To the reviewer it appears that the three chapters dealing with simple flight problems, moments and stability are so slight that they might well have been omitted, thus permitting the rather high price of the book to be reduced. The nomenclature does not always agree with that now current. Thus, the point which the author calls the focus of an aerofoil is usually known as the aerodynamic centre, and it is not correct that the quarter-chord point is called the aerodynamic centre. Also, the author uses the term 'adiabatic' when the more precise 'isentropic' would be preferable, and the symbol I for internal energy in place of enthalpy. The argument on p. 79 for using the principal value of the integral for the down-wash is not adequate, as the author must be aware.

In conclusion, this is the most comprehensive and up-to-date book extant on the theory of aerofoils in steady motion, and is a very welcome addition to the text-book literature of aerodynamics. The printing of the book is excellent. W. J. DUNCAN

PLANT GEOGRAPHY

The Geography of the Flowering Plants

By Prof. Ronald Good. Pp. 403+25 plates. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1947.) 30*s*. net.

THIS book, as the author himself states, "is devoted to plant geography in the narrower sense", plant ecology being outside its scope. As a consequence, the treatment is essentially factual in character rather than causal, and static rather than dynamic. The difficulties of any attempt at such restriction are at once apparent, despite the inclusion of chapters on geological history and plant distribution and a section devoted to the factors of distribution. However, within these limits the author has collected together many of the facts concerning the distribution of taxonomic aggregates over the earth's surface which will be a welcome addition to the botanist's library, the more so that much of the literature of the subject is widely scattered. More than a third of the text is devoted to salient facts of the distribution of families, genera and species, where many of the striking features of extended range, discontinuity and endemism are assembled and illustrated with more than forty maps portraying various types of occurrence, from the extended tropical range of the Palmæ and the cosmopolitan genus *Drosera*, to the discontinuity of the Magnoliaceæ or that of *Saxifraga geum* and *Dabœcia polifolium*.

The limitations of the method of approach are nowhere better seen than in the chapter on the dispersal of plants, which is a brief summary of the familiar facts without critical consideration of the bearing of these upon the problems of distribution. The value of special mechanisms of dispersal is assessed adversely on the grounds that "it can be said quite categorically that there is no real evidence that species possessing such mechanisms are more widely distributed"—a statement that embodies the wholly gratuitous assumption that area is a measure of dispersal efficiency and a confusion of thought between the significance of space and time.

Most of the text is concerned with the extent of distribution; but the occurrence of species within the county of Dorset is the subject of a chapter that aims at treating the intensity of distribution, and here Prof. Good extends beyond his allotted scope. This excursion contains much that is of interest from the author's own observations, such as the extension in recent years of *Bartsia viscosa* and the frequency gradients of species within the area; yet not only in this section but also in that devoted to the history and distribution of the British flora, one is rather left with the feeling of too little or too much.

It is, indeed, as a factual presentation that this book will find its chief use, and it is no doubt the realization of this that accounts for the provision of an index of plant names and another of persons and places, but not one of subjects. E. J. SALISBURY

OPTICS IN HOLLAND

Achievements in Optics

By A. Bouwers. (Monographs on the Progress of Research in Holland during the War.) Pp. viii+135. (New York and Amsterdam: Elsevier Publishing Co., Inc., 1946.) 6 fl.

THIS is the first of a series of monographs, under the general editorship of Drs. R. Houwink and J. A. A. Katelaar, to be published on the progress of research in Holland during the five years of German occupation. Most of the material was, for obvious reasons, kept secret during the War. Though prepared in secret, the text of "Achievements in Optics", which gives a survey of optical work in the Netherlands immediately prior to and during the War, was actually ready for printing before the liberation. Technical difficulties delayed its appearance until a year later. As a result, no consideration is given, or reference made, to similar work in Allied countries, and it is difficult to appreciate how much of the work described in the monograph predates similar work which has appeared in scientific periodicals during the last few years. For example, both in the U.S.S.R. (notably by Maksutov) and in Great Britain, optical systems consisting of spherical mirrors and meniscus lenses have been investigated and developed. It speaks highly for the Dutch, however, that they, in spite of their isolation from other scientific workers, should have, simultaneously, made advances in both geometrical and physical optics of such fundamental importance. The descriptions of their new optical systems and instruments given in the monograph are, therefore, worthy of the closest study.

The monograph is divided into four main sections, and in the first, on new optical systems, the Schmidt camera and its aberrations, and the advantages of spherical mirror systems, several devised by Bouwers himself, are described in detail. The excellent optical properties of these mirror systems have been applied to the design of new cameras, a new microscope and new telescopes. The telescopes have a reduced overall length as a result of the great admissible aperture ratio, almost complete absence of chromatic aberration even at the border of the field of view, and little or no 'false light'. The physical optics section consists of two papers, the first by B. R. A. Nijboer, a pupil of Prof. F. Zernike, dealing with the diffraction theory of aberrations, and the second, by Prof. Zernike himself, on the subject of phase contrast microscopy.

The illustrations and diagrams are very clear, and the monograph is excellently printed. The flimsy cardboard covers are rather a pity, because the monograph will be in great demand for reference and intensive study. S. WEINTROUB