifted from the Paleogene and Neogene to the Quaternary since the 1980s. Within the Mesozoic, the dominant interest has been on the Cretaceous, followed by the Jurassic and Triassic, in that order. Within the

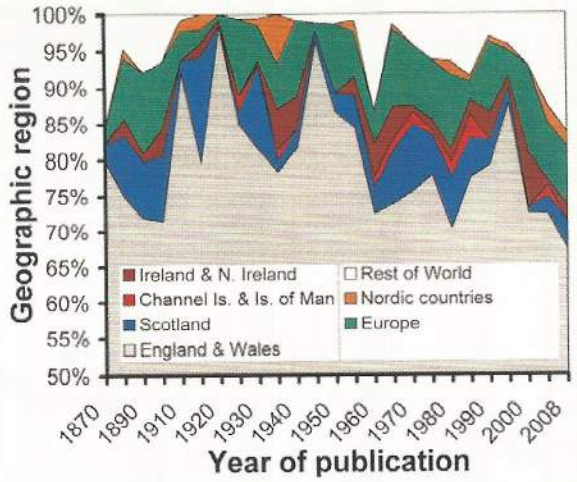

Fig. 3. Geographic region of article subject-matter

Palaeozoic, papers concerned with the Carboniferous have tended to dominate.

Turning to the actual subject-matter of the articles, it is interesting that although just prior to the Association's formation, and in the early years of its existence, much emphasis was placed by educators and others on applied geology: e.g. mineralogy, economic geology (mining, engineering and building stones) and agricultural geology (Ramsay, 1852); economic geology (building stones, coal and metallic and other minerals) and military geology (building materials, topography, water supply) (Jones, 1880); mining, structural geology, water supply, railways, building materials, agriculture, and landscape painting (Cadell, 1887); these issues did not greatly figure in the substance of articles in the PGA and they are subsumed, with other miscellaneous topics, into the catch-all category 'Other geology' in (Fig. 5). Rather, emphasis was, from its beginning, mainly on the geology of regional areas and/or their stratigraphy, palaeontology and, sometimes structure, perhaps as a result of the great interest of many members of the Association in 'geology in the field'. What later became known as sedimentology (including sedimentary petrology) became particularly prominent, with studies of heavy mineral abundance (1913-1957); the size distribution analysis of clastic sediments and contained pebbles (1929-67); and the origin of flint and chert (1859-1978); see Middlemiss (1989) for further details. Although it is true that the PGA broadly reflects 'soft rock' topics, the setting and petrology of igneous, plutonic and metamorphic bodies, including the occasional volcano, have maintained a minor, but constant, presence. The journal has in the past hosted Harold Read's classic 'Meditations on Granite' (PGA 54, 64-85; 55, 45-93), a topic recently revisited in modern terms by John Clemens and a number of discussants (PGA 116, 9-32); and metamorphic rocks have been extensively dealt with in the recent Festschrift in honour of Donald Bowes (PGA 118, 1-127). The reports of field excursions, which played such a dominant role in the early PGA, have gradually fallen away, as has the presence of obituaries (despite their regular appearance since the 1930s). Apart from palaeontology, other areas of recent growth include the history of geology, book reviews (introduced in 1990) and miscellaneous topics: papers dealing with palaeoenvironment, palaeoecology, palaeoclimate, marine geology, hydrogeology, geophysics, geochemistry, geoconservation etc., and what might be broadly grouped as physical geology, geomorphology and palaeoanthropology (these last three topics are shown in Fig. 6). Lastly, Fig. 7 shows the broad categories into which the palaeontological studies fall. Here again, more detail of the articles themselves will be found in Sweeting (1958) and Middlemiss (1989).

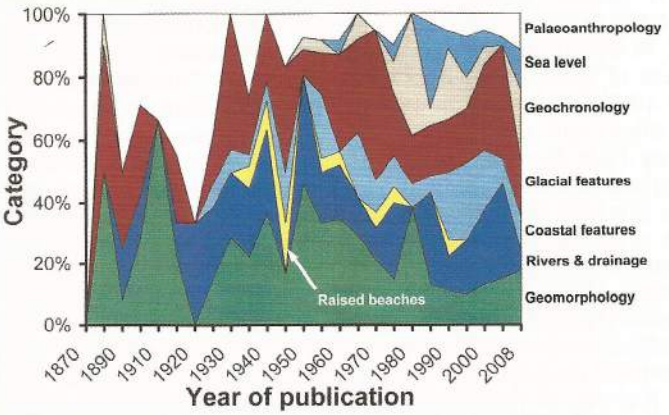

Fig. 6. Articles on physical geology, geomorphology and palaeoanthropology (included in 'Other geology' in Fig. 5).

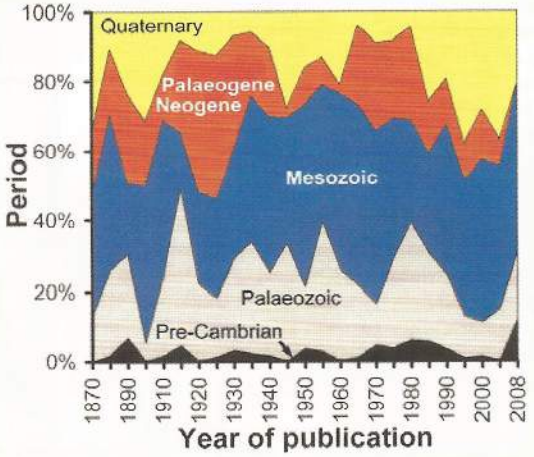

Fig. 4. Geological time-period of article subject-matter

Many of the issues concerned with the type of papers which appear in the PGA, such as the balance between research papers, review articles, field meeting reports and other articles, and adaptation of style to render

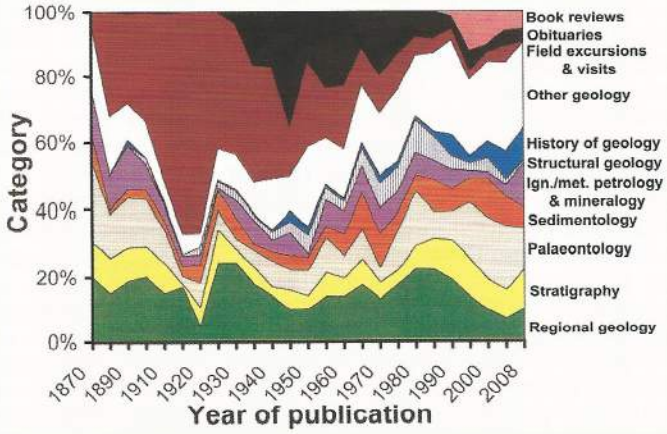

Fig. 5. Principal topic of article

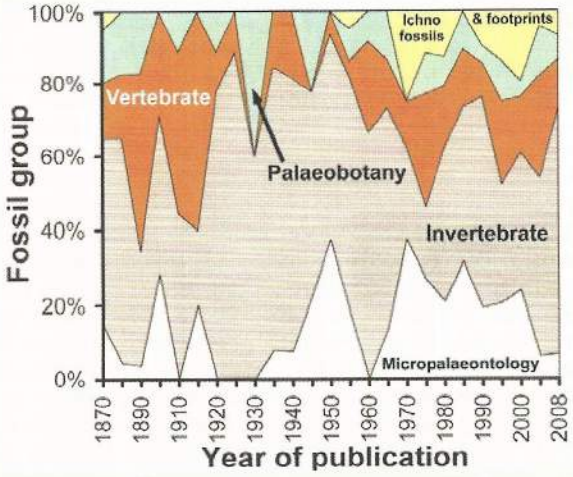

Fig. 7. Fossil groups addressed by articles on palaeontology

the contents as accessible as possible to non-professional readers of the journal, were discussed at length by Horace Montford in his 1969 Presidential Address, and these issues remain as pertinent today. His statement that 'we do our best to get the articles into a form which will interest as wide a spectrum of Members as possible' (Montford 1969, 139-140) remains as true now as it did then, although we are now aiming at a broader readership, in addition to GA members themselves.

The PGA has been produced by a variety of publishers since its inception. From 2009, it will be published by Elsevier under a new editorial team: Editor-in-Chief, Professor Jim Rose (Royal Holloway, University of London), assisted by Editors Dr. David Horne (Queen Mary, University of London) and Dr. John Powell (British Geological Survey). Papers will focus on the geology of the region around the south-western margin of the North Sea basin, giving especial attention to the Mesozoic, Cenozoic and Quaternary rocks and landforms that characterise this region. Reports on field meetings that cover new findings and interpretations, papers on applied, historical and educational aspects of Earth Science, and substantive reviews on topics of scientific importance will be continue to be welcome, as will papers relating to the geological evidence for past climates and environments; the processes that are forced by these changes; and geoarchaeological evidence of human responses to these changes. The PGA will also continue its tradition of publishing special issues on topics of scientific importance. With its impending digitisation (aimed for completion in 2009) its excellent legacy of high-quality articles will become available to a new and broader audience and the GA can look forward to its future continuing success.

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N.B. All citations are to the Proceedings of the Geologists' Association unless indicated otherwise.

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