coverage and its numerous examples of colloid phenomena in surface and sediment systems. It brings together research reports from many different disciplines and should lead the diligent reader into new literature. Any text which encourages students or research workers to cross traditional boundaries and to look outside the few journals they habitually read is to be applauded. Geochemists with no formal training in surface chemistry would do well to read this book if only to see just how widespread colloid phenomena are. I am glad to have a copy of this text on my shelves, but doubt that, at the price, many graduate students will rush out to buy one.

C. D. CURTIS

Barker (F.), editor. *Trondhjemites, dacites, and related rocks* (Developments in Petrology: no. 6). Amsterdam, Oxford, and New York (Elsevier Scientific Publishing Co.), 1979. xv+659 pp., 211 figs. Price $65.75 (Dfl. 135.00).

Trondhjemites occur in several different tectonic environments and with different suites of associated igneous rocks. Some are accompanied by volcanic rocks of similar composition; others appear to be the products of metasomatism. Not surprisingly, there are many different ideas on their origin. Descriptions of trondhjemites are dispersed through the literature of petrology and regional geology, many occurrences being recorded only incidentally in accounts of larger areas of granites, ophiolites, or metamorphic rocks. The editor of this volume, Fred Barker of the US Geological Survey, has performed a valuable service by bringing together this collection of twenty-two papers on trondhjemites and related rocks from all over the world (M.A. 79-3231). It is now possible to examine side-by-side the critical features of different kinds of trondhjemite, and to form a coherent view of these rocks, perhaps for the first time. In addition to reviewing our existing knowledge, the individual authors have contributed a wealth of new information on their field occurrence, petrography, chemistry, and mineralogy.

At least four distinct categories of trondhjemite can be recognized in the selection of examples which are described. The first group are those of Proterozoic to Cenozoic orogenic belts, where they are associated with larger volumes of granite, granodiorite, tonalite, and diorite. The type area around Trondheim in Norway, which is reviewed here by Barker and Millard, is of this type, although it is not a very suitable type locality because the trondhjemites there have undergone greenschist facies metamorphism. The second type of occurrence is in island arcs, such as the examples from Fiji which are described by Gill and Stork. In Fiji, intrusive trondhjemites are accompanied by compositionally similar low-K dacites. The third type of trondhjemite is that which occurs in Archaean grey gneiss terrains. This is the environment in which trondhjemite is most abundant and in which it is a major rock type. The Archaean trondhjemites may well have originated in a different way to later ones, but the deformation and metamorphism they have suffered is an obstacle to their complete interpretation. The excellent field photographs in the articles by McGregor and by Collerson and Bridgwater on areas in Greenland and Labrador show all manner of streaky deformed rocks, and one can only marvel at the confidence with which Precambrian specialists are able to assign an igneous identity to some of the streaks. The fourth type are the trondhjemites which occur in small amounts in ophiolite complexes. They are clearly different in nature to the other trondhjemites, and are well summarized in the article by Coleman and Donato, who consider them to have originated in the oceanic crust.

The petrogenetic conclusions of the various authors are so diverse that no single viewpoint can be cited as representative, but there are some broad areas of agreement. The magmatic origin of trondhjemites is generally accepted, not only for those with close volcanic equivalents, such as the Fijian examples, but also for others for which a metasomatic origin has been postulated in the past. A comprehensive 110-page review of the chemistry and mineralogy of salic lavas by Ewart enables the trondhjemitic dacites to be seen in the context of acid volcanism as a whole. The origin of trondhjemite magma is a more open question, but the majority of the authors look to a basaltic source, some by way of re-melting, others by simple differentiation. Whatever their views, future workers on trondhjemite will find this volume indispensable.

A. HALL

Bambauer (H. U.), Taborszky (F.), and Trochim (H.). *W. E. Tröger: Optical Determination of Rock-forming Minerals. Part I: Determinative Tables.* Stuttgart (E. Schweizerbart'sche Verlagsbuchhandlung), 1979. 188 pp., 376 figs., 3 pls. (1 in colour). Price DM 48.00 ($27.20).

This is a translation of the fourth German edition of the well-used optical determinative tables of the