

Swidden Farming and Fallow Vegetation in Northern Thailand by Dietrich Schmidt-Vogt. Geological Research vol. 8, 1999. Franz Steiner Verlag; Stuttgart, Germany; 342 pages, 51 figures, 40 tables, and 54 plates; DM 127.00.

Dr. Schmidt-Vogt, a German plant geographer at Heidelberg University, did extensive field work at several hill tribe villages in NW Thailand from 1990 to 1992. His basic concern was to determine vegetational regrowth and succession in swidden (slash and burn) agricultural systems. Since this was his post-doctoral habilitation thesis this publication has not only been carefully written and produced, but examined by his academic committee.

The introductory chapters include detailed discussions and descriptions of swidden agriculture as well as the geology, soils, hydrology, climate, and vegetation in northern Thailand. The actual swidden methods used by various ethnic groups (*e.g.* Thai, Lawa, Htin, Karen, Hmong, Lisu, *etc.*) are discussed. Case studies on swidden farming and fallow vegetation involving Lawa, Karen, and Akka people are described and analyzed in detail. The plants collected are listed in the appendix. The final part is about fallow vegetation in northern Thailand. This includes the structure and dynamics, *i.e.* weed, grass, and scrub formations; secondary forests, and the value of fallow vegetation.

Several basic conclusions are noted by the author and include the fact that swidden farming has had a great, adverse effect on vegetation and the overall ecology and biodiversity of montane areas. Swidden agricultural practices vary according to ethnic group, especially a more sustainable system using fallow land, *i.e.* short cultivation and long fallow periods, and intense systems which destroy primary forests and often have no fallow period. Population pressure, agro-economics, “development”, and reforestation or forest protection by the Thai Government are some influences which are causing changes in these systems. Fallow vegetation can be used as an indicator of the cultivation practices of various ethnic groups. This vegetation is valuable in that it can develop into secondary growth which, in time, can eventually develop into primary (*i.e.* original) growth. Fallow vegetation can also be developed for other land use systems, *e.g.* agroforestry, plantations, community forests, forest restoration, and conservation areas. The author concludes that the opportunity to develop or increase the economic value of fallow vegetation has not been pursued in Thailand.

Dr. Schmidt-Vogt has collected thousands of specimens and has had all of them properly identified. This contrasts sharply with many other frequently cited papers which are replete with misidentifications and lack of proper analyses of their significances. Considerable attention has been given to this in the form of detailed botanical and ecological plot studies, with canopy drawings, in the three case study villages.

I must indicate that I am not satisfied with Schmidt-Vogt’s classification system for northern Thai vegetation. This is not entirely his fault since there is no standard system for Thailand. Many authors have attempted to write about Thai vegetation, but none have succeeded since antiquated, “adopted”, or otherwise traditional concepts have never been critically appraised or replaced. Page 54 includes a comparison of five systems in the literature from 1957–1988 which vividly illustrates the confusion and inconsistency in names given to various forest types in Thailand. Schmidt-Vogt, unfortunately, has adopted a more recent, imaginative, and ecologically unacceptable system. This system includes contradictory terminology such as “seasonal rain forest” as well as (lower and upper)

“montane” forests which are applicable to the Himalayas (*i.e.* above 3,000 m). From my own studies on Thai vegetational literature there are over 20 references on this subject, each with variations in terminology, including my own. Credner’s work of 1935, with some alterations, would have been a better choice, but this was not included by the author. The severely flawed system followed here has, I suspect, been adopted because of friendship/ sponsorship reasons rather than academically logical criteria, which has severely degraded this aspect of an otherwise excellent and exceptionally detailed report.

Regardless of current trends in taxonomic splitting, I refuse to accept the names *Ageratina adenophora* (Spreng.) R.M. King & H. Rob. (= *Eupatorium adenophorum* Spreng.) and *Chromolaena odorata* (L.) R.M. King & H. Rob. (= *Eupatorium odoratum* L.), both Compositae and common introduced weeds in northern Thailand. The list of species, which, for a change, has properly cited and mostly correct botanical names, is arranged according to family (Bentham & Hooker system) and also alphabetically according to genus. Unfortunately, the author did not bother to revise many of these names since 1992, thus some entries need correction:

Alocasia macrohizos (not “*macrorrhiza*”), *Cyperus diffusus* Vahl var. *diffusus* (= *Cyperus laxus* Lmk. var. *laxus*), *Dalbergia fusca* Pierre (= *Dalbergia cultrata* Grah. ex Bth.), *Dendrocalamus membranaceus* Munro (= *Bambusa membranacea* (Munro) Stap. & Xia), *Dunbaria longeracemosa* Craib (= *Dunbaria bella* Prain), *Garuga floribunda* Decne. (= *Garuga pinnata* Roxb.), Hypericaceae (= Guttiferae), *Mallotus philippensis* (Lmk.) M.–A. (delete var. *philippensis*), *Melodorum oblongum* Craib (= *Fissistigma oblongum* (Craib) Merr.), *Mischocarpus grandis* (Pierre) Radlk. (= *Mischocarpus pentapetalus* (Roxb.) Radlk.) *Paramichelia baillonii* (Pierre) Hu (= *Michelia baillonii* Pierre), *Molinera* (Amaryllidaceae, not Hypoxidaceae), *Mucuna brevipes* Craib (= *Mucuna bracteata* A. DC.), *Pinus kesiya* Roy. ex Gord. (not “Gard.”), *Sapium baccatum* Roxb. (= *Balakata baccata* (Roxb.) Ess.), *Sonerila tenera* Roy. (= *Sonerila erecta* Jack), *Tarenna disperma* (Hk. f.) Pit. (= *Tarennoidea wallichii* (Hk. f.) Tirv. & Sastre), *Tirpitzia sinensis* (Hemsl.) Hall. (= *Reinwardtia indica* Dum.) *Tristania rufescens* Hance (= *Tristaniopsis burmanica* (Griff.) Wils. & Wat. var. *rufescens* (Hance) Parn. & Lug.), *Vaccinium apricum* Flet. and *Vaccinium exaristatum* Kurz (both = *Vaccinium sprengelii* (D. Don) Sleum.), *Wendlandia paniculata* (Roxb.) DC. ssp. *scabra* Kurz (= *Wendlandia scabra* Kurz var. *scabra*), *Wrightia arborea* (Denn.) Mabb. (not “*arbores*”), and a few other minor changes. All subspecific (ssp. & var.) epithets should have been italicised.

My overall impression with this book is that it is an excellent scholarly work which has been based on detailed field work, thorough library research, and competent botanical assistance (until 1992). It far surpasses other work and has set a new standard of excellence on this subject in Thailand. I consider this book a valuable addition to my library and have no reservations in recommending its use to anyone dealing with swidden farming in this region.

I have some final comments to all non-botanists working in a field where herbarium assistance is required. Botanical standards and competence vary greatly throughout the kingdom, thus one must be careful in trusting the competence of various experts available. This has been a serious problem in the past which, fortunately, Schmidt-Vogt was able to avoid. Botanical names are not always permanent and, therefore, change because of mainly revisional work. Schmidt-Vogt’s lapse of over 6 years in revising a list of names based on originally accurate identifications, is not only embarrassing to the author, but insulting to

the botanist who sacrificed his time in doing the best possible job available on the specimens. A list of errors is recommended for inclusion in the book.

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Requiem for Nature, by John Terborgh. Island Press/Shearwater Books, Washington D.C. and Covelo, California, 1999. 234 pp.

If I had to recommend only one book for the layman to read about current problems of conserving the world's rain forests, this would be it. The conservation of biodiversity has now become a feverish concern not only of biologists, but of development planners, economists, business leaders, and political leaders. This is a good sign, but unfortunately, even among conservationists there are deep disagreements over what is the best approach to save the biodiversity of the Earth from the extinction crisis that is upon us. The most widely accepted approach to preventing threatened species and their habitats from extinction has been the creation of "protected areas," primarily national parks and wildlife reserves. In most tropical areas, however, this approach is not working very well, and there is vigorous debate in the conservation community over how to remedy the situation. Terborgh's book very clearly portrays the maladies affecting parks, mostly drawing on his personal experiences, and offers his own prognosis and long term cures. His conclusions are highly opinionated—his goal is to redress current misunderstandings and misguided funding priorities in conservation. In fact, this book is one of several recent volumes that deal with this issue, but in my opinion it is the most readable and convincing, with the least professional jargon.

John Terborgh, a highly regarded ecology and tropical biology professor at Duke University, has thirty years of experience in studying populations and communities in the tropical rain forest, most of it in Peru. The opening chapters introduce us to the place he knows and loves the most, Manu Biosphere Reserve, a largely wilderness area of 15,000 km² which stretches from the Amazon lowlands to the 4,000-m high peaks of the Peruvian Andes. There, far up the Manu River, Terborgh helped to establish and still manages the Cocha Cashu Biological Station, from which has emanated a steady stream of high-quality research findings. Like virtually all tropical ecologists, Terborgh has increasingly become involved conservation projects and activities, as an eyewitness to the relentless expansion of human activity into wild areas and the steady decimation of animals and their habitats.

Manu Reserve has become legendary for its diversity of plants, birds, mammals insects, etc. The number of species it contains is roughly the same as that in all of Thailand. For example, it has close to 1,000 bird species, about the same as Thailand. In the author's long term perspective, however, Manu is a "Paradise Fading." It is threatened both within and without. Within, it contains a cancer in the form of an expanding population of tribal