clear plastic base sheet to which the map copy is photographically transferred is first coated with an opaque material, usually yellow paint. Using a metal stylus ground to the width of line desired, the draftsman traces the copy, cutting out the opaque coating along the lines that are to be printed. The product is a line negative that the photoengraver can use directly to make the printing plate.

The principal advantage of scribing is that the width of a line is determined entirely by the scribing tool used, in contrast to pen-and-ink drafting where line-weight depends on the size of the pen point, the fluid qualities of the ink, the surface paper, and on the pressure on the pen. The map scriber has few critical factors to control, and he can devote his full attention to productive work. The training period for new employees is relatively short, and their output is superior, both in quantity and quality, to pen-and-ink drafting.

For the "gadgeteer," scribing has opened up a new field of activity—the design of special tools for the various symbols and types of lines on topographic maps. The usual tool is made from a phonograph needle ground to a chisel-shaped point and held in an ordinary pen-holder, but many others have been developed for particular purposes. A swivel-head scriber cuts two parallel lines at the same time to trace double-line roads; a special templet is used to cut rectangular building symbols; and there is even a motor-driven scriber to produce small circles representing oil or water tanks. There is still an unfilled need for a device to scribe dotted lines conveniently and accurately.

The most critical problems in the introduction of scribing techniques concern the materials—the base sheets and the opaque coatings. The base sheet must be transparent, dimensionally stable, and have a smooth surface hard enough to prevent scratching by the scribing tool. Glass is the ideal material so far as these qualities are concerned, but it is fragile and heavy, and the problems of transportation and storage are formidable. After considerable experimenting, a type of vinyl plastic sheeting was selected as the most satisfactory, although there is still room for improvement.

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Received February 10, 1954.

Book Reviews

Geology of India. Rev. ed. D. N. Wadia. London: Macmillan; New York: St Martin's Press, 1953. 552 pp. Illus. + plates. $10.00.

This reviewer, quite lacking in knowledge of India, found the revised edition of *Geology of India* by Wadia, both pleasant to read and instructive. Persons acquainted with Indian geology perhaps could find gaps in the descriptions and might disagree with some of the interpretations offered or with the emphasis given certain topics. After all, India is nearly half the size of the United States and it would be next to impossible to obtain agreement about the items that should be emphasized in 550 pages describing the geology of half this country.

The first 57 pages describe the physical features, including the physical geography of the three great physiographic divisions of India, the drainage system, lakes, glaciers, coasts, true volcanoes, mud-volcanoes, earthquakes, tilt records, isostasy, climatic conditions, soils, erosion, and résumé of the history of major drainage changes.

The main part of the book (354 pp.) is devoted to a description of the formations, geological history they record, and some of their unsolved problems. This description is apportioned as follows: General introduction to the stratigraphy, 17 pages; pre-Cambrian formations, 62 pages; Paleozoic formations, 95 pages; Mesozoic formations, 58 pages; Deccan trap, 13 pages; and Cenozoic formations, 109 pages.

Following the stratigraphic descriptions and history is a 26-page chapter on physiography. The last chapter (76 pp.) describes the mineral resources and soil.

Accompanying the book is a 1 : 6,000,000 geologic map of India in colors. It would have been helpful to have had additional larger scale maps showing the locations of the many places referred to by name in the text. Too, this reviewer would not share Wadia's pessimistic view (p. 439) that "Chances of discovery of new mineral deposits of any extent and richness by ordinary geological methods are not many. . . ." The book itself refers to the gross inadequacies in knowledge about the geology of India, and as long as this situation continues we can be rather confident that major mineral discoveries are still to be made in that vast area. At least, this has been the history of progress in geological knowledge everywhere else, why not in India?

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Krankheiten und Schädlinge der Kulturpflanzen und ihre Bekämpfung. 7th ed. H. Braun and E. Riehm. Berlin, Germany: Paul Parey, 1953. 339 pp. Illus.

In 1910, Dr. Riehm published a small handbook dealing with the diseases and insect pests of crops in Germany. Since then six additional editions have appeared, each one a little larger and more detailed. The later ones had H. Braun as the senior author.

In the present edition are 28 pages of general discussion, followed by those for 23 special crops or