

REVIEWS

WEBERLING, FOCKO — Die Infloreszenzen der Valerianaceen und ihre systematische Bedeutung. — Abh. Akad. Wiss. Lit. Mainz, math.-naturw. Kl., 1961, 5, 151—281. Mit 60 Abbildungen im Text und auf 29 Tafeln. Verlag Ak. Wiss. Lit. Mainz in Kommission bei Franz Steiner Verlag GMBH, Wiesbaden.

This study is a full-sounding prelude to the fundamental work on the morphology of inflorescences, which is being prepared by Prof. Dr. W. Troll of Mainz.

All inflorescences in Valerianaceae are understood as modifications of one basic form, the thyrs. It is gratifying to note that forms of inflorescences, described in systematical works as for instance 1) capitate or interruptedly spicate (*Plectritis*), 2) compound dichasium, dichotomous throughout (cymoid *Valeriana* spp.), or dichotomously branched inflorescence (*Valerianella*), 3) 'rispig bis fast trugdoldig' (*Phuodendron*), in reality all are variations on one theme, the decussate mono-, to pleiothyrs, i. e. a simple to compound inflorescence with a racemous primary axis and cymous lateral axes. The transformations take place first of all by a favoured development of lateral axes on definite heights of the main axis ('basi-mesotoner, akrotoner Förderungssinn') and secondly by the number of flowers developing and the more or less pronounced tendency to form monochasia. Moreover, different forms such as loose panicles, umbels, glomerules, heads and even nearly simple racemes (*Aretiastrum*), originate by extension or reduction of axes of some or all orders.

A chief character of valerianaceous inflorescences is the apical forking of the primary axis into two (decussate) secondary axes, no trace of a terminal flower being present. Though the growing apex becomes entirely consumed by these apical axes (Philipson), Weberling considers this forking pseudodichotomous, because 1) the axes are subtended by bracts and 2) because in *Valerianella* and *Fedia* the secondary, etc., axes have central terminal flowers neither, whereas on the more distal axes these flowers have not been suppressed. Regarding the two last-mentioned genera it is furthermore postulated that, by a strict acrotony, mostly only the two apical secondary axes get developed. Consequently, a compound dichasial inflorescence results, chiefly without terminal flowers, which by Troll has been named a cymoid.

For the connoisseurs of inflorescence morphology a chapter is there, in which the thyrsi of Valerianaceae are fitted in the general types as conceived by Troll. They appear to belong to the monotelic type, but by the failure of terminal flowers and the specialization of certain partial inflorescences, they show strong tendencies to the contrasting polytelic type.

A systematic evaluation using inflorescences characters is of prime importance, since when studying these structures, their place in the growing mode of the entire plant with its possible modifications must be taken into consideration as, in fact, is consistently done by Weberling. The author rightly points out that thus is put into words what is commonly called 'habit'. The general outcome is that every genus can be characterized by a special form of thyrs, except *Valeriana*, in which genus the same forms may be used to distinguish between sections.

The work is amply and efficiently illustrated and rich in interesting morphological details.

W. A. VAN HEEL.

CATALOGUE OF BOTANICAL BOOKS IN THE COLLECTION OF RACHEL McMASTERS MILLER HUNT — Volume I: Printed Books 1477—1700, compiled by Jane Quinby. Pittsburgh, Penn. 1958, lxxxiv + 517 pp. + 25 pl. — Volume II, part I: Introduction to Printed Books 1701—1800, compiled by Allan Stevenson. Pittsburgh, Penn. 1961, ccxlv pp. + 1 pl. — Volume II, part II: Printed Books 1701—1800, compiled by Allan Stevenson. Pittsburgh, Penn. 1961, ix + 655 p. The edition was privately printed, and limited to 750 copies, which are not for sale, but are distributed by the Bailey Hortorium, Ithaca, N. Y., U. S. A., to institutions and scholars whose collections and work are known to relate directly to the subject matter of this publication.

Bibliography can be studied in 3 ways: 1) as enumerative bibliography; this means the compilation of bibliographies as an aid to scientific work, 2) as descriptive bibliography; this means the skilful description of individual book copies as an aid to recognize

other copies, 3) as analytical bibliography; this means the gathering of historical information as an aid to descriptive and enumerative bibliography. For taxonomy the result has been so far several great enumerative bibliographies (Pritzel, Rehder, Merrill & Walker) and several smaller publications dealing with the results of analytical bibliography (many of them in the *Journal of the Society for the Bibliography of Natural History*, since 1936), but in descriptive bibliography not much had hitherto been accomplished. The books which are here being reviewed represent the first major work in this field. They embody the description of the Hunt Library, which has been brought together privately by Mrs. Rachel McMasters Miller Hunt, and recently was presented to the Carnegie Institute of Technology in Pittsburgh, Penn., U. S. A. Besides being likely to rank as the finest collection of botanical prints in the New World, the Hunt Library is intended to become a centre of bibliographic research, under the directorship of Dr. G. H. M. Lawrence.

Volume I contains a preface by Mrs. Hunt, and four brief essays: Botany from 800 to 1700 A.D., by H. W. Rickett; Medical Aspects of Early Botanical Books, by J. F. Fulton; The Dawn Time of Modern Husbandry, by P. B. Sears; The Illustration of Early Botanical Works, by W. Blunt. The more important essay on Bibliographical Survey, by Margaret B. Stillwell, deals with the great early printing firms and their centres of activity in Europe. The Catalogue proper contains 402 items, chronologically arranged and completely described and annotated, besides 56 numbers of facsimile editions, translations, etc.

Volume II, part I contains a preface by Mrs. Hunt, and four essays: Eighteenth Century Botanical Prints in Color, by G. Dunthorne; Gardening Books of the Eighteenth Century, by J. S. L. Gilmour; Botanical Gardens and Botanical Literature in the Eighteenth Century, by W. T. Stearn; A Bibliographical Method for the Description of Botanical Books, by Allan Stevenson, with Appendixes of Common Paper and Type Sizes in the Eighteenth Century.

Highlights of the whole work so far published are the monumental essays by W. T. Stearn and by Allan Stevenson. "Botanical Gardens and Botanical Literature in the Eighteenth Century" is a comprehensive account of early botanic gardens and the printed works that originated from them. The immense significance these gardens have had for civilization in general and for botany in particular (a significance they have retained in the tropics) is explained through a survey of all important botanic gardens in Europe in the course of the 18th century. After a brief but significant reference to the richness of the 17th century legacy of ideas and discoveries, the main subjects discussed are: the Amsterdam and the Leyden Botanic Gardens, De Hartecamp, the gardens at Eltham, Uppsala, Chelsea, the introduction of American plants via Philadelphia and London, the Schönbrunn and Vienna gardens, the early history of Kew. All of these are dealt with in connection with one or more botanists of whom we name the Sherards, Philip Miller, Peter Collinson, Adanson, Curtis (of the *Botanical Magazine*), and Medicus.

Equally brilliant is Stevenson's essay, in which he explains not only the complicated considerations involved in the composition of a ten-point entry for each book (author and title, transcription of the title pages, collation of letterpress, list of press figures, collation of plates, paper, type, binding, references, notes), but also the fascination of his work and even the use of it.

Volume II, part II has obviously been enriched with the fruits of the experience gathered in the compilation of volume I. It is apparent that this volume has set a new standard in descriptive bibliography. In this field, several innovations are introduced, like the printing in red of what is red in the originals, the symbol [] or [] for a blank page, [^] for an unsigned, unpaginated leaf facing or associated with a plate, ⁺ for a plate in a MS. volume where the authority for the numbering is unknown or recent. Analytical bibliographers will consult the book in order to find clues and suggestions in the highly scholarly notes. This volume of the Catalogue contains the items 403 to 764, and facsimiles etc. 57 to 62, an Index to scientific names, and a General index.

To mention a few of the works described in the whole Catalogue: The Grete Herball, 1st ed. (1526); a herbal of Di Nobili (c. 1580), the second known copy, 2 plates reproduced; Hernandez, *Quatro Libros*, ed. De Recchi (1615); *Catalogus Plantarum* (1730) by the Society of Gardeners; Catesby, *The Natural History of Carolina* (1731—1743), and *Hortus Britannico-Americanus* (1763); Rumpf, *Herbarium Amboinense* (1741—1750) with extensive annotations; W. Curtis, *Flora Londinensis* (1777—1798); L'Héritier de Brutelle, *Stirpes novae aut minus cognitae* (1784—1785), and his mono-

graph on Cornus (1788); Aiton & Bauer, *Delineations of Exotick Plants* (1796—1803). That not only books on botany have been incorporated in the Catalogue, but also on gardening, can be perceived from the cover vignette, which depicts St. Fiacre, a 7th Century Irish nobleman, now patron saint of gardeners.

As a whole, the work is a splendid achievement of capital brains and capital finance. Not a single printing error interferes with the magnificent execution. The composition, in the Linotype Granjon letter, the presswork by the Anthoensen Press of Portland, Maine, and the handmade paper are second to none of the finest editions in Europe.

M. JACOBS.

GUNNAR SEIDENFADEN and TEM SMITINAND, *The Orchids of Thailand*. A preliminary List. — The Siam Society. Bangkok. 1959—1960. — To be published in 4 instalments, issued parts I and II. Part I: p. 1—98c, 1 sketch-map of Thailand, figs. 1—73, pl. I—II (8 col. photos). 1959. Price 20 Danish Crowns. Part II, 1: p. 99—184b, figs 75—150, pl. III—V (12 col. photos). 1959. Price 22 Danish Crowns. Part II, 2: p. 185—326a, figs 151—248, pl. VI—XIII (32 col. photos). 1960. Price 40 Danish Crowns.

Very little information is available on the Orchid Flora of Thailand. There are F. N. Williams's list on Thai Orchids, and occasional short papers on this topic, but a more or less exhaustive taxonomic survey does not exist, and even the present paper should not be considered a real Orchid Flora of Thailand, as was indeed definitely expressed by the authors. However, "*The Orchids of Thailand*", is certainly not "A preliminary list" only, as the sub-heading would suggest, but is a rich source of all kind of information. No generic and specific descriptions are presented, but to each genus a key to the species and in some cases also a key to the sections is added. Counterbalancing the omission of diagnoses a very large number (248) of figures (habit, floral analyses) and 13 plates, comprising 52 beautiful coloured photos, is given. The care of nomenclature and references is on the whole not too scanty, though the basionym is always and the synonyms are mostly omitted. The localities in Thailand and the geographical distributions are given in full detail. Much care is also spent on critical notes. The genera taken up are practically the same as those familiar to Malaysia, but the bulk of the species is apparently different. The basis for the present paper is a few thousand specimens of orchids collected by the authors in different parts of Thailand, amplified with data from literature, mostly identified with the help of Mr. V. S. Summerhayes, Kew. The "Preliminary list" will finally contain about 750 native species, inclusive of quite a number of unnamed ones which are nevertheless incorporated with the provision of critical notes and illustrations. "*The Orchids of Thailand*" surely is a welcome addition to tropical Asiatic taxonomy and it is to be hoped that the two completing instalments will be issued at an early date.

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