

**Semimicro Qualitative Analysis**

By Prof. Paul Arthur and Prof. Otto M. Smith. (International Chemical Series.) Third edition. Pp. xi+285. (London: McGraw-Hill Publishing Co., Ltd., 1952.) 34s.

THIS book is intended to provide an elementary course in inorganic qualitative analysis on the semi-micro scale, covering the commoner cations and anions, but excluding separations in presence of phosphate. Ten chapters, roughly half of the text, give an outline of the theory involved, each being followed by a series of questions for the student, and including, where relevant, typical worked examples. The remainder gives a survey of experimental technique, clearly illustrated by diagrams, followed by analytical schemes for cations and anions. Each tabular scheme is preceded by a brief general survey of the reactions of the ions included, and followed by a series of notes on the experimental procedures.

The analytical schemes for the cations follow mainly the classical pattern, but a useful alternative method for the analysis of the iron group, based on a modified Ford-Williams separation of manganese and chromium, is given. This should minimize adsorption errors such as occur in the usual hydroxide-sulphide method for this group. The tabular schemes are clearly set out, and the accompanying notes cover most of the difficulties likely to be met with by students without overloading the text. Confirmatory tests for particular ions are based, as they should be, mainly on the correct carrying out of the separation procedures, but a short section lists alternative special reagents for use in doubtful cases.

The practical section is evidently based on laboratory experience of the methods described in the text, and this, together with the appended notes, makes the book a reliable introduction to the theory and practice of qualitative analysis. J. A. MAIR

**Bibliographie des langues aymará et kičua**

Par Paul Rivet et Georges de Créqui-Montfort. (Université de Paris: Travaux et Mémoires de l'Institut d'Ethnologie, Tome 51.) Vol. 1 (1540-1875); pp. xlii+500; 3,200 francs. Vol. 2 (1876-1915); pp. v+656; 3,500 francs. (Paris: Institut d'Ethnologie, 1951-52.)

THESE two volumes, which are a product of forty years of work, comprise a list, with short critical notes on each item, of practically everything which was printed in Quichua and Aymara from the Spanish Conquest down to 1915; and, although the authors invite additions and corrections, it is unlikely that they have missed anything of importance. The title pages of a good many of the more important works are reproduced in facsimile, and an index is promised but has not yet appeared, so it will presumably follow in a subsequent volume.

The introductory chapter is brief, and, besides describing the objects and scope of the work, it sets the stage by giving a short account of what the authors conceive to have been the general linguistic situation during the time of the Incas. In the course of this they repeat some statements with which many linguists disagree, but they themselves stress the immature state of linguistic studies of South America, so this need cause no surprise. Most of the material is connected with the evangelization and religious instruction of the Indians, and in the nature of things little can come from native sources, so a relatively large proportion of this chapter is devoted to a dis-

cussion of the original MSS. of the native drama Ollantay.

Having heard Prof. P. Rivet introduce and present these volumes to two recent international congresses—the Peruvianists in Lima, and the Americanists in Cambridge—I can testify to the enthusiastic reception which they have already received from many scholars, and have no doubt that they will be equally warmly welcomed by all who are concerned with the historical and linguistic study of South America.

G. H. S. BUSHNELL

**Automatic and Manual Control**

Papers contributed to the Conference at Cranfield, 1951. Pp. xi+584. (London: Butterworths Scientific Publications, Ltd., 1952.) 50s. net.

EACH paper in this volume is a contribution to fundamental design technique, and as such would merit scientific publication, in one form or another, in the usual way. In considering a symposium of such papers, however, the questions which arise are: Is the publication of the collection, as a whole, worth while, and does it fulfil the objects which the editorial committee set itself? According to the preface, the volume is intended as a work of reference for those engaged in control equipment design, and also as a book which might valuably assist those possessing a general background knowledge to branch out into more specialist fields. It must suffer, as a work of reference, by its very structure, which makes it impossible to use as a normal referenced text-book; nor can it be particularly comprehensive, as much of the basis of design technique has to be taken for granted. To offset this, one has the advantage of the direct research experience of specialists, much of the material being a model of presentation, logical in sequence, lucid and well illustrated. Although a point has been made of covering specially the mathematical techniques employed in the theory, and though wide in its applied interests, the work must prove a difficult one for students. This does not detract from its inherent value, and in the class of published symposia it must certainly take a very high place.

A. J. KENNEDY

**King Solomon's Ring**

New Light on Animal Ways. By Konrad Z. Lorenz. Translated from the German by Marjorie Kerr Wilson. Pp. xxi+202. (London: Methuen and Co., Ltd., 1952.) 15s. net.

WELL known in scientific circles for his elaboration of the 'releaser' and 'imprinting' mechanisms in animals, Dr. Konrad Lorenz is now seeking to interest a bigger audience in his life's work. In "King Solomon's Ring" he tells of insects, fishes, ravens, geese, jackdaws and dogs with rare insight arising out of great creative powers allied to direct observations often carried out in most painful and trying circumstances the like of which few naturalists have experienced. As a result, Lorenz has stories to tell which, because of their very truth, grip the reader in wonder and admiration. The accounts themselves are embellished by a style of writing which, while never less than scientific, is at once lucid and simple, as well as amusing thumb-nail sketches which have been contributed by the author himself. If the book has any blemish, it is that the remarkably fine chapter on jackdaws deserves a volume to itself. In the meantime, one gratefully welcomes this book which, of its kind, has known no peer for many a year.

T. H. H.