The first volume of this new series was published in 1952. This second volume covers a larger and more varied field and is the work of a number of authors. The main sections are: Introduction, Fundamental Mathematics, Crystal Geometry, Diffraction Geometry, Physics of Diffraction Methods, Fourier Synthesis and Structure Factors, Special Topics, Miscellaneous Exponential and Trigonometrical Tables. The work is completed by a Dictionary of Crystallographic Terms in English, French, German, Russian, and Spanish. Items of special interest to the mineralogist are the sections on twinning and on the interpretation of single-crystal and powder photographs, but the volume contains much that is of use to all those engaged in different branches of crystallographic studies. The Editors have done a splendid job, and the whole production is of the high standard that would be expected from the Printers and from the International Union of Crystallography.

C. H. KELSEY

WILLIAMS (Howel). *Volcanic History of the Guatemalan Highlands.* University of California Publications in Geological Sciences, vol. 38, No. 1, pp. 1–86, pls. 1–13, 8 figs. (including 2 folding maps).

This account is based on field reconnaissances totalling four months under a Guggenheim fellowship. Apart from a succinct preliminary sketch of the basement geology, it is entirely devoted to detailed descriptions of the outcrops of the volcanic rocks, the physiography, and the history as deduced from these. As the only up-to-date general account of this area it is most valuable, but it contains no detailed petrographic descriptions and the author's use of rock names is vague; one suspects from his descriptions that most of the rocks called 'andesite' and 'dacite' would have been named 'rhyodacite' had analyses been available. The author throughout commendably uses the term 'glowing-avalanche' instead of 'nuée ardente'. A feature of his observations is the extent to which he has recognized the prevalence of this type of deposit especially in the first, Tertiary, 'fissure-eruption' phase of vulcanicity. He recognizes, however, that most of the vast pumice deposits of the second, Quaternary phase are of secondary, penecontemporaneous, torrential (laharic) origin. Much attention is devoted to the geomorphological history of the area, especially the origin of its three main lakes: Atitlan (as a cauldron subsidence), Ayarza (as paired calderas), and Amatitlan (as a volcanotectonic basin).

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