

## Book Review

**Forests and Trees of the Central Highlands of Xieng Khouang, Lao P.D.R. A field guide;** by Lutz Lehmann, Martin Greijmans, and David Shenman. DANIDA, Danish International Development Agency; Vientiane, Lao P.D.R.; June 2003, 246 pages, free; email: ltsp1@laotel.com

When I first heard about the production of this book I was anticipating a most needed contribution to the Lao flora as well as many interesting specimens to verify. I have been greatly disappointed in both aspects. Even though the three authors are proclaimed to have “considerable knowledge” of the forests of Xieng Khouang Province, this book is abundant evidence proving that such an accolade is quite incorrect. It is another example where putative “experts”, none of whom are botanists, attempt to compile technical information without proper scientific capabilities. Since the book lacks botanical credibility, its value is minimal. It is replete with misconceptions, errors, and is basically poorly written. The entire project was obviously illconceived since it was based on an initial collection of photos, random information provided by the authors, and a patronizing sponsor more concerned with diplomacy than botanical professionalism.

The introductory parts succinctly describe the topography, climate, soils, forests and people, and some basic population, agricultural and economic data for the province. Xieng Khouang Province is incorrectly noted to be in the temperate zone, but at *c.* 19 degrees N latitude it is surely a tropical area, albeit at 900-2000 m elevation. The authors note that the region has 9 basic kinds of forest, the first 7 being primary. These include: pine savanna and pine, mixed conifer and broadleaf, moist evergreen, dry evergreen hill, riverine, swamp, dry deciduous forest on limestone, moist dense secondary, and dry open secondary forests. A tenth category of transitional forest facies is also noted. Each of these categories is

represented by a different colour, which is depicted as coloured leaves after each species description. There are also some habitat photos for these forest types. The use of the terms “dry” and “moist” is inappropriate since they are not only misleading, but inaccurate. Seasonality, elevation, and the degree of disturbance should be emphasized, not merely trees, in the vegetational analyses. Dry deciduous forest on limestone is certainly not a legitimate category. The tree species noted to represent this kind of forest are mostly deciduous and all members of deciduous forests commonly found on other bedrocks. The unique factor of limestone outcrops and hills is the epilithic flora. As with other botanical amateurs, the authors have based their vegetation categories solely on trees – shrubs, climbers, vines, treelets, herbs and epiphytes all being neglected. The two types of secondary growth merely represent stages in forest regeneration, moist, dense facies being older than dry, open areas.

The field guide has 96 species which are illustrated, each with one page of marginally informative and often poorly reproduced colour photos, but hardly fully described as claimed. Rather than presenting the species in order of botanical families where related genera such as *Castanopsis*, *Lithocarpus*, and *Quercus* appear together, they are alphabetically arranged according to genus. The botanical name, family, local name, description, occurrence and distribution, use, propagation and sometimes reference to similar species are given.

This is the most pathetic part of the book. Of these 96 species I have found 39 author citation errors (*e.g.* the correct citation of *Dacrydium elatum* is (Roxb.) Wall. *ex* Hk. (not Hickel)), 9 with incomplete taxonomic rank (*e.g.* it is *Archidendron clypearia* (Jack) Niels. ssp. *clypearia* var. *clypearia*), 10 synonymous names, and two misidentifications.

Since voucher specimens of these entries are non-existent, it has been very difficult for me to confirm or identify several species from the photos, thus there may be more than two wrong identifications.

These two incorrect entries are:

1. *Alangium chinense* (Lour.) Harms (not Rehd.) is probably *A. kurzii* Craib and
2. *Ficus hirta* Vahl var. *roxburghii* (Miq.) King which must be *F. fulva* Reinw. ex Bl. var. *fulva*.

Synonymous names are old names which should not be used. These include:

1. *Aleurites montana* (Lour.) Wils. = *Vernicia montana* Lour.,
2. *Canarium nigrum* Roxb. = *C. acutifolium* (DC.) Merr.,
3. *Carpinus poilanei* A.Camus = *C. londoniana* Wink. var. *londoniana*
4. *Castanopsis "ceracentha"* Hick. & A.Camus = *C. ceratocentha* Rehd. & Wils.,
5. *Engelhardia colebrookeana* (Lindl. ex Wall.) O.K. (not "Engelhardtia colebrookiana" = *E. spicata* Lechen. ex Bl. var. *integra* (Kurz) Mann.,
6. *Lithocarpus podocarpus* Chun (not Chun.) = *L. longipedicellatus* (Hick. & A.Camus) A.Camus,
7. *Paramichelia baillonii* (Pierre) Hu (not Hu.) = *Michelia baillonii* (Pierre) Fin. & Gagnep.,
8. *Toxicodendron succedanea* (L.) Mold. = *Rhus succedanea* L.,
9. *Tristania merguensis* Griff. = *Tristaniopsis merguensis* (Griff.) Wils. & Waterh., and
10. *Aralia montana* Bl. = *A. thomsonii* Seem. ex Cl.

*Glochidon fagifolium* Miq. (not. Bedd.) looks to me like *G. sphaerogynum* (M.-A.) Kurz. *Psidium guajava* L. (not "guayava") is not native to Laos, and the correct family of *Myrica* is Myricaceae, not Myrtaceae. Although I prefer *Eugenia* over *Syzygium*, the two species included in the book are correct.

At least six species (e.g. *Salix tetrasperma* Roxb.) noted as being evergreen are deciduous and conversely 3 are evergreen not deciduous (e.g. *Macaranga denticulata* (Bl.) M.-A.).

Some of the more outrageous botanical blunders, in addition to slightly less culpable incompetence, include:

1. *Alstonia rostrata* Fischer has simple, whorled leaves, not a compound leaf with 3 leaflets; it also has a pair of follicles, not "fruit pods",
2. *Bischofia javanica* Bl. and *Erythrina stricta* Roxb. have trifoliate leaves which do not "grow in clusters of 3 blades",
3. *Canarium* is correctly noted to have drupes, but the "seeds" are pyrenes, each containing 1-3 seeds (as clearly shown on page 52),
4. *Diospyros glandulosa* Lace berries do not have "4 leave-like lobes", but a deeply 4-lobed calyx at the base,
5. *Ficus lacor* B.-H. and *F. altissima* Bl. are both "strangling" i.e. initially epiphytic, not free-standing trees, the former being clearly depicted as such in a photo on page 88,
6. *Mallotus barbatus* M.-A. var. *barbatus* has racemes, not catkins, and the fruits are capsules, not "balls",
7. *Markhamia stipulata* (Wall.) Seem. ex K. Sch. and *Oroxylum indicum* (L.) Vent. have capsules, not pods,
8. *Paramichelia* (= *Michelia*) *baillonii* does not have a "cone" for fruit, but a fleshy dehiscent syncarp,

9. *Phoenix loureiri* Kunth var. *loureiri* has rigid, once pinnate leaves with the lowest leaflets reduced to spines (*sic.* spikes), and
10. *Phyllanthus embilca* L. has simple, alternate leaves, not “compound leaves with tiny leaflets”.

All of the descriptions to varying degrees, are imperfect. Some of them have quite contorted syntax. *Rhus chinensis* is noted to have “Compound leaves count 3-6 pairs toothed, soft and hairy leaflets”. This actually means that leaves are once-pinnate with 3-6 pairs of soft, hairy leaflets with toothed margins. A similar description is given for *Sapindus rarak* DC. .

The list of references shows in part why the book is so botanically anemic since primary, professional references (such as I constantly use) *e.g.* **Flore Generale de l’Indo-Chine, Flore de Cambodge, du Laos, et du Vietnam, Flora of Thailand, Flora of China** and **Flora Malesiana**, were not consulted. More careful plagiarism from the secondary references cited would have substantially reduced, but by no means eliminated, many of the inexcusable errors enumerated above.

The scientific and “phonetic” (*i.e.* Lao vernacular) indices end the book. The former is superfluous because of the alphabetical ordering of entries in the body of the work and its lack of reference to botanical families for readers acquainted with the concept.

If the phonetic transliterations are meant to assist foreign readers communicate with Lao folk they are doomed to fail. There is no recognition of the tonalities of Lao, there is no explanation of how the Latin names should be

spoken and as if the intention is to insult Lao readers the vernacular index is not even presented in Lao alphabetical order despite the welcome presence of vernacular names in Lao script. A good example of confusing transliteration is for *Castanopsis*, *Lithocarpus*, and *Quercus* where “ko” is the basic name, the actual pronunciation being “gaw”. Likewise *Schima wallichii* (DC.) Korth. becomes “thalo”, but Lao (and Thai) has no theta sound, the initial consonant is a cross between English “d” and “t”, the “a” has a long sound as in “are” and the final vowel is short as in “got”. Who would have guessed it is actually “dtaloh”?

In summary, this book could have been much better had botanical expertise and a competent editor been added and a competent colour printer chosen. The authors are to be discredited for doing a poor job and DANIDA condemned for producing a work falling far short of professional standards of the European Union.

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