

## Book Review

*Guide to the Forests of the British Solomon Islands*, by T. C. WHITMORE. British Solomon Islands Protectorate, Forest Record No. 2. Oxford University Press. 1966. i-xi, 1-208, endpaper maps, figs. 1-17. Price 40 shillings (U. K.).

The British Solomon Islands are not quite all of the Solomon Islands—Bougainville comes under the Australian Papua-New Guinea Territory—and they include for political reasons the Santa Cruz Group, islands which are neighbors and similar to the others although with some special characters. Thus, the islands covered by this book are, from north-west to south-east, Fauro, the Shortland Islands, Treasury Islands, Choiseul I., the New Georgia Group (chiefly Vella Lavella, Kolombangara, Rendova, New Georgia, and Vangunu), Santa Ysabel, the Russell Group, the Florida Islands (including Tulagi and Nggela), Malaita, Ulawa, San Cristobal, Bellona, and Rennell, together with many small islets and some atolls; and the Santa Cruz Group (Tinakula, Santa Cruz, Utupua, and Vanikoro).

For many years this area has been a botanical *terra incognita*, despite the advances made in our knowledge of certain families. Little if anything has ever been attempted as a general survey. H. B. Guppy<sup>(1)\*</sup> wrote knowingly of these islands in the 1880's and his work may be regarded as the starting point of Solomon Islands botany. Later there came some excellent work from the Austrian Karl Rechinger,<sup>(2)</sup> in the years between 1900 and 1912. Various species have been described by the Australian taxonomist C. T. White.<sup>(3)</sup> In America, A. C. Smith<sup>(4)</sup> included Solomon Islands plants in several of his papers in a series entitled 'Studies of Papuasian Plants'. F. R. Fosberg,<sup>(5)</sup> E. B. Copeland,<sup>(6)</sup> S. J. Record<sup>(7)</sup> E. D. Merrill and L. M. Perry,<sup>(8)</sup> Stone, and Stone and Lane<sup>(9)</sup> have written papers dealing with Solomon Islands plants in recent years, while a variety of authors have mentioned, often only very briefly, a few species from the Solomons, in earlier times. Unlike the case of New Guinea, the Solomons flora has received on the whole less attention than it deserves. Except for the large and well-preserved collections made by L. J. Brass and S. F. Kajewski,<sup>(10)</sup> even the basic collecting has been skimpy. Even so recently as 1957, when I was in the Solomons, very little collecting had been done since the 1930's, the heyday of Kajewski's explorations, and the only book of much use to the botanist was F. S. Walker's forestry manual,<sup>(11)</sup> written in 1948.

Fortunately we have available now in Dr. Whitmore's work an eminently useful book that marks the dawn of a new era in our knowledge of this fascinating part of Melanesia. There is more to be said: the B. S. I. P. Forest Department has accumulated several thousand specimens (many collected by Whitmore himself) and, with the leadership of men like Geoffrey Dennis, is continuing in this valuable task. Still further, the Royal Society of London recently sponsored a large biological expedition to the Solomons, with E. J. H. Corner leading the botanical party. Their collections will yield a very large amount of information.

\* Superscript numbers refer to notes at end of this review.

Perhaps rather soon we shall be able to say that the Solomons are a *terra bene cognita*.

Dr. Whitmore's book is designed for use by the forest department, hence it should be judged largely on its values as such. It is impossible, however, and indeed unnecessary to separate its botanical aspects. We have here enough to be of service to the forester and the academic botanist. In the author's own words, "...three things are attempted: firstly to provide full descriptions of the common big trees...[of the B. S. I. P.]; ...to describe for these species as far as they are known uses, total distribution, and notes on where they grow and how they regenerate; the second aim is to provide, via the list of names in the Kwara'ae language, a means of identifying all the woody plants and some others known to the Kwara'ae people which is all the common and many of the rarer species. ...that third objective is to bring together in one place the very scattered and scanty knowledge of the flora of the Solomon and Santa Cruz Islands in the form of a list of all species recorded from these islands."

On the whole, in these three goals the author has succeeded very well indeed. Later he states "it has been difficult to decide just what should go in" to the book, and that "the prime objective is to provide a guide for foresters"...The forester, I feel sure, will find that the book very largely meets the requirements. The taxonomist and biogeographer will find much of interest and value as well.

In his introduction, Dr. Whitmore briefly discusses the flora of Melanesia, the types of vegetation found in the Solomons, botanical pointers for users of the book, the native (Kwara'ae) names, and aspects of botanical nomenclature. Much of this is so simplified that not only foresters but laymen and administrators must have been kept in mind as well. In part II, the descriptions are analyzed in a section called "the Description of a Tree." This part is clearly written and stands as a model for those who wish to learn how to describe a tree in such a way that it can be identified and in addition can provide some useful forestry data. It seems to me that it would be an excellent idea if foresters and botanists chose to use the same type of descriptions, incorporating the same type of data. Obviously, bark and slash characters, and others dear to foresters, are of general taxonomic value as well, as Whitmore himself has shown.<sup>(12)</sup> True, the taxonomist is often confronted with a paltry herbarium specimen and cannot record data on bole, buttresses, color of sap, and so on; but, once known, they should be incorporated in the plant descriptions found in floras, as well as in the specialized forestry manuals.

On the other hand, it seems too bad to ignore or neglect the fundamental characters of flowers and fruits; and Dr. Whitmore's goal of providing "full descriptions" is not quite met in several cases. One may suggest a comparison of the description of *Teysmanniodendron ahernianum*, which is excellent and satisfactorily complete, with that of *Calophyllum cerasiferum*, which is very sparse and leaves out the floral and fruit characters.

The section on families, and especially on distinctive families and distinctive characters, is very well set forth and should prove very handy for the beginner.

Part III details the common big trees, which are already playing or may play a role in commercial timber operations. A very good general key is provided, and keys to species are found under each genus. The families and genera

mentioned are worth summarizing here: Anacardiaceae (*Buchanania*, *Camptosperma*); Apocynaceae (*Alstonia*); Araucariaceae (*Agathis*, found in Santa Cruz Group, but not in the Solomons); Burseraceae (*Canarium*, *Garuga*, *Haplolobus*); Chrysobalanaceae (*Parinari*, *Maranthes*); Combretaceae (*Terminalia*); Cunoniaceae (*Schizomeria*); Dilleniaceae (*Dillenia*); Elaeocarpaceae (*Elaeocarpus*); Erythroxylaceae (*Erythroxylum*); Euphorbiaceae (*Endospermum*, *Neoscortechinia*, *Pimeleodendron*); Flacourtiaceae (*Trichadenia*); Gonystylaceae (*Gonystylus*); Guttiferae (*Calophyllum*); Leguminosae (*Intsia*, *Albizia*, *Archidendron*, *Pterocarpus*); Meliaceae (*Amoora*, *Dysoxylum*); Myrtaceae (*Eugenia*); Polygalaceae (*Xanthophyllum*); Rosaceae (*Prunus*); Rubiaceae (*Mastixiodendron*); Sapindaceae (*Ganophyllum*, *Pometia*, *Tristiropsis*); Sapotaceae (*Burckella*, *Chelonespermum*, *Chrysophyllum*, *Manilkara*, *Palaquium*, *Planchonella*, *Pouteria*); Ulmaceae (*Celtis*); Verbenaceae (*Gmelina*, *Teysmanniodendron*, *Vitex*).

From this summary it can be seen that the "big trees" in the Solomons come in only 24 families and total only 44 genera. In many cases only one species in a genus is included; in others, e.g. *Calophyllum*, *Eugenia*, *Terminalia*, *Planchonella*, half a dozen or more may be included. However, these are not really the correct totals, because more than just a few species appear to have been left out in this section. Surely *Barringtonia asiatica* qualifies as a big tree? As do several species of *Ficus*, *Parartocarpus*, *Artocarpus*, *Podocarpus*, *Dacrydium*, *Heritiera*, and *Casuarina*. Surely also some *Litsea* species? Presumably these were omitted for reasons peculiar to forestry. That also would explain, perhaps, the omission of palms and pandans.

Part IV is titled "The Check Lists." The first list is of the known Kwara'ae plant names, whether of trees or not. Notes on pronunciation and spelling are given. In general, orthography follows English standards of spelling phonemes, and no diacritical marks are used except the glottal stop, indicated by an apostrophe. Since Kwara'ae is a sort of *lingua franca* in the Solomons, it is useful; there are, however, a fair number of other languages spoken in the Solomons, and eventually it will be valuable to have similar lists for some of them. In general the list seems to be very well drawn up and is certain to be extremely useful, since many natives know their plants accurately.

The second check list shows all plants ever recorded from the Solomons. We have here a basic document of prime value to botanists and biogeographers. The prologue states that "new species" are printed in boldface type. This is incorrect; what seems to be the case is that all species based on Solomon Islands collections, hence presumably endemic, are printed in bold type. I did not make a careful count, but about 2000 species are listed. On the whole, the Solomons flora can be seen to consist heavily of Malaysian—especially East Malaysia and New Guinea—species. On the other hand, there are some undeniably extraneous elements representing the "Pacific" flora, e.g. *Metrosideros*. About 22-25 percent appear to be endemic species.

There are, inevitably, a few errors. For example, *Melicope grandifolia* Burt, is listed, but this has been renamed and is now called *M. burttiana* Stone. New combinations are made, but not indicated (as in *Eugenia*).

Misspellings are very few; on p. 169, under *Bidens biternata*, E. E. Sherff's name is spelled Scherff; on p. 186, *Horsfieldia palawensis* (not *palewensis*); *Humata gaimasdiana* should be *gaimardiana*; on p. 190, *Mammea odoratus* should be *odorata*;

on p. 193, *Ocinum* should be *Ocimum*; on p. 195, *Peekiliopanax* should be *Peekeliopanax*; and *Pentaspodon* should be *Pentaspadon*; on p. 196, *Pipturus chamissonianus* should be *chamissonianus*; on p. 198, under *Prosopis*, the full author-citation should be "(Guillemin) Bret."; on p. 200, *Jeswiet* (not *Jeswict*); on p. 203, under *Terminalia kajewskii*, Excell should be Exell; and there may be a few others. These are all rather trivial.

The list of references is curiously incomplete; it seems to emphasize longer works, but some short articles are included also; yet, strangely, many significant papers are omitted. They are cited under species in the check list, however. Also, I cannot see why many collections are cited, but by no means all: for example 4 specimens are cited as representing *Saurauia rosea*, but none are cited under *S. floribunda*. The inconsistency is jarring, but not of undue importance.

Whitmore remarks on the interesting compression of vegetation-altitudinal zones with respect to continental areas; it is as if the "middle forest zone" had dropped out, leaving the montane zone contiguous with the lowland zone, and often at a much lower elevation. The same phenomenon may be seen in such islands as Ponape.<sup>(13)</sup> Another interesting point is the absence of *Eucalyptus*. A final point is the unusual flora of the ultrabasic rocks.

Dr. Whitmore has produced a very useful and, I think, a very valuable book. As he says, it is a beginning, not an end. Those of us concerned with insular Pacific vegetation, as well as the foresters, the persons connected with the forest industries in the Solomons, and the B. S. I. P. government, all owe him a debt of gratitude. We hope he will have more to say about these fascinating islands in future papers and books.

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