number of figures remains exactly the same. Unfortunately, the popular morphology maps of the ocean basins have not been brought fully up to date and appear sparse of information when compared with Heezen and Tharp's and Menard's recent physiographic diagrams.

Five years, it seems, have not altered Professor King's ideas on geotectonics. His well-known views on a low-density upper mantle zone rich in volatiles as the cause of 'cymatogeny' and orogeny are restated in the new edition. As before, in using gravity data to support his ideas King fails to make a clear distinction between Bouguer and isostatic anomalies. His explanation of the cause of large negative anomalies in terms of low-density mantle is unconvincing, and the numerous recent seismic studies relevant to this interpretation are not discussed. The chapter on 'mobile welts', hardly modified, appears inadequate now that Aubonin's authoritative discourse on geosynclines has entered the literature.

Professor King is more convincing when discussing landscapes than when reinterpreting geophysical results. And the major part of his book remains a masterly account of the nature and evolution of continental scenery with a detailed, yet worldwide coverage. Perhaps the most important single aspect of *Morphology of the earth* is that it reveals geomorphology as a vital branch of geology, equal in status to other intrinsic branches of the science.

It may be argued that the close similarity of the first and second editions merely reflects the excellence of the first edition. The publishers, in their notes on the dust-cover, should have taken this line rather than claim a degree of revision and up-dating that has not occurred.

M. BROOKS

MASON (BRIAN). *Principles of geochemistry* (3rd edition). New York, London (Wiley), vii+329 pp. Price: 75*s*.

This is the third edition of a book that has probably become a standard students' text on geochemistry. The present edition differs very little in size and content from the second edition of 1958. Although the price increase from 64*s*. to 75*s*. is rather disproportional to the change in subject matter, it is presumably justifiable on the grounds of increased costs. The format, order of treatment of topics, and sometimes page-numbers are the same as the previous edition. Chapters 1 and 2 (Introduction and The Earth in Relation to the Universe) remain essentially unaltered but Chapter 3 (Structure and Composition of the Earth) has

been updated to include the results of laboratory investigations at higher pressures and revised earth-models based upon such work. Chapters 4 and 5 (Thermodynamics and Crystal Chemistry; Magmatism and Igneous Rocks) contain minor modifications. Chapter 6 on sedimentary geochemistry commences with a brief new section on soil geochemistry; there are some slight changes in the section on oxidation-reduction potentials (including a revised SiO_2 solubility diagram), and an additional table of major and minor element abundances in sediments. A new table of element abundances in sea-water, their principal species, and residence times has been added to the chapter on the Hydrosphere (Chapter 7). At the same time, however, a useful table on the geochemical balance of the elements in the oceans has, unfortunately, been omitted in this edition. Chapter 8 on the Atmosphere is little altered; Chapter 9 on the Biosphere contains a new section on the concentration of the rarer elements in biogenic deposits and a slightly enlarged section on the geochemical cycle of carbon. Chapter 10 dealing with Metamorphism and Metamorphic Cycles is virtually unchanged and Chapter 11 on the Geochemical Cycle contains a section on isotopic fractionation expanded to include sulphur isotopes. The Appendix consists of tables of atomic weights and ionic radii; a Geological Time Scale; a table of estimated annual world consumption of the elements and the price of the latter in U.S. dollars per ton; and some questions and problems. T. W. B.

ALBERTUS MAGNUS. *Book of Minerals*, translated by DOROTHY WYKOFF. Oxford (Clarendon), 1967, xlii+309 pp. and 2 plates. Price 84*s*.

Albertus Magnus, patron saint of scientists, published a series of commentaries on the works of Aristotle, mainly those concerning natural science. Albert could find no Aristotelian treatise on minerals and filled this gap by his own researches, basing the work on Aristotle's principles. The date of this particular work is uncertain and the translator suggests that it was probably completed by 1263. She has provided a lengthy introduction covering the life of Albert, his writings in general and the Book of Minerals in particular.

Those mineralogists who have an interest in the origins of their science will find much to intrigue them here. Each chapter has been given an explanatory introduction by the translator, for without this much of the direct translation would be difficult to follow. Copious footnotes are also provided to aid the reader. There are also five