

*Introduction to the Rarer Elements.* By PHILIP E. BROWNING, Ph.D., Assistant Professor of Chemistry, Yale University. Second edition, thoroughly revised. New York, John Wiley & Sons. 1908. Pp. x + 207, 2 plates.

The first edition of this book was reviewed in these columns in 1903.<sup>1</sup> After five years it has been revised, much new material being added. This is especially the case in regard to the radio-elements, the excellent chapter upon that topic being contributed by Professor Boltwood, a colleague of the author.

While the book is teeming with information, it does not pretend to be a compendium. However, one feels the lack of proportion when he observes that forty-nine double chlorides of cesium (p. 11) are mentioned and only one oxide of rubidium is named. The statement is made (p. 63) that metallic praseodymium and neodidymium have not been separated. Muthmann accomplished this very cleverly several years ago and his method has been applied successfully in the reviewer's laboratory. Good crystals of metallic thorium have also been obtained by another method, namely, reduction by aluminium, published in the Year Book of the Carnegie Institution. It is not mentioned. A satisfactory method for separating zirconium and aluminium (p. 78) published fifteen years ago is not incorporated. Nor is the only good method for separating zirconium and titanium (by hydrogen dioxide) given. The chapter on the uses of the rarer elements is in much need of revision. The recent work on scandium is not included.

The colored plate of the spectra is a good illustration of the printer's art, but the small plate on the absorption spectra is poorly chosen, in fact, is incorrect. Additional plates would be helpful, as well as a general discussion of some of the principles involved in the fractionation of these "complexes of elemental matter," as Crookes put it. There is an index, but it is inadequate.

The book must have served a good purpose and every library of chemical works should have a copy, for the term "rare earth" does

<sup>1</sup> SCIENCE, N. S., XVIII., 497.

not frighten teacher or student quite as badly as formerly. This is due in large part to a book of such rightness of purpose as is this one.

CHAS. BASKERVILLE  
COLLEGE CITY OF NEW YORK

#### SCIENTIFIC JOURNALS AND ARTICLES

*The American Museum Journal* for March contains the following articles: "The Darwin Celebration," with views of the bust of Darwin presented to the museum by the New York Academy of Sciences; "New Habitat Groups of North American Birds," six in all, with an illustration of each. These groups mark the highest point reached in presenting to the public an accurate idea of the bird life of various parts of our country; they have been made possible by the liberality of a number of friends of the museum and of the public. A notice of "The Annual Meeting of the Trustees" notes that the present endowment fund is \$2,048,156, and that last year the museum expended \$115,488, and the city \$159,930. There is a letter from Mr. Stefansson, on "The Stefansson-Anderson Arctic Expedition," and an account of "Recent Purchases of Fossil Vertebrates."

*The Museums Journal* of Great Britain for February has an article on the "Victoria and Albert Museum," reviewing the recent report on its rearrangement, classification of its material, relations of the national museums to one another, and on the general policy of the institution. Most interesting is the account given by Rev. J. S. Whitewright of "Pioneer Museum Work in China." The models, diagrams and maps, many of them large and elaborate, were made on the spot by Chinese artisans. The number of visitors—there were 69,745 in thirty-six days—shows the success of the work. Robert Standen tells how to make and use "Glue and Turpentine Cement for Alcoholic Mounts." There are the customary reviews and notes.

#### SPECIAL ARTICLES

##### A LITTER OF HYBRID DOGS

SEVERAL years ago the writer had the opportunity of observing the results of a cross be-