

Further, there is very little discussion of the genetics of viruses, an omission which is deliberate and explained on the grounds that other books and review articles have covered this topic in detail. In the past three decades, however, studies on viruses have made a considerable contribution to an understanding of biological processes, particularly with regard to the nature and expression of the genetic code. The relevant experiments were possible because of a combination of approaches, that is, details of the virus structure from a physico-chemical viewpoint and of the biology of infection, both molecular and genetic aspects. Accordingly, in an introductory but nevertheless advanced book of this kind, I feel that it would have been advantageous to develop these themes together, even if this necessitated some increase in length.

There is a useful series of questions for each chapter at the end of the book. I recommend the book, particularly for those who require a predominantly experimental introduction to viruses.

D. H. ROSCOE

IMMUNOLOGICAL DISEASE

Autoimmunization and the Autoimmune Hemolytic Anemias

By Bernard Pirofsky. Pp. xiii + 537. (Williams and Wilkins: Baltimore. Distributed in the UK by Livingstone: Edinburgh, 1969.) 180s.

In this book Professor Pirofsky develops his thesis that autoimmune haemolytic anaemias are but one manifestation of a diffuse immunological systemic disease either genetically determined or caused by vertical transmission of virus infection in an immuno-deficient individual. This theme runs throughout the book, though technically it is divided into two parts, the first dealing predominantly with the clinical and haematological aspects of acquired haemolytic anaemias, and the second reviewing the theoretical and immuno-haematological evidence of a positive antiglobulin test and its relation to auto-immunization.

In the excellent historical review, the acquired haemolytic anaemias are examined in relation to the concept of an antibody produced by an individual and specifically directed against his own unmodified erythrocytes. On this criterion many of the antiglobulin positive immuno-haemolytic anaemias can be shown to have antigens modified by drugs or cross-reacting antibodies stimulated by various environmental factors such as disease states, drugs and viruses. There is an extensive analysis of the author's series of 234 patients with warm acting erythrocyte antibodies studied from 1958 to 1966. The most striking features of the series are the remarkably high incidence of autoimmune haemolytic anaemia secondary to the leukaemias and the subsequent development of lymphomas in patients initially diagnosed as idiopathic haemolytic anaemia. Because of these features, the possibility exists that the term idiopathic is illusory and a longer follow up is necessary to define the true pattern of the disease.

The chief diagnostic criterion, a positive direct antiglobulin test, was found to be negative initially in thirty cases in the series and only repeated investigations in combination with enzyme tests enabled a firm diagnosis to be made. The therapy of all aspects of the disease, both primary and secondary, is well covered.

The second part of the book reviews the theoretical and immuno-haematological implication of the clinical viewpoint and tries to define the terms so that the subject is not bedevilled by the semantics which have previously caused confusion owing to the extended ways in which the term autoimmune has been used. The final form of the book is derived from a preliminary text dominated by a "stream of consciousness" literary style: there are chapters on the self recognition phenomenon and the thirteen mechan-

isms leading to the state of autoimmunization are outlined in chapter thirteen and elaborated in the two subsequent ones.

One is conscious, in this book, of flights of imagination many of which are difficult to follow, and the repetition of many of the arguments does not add to its clarity. The whole work could be improved by a severe pruning of repetitive material. It is, however, undeniably useful as a complete compilation of every aspect of acquired and autoimmune haemolytic anaemias together with all the drugs and diseases which have been associated with increased haemolysis.

M. M. PICKLES

FIELD GUIDE FOR THE ARMCHAIR

Flowers of Europe

A Field Guide. By Oleg Polunin. Pp. 662 + 192 pages of illustrations in colour. (Oxford University Press: London and New York, June 1969.) 84s.

ONE botanizing season has already passed in Europe since the publication of this book, so its value as a field guide to European plants has been experienced by those who have used it. There is no doubt that it filled a gap in European botanical literature, for here, at a modest price for its size and content, is a single volume describing and illustrating a good selection of phanerogams. On the whole, it can hardly be recommended to professional taxonomists, because out of a figure far exceeding 15,000 species of seed-bearing plants natively growing in Europe or naturalized there, this work deals with only about 2,800 species. It is intended for, and best suited to, the ordinary traveller who wants to name and know something about the plants he stumbles across while he is on holiday.

The choice of included species must have been difficult and the criteria used in making it have been abundance, attractiveness, individuality and fame. About 1,900 plants are given full treatments—their principal diagnostic characters, a list of the countries in which they have been found, and their uses in healing, as poisons, dyes or food plants. As this is primarily a book for identification, keys to families and genera are given, and species in each genus are grouped under key-like headings to make identification simpler. The author in his preface stresses the importance to the layman of having colour photographs, and includes in his book more than 1,000 colour plates. There are also about 300 line drawings of plants. Throughout the book botanical terminology is kept at a minimum (but, we are told, not at the expense of accuracy), and those terms that have, inevitably, to be used are defined in a 15-page illustrated glossary. There is a very useful bibliography, and a list of popular names in English, French, German and Italian. The splitting of the contents of the book into two indexes, one English and the other Latin, is a tedious and frustrating practice for which I know no justification.

The descriptions of individual species are concise and consist of the principal diagnostic characters by which the plants may be identified: the mass of detail often discovered in a standard work is eliminated. Occasionally, there is an attempt to give the reader a thumb-nail impression of the plant first, before proceeding to the details. There is some inevitable inconsistency in the success of this, because some plants are more conducive to the treatment than others, but on the whole it is well done. Although the book is called a "Field Guide", this is not to be taken too seriously. Only the most stalwart would brave more than a few hundred yards with it in his rucksack (it weighs more than 3 pounds), and the information on uses of plants, although short, is an incidental inclusion that one can forgo in the field. It is an empty boast that the colour plates show the "nuances of posture, colour, form, and habitat" of the plants. There are some very fine photographs of which the one of *Gentiana lutea*