The rest of the guide is hard to fault. Its second section is an absolute joy, and gives useful hints on the identification of the most easily identifiable species by listing together those that have similar striking characters, such as a specific niche, habit, bark or coloured exudate. This section spans 44 pages and is beautifully illustrated, by both line drawings and abundant high-quality colour photographs. This part of the guide reminds one of Al Gentry's rather quirky identification aids, and its use is fun, facilitating the quick identification of a plant, whilst acting as an important educational tool.

The final section of the guide provides keys and taxonomic treatments, including a page on how to use the keys, something that is often omitted and is very valuable for first-time users. The authors have attempted to use only characters that are visible to the naked eye or with a 10× hand lens. However, the keys are based primarily on fertile material, sadly so frequently unavailable to the field worker. The keys are indented and dichotomous, and are clearly written and easily understandable. Likewise, the taxonomic treatments are of high quality. Where complex terminology is used, the annotated glossary at the back of the book quickly removes doubt as to the meaning of a word. There are abundant colour plates and line drawings throughout the book, reinforcing the keys and treatments and thereby further assisting the user. They also help to lighten the tone by bringing the flora to life and illustrating the remarkable variation and beauty of the plants of this region. The plants practically wink at you from the pages and whilst viewing the book one is immediately tempted to pack one's plant press, set forth to French Guiana and identify.

This is a beautiful quality guide, one that is easily usable in the field whilst acting as an important reference document. It sets out to provide the necessary tools for people to identify the vascular plants of central French Guiana, and does just that. Hopefully it will stimulate the appearance of many more such guides for other regions of South America.

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**Orchids of Samoa.** Phillip J. Cribb & W. Arthur Whistler. Royal Botanic Gardens Kew. 1996. vii + 141pp. ISBN 1 900347 01 6. £15.00 (softback).

Perhaps best known for once memorably defeating the Welsh national rugby team, the Samoan Islands are also international players in the orchid league. This self-contained overview of the orchids of Samoa exhibits the quality of production and classical taxonomy that one would expect from the Royal Botanic Gardens Kew.

The bulk of the book comprises formal descriptions of, plus artificial keys and an index to, 101 species of 47 genera, building on the earlier work of such luminaries as Reichenbach, Schlechter and Rechinger. The text is aided by 27 sets of line drawings and 81 colour photographs, most flash-lit and of varying quality, arranged

in 24 plates. Obvious errors are few (e.g. *Flicklingeria comata* of the text and cover becomes *Dendrobium comata* in the plates, perhaps reinforcing the iterated point that many of the genera are 'in urgent need of revision'). Many of the plants depicted bear small, modestly adorned flowers, though some have clear horticultural potential; in addition to the aforementioned *Flicklingeria*, several other members of the *Dendrobium* group in particular should be mentioned in aesthetic dispatches.

Scientific interest in the book is concentrated in the first two sections: four pages of conventional descriptions of general orchid morphology and, more importantly, 14 pages of background to the (bio)geography of the islands. Herein lies a splendid potential research project for a collaborative group of oceanic island biologists (cf. the Hawaiian compilation edited by Wagner & Funk, 1995). Samoa is a classic set of volcanic islands that are situated over an oceanic hot-spot, and therefore diminish in age westward from a maximum of 5 my. They reach 1800m in height, have an equable, relatively aseasonal climate that encourages rain-forest development, and are only moderately disturbed by Man. Thus, they are conducive to orchid colonization and diversification.

Not surprisingly, the orchids described in this book cover a wide range of sizes and shapes of both plant and flower, and of growth habit and habitat. The orchid flora includes the terete-leaved xeromorphic epiphyte *Schoenorchis micrantha*, the epiphytic *Taeniophyllum* species with photosynthesis restricted to their roots, and the terrestrial saprophyte *Didymoplexis micrandenia*. However, only 15 of the 101 species are endemic, and most of these have close, potentially conspecific relatives on nearby islands. Also, the number of orchid species varies according to area of the island rather than its age. Repeated immigration events seem likely.

Noting these observations, the authors advance the credible hypothesis that these lineages 'island-hopped' from New Guinea to Samoa via airborne seed, and that the main barrier to successful establishment of repeated attempted colonization events was probably the availability of compatible mycorrhizal fungi (though Rasmussen, 1995, which contains many relevant clues to this riddle, escapes citation). Fortunately, such fascinating hypotheses can now be tested by integrated phylogenetic studies (Wagner & Funk, 1995), and I hope that similar research will eventually be conducted in Samoa.

In the meantime, as a foundation to such evolutionary studies, we have been given an excellently produced volume. Compact, attractively formatted, amply illustrated, well printed on quality paper, with an excellent weatherproof cover and good value for money, it is a pleasure to own and use.

*References*

RASMUSSEN, H. N. (1995). *Terrestrial Orchids: From Seed to Mycotrophic Plant.* Cambridge: Cambridge University Press.

WAGNER, W. L. & FUNK, V. A. (1995). *Hawaiian Biogeography: Evolution on a Hot Spot Archipelago.* Washington DC: Smithsonian Institution Press.

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