

REVIEW

W.L. WAGNER, D.R. HERBST & S.H. SOHMER (Eds.): *Manual of the Flowering Plants of Hawai'i*, 2 Volumes. University of Hawaii Press; Bishop Museum Press, Honolulu, 1990, XVIII + 1853 pp., 245 plates. Bound. Price US\$ 85.00. ISBN 0-8248-1152-6.

Hawai'i is the most isolated major island group in the world, built up by and of volcanos and accordingly unstable but with a remarkable diversity of ecological niches. This has led to a flora on the one hand disharmonic (only three native orchids and one native genus of palms; no Gymnosperms nor primitive flowering plant families), on the other hand one of the worlds finest and most interesting ones. Though the island group is nearest to North America, most of the native flora is of Malesian affinity. In a sense, the flora is poor; one or a few colonist(s) often gave rise to a number of more or less closely related endemic species, some of which often relatively young polymorphic ones.

The last complete treatment of the Hawaiian flora was Hillebrand's 'Flora of the Hawaiian Islands' (1888). Since then, much work has been done, with different authors often based upon a very different species concept. This led to often strongly varying numbers of endemic species. Whereas Hillebrand accepted 705 native species, recent estimates varied between 1394 and 20,000–30,000 respectively! The authors of the present manual have tried to keep this number as low as possible; with their own words: "The main contribution of the Manual to Hawaiian botany is in providing a species concept that is probably more realistic, more functional, and more relevant to the understanding of this unique flora than anything available since the works of Hillebrand and Rock." The total number of species here accepted is 1817; 956 of these are considered to be native and of these 89% are endemic. The number of genera accepted is 216, 15% of which are still endemic, but several of these are expected to be merged in the future with extra-Hawaiian genera. A good example of the treatment of endemic variation is to be found under *Cyrtandra* (Gesneriaceae) with 53 species accepted.

Work on the present Manual started in 1983 and was completed by the end of 1987, a remarkable achievement. Notwithstanding the contributions by many specialists, as a matter of fact no complete revision could be made in such a short time. Still, the work makes a very good and balanced impression. What one may expect from this flora is summarized by the editors as follows: "It contains keys and descriptions of the families, genera, and species of both native and naturalized plants occurring in Hawai'i. ... Each species treated is provided with its accepted scientific name, Hawaiian and English common names, list of nomenclatural and taxonomic synonyms, citations of relevant literature, chromosome numbers, statement of geographical and ecological ranges, and notes on taxonomic problems or other relevant information. Ethnobotanical information is also provided for many species." More than half the species are illustrated by simple but clear line drawings. The flora proper is preceded by chapters on Geology, Climate, and Vegetation, and finished up by a glossary and a fairly extensive survey of the literature cited.

Of course, even the best work is not perfect, and so I may conclude with some critical remarks. The so-called synoptic keys given with many groups actually are natural keys in a normal analytical form; they give an impression of the systematics of the group concerned but will hardly ever be useful as a key. In the 'Synoptical' key to the orders and families of the Asteridae (p. 144), lead 24b, the anthers of the Goodeniaceae are said to be extrorse; actually, they are introrse as rightly described in the family description (p. 782). An incomprehensible slip of the pen may be p. 149 lead 6a, where the Euphorbiaceae are characterized by 'watery sap', contrary to 'milky sap' in 6b. But as a whole, the keys seem to work well.

Summarizing, an excellent work, well printed and surprisingly cheap. Our congratulations!

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