

Book Review: Geology of the Lake Superior Region by Gene LaBerge, 1994, Geoscience Press.

This fine new book describes the diverse geology of the states surrounding Lake Superior. The author, Dr. Gene LaBerge, of U.W.- Oshkosh, has worked for decades investigating the region's geology and has distilled the experience of those years of field and laboratory work into a book accessible to many of the general public. The best audience for the book are readers who have had a basic geology course and have the patience to sort out some of the terminology in a glossary of geological terms. For rock hounds the book details the geological framework in which their favorite collecting areas occur, and can answer many of their questions about the rocks and landforms that they see as they travel throughout the region.

The book is profusely illustrated with black and white photos (including numerous mineral specimens), line drawing and maps. Photos and text suggest numerous places where important geological relationships are exposed, forming the nucleus for numerous field trip stops.

One of the strongest aspect of the book is that, like the geology, the author is no respecter of state or national boundaries. Dr. LaBerge's examples are drawn equally from Wisconsin, Iowa, Minnesota, Michigan and Ontario. He has also gone even farther afield (Alaska, Hawaii, Australia) to cite or photography modern examples of the events that formed the area's rocks. Other books on the Lake Superior area focus on one state or province. LaBerge has wisely chosen to synthesize and illustrate the geology from the entire region, in effect showing us the whole story in a way never before done for the general reader. His book takes the story of the rocks from the earliest Archean time between three and four billion years ago, up through the latest Ice Age to modern mining initiatives.

The book begins with a brief overview of geology. Next, Dr. LaBerge details the formation of Archean continental cores of Greenstone belts and gneiss belts, including the origin of such rocks as the Ely Greenstone and Tower iron formation. He next chronicles the complex early Proterozoic history with its shifting microcontinents, island arcs and rising mountain ranges. This chapter includes extensive information on the origin of the iron formation so important in the region's historical and economic development. It also details the setting for the Baraboo Quartzite and the copper mining in central and northern Wisconsin. The middle Proterozoic is next. Dr. LaBerge gives a lucid description of the origin of the Wolf River Batholith, the pegmatites of Wausau and the Keweenaw rocks with its lava flows and copper deposits of White Pine and the Keweenaw Peninsula. The Paleozoic sedimentary rocks are covered in the next chapter, including a summary of the classic upper

Mississippi zinc-lead district. A final chapter details the Pleistocene geology with the advancing and retreating glaciers. A bonus in the chapter is a description of the correlation between diamond finds and glacial drift.

The book does have some weaknesses. Some prior knowledge of geology is essential to the reader. Although there is a glossary, some technical terms such as stromatolite and mylonite, are not included. Mineral names are also presented without explanation. Some of the diagrams, such as fig. 2-13 and fig. 4.4 need better explanations or labels, and in the case of 2-13, a scale! There are a number of typos and other errors. For example, the captions of fig. 5.36 and 5.37 are reversed and fig. 5.34 (a quarry) is cited once as a commercial cave. Another weakness is the relatively small amount of data given for the Ontario side of the Lake.

All in all, however, this book should be read by area collector or anyone else interested in the long and exciting natural history of this beautiful region. I've already bought two copies, and have asked the University bookstore stock it. I'll also use this for a textbook for a field trip course I teach. This book can be ordered from Geoscience Press, 12629 N. Tatum Boulevard, Suite 201, Phoenix, AZ, 85032, phone # 602-953-2330.

- Dr. Bill Cordua, University of Wisconsin-River Falls