

NOMENCLATURAL NOTE ON WU PI CH'A OR THE BLACK-BARKED TEA PLANT

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Abstract: The Indo-Malayan genus *Pyrenaria* and the southern Chinese genus *Tutcheria* have been merged, the new name for Wu Pi Ch'a is *Pyrenaria shingkoensis* (Hayata) H. Keng. It is further postulated that this plant could have reached Formosa via southern China prior to the formation of the present Taiwan Strait.

In 1948, as a graduate student at National Taiwan University, under the supervision of Professor Hui-lin Li, I was writing up a term paper on the taxonomy of Formosan Theaceae for a course of Taxonomy of Angiosperms I took. My attention was drawn to an interesting tea plant, its native name is Wu Pi Ch'a (烏皮茶) which means the black-barked tea plant. It is a small tree occurring in central and northern parts of Taiwan, and is especially common around Shen Keng (深坑) near Taipei, from where the type specimen was collected.

I checked through the Formosan literature (Hayata, Sasaki, Kanehira, Masamune, etc.) known to me, and found it was named either as *Thea shinkoensis* Hayata or as *Camellia shinkoensis* (Hayata) Makino. From a secondhand bookstore in Taipei, I managed to obtain a copy of a small book which was published in commemoration with the late Professor T. Nakai's 60th birthday. In this book, I noticed that Nakai had referred this plant to a southern Chinese genus, *Tutcheria*, and made a new combined name, *Tutcheria shinkoensis* (Hayata) Nakai, based mainly on its stigmatic and fruit characters. Nakai's combined name has since appeared in all the recently published books on Formosan plants (e.g. Liu, Li, etc.)

Over ten years ago, when I was examining some theaceous specimens in the herbarium of Singapore Botanic Gardens, I observed several specimens from British North Borneo (now a State of Malaysia, known as Sabah) which bear tardy, dehiscent fruits and angular seeds resembling those of *Tutcheria*. Later I found two other specimens from the Malay Peninsula which share more or less the same characters.

After much deliberation and lengthy discussion with others, I came to the conclusion that the Indo-Malayan genus *Pyrenaria* and the Southern Chinese genus *Tutcheria* are congeneric. For details, see paper published elsewhere (Gard. Bull. Sing. 26: 127-15, 1972). A few salient points are summarized below.

Pyrenaria was established by C. L. Blume in 1826 (in 1826 (in Bijdr. 1119) based on the Javanese species, *P. serrata* Bl. Up to now over 20 species have been described, they were from E. India, Burma, Thailand, Indo-China, S. W. China (Yunnan) and southwards to the Malay Peninsula, Sumatra and Borneo.

Tutcheria on the other hand, was established by S. T. Dunn in 1908 (in Jour. Bot. 46: 324) based on a Hongkong species, *T. championi* Nakai, formerly known as *T. spectabilis* (Champ.) Dunn. There are about a dozen species in this genus, confined to S. China, Hongkong, Taiwan and the Liukiu Islands. Dunn realized that *Tutcheria* and *Pyrenaria* were closely related but pointed out that they are different in (1) the number of ovules per ovary-locule, and (2) the nature of their pericarp.

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The number of ovules per locule in these two genera, viz., 4-6 in *Tutcheria* and 2 in *Pyrenaria*, is not so clearly different as Dunn once thought, but is somewhat overlapping as more species were examined. The only substantial difference between these two genera is the nature of their pericarp, viz., dry and dehiscent in *Tutcheria* and succulent and indehiscent in *Pyrenaria*.

From the above discussion it can be concluded that *Pyrenaria* and *Tutcheria* are closely related. It can be further emphasized that their seed and seedling characters are not only similar but unique among the family Theaceae (H. Keng in Univ. Calif. Publ. Bot. 33: 276 & 350, 1962). Thus the crucial question is whether the fruit character alone is sufficient for the demarcation of these two genera.

To this question, I found several isolated but similar examples from various families, e. g., *Lobelia-Pratia* of the Lobeliaceae (Moeliono & Tuyn in Fl. Mal. I, 6(1): 122, 1960), *Buddleja-Nicodemia* of the Loganiaceae (Leenhouts in Fl. Mal. I, 6(2): 336, 1962), *Euphorbia-Elaeophorbia* of the Euphorbiaceae (Webster in Jour. Arnold Arb. 48: 397, 1967), *Lomatophyllum-Aloe* of the Liliaceae (Rowley in Taxon 18: 625, 1969); these authors uniformly indicated that the fruit character alone, could only be considered for subgeneric or sectional, rather than generic segregation. To strengthen the argument that *Pyrenaria* and *Tutcheria* should be merged and be under a united generic name *Pyrenaria*, the two Malaysian species, which I mentioned earlier, one from Sabah and one from the Malay Peninsula (which I named *Pyrenaria tauauensis* and *P. pahangensis* respectively), both possess thin cartilaginous, tardy, partially dehiscent pericarp, and appear to fill the gap between baccate and capsular fruits.

Judging from the fact that there is a great concentration of species of *Pyrenaria* (including *Tutcheria*) in and around Indo-China (such as Thailand, Laos, Cambodia, Vietnam and Yunnan) where both baccate and capsulate species are mingled and where the most primitive species with entirely free styles (e. g. *P. garrettiana* Craib and *P. camellioides* Hu) occur, it is reasonable to assume that this is perhaps the centre of origin and dispersal of the genus. Also, in view of the fact that this curious plant, *Wu Pi Ch'a*, like other members of the genus does not seem to possess any special or efficient means or mechanism for dispersal of its fruit or seeds, it must probably have reached Formosa via S. China prior to the formation of the present Taiwan Strait.

To summarize, a citation of some important literature on the nomenclature of *Wu Pi Ch'a* or the black-barked tea plant is given below:

PYRENARIA SHINKOENSIS (Hayata) H. Keng in Gard. Bull. Sing. 26: 135, 1972.

Basinym: *Thea shinkoensis* Hayata in Journ. Coll. Sci. Tokyo (Mat. Fl. Formos.) 30(1): 45, 1911, Icon. Pl. Formos. 1: 92, 1911.

Synonyms: *Camellia shinkoensis* (Hayata) Coh.-Stuart in Meded. Proefst Thee 90: 68, 1916; Makino in Jour. Jap. Bot. 1(12): 41, 1918; Sasaki, List Pl. Formos. 292, 1928; Makino & Nemoto, Fl. Jap. 740, 1931; Yamamoto in Sylvia 5: 37, 1934; Kanehira, Formos. Tr. rev. ed. 458, f. 419, 1936; Suzuki in Masamune, Short. Fl. Formos. 139, 1936. *Tutcheria shinkoensis* (Hayata) Nakai in Jour. Jap. Bot. 16: 708, 1946; H. Keng in Taiwania 1: 229, 1950; Liu, Ill. Lig. Pl. Taiwan 1: 254, f. 210, 1960; Li, Woody Fl. Taiwan 599, 1965.

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