

## AQUATIC PLANTS OF INDIA AND BURMA

Hand-Book of the Common Water and Marsh Plants of India and Burma, 1936

By K. Biswas and C. C. Calder. (Health Bulletin No. 24: Malaria Bureau No. 11.) Pp. xiii + 140 + 38 plates. (Delhi: Manager of Publications, 1937.) Rs. 2.12 or 5s.

THE purpose of this book is to facilitate the field work of those associated with anti-malarial investigations of the breeding places of mosquitoes. It is obvious that a sound knowledge of the plant life found in those localities, their reactions to each other and their relations with the animal life in their surroundings is an important stage in this research.

Brief accounts of the bionomics of freshwater vegetation, general features of aquatic vegetation, periodicity of water plants, methods of control, precede the systematic enumeration of the plants likely to be encountered. The work is not exhaustive, but is intended only to comprise the commoner plants. Short descriptions of the 61 families, 126 genera and 220 species (including Cryptogams) are set out, together with practical keys for the determination of genera and species

where necessary. A key to the families would have been helpful to those inexperienced in systematic botany.

Six reproductions from photographs of aquatic habitats, and line drawings of 157 of the species or varieties listed are appended. Comparison would have been made easier had the plants of the same family, or at least genus, been juxtaposed. Only in the case of the Cryptogams have the magnifications of the enlargements been stated.

The nomenclature is not in all cases that accepted nowadays by systematists: for example, *Herpestes Monniera* has been retained in place of *Bacopa Monniera* (L.) Wettst., and *Panicum muticum* is given preference over *Brachiaria mutica* (Forsk.) Stapf.

There are a number of errors and omissions; many of these have been corrected in an addendum not bound up with the publication, but others have escaped: for example, at the foot of p. 7, "Whether this . . ." should read "Where this . . ." and *Leersia hexandra* Sw., described on p. 100 and figured on Plate III, is omitted from the index.

The work, however, is generally good and should amply fulfil its object. C. E. C. FISCHER.

## SOME ASPECTS OF CHEMICAL ENGINEERING

A Practical Manual of Chemical Engineering  
By Harold Tongue. Pp. xvi + 560. (London: Chapman and Hall, Ltd., 1939.) 36s. net.

A BOOK on chemical engineering published in England is welcome, even if only to show the growing interest in this subject. Mr. Tongue's work does more: it fills, as he claims, a gap in the literature, by dealing with the materials which modern science has placed at our disposal, and methods of using them. It is admittedly a compilation and, as such, it is bound to exhibit a certain lack of balance; for example, under the heading "Wood", with the exception of a table of the mechanical properties of a few American woods, redwood is the only material discussed. Under "Rubber", six pages have been transcribed verbatim from a well-known pamphlet, apparently without acknowledgment—no doubt a slip on the part of the author—and there are other abstracts which, although good in themselves, are often somewhat disconnected.

The chapters dealing with metals and alloys are excellent, and the only criticism which need be

made is again a certain lack of co-ordination, the mass of isolated facts tending to produce a sense of confusion. Perhaps in a future edition the author would consider the introduction of a few phase diagrams to explain the interrelations of some of the alloy systems. Since space is important, details of welding procedure might be curtailed, and extraneous matter, such as the uses of platinum as a catalyst, omitted.

The following sections on pressure vessels and piping are up to the high standard which is to be expected from the author of "The Design and Construction of High-Pressure Chemical Plant", and they are followed by a useful chapter on heat insulation and an even more valuable summary of recent data on the economic utilization of power in works. This difficult subject is one which should have more attention than it frequently receives.

At this point the author appears to have realized that the book was becoming too large, and to have attempted the impossible task of crowding heat transfer and a few selected unit processes into two hundred pages. The result is unfortunate, for the theory is inadequate and a great deal of the