

Three of the four papers grouped under 'Regional Considerations' are broad reviews of the large-scale features and units within geologically complex and diverse high-grade areas which definitely deserve more coverage in the western literature: the Pamirs and Tien Shan (Budanov *et al.*), Baikal and areas west (Sizykh) and Kazakhstan (Shlygin *et al.*). Although some of the maps and diagrams are cryptic and the age data not reliable, these articles may provide some useful background for future work. A paper by Budanov and Volkova on bimetasomatism in magnesian skarns in the SW Pamirs, in contrast, is a highly focused and purely petrological contribution of considerable worth but not particularly relevant to the regional considerations theme.

Despite the apparent organisation, the book has no real definitive or unifying approach binding the diverse papers together. It is not a text which will be referred to for state of the art or up to date evaluations of the principal issues facing those of us working on high grade terrains, such as the roles of fluids and melts, tectonic settings, implications of $P-T$ paths, reliability of $P-T$ estimates, constraints imposed by mineral assemblages and grids, and temporal and spatial scales of high grade events. The main use of this book will be as an avenue into some of the literature relevant to the terrains considered and perhaps a data source for geochemical compilations, but it is not a book which I can recommend either to specialists or petrologists in general.

S. L. HARLEY

Brocardo, O. *Minerals and Gemstones of the World*. Newton Abbot, Devon (David and Charles), 1994. Price £10.99 (paperback) [ISBN 0 7153 0197 7]. 215 pp., 156 colour photographs.

This handy identification guide (translated from Italian) comprises an excellent text in the first 43 pages, followed by 156 pages with colour plates of mineral specimens, together with a pictographic table below each using easily identified symbols to allow rapid selection from a mass of detailed information on the characteristics and properties which can be used to classify and identify the mineral. The order of presentation of the minerals is by their overall colour.

The colour photographs are generally excellent, but the specimens to be shown were all selected from the Turin Museum of which the author is Director; there is thus a tendency to select rather rare species, e.g. buergerite, creedite and greenockite. Admittedly we are told that these are rare or extremely rare, but with only some four percent of known mineral species on display the inclusion of such rare species

must be questioned. Also, we are shown some unusually coloured varieties, e.g. violet-pink cobaltian calcite [though, no doubt by a slip, the formula is given beneath the plate as CaCO_3]; similarly we have a rather bilious yellow quartz, labelled prase. Another problem users may find is with the colour descriptions in the pictograms: it turns out that the colour indicated there is that of the mineral powder rather than the hand-specimen appearance — thus we have a representative picture of kyanite, we are told the name is for the blue colour, but the pictogram indicates merely white or pale. Under epidote, piemontite is mis-spelt and the selected sample of epidote is yellow-brown rather than the typical pistachio green.

Despite these reservations (colour giving a collector such an important clue), I would happily recommend this useful little book to a beginner.

R. A. HOWIE

Veasey, T. J., Wilson, R. J. and Squires, D. M. *The Physical Separation and Recovery of Metals from Wastes*, (Gordon and Breach), 1993. vi + 201 pp. Price £45.00.

This book, arranged in five chapters, is a review of the physical processes involved in the recycling and reprocessing of secondary metals. Resource conservation, in the form of reclamation and recycling, has increased in the past two decades and is expected to continue increasing. The technologies involved are complex and have developed considerably in response to the increase in recycling. Hence, this review of the latest technologies available for secondary metal processing deals with an important topic in engineering.

The first chapter introduces the relevant terminology and considers the economic, political/social and technological practicalities of metal and material recycling. It highlights the environmental and energy cost benefits to be gained from secondary metal processing. The second chapter, 'Unit operations in secondary metals processing', describes the methods available for the comminution of waste and physical separation of metal fragments from the bulk in detail. For each separation technique described (size, density, magnetism and electrical conductivity) the suitability of various types of machinery to different waste sources is assessed. The third chapter reviews the different processes employed to recover scrap metal from large objects such as automobiles whilst the fourth describes the processing of metal wastes from smaller sources e.g. television sets. The final chapter is an interesting description of the recent attempts to separate out municipal solid waste into its major components.