

PREFACE TO THE FIRST EDITION.

The origin of this work lay in an appreciation of certain difficulties in their field work that confronted officers associated with the Malaria Survey of India. The utility of a bulletin confined to the water and marsh vegetation of India was first raised by Mr. R. Senior White, F.R.S.E., Malariologist of the Bengal Nagpur Railway, Calcutta. Officers whose duties lead them to a study of the distribution and life history of the parasite carrying mosquitoes frequently complained of the absence of any handy work confining itself to the vegetation of tanks, ponds, jheels, etc., and it was suggested that a study of larvæ themselves could not be completed without some knowledge of the plant associations, etc., in which they bred. An early attempt to arrange and describe the commoner water plants of the district soon led to the realisation that if a publication was to be of any use, it had to comprise a greater number of plants than we had originally estimated would be necessary. Thus the disadvantages of eliminating the Cryptogams from a work on water vegetation become evident, for it is largely in association with the Cryptogams that mosquito larvæ breed. The necessity of adding the commoner and especially the gregarious algæ needed no excuse but it delayed the completion of this bulletin.

Even now it has been found difficult to incorporate all the higher plants that might be of interest. We have, so far as possible and in view of the limited knowledge of botany of the officers who will handle this book, tried to avoid technical terms and the keys have been arranged in such a manner that the principal distinguishing characters come first to notice. They cannot, however, be read by themselves and it will in most cases be necessary to refer to the description of species given as well as to the figures. Descriptions and figures of a number of the commoner algæ, chiefly those which grow gregariously and sometimes cover tanks in dense floating masses and serve either as food or shelter to larvæ, have been added with notes on the periodicity. There has also been added a short glossary of botanical terms, reference to which will explain the meaning to any collector unacquainted with the terms used.

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HERBARIUM,
ROYAL BOTANIC GARDEN,
CALCUTTA.

K. BISWAS,
C. C. CALDER.

PREFACE TO THE SECOND EDITION.

The book has been revised to suit the needs of students of Botany and all those interested in the aquatic plants of India. Its previous specification designed to meet the needs of the malariologists and officers dealing with the control of Malaria carrying mosquitoes has also been maintained throughout the book. Considerable additional matters have been incorporated without altering the general arrangement followed in this work. Six new chapters namely—one on "Mangrove or Littoral Swamp vegetation", another on "Halophytes or Strand Vegetation", a third on the "Classification of Plant Kingdom" and a fourth on "Nomenclature of Plants" have been added. Observations on the food of mosquito larvæ together with an enumeration of the most common algæ based on the result of my microscopic and macroscopic examination of several hundreds of gut contents of different species of mosquito larvæ form the subject of another chapter on "Algal flora and Mosquito Larvæ". A general account of the different classes of Algæ has also been incorporated. Descriptions of a few more species of Water Plants and necessary changes in the nomenclature of plants described have duly been made. Some of the figures of plants whose descriptions were not in the text of the First Edition have been deleted, and, in their place, sketches of more important species described in the present edition have been substituted. It is hoped that this enlarged and properly modified Second Edition of the book will receive like the First Edition due recognition and proper appreciation from botanists and lovers of water plants.

HARBARIUM,
INDIAN BOTANIC GARDEN,
CALCUTTA.
May, 1954.

KALIPADA BISWAS.