

## BOOK REVIEWS

C. A. BACKER and R. C. BAKHUIZEN VAN DEN BRINK Jr., *Flora of Java* (Spermatophytes only), vol. I, Gymnospermae, families 1-7, Angiospermae, families 8-110. N.V. Noordhoff-Groningen, the Netherlands, 1963. XXIII. 648 pp. Price f 59,50.

The publication of *Flora of Java* (vol. I) is an event of first importance in the progress of scientific botany in Indonesia. Java, by far the most densely populated island of Indonesia, now receives a full-sized adequate flora. This first volume (of two) contains about 670 pages, closely printed but easily readable. It is very well printed and the publishers are to be congratulated for the production of this well-bound large book. The *Flora* is also a most convincing testimony of the devoted research of a life-time.

The *Flora of Java* received the financial support of the Netherlands Organisation for the Advancement of Pure Research and was prepared under the auspices of the Rijksherbarium (National Herbarium) at Leyden. These "auspices" allude first of all to Dr. R. C. Bakhuizen van den Brink Jr., who spent years in translating while checking nomenclatorial matters, apart from elaborating some taxa. Dr. Bakhuizen took a major part in establishing the dignified harmony in the general lay-out of the text. The specific descriptions are all of nearly the same length: 8 printed lines.

This is a fine achievement, resting on an age-old Linnean idealistic concept. It requires the hand and judgment of the experienced phytographer, a sound knowledge, and an ability to discard detail while delimiting the species by a balanced minimum of essentials. The co-operation between Backer and Bakhuizen resulted in this phytographical and taxonomical work of eminence.

Backer's portrait (heading the letterpress and the only illustration) is accompanied by a preface by prof. dr. H. J. Lam. This preface, dated Jan. 1962, is completed by a postscript, undated, placed 13 pages farther in the book, for no obvious reason as it might have been added on the final page of the preface without any typographical difficulty.

A biography and bibliography (by Bakhuizen van den Brink) follow.

Earlier attempts to describe and classify at least a considerable part of the Javan phanerogamic flora in particular, are numerous. The names of J. Bontius, C. P. Thunberg, R. Brown and J. J. Bennett, C. L. Blume, F. A. W. Miquel, W. H. de Vriese, J. H. Hasskarl, S. H. Koorders, Th. Valeton, and J. J. Smith are remembered. They published various contributions, very different in size and quality. An evaluation of their work on the Javan flora is found in *Flora Malesiana*, ser. I, vol. 4 (2), 1949, pp. LXXI-CLXI, *passim*. Only this time a *Flora of Java*, entirely worthy of that name, was brought to completion.

Although Lam in his preface to the *Flora of Java* noted "on looking through the list of (Backer's) writings a certain want of planning and foresight", one may be more impressed by the evidence to the contrary in the same list of a most determined and patient progress towards a *Flora of Java*. Backer wrote on a wide variety of botanical subjects but practically all related to the Javan flora and it

is to be observed that his first major publication is a Flora of Batavia (1907), followed in 1908 by a Precursory to a Flora of Java for Schools. In 1911 appeared a Schoolflora of Java. These attempts, admittedly, were never brought to a finish, the scope of the planned work was too large to be completed by one man. However, the quality of these first steps, and the amount of research executed, established Backer as the acknowledged specialist for the taxonomy of the Javan flora. The beginnings of 1907–1911 paved the way to the ultimate goal, the Flora of Java, more than half a century later. In the meantime he published dozens of larger and smaller studies on Javan plants.

The outbreak of war in the Netherlands (1940) stressed the necessity to safeguard the outcome of so many years of a devoted study of the Java flora. A privately stencilled edition of a “Beknopte Flora van Java” (Nooduitgave) — Concise Flora of Java (Emergency Edition) — began to appear by instalments in 1940. Backer was fortunate in receiving the help of nearly a dozen experienced taxonomists, who elaborated some taxa for him according to their specialist knowledge. This “first” edition (in Dutch) was completed in 1961. Dr. Bakhuizen, years before, had started translating into English and in the meanwhile the nomenclature was revised when advisable.

The present Flora of Java is the translated and printed, revised and augmented edition of the stencilled flora, with the exception of the Ferns and Fern Allies. It will now contain about 6100 species, arranged in 2067 genera and 238 families. The families are consecutively numbered and their sequence is in agreement with Hutchinson’s system. The families and genera are described as occurring in Java.

The geographic area covered includes Java, Madura, Bawaen and Karimondjawa arch., and some small coastal islets (the Kangean and Krakatoa arch. are excluded). The genera are keyed out; there is a general key to the families. The specific descriptions are merged with the key to the species. This unusual method demands more time when naming a specimen than a dichotomous key introducing the series of separately described species, as is common practice nowadays. On the other hand, the user is compelled by Backer’s method to examine his specimen more thoroughly in order to make progress towards the discovery of its name, and his ultimate conclusion will be better founded.

The period of flowering and general occurrence (ecology) on Java are added to the species description. Frequently references point to selected literature and well-known synonyms (if any) are cited.

The geographical data are not quite satisfactory, because while of species indigenous in Java the distribution within the area of the Flora is outlined, and of introduced species the country of origin mentioned, the Flora keeps silent of the total area of distribution if a Javan species occurs outside Java. An example is *Melaleuca leucadendron* L. Its area in and near Java is duly reported but nothing suggests its wide occurrence in Malaysia.

On the other hand, a close ally, *Callistemon lanceolatus*, SWEET is correctly cited as a cultivated ornamental on Java, introduced from Australia. If it would have been possible to indicate the general area of distribution of all non-endemics on Java in conjunction with the data relating to Java actually given, the geographical information of Javan species would have become decidedly more satisfactory.

However this may be, Backer and Bakhuizen van den Brink’s Flora of Java is an outstanding work. The first author will be gratefully remembered by this *monumentum aere perennius*, an example and inspiration for generations of taxonomists;

the second author earned the lasting merit of skilfully having executed a delicate task of many years.

All botanists who by their profession are in touch with the Javan flora will greatly profit and the Indonesian people received a most valuable tool to promote peaceful prosperity.

H. D. C. DE WIT

F. H. PERRING, P. D. SELL and S. M. WALTERS, *A Flora of Cambridgeshire*, with a section on Bryophyta by H. L. K. WHITEHOUSE, Cambridge (Great Britain), published in association with the Cambridge Natural History Society at the University Press, 1964, xvi and 366 pages, 8 plates, 1 fold-out map, 30 shilling net. Date of publication: 4 June 1964.

The publication of this book is proof that the old and rich British tradition of publishing county-floras is still alive and, in the most recent example, is being kept up-to-date by following present-day developments in taxonomy, ecology and plant geography. The introduction to this new flora of Cambridgeshire correctly begins with the assertion that "for three hundred years Cambridgeshire has been one of the best known counties, botanically, in the British Isles". We may even add "or in the world", because there is hardly any other comparable area that has been described in such detail botanically by such a long and continuous series of local floras as Cambridgeshire. The sixteenth century Cambridge physician and botanist William Turner, the English pioneer of scientific botany, was the first to publish records of Cambridgeshire plants, the great John Ray published his *Catalogus plantarum circa Cantabrigiam nascentium* in 1660, and since then there has been an uninterrupted series of publications on the flora of the county. The present flora is mainly the outcome of the activities of a group of Cambridge botanists who have become well known for their work on the Botanical Society of the British Isles' Maps Scheme, a scheme in which amateurs and professional botanists co-operated very closely. The present book summarizes the knowledge about the Cambridgeshire flora by listing all species of vascular plants (including the bryophytes, certainly a very commendable addition) with notes on their local and general distribution, giving in addition the first known record for the county, synonymy, taxonomic notes on critical infraspecific taxa, and keys to the species of some of the difficult genera. In addition, the Introduction provides a short history of the study of the flora, notes on topography, climate, geological areas and their types of vegetation, with a specially interesting account of the Fens. The Flora deviates from most modern floras treating larger areas by not giving descriptions of the species—except in the keys to some of the critical genera—and by not providing general keys to all species. The book has to be used in combination with Clapham, Tutin and Warburg's *Flora of the British Isles* and it is understandable that with this standard flora now generally available, duplication of descriptions and keys could be avoided. The nomenclature follows in general J. E. Dandy's *List of British Vascular Plants* (1958) and is therefore understandably correct. One or two changes that have become known since 1958 might have been incorporated, however, such as the legitimate *Dactylorhiza* Nevski (1937) for *Dactylorchis* (Klinge) Vermeulen (1947) and *Juncus subuliflorus* Drejer for the species that is usually but erroneously called *Juncus conglomeratus* L. The taxonomic treatment also follows in general that of

Dandy, for instance in the acceptance of his concept of *Agropyron*. The ecological notes are a bit short: a book like this, coming from the country of Tansley, would have provided an excellent opportunity for more detailed and critical notes on the ecology of the species and infraspecific taxa. In one respect this county flora does not live up to the good tradition of several of its predecessors in giving biographical data about the botanists and collectors mentioned in the flora, for instance those which first recorded certain species for the region.

The book is well-produced and illustrated by eight black and white photographs. As a recent compendium of the knowledge of a region which is botanically so well-known that it might seem to become uninteresting, it shows how and why such accounts are really of great interest, mainly because taxonomy moves with the times and the items of interest for to-day's botanists are different from those of our predecessors. A tradition kept alive in this way is well worth preserving.

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