

INTRODUCTION

The first volume of this series was published as Monograph 8 of the National Institute of Science and Technology in Manila, the second as Supplement 5 of *Blumea*. Originally I intended to publish the third volume as another supplement of *Blumea*, but following the advice of the Director of the Rijksherbarium Dr. C. Kalkman, I decided to issue it separately. After this chequered history the series will hopefully be continued as an irregular publication of the Rijksherbarium.

It is a pleasure to see that already in this early stage P.P.A. has induced thought and has been made use of, e.g. by Thorne (1972)¹.

Volume 2 followed three years after the issue of the first volume. This was mainly caused by the fact that I could spend a full year on the compilation of maps for volume 2.

The completion of the present volume took more time than foreseen. One of the reasons for the rather slow progress is that the 'easy' taxa have been exhausted. Although a speedy progress of the project is desirable, this should never be at the expense of quality.

Although in the compilation of maps utmost accuracy has been attempted, some of the maps in the two foregoing volumes have appeared to be no longer correct. This was due in a few cases to overlooking of a publication. Thus I missed a record of *Mitrastemon* (P. P. A. 2, map 63) for Indo-China. Most of the changes, however, are caused by new records that have come to light after the publication of the maps, and by new taxonomic concepts, e.g. the genus *Distylium* (P. P. A. 2, map 73) was recently split into two genera. I have kept record of all changes and additions in the maps so far published, but have refrained from publishing a list of corrigenda and addenda in the present volume. I hope to do so in a later stage.

The use of maps to illustrate the distribution of taxa is becoming increasingly popular. It is much easier to visualize a distribution pattern by a map than by words. This is clearly demonstrated in Meusel et al. (1965)², in Hultén's *Flora of Alaska* (1968)³, *The Galapagos Flora* by Wiggins and Porter (1971)⁴ and St. John's revision of *Cyrtandra* in Oahu (1966)⁵. This explains the extent of the supplementary bibliography.

One might question the use of a continuation of this bibliography since the appearance of that great effort 'Index Holmensis' edited by Dr. H. Tralau in Stockholm⁶. This project aims at compiling an index of all distribution maps of vascular plants that have

¹ R. F. Thorne, Major disjunctions in the geographic ranges of seed plants, *Quart. Rev. Biol.* 47 (1972) 365-411.

² H. Meusel, E. Jäger & E. Weinert, *Vergleichende Chorologie der Zentraleuropäischen Flora*, G. Fischer Verlag, 1965, Jena.

³ E. Hultén, *Flora of Alaska and neighbouring Territories*, Stanford University Press, 1968.

⁴ I. L. Wiggins & D. M. Porter, *Flora of the Galapagos Islands*, Stanford University Press, 1971.

⁵ H. St. John, *Monograph of Cyrtandra on Oahu, Hawaiian Islands*, Bern. P. Bish. Mus. Bull. 229, 1966.

⁶ H. Tralau, *Index Holmensis* (1969 onwards, 3 volumes have appeared so far).

ever been published. I think the limited bibliography in *Pacific Plant Areas* should be continued. In the first place the *Index Holmensis* is far from finished, whereas the *P. P. A.* index is complete and only needs regular supplementation. Moreover a limited index dealing only with Phanerogams and only of Malesia and the Pacific makes it easier to consult by those interested in *Pacific Phanerogam botany*.

The choice of maps for inclusion in the bibliography had to be rather strict. As explained in the introduction of volume 1 only taxa occurring in the Pacific basin proper (incl. Malesia) are taken up, besides those that show transpacific links, but not actually entering it: the amphipacific taxa. Thus from Hultén's maps in the *Flora of Alaska* only a few have been selected.

It could be questioned if the publication of new maps in *Pacific Plant Areas* is still justified after the publication of the list of Pacific plant genera in '*Plant Geography of the Pacific*' (Van Balgooy, 1971)⁷. I think it is, since in the first place, *P. P. A.* intends to map also Cryptogam taxa and not only at genus level as in the list referred to above. Moreover, the maps in *P. P. A.* present a much more detailed picture of the distribution than could be achieved in the list of genera, which in addition are not accompanied with notes on habit, habitat, and dispersal.

Since the *Pacific Plant Areas* project is mainly concerned with distributions of taxa in the Pacific basin initially a base map was selected showing the Pacific proper. In those cases where a taxon occurred outside the area of the map this was shown by arrows. I considered this a disadvantage where widespread taxa were concerned. Thus other types of base maps are used in the present volume.

The use of symbols on the maps has perhaps been too briefly discussed in the previous volumes and can best be explained fully here.

Localities are indicated by dots (●), squares (■), triangles (▲) and other symbols, e.g. map 217. In those cases where the author has personally revised the taxon he may use filled symbols for localities of plants checked by himself and open symbols (○) for localities copied from (reliable) literature sources.

Crosses (+) represent localities not precisely indicated, e.g. on some of the maps of Kramer and Den Hartog.

If there are many localities together, mapping of each one individually may be senseless and instead hatching (///) (map 188) or shading (■) (map 192) is applied.

Sometimes a line has been used instead of shading e.g. for the distribution of *Eurya* (map 174) in continental Asia. Lines are used primarily to emphasize the limits of a distribution pattern and have not been inspired by any theory. If the limits are not exactly known or if a taxon is expected to be found beyond the present recorded area this is indicated by a broken line, e.g. map 222.

When reliable fossil records exist beyond the present range of the taxon, these localities have been indicated by daggers (†), e.g. map 223.

In a few cases oblique arrows (↗) have been used to indicate localities where the taxon is naturalized, e.g. map 197.

Localities that need confirmation are indicated by a question-mark (?), e.g. map 217.

The figures in some maps indicate the number of species in a certain region (e.g. map 238), or they refer to species mentioned in the accompanying text (e.g. map 237).

Maps not checked by either Mrs. Van Steenis or myself have been annotated as (n.v.): non vidi.

⁷ M. M. J. van Balgooy, *Plant geography of the Pacific as based on the distribution of Phanerogam genera*, *Blumea Suppl.* 6 (1971) 1—222.

ACKNOWLEDGEMENTS AND DEDICATION

This volume could not have been written without help from various sides.

I am particularly grateful for the privilege of finding Mrs. M. J. van Steenis-Kruseman willing to help in compiling the supplement bibliography of maps, an enormous task as can be seen from the size of the chapter concerned.

Mr. E. F. de Vogel took part in the project for five months. He speeded up the completion of this volume by contributing several maps and accompanying text. Various other persons have been helpful either by preparing maps and texts or by providing information. For this I am grateful to Miss C. L. F. Ichaso (Rio de Janeiro, Brasil), Miss M. Munoz S. (Santiago, Chile), the late Mrs. P. G. de Vries-Smit (Appelscha), and the following gentlemen: H. K. Atty Shaw (Kew, England), R. C. Carolin (Sydney, Australia), S. L. Everist (Brisbane, Australia), H. R. Fletcher (Edinburgh, Scotland), F. R. Fosberg (Washington DC, U.S.A.), D. Geerinck (Brussels, Belgium), R. Geesink (Leiden), P. S. Green (Kew, England), C. R. Gunn (Beltsville, U.S.A.), B. Hansen (Copenhagen, Denmark), C. den Hartog (Nijmegen, Netherlands), M. Jacobs (Leiden), T. M. Koyama (New York, U.S.A.), K. U. Kramer (Utrecht, Netherlands) W. E. Manning (Lewisburg, U.S.A.), R. van der Meijden (Leiden), the late L. S. Smith (Brisbane, Australia), D. W. H. Walton (Birmingham, England), P. Wardle (Christchurch, New Zealand), W. J. J. O. de Wilde (Leiden), J. H. Willis (Melbourne, Australia), J. J. Wurdack (Washington DC, U.S.A.).

The tedious task of typing of the manuscript was done by Miss M. van Zoelen and the drawings were prepared by Messrs H. J. T. Tammel and C. L. Marks. Printing of the book was made possible by a grant from the Netherlands Organization for the Advancement of Pure Research (Z.W.O.), for which I am extremely grateful.

It is a pleasure to dedicate this volume to the former editor of *Pacific Plant Areas*, Dr. C. G. G. J. van Steenis, who has done more than anybody else to stimulate the publication of this series and who has remained critically interested in the work after he had handed over the editorship to me.

Leiden, January 1974

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