material relating to the pyroxenes is more satisfactory than in the first edition (see *Min. Mag.* **33**, 525), the minerals now being divided into Mg–Fe pyroxenes (orthopyroxene and pigeonite), Ca-pyroxenes, Ca-Na pyroxenes, Na-pyroxenes, and Li-pyroxenes. This much better reflects their common paragenetic associations and simplifies finding the information one is looking for. Much modern work, including of course more recent crystal structural results of a fundamental kind, is also incorporated into the sections dealing with the non-pyroxenes towards the end of the volume.

The section dealing with orthopyroxenes, running now to 141 pages, may be taken as a fair sample of the whole. It lists seventy-six chemical analyses—twice as many as the earlier edition—only one of which confesses to being a microprobe analysis. It has twenty-one pages of references, as against the previous four. The whole text is expanded in like proportion: the familiar optical properties diagram for the orthopyroxenes appeared as fig. 10 on p. 28 in the first edition; in slightly revised form it appears as fig. 74 on p. 109 of the second.

The reviewer, given limited time for his task, is conscious that he can give but a superficial impression of a lengthy work of reference. But readers will want to know, especially in view of the price, whether this new edition of D. H., and Z. is going completely to supersede the old. The answer clearly is that it will. While older editions of some standard texts in descriptive mineralogy may retain much of their usefulness, this will inevitably be less so in the case of D. H., and Z., the main strength of which is its usefulness to the interpretative petrologist as an up-to-date, complete, and well-documented source of information and ideas that unlike, say, optical data, change continually and radically as the subject advances. Petrology and mineralogy are in a very different state now from that in 1963, and this second edition—virtually a new work—must again be regarded as an essential tool to which everyone working in the field must have ready access.

The present volume is attractively printed and well set out, giving a rather more 'modern' impression than the first edition. The reviewer has spotted few typographical errors—though it is unfortunate that the word 'lead' appears twice instead of 'led' in the Preface: this slip is not symptomatic of the whole. Figure captions are now printed in heavy type as, less understandably, are the lists of oxides, ions, etc. in the tables of analyses. The diagrams are, as before, of high quality, many being entirely new and most of the others revised. The occasional half-tone photographs printed in the ordinary text have reproduced quite well and there is a coloured frontispiece, the slight over-all greenish cast of which detracts a little from its impact. The binding, if durable, is horrid: glossy boards with no separate dust cover and which (in the review copy) are easily bent and creased: at £25 the purchaser might reasonably expect the decent cloth binding and dust cover of the first edition. And why have Longmans, rather like the Rover division of British Leyland, abandoned their famous '1724' house sign with its elegant three-masted vessel in favour of a nasty stylized symbol a computer might have drawn?

Apart from the binding, this volume is a triumph for all concerned, and we hope fervently that the authors' energies will maintain momentum until the whole enterprise has been completed for the second time. But it will be like painting the Forth Bridge. . . .

E. A. VINCENT

Potter (P. E.) and Pettijohn (F. J.). *Paleocurrents and Basin Analysis* (second corrected and up-dated edition). Berlin, Heidelberg, and New York (Springer-Verlag), 1977. xiv+426 pp., 167 figs., 30 pls. Price DM 55,70.

I have little but praise for this excellent book. It has been up-dated to 1976 by inserting supplementary chapters after each original one, but the whole is kept within 425 pp. and embellished with thirty splendid plates. Some of the more important literature from France, Germany, and the Soviet Union has been used, as well as an extraordinary range of work in English, with an emphasis on the quantitative. There are brief abstracts of many of the more recent papers.

Inevitably, the very recent but vital research of Vail, Mitchum, and Thompson on seismic analysis of basin development could not be included, but the authors were always more concerned with the finer details of basin analysis than with the broad picture. Nevertheless, there is a curious absence of any mention of the effects of transgressions and regressions, or changes of sea-level, on basin structure. It is relatively thin on the factors that control the distribution of mineral species in sediments. On the other hand, the chapter on 'The Sedimentary Model' includes a thorough coverage of the application of plate theory to basin and facies development.

With these minor strictures, a mineralogist with any interest at all in clastic sediments will find this book invaluable for its succinct summaries and its survey of references. The price of around £15 is reasonable; students can use it both as a systematic text and for the pleasure of browsing through it.

J. M. HANCOCK