

## BOOK REVIEWS

BLACK (G. P.), *Arthur's Seat: a history of Edinburgh's volcano*. Edinburgh (Oliver & Boyd), 1966, 226 pp., 19 figs., 8 plates. Price 35s.

Following the early descriptions of the Arthur's Seat volcano by C. Maclaren (1839, 1866) and A. Geikie (1897), a Geological Survey Memoir and map was published by B. N. Peach in 1921 and a book by T. C. Day in 1933. Since then several papers have been published on the volcano, notably by R. H. Clark (1956), which have mainly contributed more petrographic information. The first chapter of the present book contains a brief description of volcanoes and their products together with an outline classification of igneous rocks. While the book is aimed at the naturalist anxious to learn something of geology, it is nevertheless a complete account of Edinburgh's volcano, illustrated with numerous maps, sections, and photographs. Lavas and ashes on Arthur's Seat and adjacent areas are tabulated without exhaustive petrographic descriptions. There is a glossary of geological terms and a useful excursion guide, which is cross-referenced to the main text and contains National Grid references, which are also printed on the sketch-maps. Localities such as 'Gutted Haddie', 'Hutton's Section', and 'Windy Gowl', which have become geological classics, will have a special nostalgia for Edinburgh geologists who, on their first excursion, traversed all thirteen lava flows on the windswept slopes of Whinney Hill.

T. W. B.

BEUS (A. A.). *Geochemistry of beryllium* (translated by F. Lachman, edited by L. R. Page), San Francisco (Freeman), 1966, 401 pp., 61 figs., 148 tables. Price 105s.

This is a translation of a book published by the Soviet Academy of Sciences in 1960. Both translator and editor are to be congratulated on its readability, a property that many such translations lack. This is a comprehensive book, full of factual information on beryllium and supported by numerous well laid out tables and a lengthy list of references. Figures are in general clear, although marred by their legends, which follow the continental system: that is, the explanation of symbols used is concealed in a lengthy caption below.

The book is arranged in three parts, each of about 150 pages. Part I deals with the chemistry and mineralogy of beryllium in considerable

detail and will be found most useful by many geologists. Part II is largely descriptive and reviews the different types of beryllium occurrence. Many western readers may feel lost here owing to Russian pegmatite terminology, which differs from our own. This is particularly confusing where similar terms have different usages.

Part III considers the role of beryllium in various geological processes. Some may find this part rather thin, in particular there appears to be little explanation of the more regional aspects of beryllium mineralization. In this respect little is made of zoning even in Part II except from an idealized viewpoint: factual maps, rather than hypothetical block diagrams would have been most useful here.

Although descriptions of beryllium occurrences are strongly biased towards Russian examples, as might be expected, there are many references to deposits outside Russia. One omission from the extensive list of references is the work done by the editor of the translation himself and his colleagues, under the leadership of E. N. Cameron. Their publication on the internal structure of pegmatites surely warrants a reference in a book of this type. Although this book is mainly concerned with the geochemistry of beryllium, it is also subtitled '... and genetic types of beryllium deposits' and this reviewer feels the subject has been treated rather narrowly: but this is the view of a geologist and not of a geochemist. Despite such criticisms, it is still most useful to have this wealth of largely factual information gathered under one cover. However, the editor of the translation does warn the reader, in an introductory note, that much recent work from western sources has been ignored. Therefore, although a most useful review of the geochemistry of beryllium, it should not be considered the last word on the subject.

J. W. B.

EL-HINNAWI (ESSAM E.). *Methods in chemical and mineral microscopy*. Amsterdam (Elsevier), ix+222 pp., 103 figs., 1966. Price 90s.

The book aims at bridging the gap between Johannsen's 'Manual of Petrographic Methods' (1918) and the current needs of mineralogists, petrographers, and microscopists. The author has assembled a lot of useful published information together with less accessible manufacturers' data. The series of eleven chapters is concerned more with the description of the methods of examining crystalline substances under the polarizing microscope than with the principles of optical crystallography. It is assumed that the reader is already familiar with the principles and knows how to use the polarizing microscope. Hence the book provides