of the same species in the same woods. The power of coincidence should never be under-estimated!

References

- ARDITTI, J. (1991). Fundamentals of Orchid Biology. New York: Wiley.
- BROOKS, D. R. & McLENNAN, D. (1991). *Phylogeny, Ecology, and Behavior*. Chicago: Chicago University Press.
- DARWIN, C. (1877). The Various Contrivances by which Orchids are Fertilised by Insects. Ed. 2. London: Murray.
- DRESSLER, R. L. (1993). *Phylogeny and Classification of the Orchid Family*. Cambridge: Cambridge University Press.
- FUNK, V. A. & BROOKS, D. (1990). *Phylogenetic Systematics as the Basis of Comparative Biology* (Smithsonian Contributions to Botany 73). Washington DC: Smithsonian Institution.
- GOULD, S. J. (1977). Ontogeny and Phylogeny. Cambridge, Mass.: Belknap Press. RASMUSSEN, H. N. & WHIGHAM, D. (1993). Seed ecology of dust seeds in situ: a new study technique and its application in terrestrial orchids. Amer. J. Bot. 80: 1374–1378.

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Illustrations on the Flora of the Palni Hills, South India. K. M. Matthew. Madras: C.L.S. Press. 1996. xlvi+979pp with 950 black & white plates. ISBN 81 900539 1 4. £55.00 (hardback).

With the publication of *Illustrations on the Flora of the Palni Hills*, Father Matthew presents the second stage of his mission to spread botanical knowledge among the people of the Indian Peninsula. The first stage of this project, which was published as the *Flora of the Tamilnadu Carnatic*, covered the Tamilnadu plains and southern hill ranges, and the *Flora of the Palni Hills* can be seen as the montane counterpart to that work, extending the coverage to include the entire Indian Peninsula with the exception of the Western Ghats.

The motto of the project is 'Lab to land' and the intention is that the benefits of the work should be felt by the people of the region. Thus, whilst the basic research for the Floras has proceeded at the Rapinat Herbarium, the products of that work have been disseminated to students and villagers at the Anglade Institute of Natural History, where about 35,000 people have attended free three-day environmental awareness courses since 1984. The cost of most tropical Floras places them well beyond the reach of ordinary people, and Father Matthew has maintained a policy of pricing them at reduced rates to increase their circulation. At £55 the present volume may not appear especially cheap, but a huge amount of labour has gone into its production and if it were to be published in the UK from illustrations drawn here it could easily cost ten times the price.

At an early point in the project the value of illustrations, particularly to nonspecialists, became apparent, and the ultimate goal is that over 90% of the project area's 3015 species should be covered. To date some 1716 species have been covered in the Flora of Tamilnadu Carnatic, with this volume of illustrations including 914 of the species found only at higher altitudes. The intention is that the written part of the Flora of the Palni Hills should include another 250 plates and it seems a shame that having come this far they do not aim to cover the 135 remaining species to produce a fully illustrated Flora. The introduced species of Indian hill stations have long been a source of confusion, which this volume aims to remedy by emphasizing aliens alongside the native species. Every species is depicted in a full page, except for the Gymnosperms, some of which are given two pages. The drawings are all original and depict detailed floral dissections in up to 20 separate illustrations so that related species are readily comparable. Though much of the detail might be considered irrelevant by the monographer, the target audience is the lay reader who is unlikely to be aware of the critical characters in a particular group so this level of detail is certainly not superfluous. The standard of the illustrations is generally high, though for some species there is a little loss of clarity due to excessive shading. Random comparisons with a few illustrations in Wight's Icones Plantarum Indiae-Orientalis confirm the accuracy and quality of the new drawings. Edinburgh specialists in the Leguminosae, Graminae, Cyperaceae, Scrophulariaceae and Umbelliferae have all commented on the high standard of the drawings with only minor criticisms. I noted some slight inaccuracy in the depiction of *Polygala arillata*, in the family in which I have most experience, but such quibbles should be considered in the context of the huge number of species covered. I was pleased to note that the Preface and Introduction are numbered in a separate sequence from the illustrations so that the plate number and page number always coincide, making it easier to find a particular species. A spin-off from the main project is an extensive programme of fieldwork to increase knowledge of the flora. This has resulted in about 50,000 new collections, and has laid the foundations for work on the conservation of the rarer

It is refreshing to see a project like this initiated in the tropics and carried through with such determination. It is, however, somewhat chastening to compare its progress with the slow rates of completion of the large tropical Floras based in developed countries. It is to be hoped that it will act as a spur to systematic botany both in India and throughout the tropics.

Reference

WIGHT, R. (1838-1853). Icones Plantarum Indiae-Orientalis, 1-6, Madras.

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