ing the boycott of products of nations they suspect of ignoring all the fine resolutions that have been made in the board rooms of the whaling conventions. Much of this agitation comes from Americans, and those who still hunt whales may remind us that ours was the land of Moby Dick and all the whales our great grandfathers slaughtered for oil and scrimshaw and now it is their turn to kill the whales that are still in the sea for the more worthy purpose of human food. So the whale problem is that everyone else is doing wrong and the whales belong to all of us. The problem is not whales but human nature, not that human nature is completely immutable but that it may change at different rates with different people.

There has always been a contradiction in this whaling business; Captain Scammon, a keen student of the natural history of whales, did not believe in killing them on Sunday but expected his crew to make up for the layoff by killing twice as many on Monday. So at last the United States would atone for Captain Ahab, and in 1970 declared that eight species of whales were officially endangered species and that no parts or products of these whales could be brought into the United States (or, for that matter, sold within the country, so that antique dealers and curio stores can no longer sell scrimshaw or sperm whale teeth even if they came from grandfather's attic). At the same time a conference was called for to discuss matters of biology and conservation of the large whales. Accordingly an International Conference on the Biology of Whales was held in 1971 on the Blue Ridge of Virginia. Representatives of ten nations concerned with whaling and the biology of whales attended; the Russians, although invited, did not attend. Although this book, the result of that conference, is reproduced in unjustified typescript, it has taken unconscionably long to prepare. Such an important conference as this deserved a high-speed effort.

Everybody has tried to be objective, and in addition the protectionist point of view is specifically stated, by Scott McVay. The cetologists include almost everyone identified with the subject except Gilmore and some of the older workers, and among them are a number of authorities on the dynamics of exploited stocks. As might be expected, the participants conclude that we still lack much of the essential knowledge of population structure, of migration patterns, and, most important, of the ecological significance of whales in the trophic structure of the sea and emphasize the need for more research and the application of newer technological advances such as radiotelemetry. Not much of this has happened, however; "The International Decade of Cetacean Research" is yet to begin. The blue whale unit was abandoned after the conference occurred, and J. L. McHugh's review of the International Whaling Commission is a useful and up-to-date summary which, if read, should bring some of the blood pressure down. There is much valuable factual information in this book, which will accordingly be essential to all who are concerned in one way or another with the "whale problem," including those who believe that the whales belong to all of us and must be protected for the benefit of all, most of whom may never see a living whale.

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The Feldspar Group

Feldspar Minerals. JOSEPH V. SMITH. With the assistance of Brenda F. Smith. Springer-Verlag, New York, 1974. Vol. 1, Crystal Structure and Physical Properties. xx, 628 pp., illus. $40.10. Vol. 2, Chemical and Textural Properties. xiv, 690 pp., illus. $42.50.

The feldspars are the most abundant group of minerals in the earth's crust, they are used universally in the primary classification of all but a few igneous rocks, and because of the solid solution between the alkali feldspars and the sodium-calcium feldspars they play an essential role in petrogenetic interpretation. It is not surprising, then, that the feldspars have attracted more attention from crystallographers, mineralogists, petrologists, and geochemists than other mineral groups have received. The task of sorting, sieving, integrating, and, in some cases, making an assessment of the current position is one that few are so well equipped to undertake as Joseph Smith.

The author's description of the work as a "symphony on feldspars" is not presumptuous. These two volumes deal with crystal structures, physical properties, experimental techniques, chemical properties, growth, diffusion, defects, and intergrowths. The third volume will cover thermodynamic properties and phase relations and finally feldspar parageneses. For nonspecialists, the author has provided an extended but very welcome summary, which leaves the reader in no doubt that there are feldspar problems as yet unresolved. This summary sets the style of the work as a whole. The complexities of the underlying structural features and of the resulting properties of both the alkali feldspars and the plagioclase series are presented with admirable clarity; lack of data is not glossed over, and work of doubtful precision and reliability is not spared. Discussion of the more controversial topics and conflicting hypotheses is well balanced, and, commendably, the author's own convictions and prejudices are clearly stated.

The encyclopedic reporting of the literature leads inevitably to a style that can be disconcertingly abrupt. Much of the account of the theory of zoning reads like a tabulation of short notes on the source material. It might have been more useful had the author summarized conflicting contributions, data, and hypotheses. Overall, however, the format and presentation are clear and attractive, the many figures and diagrams are exceptionally well executed, and the work is enhanced by well-chosen and excellently reproduced microphotographs and electron micrographs.

As a work of reference covering all aspects of the feldspar group, the book will be widely consulted, not only by feldspar specialists and more general crystallographers and mineralogists, but by petrologists and geochemists. In synthesizing almost all that is known about feldspars, Smith has produced an outstanding work that will remain the definitive statement on the subject for a long time, especially if he carries out his promise to provide further volumes to cover developing research at 10-year intervals.

Although the price may limit the number of purchases by nonspecialists, *Feldspar Minerals* is an essential piece of equipment for all earth science departments. The volumes will become well thumbed soon after they appear on the library shelves, and two sets will almost certainly be needed.

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