Genetica

By Prof. Enrique Sanchez-Monge y Parellada. Pp. xii+437. (Madrid: Enrique Sanchez-Monge y Parellada, Instituto Nacional de Investigaciones Agronomicas, 1961.) 380 pesetas.

THE present work by Prof. Sanchez-Monge is based on a previous book by him and Dr. Ramon Esteruelas published in 1952. The rapid development of genetics during the past few years has made rewriting necessary, though the objectives which animated the first work are unchanged. These were, states the preface, briefly to put into the Spanish language all the fundamental bases of modern genetics so that the reader may appreciate the importance of this discipline in pure and applied biology, medicine, psychology, agronomy, forestry, taxonomy, the improvement of plants and animals, microbiology and virology.

Such a book was highly necessary in Spain, where, it is alleged, outmoded ideas which should have been abandoned years ago still have a firm hold on the curriculum.

The present work differs in its general plan from the first one, principally in the change of title, and in the omission of two chapters on the improvement of plants and animals. It begins with an introductory chapter on reproduction, and then goes on to chapters on Mendelian heredity, qualitative and quantitative, the latter being preceded by a brief introduction to statistical analysis. It continues with an account of sex determination and sex-linked inheritance, types of evolutionary change, the role of cytoplasm in heredity, the genetics of populations and the physiology and nature of the gene. Then follows a chapter on genetical aspects of evolution, with special reference to mechanisms of speciation and to the species concept. Finally there are two chapters dealing with the genetics of micro-organisms and of man. Considering the wide field that the author has surveyed it is not surprising that treatment sometimes fails to achieve correct emphasis. For example, the chapter on human genetics contains no mention of the work of Penrose or Haldane, nor of the contributions of Harris in the domain of human biochemical genetics.

Five appendices contain: a short history of genetical discoveries, the international rules regarding symbols, a glossary of technical terms, a collection of problems and a list of recommended books. The book contains an admirably clear, concise and on the whole accurate account, in 437 pages, of present-day genetics, and is recommended to all students who read Spanish. It is well produced and illustrated and relatively cheap, though of somewhat inconvenient size. Each chapter contains a useful bibliography and there is a good index.

S. C. HARLAND

Proceedings of the Third World Orchid Conference

London, May 30–June 2, 1960. (Sponsored jointly by the American Orchid Society, The British Orchid Growers' Association and the Royal Horticultural Society.) Pp. 442+10 plates. (London: The Royal Horticultural Society, 1960.) 42*s*.; 6 dollars.

THE third World Orchid Conference, held in London at the beginning of June 1960, brought together more than five hundred persons, from thirty different countries, whose common interest was the study of the family Orchidaceae, albeit from many different points of view. Professional growers, amateurs and scientists were among those attending, and the numerous papers delivered, though with a distinct bias towards cultivation, covered a wide range of aspects of orchidology. This volume gives a general account of the programme and proceedings of the conference and includes all the papers delivered during its thirteen sessions.

The Conference was given an excellent send off by Dr. W. T. Stearn of the British Museum (Natural History), who entertained the members with a scintillating and highly humorous account of the development of orchidology from classical times up to the present day. Following this, each session dealt with some special aspect of the subject or with one of the more important groups of cultivated orchids. The former include such diverse subjects as culture methods for amateurs, the principles of orchid nutrition, the ecology of orchids, diseases and pests, aspects of the orchid trade, the classification of orchids, growing orchids in rooms, and orchids in botanical gardens. The papers on cultivated orchids deal with the genera *Cattleya*, *Vanda*, *Phalaenopsis*, *Cymbidium*, *Dendrobium*, *Cypripedium*, *Odontoglossum*, *Miltonia* and their close allies. These last-named papers include accounts of the latest methods of cultivation, progress in breeding and criteria used in judging. Altogether there are forty-eight papers and these taken together provide an adequate cross-section of the various activities which are being pursued to-day with respect to this remarkable and entrancing family.

The general format of the book is pleasing, the print being easy to read. There are ten excellent coloured plates of orchids which gained awards in the Royal Horticultural Society's Chelsea Show held just before the Conference and nearly thirty monochrome illustrations. In addition many of the papers contain illustrative text-figures. Altogether this is a book which everyone interested in orchids will require, containing as it does many of the latest ideas bearing on the cultivation, breeding and classification of these plants. V. S. SUMMERHAYES

Advances in Agronomy, Vol. 12

Edited by A. G. Norman. (Prepared under the auspices of the American Society of Agronomy.) Pp. xi+464. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1960.) 12.50 dollars.

THE present volume fully maintains the standard set by recent issues of *Advances in Agronomy*. It contains eight reviews of United States work each of which is long, detailed, exhaustive and dull. Research papers are often summarized in single sentences and more-or-less contrary findings by different authors are recorded consecutively with serene impartiality and little or no critical comment.

Of the articles in this volume, that by Rich and Thomas on the clay fraction of soils is unusual in including many references to work done outside the United States and in dealing with recent work—real 'advances'. "Fertilizers in Forestry" (Stoeckeler and Arneman) also makes a good attempt at bringing together work done in many countries. Two papers on soya beans (81 pages in all) leave the reader with the impression that a great deal of research on this crop is proceeding, but that very little of it is likely to lead to increases in yield before 1980.

"Water Infiltration into Soils" (Parr and Bertrand) catalogues many fascinating pieces of apparatus and