The book is a safe and valuable guide and should prove very useful to health officers, physicians and all intelligent persons who desire to understand the principles of disinfection. There is only one important statement that I take exception to, and here the error is on the side of safety. It is stated that disinfection with the fumes of burning sulphur requires eighteen to twenty-four hours, and that the injurious effect on fabrics of this disinfectant contracts its use to narrow limits.

In places where each family occupies an entire house it may be possible to require people to vacate rooms for eighteen hours, but in tenements such as occur in cities this is impossible. We have found, however, that when a room is tightly sealed and four pounds of sulphur are burned to each 1,000 cubic feet, disinfection is practically complete in eight hours, when penetration is not required and the microorganisms to be killed are not more resistant than those met with in diphtheria and small-pox. Its cheapness, ease of use and its value as an insecticide cause us to use sulphur rather than formaldehyde in the rooms requiring disinfection in the tenements of New York city.

WM. H. PARK.

Mineralogy. By H. A. MIERS. The Macmillan Co., 8vo. Pp. 584.

Mr. Miers, for a long time connected with the mineralogical department of the British Museum and now professor of mineralogy in the University of Oxford, has had unusual facilities for the study of mineral specimens, and his book is the result of many years of labor. As stated by the author in his preface, the volume is not an exhaustive system of mineralogy, but is intended rather as a treatise in which students will find all that is required for an elementary acquaintance with the subject. The difficult subjects of mathematical crystallography and the physical properties of crystals are treated carefully and with much detail, and the chapter on the optical properties of crystals is especially helpful and suggestive. In the part treating of descriptive mineralogy, comprising about one half of the volume, essentially the same classification as adopted by Dana is followed. In the description of species the crystallographic characteristics are given with much detail, and the text is illustrated not only by the usual outline figures of crystals, but also by numerous carefully executed and effective shaded drawings, many of them of characteristic specimens in the British Museum. At the close of the volume there are given tables of minerals arranged according to the chemical classification, optical properties and specific gravity.

The book is one which advanced students will find useful in the study and comparison of specimens, but it is scarcely elementary enough to serve as a text-book for beginners. The volume is handsomely gotten up, and in this respect may serve as a model for books of its kind.

S. L. PENFIELD.

SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for February opens with an important paper on 'The Structure and Relationships of the American Pelycosauria,' by E. C. Case. The author concludes that all known reptiles from the American Permian possessed two temporal arches and that the Pelycosauria followed a line of development here that led to extinction, the persistent line of development being followed elsewhere. These points are dwelt on in a description of the cranial features of various species. V. Sterki presents some 'Notes on the Unionidæ and their Classification,' and gives a scheme of classification, differing somewhat from that of Simpson, based largely on the structure of the hinge, shape of the embryonic and adult shells, and condition of the marsupia. E. L. Mark describes 'A Paraffine Bath Heated by Electricity,' intended to do away with the danger of explosion that attends the use of gas. The number contains the Quarterly Record of Gifts, Appointments, Retirements and Deaths.

THE February number of the *Botanical Gazette* contains the first half of a paper by Dr. E. B. Copeland on 'Chemical Stimula-

tion and the Evolution of Carbon Dioxid.' In this part he summarizes previous contributions to the subject and describes improved apparatus for respiration experiments, and an accurate method of titration, on which the somewhat surprising results to be set forth in the second instalment are based.—Professor Charles S. Sargent enumerates the species of 'The Genus *Cratægus* in Newcastle County, Delaware,' including notes on the old species, and the description of eight new species and two new varieties.—Mr. William H. Long, Jr., monographs 'The Ravenelias of the United States and Mexico.' From the genus *Ravenelia,* the species *R. Holwayi,* having æcidia without pseudoperidium, is separated to constitute the genus *Neoravenelia,* and the six species having the inner teleutospores two-celled are segregated as a new genus, *Pleoravenelia.* Three new species of *Ravenelia* and two of *Pleoravenelia* are described. Diagnostic structures of the various species are shown on the two double plates.—Frederick H. Billings has found chalazogamy in the pecan, whose close alliance with the walnut, in which this mode of tube entry was first described, makes the discovery seem quite natural. Mr. W. C. Coker contributes various brief notes; one on leaf variation in *Liriodendron;* another on the occurrence of two egg cells in the archegonium of *Mnium,* from each of which a ventral canal cell is cut off; another on the nucleus of the spore cavity in prothallia of *Marsilia.* This nucleus enlarges greatly as development of the prothallium proceeds, protrudes two or more arms and filaments toward the prothallium, and later fragments amitotically.—Mr. Westgate reviews Gerhart's book on dune work in Germany, and Mr. Howe the volume of Boppe and Joylet on the forests of France.—There are nine pages of notes on current literature and three pages of news items.

The Popular Science Monthly for March contains some 'Hitherto Unpublished Letters of Charles Darwin,' an account of 'The Vienna Academy of Science,' by Edward F. Williams, and the eighth paper by Frederick A. Woods on 'Mental and Moral Heredity in Royalty,' which considers the evidence from Lehr's Genealogy. Edwin G. Dexter considers 'High-Grade Men: In College and Out,' presenting some evidence to show that men who stand high in college retain their position in after life. Raphael G. Zon discusses 'The Source of Nitrogen in Forest Soil' and R. H. Thurston 'Education for Professions,' summing up that prerequisites for success are perfect training of body, brain and soul. John Quincy Adams considers 'Science *versus* Art-Appreciation,' but we believe he errs in stating that science has not only driven art into the background, but has misrepresented its character. The concluding article is by S. W. Williston, on 'The Fossil Man of Lansing, Kansas,' giving a good description of the conditions under which the remains were found and a careful consideration of the possible age of the specimen. 'The Progress of Science' contains critical articles on the Smithsonian Institution and Carnegie Institution.

The Plant World for February contains the third instalment of 'Extracts from the Note-Book of a Naturalist on the Island of Guam,' by W. E. Safford, 'Notes on the Flora of Central Chile,' by George T. Hastings, 'Conditions of Plant Growth on the Isle of Pines,' by W. W. Rowlee and other shorter articles.

The Museums Journal of Great Britain for February has 'A Design for the Tops of Table Cases,' by A. Jukes-Brown, and a consideration of 'The Use of Museums in Teaching,' by W. E. Hoyle, with special reference to the Manchester Museum. Among the notes is one entitled 'A Statesman's View of Museums,' showing the high value set on them by Mr. James Bryce, and the announcement of the completion of a large additional building for the Kew Herbarium.

SOCIETIES AND ACADEMIES.

NEW YORK ACADEMY OF SCIENCES. SECTION OF GEOLOGY.

A REGULAR meeting of the Section of Geology and Mineralogy was held on the evening of February 16, at the American Museum of Natural History, with Professor J. F. Kemp in the chair.

Professor William Hallock read the first