

A TAXONOMIC MONOGRAPH

OF THE CYCADS

By

Charles J. Chamberlain

The University of Chicago

Edited, Completed, and Revised by

Arthur W. Haupt

The University of California

Los Angeles

PREFACE

The plan and purpose of the present work were set forth by the author in a preliminary announcement, submitted a few weeks before his death to *Chronica Botanica*, and published in the December, 1943, issue (vol. 7, pp. 438-440) together with a short biographical sketch. Some of the ideas expressed in this announcement are restated herewith in the introduction. In preparing the monograph for publication, the editor has endeavored, so far as possible, to carry out the author's aims and to complete the work in much the same way as he would have done. This has been difficult because of the condition of the unfinished manuscript and of a lack of directions for its completion.

Dr. Chamberlain had made a detailed study of many species of cycads, both in the field and under cultivation. He had assembled copious notes, dried specimens, material preserved in liquid, and many photographs. He had finished writing the descriptions of practically all the species of which he possessed a first-hand knowledge. Because this work was done carefully, over a period of almost forty years, the editor has accepted most of the author's statements, without feeling that they should be corroborated by an extensive reexamination of specimens.

^{Some of} the considerable number of species not studied by Dr. Chamberlain in the field, greenhouse, or botanical garden, ~~was~~ he had described from data published by authors whom he knew and in whom he placed a great deal of confidence. Other species, mostly belonging to Cycas, Encephalartos, and Zamia, he had not described at all. The editor has written descriptions of these species, basing them on data available in the literature and supple-

mented, wherever possible, by additional facts obtained from the examination of specimens. The original descriptions of practically all these species have been consulted. Exceptionally, the original descriptions are so complete that they are quoted with ^{almost} ~~practically~~ no changes. As a rule, however, they are very incomplete, having been based on mere fragments sent in by collectors in distant places. In fact, the original descriptions are frequently so inadequate, that it is not possible to recognize the species being described. Because of insufficient data, some of the descriptions in the monograph are brief, but their inclusion will at least make possible the identification of species which, it is hoped, will later be described in greater detail by botanists having access to abundant living material.

The editor has prepared the diagnosis of the family, all generic descriptions, the analytical keys, and the citations to the literature. He has been compelled to rewrite all descriptions of species prepared by the author, not to alter statements, but to arrange them in a logical sequence and to make the descriptions consistent throughout in terminology, style, and other respects. Wherever additional facts could be added, this was done. The introduction is almost entirely in the author's words, but the section on relationships and distribution was written by the editor. The ideas here expressed, however, are ~~thought to be~~ those with which the author ^{doubtless} would have been in agreement. The general account of vegetative organs is a condensation and reorganization of several chapters which Dr. Chamberlain had written for a later work. The section dealing with cones and sporophylls has been added by the editor.

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Although the author's views on nomenclature were somewhat unorthodox, his choice of names, with few exceptions, has been preserved. Encephalartos caffer, the name which he insisted on applying to a species which should be designated E. longifolius, is rejected entirely and not applied to E. brachyphyllus, as is done by certain other authors. This change is made in an effort to straighten out a very confusing situation. E. longifolius is the species called E. caffer in all the author's other writings.

Dr. Chamberlain had indicated only a few of the illustrations which he had planned to use in the monograph. But from his collection of hundreds of photographic prints and thousands of negatives, it was possible to select and to prepare the many illustrations appearing throughout the book. Wherever possible, illustrations not previously published by the author have been selected. Although most of them have been prepared from photographs made by the author, those known to have been furnished by others are acknowledged in the accompanying legends. Wherever such acknowledgment may be lacking, the editor was unable to learn the source of the illustration.

The editor has undertaken to finish and prepare for publication Dr. Chamberlain's manuscript in order to preserve and make available the results of his extensive studies. It may be said to represent a fairly comprehensive account of the known cycads of the world. Future ^{research} ~~studies~~ may be expected to establish the identity of a number of species now regarded as doubtful and others that are still undiscovered. Such ^{investigations} ~~studies~~ cannot be carried on merely by an examination of fragmentary herbarium specimens, usually representing parts of leaves, and of dried cones and seeds. They must be based on extensive observations of living plants in the field. It

is hoped that the present monograph will be useful, both to
the general student who wishes to become familiar with the
known species of cycads, and to the investigator who will
have an opportunity of making additional contributions to
our knowledge of this ancient and interesting family of
plants.

University of California

Arthur W. Haupt

Los Angeles 24, Calif.

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*it is an order
and a family
title is required*

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