REVIEW

Mineralization in England and Wales by R. E. Bevins, B. Young, J. S. Mason, D. A. C. Manning and R. F. Symes. 2010. Geological Conservation Review Series 36. Joint Nature Conservation Committee: Peterborough, 598 pages, 978-1-876107-566-6, £70, from NHBS, 2 Wills Road, Totnes TQ9 5XN.

This massive volume is the culmination of over 20 years gathering data on Geological Conservation Review (GCR) sites (mostly Scheduled Sites of Scientific Importance: SSSIs) concerned with the varied evidence of the mineralization processes in England and Wales. A companion volume on Scotland has been promised. This Mineralization volume was started by L. Haynes, and I have memories of him interviewing me about Peak District sites, but he then dropped out of the project. The GCR scheme is closing in the summer of 2011 when the series should contain 45 volumes.

This volume summarizes the reasoning behind the selection of 137 sites. After an introductory chapter by R. E. Bevins, the sites are covered in six regional chapters by different authors: Lake District, North Pennines, South Pennines (including Cheshire, Lancashire and Shropshire, but not Staffordshire), Wales, Mendips and Southwest England. The introductory chapter includes tabulations of the types of mineralization and of the special features shown by the 137 sites, together with a history of the mineralization processes through geological time. One aspect of the latter caught my eye: much of the vein mineralization hosted in the Lower Palaeozoic rocks of Wales and the Lake District is now regarded as of Carboniferous age – implying a former cover of Carboniferous strata on top of the older rocks? Each of the GCR sites is covered in about four pages, with an introduction, description, interpretation and conclusion, which tend to some duplication of comments.

As space precludes coverage of all the areas, my remarks are confined to the South Pennines and adjacent areas in Chapter 4 compiled by D. A. C. Manning and others. Three of the local sites are Leicestershire quarries that ceased production long ago and are now partly or completely filled with rubbish; Enderby Warren Quarry was filled in years ago and is now covered by an industrial estate. So what is the point of including them as GCR sites? Calton Hill quarry, east of Buxton, was also largely filled in with rubbish, but a little of its unique basalt with its ultrabasic olivine-rich inclusions is still visible; few traces of its later quartz-hematite veins can be seen. Of the rest of the Peak District sites, those of Treak Cliff with its Blue John fluorspar deposits, Windy Knoll with its bitumens, and Dirtlow Rake with complex multiphase mineral deposition are obviously of national if not international importance; however, parts of Dirtlow Rake have recently been back-filled and levelled. The complex of veins, pipes and replacements in the Masson Mines at Matlock is again a significant aspect of mineralization. I was a little surprised to see Bage Mine near Wirksworth listed – it is the type locality of the lead chloride minerals matlockite and phosgenite (= cromfordite), but recent explorations have failed to find the original site within the accessible workings.

Doubtless, readers with a good knowledge of the Peak District will be able to suggest sites which are not listed; perhaps Magpie Mine's Blende Vein with its unusual sphalerite-calcite pipe veins, and Golconda Mine with its extensive baryte-galena deposits containing uncommon secondary minerals such as hemimorphite and aurichalcite. The unique stalactitic baryte deposit near Arborlow stone circle is not mentioned. The Ecton copper mines of Staffordshire are included, but surprisingly are listed as being in Derbyshire, which explains the absence of Staffordshire from the chapter title! The chapter also includes the Alderley Edge copper deposits in Cheshire, with an account brought up to date by Geoff Warrington. Gipsy Lane brickpit in Leicester, with its unusual vanadium and uranium minerals in the Triassic mudstones hosting gypsum beds, is included, though part of the pit has been filled in and much of the rest is very overgrown. Snailbeach and Huglith Mines are the only sites in Shropshire to be listed, though there were many more mineral deposits and mines.

The entries are accompanied by black and white photographs but their reproduction can be so poor and muddy that it is difficult to make out what they depict. The colour photo on the cover does not appear to be identified inside. The volume concludes with a combined bibliography of 44 pages, though very few are dated later than 2000 and most much earlier - evidence of the long preparation time?

This listing of sites with evidence of mineralization processes is an important contribution to the record of our inheritance. It accompanies others in the GCR series on the Carboniferous Limestone, Karst and Caves, Quaternary, and many other facets of geology, and should be available to all those concerned with planning and conservation, though whether they will have any influence on preservation or control of development is something we shall have to see in the future.

Trevor Ford

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A cumulative index for the ***Mercian Geologist*** is available on the Society website (www.emgs.org.uk). This will have entries added for future volumes, and will also be backdated as far as Volume 13, but these are currently being generated and await completion.