

REVIEWS.

Die Cytology Der Blütenpflanzen by P. N. SCHURHOFF. Pp. XV + 792. Stuttgart, Ferdinand Enke. Price 54 Marks (illustrated).

In recent years increasing attention that has been paid to the study of the science of genetics has stimulated cytological research as never before. The result has been a clearer recognition of the fact that cytological features have a great bearing on taxonomic questions, and these have often been successfully exploited in disentangling some obscure phylogenetic relationships. A comprehensive treatment of this aspect of the life-histories of Gymnosperms and Angiosperms, representing as they do the two most dominant groups of the present-day flora, was therefore most needed. The Morphology of Angiosperms, with its companion volume The Morphology of Gymnosperms, by Coulter and Chamberlain, included the treatment of the whole field of morphology, and only incidentally touched upon cytological features. Besides the former has never been revised after its publication nearly 25 years ago, and the latter is behind time by more than a decade, while most of the research work on cytology—and practically the whole of it relating to genetics—has been done since.

The present work is, therefore, doubly welcome not only as supplying a long-felt want but also as being from the hands of one whose contributions to the subject, especially on the gametophyte generation of Angiosperms, have been most extensive, and who is, therefore, competent and a recognised authority to write with first-hand knowledge on the subject.

The book is divided into two parts. The first treats of (1) the general cytology dealing with the nuclear phenomena in all their bearing. It also includes a discussion on the normal and experimental physiology of the nucleus wherein a detailed treatment of the influence of various physical and chemical factors viz., Temperature, Pressure, Light and Chemicals is given: and (2) the general account of the X-generation in which beginning with the development of the male and the female gametophytes of Gymnosperms and Angiosperms are dealt with in complete detail the whole sequence of phenomena leading up to the fertilisation and formation of the endosperm. Finally there is a discussion on the bearing that cytology has on systematics both from the point of

view of chromosome numbers as well as from that of the male and female gametophytes.

While dealing with these topics the author also expresses his interesting views on such questions as the relation of amitosis to mitosis, the occasional occurrence of 3-fold spindle in endosperm and the evolution of the embryosac of angiosperms. It will be beyond the object of this review to deal with them here, and the reader is therefore referred to the original work. It may, however, be mentioned that while dealing with the nuclear phenomena the author emphatically repudiates the suggestion of the suspicion which is often entertained that the 'fixed' and stained preparation may represent artificial products and says "the researches on the living nucleus have not widened our knowledge but in many cases have merely confirmed the observations made on the stained material." Coming as it does from a person of such recognised authority this statement is of very special significance.

The second part treats of the special cytology of the different classes, families and species of the seed-plants, including even the known fossil representatives, and includes a detailed account of all the known researches giving chromosome numbers of the individual families and species in cases they have already been recorded. While dealing with these the author particularly emphasises those features which may be of use in any discussion of phylogeny. Besides, he also discusses in the light of haploid development relationship of the monocotyledons to the dicotyledons and of the Gymnosperms to the Angiosperms.

The book is thus a compendium of the most useful information on the subject of the cytology of the "Flowering Plants" and not merely a text-book, as the author very modestly styles it in the preface. The information is also presented in such a systematised and masterly manner that, it may be confidently asserted, that the investigator who may eagerly turn to its pages will never be disappointed.

The text is plentifully illustrated and there is a copious bibliography for the use of those who may like to go to the original sources. After consulting the work one only wishes that publications like these were also available in English for the benefit of those who cannot take advantage of the German language.

N. K. T.

Florae Siamensis Enumeratio. A list of the plants known from Siam with records of their occurrence, by W. G. CRAIB, M.A., F.L.S., F.R.S.E., Regius Professor of Botany in the University of Aberdeen, Volume II, Part 1, Caprifoliaceæ and Rubiaceæ (in part). Published under the auspices of the Siam Society. Date of publication, March 12th, 1932. Price to Members: Tcs. 5. Price to non-Members: Tcs. 7 (12s. 10d). Agents: The Bangkok Times Press, Ltd., Bangkok. Luzac & Co., London.

The present volume carries the list of species from the Caprifoliaceæ to the Rubiaceæ. About 400 species are enumerated of which 17 are included in the Caprifoliaceæ and the remaining in the Rubiaceæ. As in the former volume not only the localities are given but the local names are also added.

LAHORE,

18th April, 1932.

International Address Book of Botanists. Being a directory of individuals and scientific institutions, universities, societies, etc., in all parts of the world interested in the study of Botany. Prepared in accordance with a resolution passed at the fifth International Botanical Congress, Cambridge, 1930. Published for The Bentham Trustees by Bailliere, Tindall and Cox, 7 & 8 Henrietta Street, Covent Garden, London.

The last publication of this nature which is now entirely out of date was the third edition of Dorfler's "Botaniker-Adressbuch" which was published in 1909. The information for the present work, therefore, had to be collected wholly afresh.

The publication of this book has been arranged by a Committee consisting of Prof. Dr. L. Diels, Direktor, Botanischer Garten und Botanisches Museum, Berlin-Dahlem. Germany; Dr. E. D. Merrill, Director-in-Chief, New York Botanical Garden, New York, United States of America; Dr. T. F. Chipp, Royal Botanic Gardens, Kew, England.

The arrangement is by countries alphabetically and the entries under each country are, as far as practicable, in the language of the country in Roman script.

At the beginning an index gives page reference to each country. At the end there is a page reference to each personal entry.

The entries under each country include:

- (a) Societies with their postal addresses.
- (b) Institutions wholly or chiefly botanical, their addresses and departments, educational institutions having separate departments dealing with botanical teaching and research.

- (c) The surname and initials of Botanists, both professional and amateur, with information as to their offices and professional qualifications, their postal addresses and their special botanical interests.

This book should prove exceedingly useful to all students of Botany and no Botanical Library should be without a copy.

LAHORE,
18th April, 1932.

A Handbook of the British Seaweeds, by LILY NEWTON, PH D, F.L.S., Professor of Botany, University College, Aberystwyth. With 270 figures in the text. London. The Trustees of the British Museum, British Museum (Natural History), Cromwell Road, S. W. 7, 1931.

As stated in the preface to this book the last complete account of British Seaweeds was published about 60 years ago and an up-to-date book on the subject was obviously a great necessity. Dr. Newton has described about 260 genera and 750 species in this volume. The descriptions are accompanied by drawings which were made for the most part by the late Mr. Percy Highley and a few by Prof. Newton herself. There is no doubt that the book would prove very useful to the students of Seaweeds not only in Great Britain but in other countries also and we hope that it will encourage more people to take up the study of this interesting group of plants and lead to monographic studies on the subject. We can recommend this book wholeheartedly to all students of the subject.

LAHORE,
18th April, 1932.

"Indian Forester", Vol. LVIII, No. 6, June, 1932.

The above number contains several interesting articles, reviews and other items. Among the articles there is a very interesting and well illustrated paper on "The Forests of Finland" by Mr. Chaturvedi. Another is on "The eradication of *Parrotia* from the Conifer forests of Kashmir" by Mr. Jamwall. The Journal is well got up and serves a useful purpose. We wish it all success.

LAHORE,
7th July, 1932.