

Although the book is fairly detailed it makes interesting reading, particularly in giving an insight into why projects may have failed in the past. It certainly whetted my appetite for exploration and I wished that I had some spare capital to invest in an exploration programme! The editors have done little to the original manuscripts so there is often some repetition. However, as they say: "What we have here is essentially a guide to buried treasure and no treasure hunter wants a second-hand interpretation of someone else's map — they want the original."

It is debatable whether the mining industry in this region will ever return to prosperity after the disastrous tin price 'crash' of 1985, but this book underlines the fact that promising prospects still exist in the region. It is recommended for anyone with interests in the mining industry and mineral exploration in southwest England.

D. H. M. ALDERTON

Burt, R., Waite, P. and Burnley, R., Eds. *The mines of Flintshire and Denbighshire*. Exeter (University of Exeter Press), 1992. xxxii + 168 pp. Price £12.95. ISBN 085989 3715.

This is the tenth volume in the series presenting statistical details of mining operations in various parts of the United Kingdom. It covers the mines of Flintshire and Denbighshire in northeast Wales, an area which has had a long history of mining but one that is poorly documented. During the latter half of the last century the mines were producing between one third and one quarter of the total British output of Pb and Zn, together with important amounts of Ag. The area was particularly unusual because at this time the production levels were increasing, unlike the terminal decline witnessed in other British metal mining fields. The book lists the mines in operation between 1845 and 1914, their location, owners, production statistics, and numbers employed. The information is all presented in tables, so it is essentially a reference work. It will be of specific relevance to those with interests in the former metal mining industry of northeast Wales.

D. H. M. ALDERTON

Vincent, E. A. *Geology and Mineralogy at Oxford 1860–1986: History and Reminiscence*. Oxford (Dept. of Earth Sciences), 1994. viii + 245 pp, 17 pls. Price £8.50 (£10.50 inclusive of postage and packing).

This book can be considered to have four distinct parts. It opens with an interesting historical description of the Departments of Geology and

Mineralogy as they existed from their establishment in the University Museum in the latter part of the XIXth century up to their incorporation as a single Department after the Second World War. Here the black-and-white portraits of such worthies as Wm. Buckland, John Phillips, M.H.N. Story-Maskelyne, H.A. Miers, W.J. Sollas, T.V. Barker and R.C. Spiller help to bring to life the expertise and eccentricities of these gentlemen.

A new era was ushered in from 1950, with the appointment of L.R. Wager to the Chair of Geology, and for the years from 1951 onwards, when the author was appointed to the staff, we get a fascinating personal account of the development and growth of the Department, including the appointment of Louis Ahrens to the Readership in Mineralogy, the continuing research activities on layered intrusions, and the development and growing pains of the geochronological laboratory. I found these particular chapters of far more than mere parochial interest, describing as they do the burgeoning of geochemistry, integrated with mineralogy and petrology and the growth of isotope geology — mirroring many of the developments elsewhere. Ahrens was succeeded by the author as Reader in Mineralogy, and later by Jack Zussman and Eric Whittaker. Meanwhile on the geological side, the lecturing staff included such people as Malcolm Brown, Keith Cox, Stephen Moorbath, Keith O'Nions and Ron Oxburgh.

David Vincent succeeded Lawrence Wager to the Chair of Geology in 1967, and the third part of this account is devoted to the subsequent period of consolidation and change until his own retirement in 1986. Here we are given an insight into the strains and stresses in a department which had grown very considerably in size and perhaps had allowed the pendulum to swing too far to the 'hard rock' side. However, the last two decades with which this book is concerned saw the balance shift somewhat, with the emergence of strong research teams in palaeontology and sedimentology and the broadening of the research base of the Department. We also hear of the trials and tribulations brought about by the imposition of new fire regulations on old buildings and of the impact of the changing policy on grant allocations.

The last, but by no means least, part of this well written account is concerned with the technical and support staff — right back to the days of the typical indomitable laboratory assistants, who became experts in their subjects. They had to be Jacks-of-all-Trades, everyone having to help with setting out laboratory practical classes and clearing away afterwards. Later they became known as technicians, but were poorly paid, particularly in comparison with those employed elsewhere in the area at Morris Motors. Nevertheless, men and women

of outstanding quality were recruited and served in the Department for long periods. Here the author gives glimpses of the types of character involved, who would often say a thing couldn't be done only to eventually produce the desired item, functional and perfectly polished. The work concludes with a clutch of appendices listing staff, academic long-term visitors, research dissertations, and books and monographs produced from the Department.

Although inevitably there is much said about people and administrative procedures unknown in the broader world, this book is so well written by someone who was immersed in all the Department has done that it should be widely read. The photographs illuminate the text and there are touches of humour too. Definitely recommended.

R. A. HOWIE