

**THE MONOTYPIC FAMILY BRETSCHNEIDERACEAE NEWLY RECORDED
FOR THAILAND**

*Thawatchai Santisuk**

Bretschneidera sinensis Hemsl. in Hook., Ic. 28: t. 2708. 1901; Hand.-Mazz., Symb. Sinicae 7: 373. 1931; Chun, Sunyatsenia 1: 265. 1934; Merr., J. Arn. Arb. 19: 46. 1938; Gagnep. in Suppl. Fl. Gén. I.-C. 1(9): 1001. Fig. 129. 1950. Types: China, Yunnan, Mengtze, *A. Henry 10540* (K); Szemao, *A. Henry 11651* (K). -*B. yunshanensis* Chun et How, Acta Phytotax. Sinica 7(1): 68. Pl. xx. 1958. Types: China, Hunan, Wukang, Yunshan, *H. T. Chang 4650* (SYS); Hengshan, Fangkwang Tzu, *K. H. Chu 99* (SYS). *syn. nov.*

This remarkable forest tree is characterized by the following characters: leaves alternate, imparipinnate to 30-70 cm long; leaflets 4-9 pairs, ovate-lanceolate or oblong-lanceolate, apex acuminate, base oblique, glaucous underneath; inflorescences large, terminal, upright racemes to 30-45 cm long; flowers showy, weakly zygomorphic, white-rose; pedicels slender; calyx broadly campanulate, with 5-truncate lobes, greenish white outside; petals 5, free, imbricate, obovate, long-clawed at base, inserted on calyx tube, the upper (posterior) petal slightly smaller and innermost, outer surface pinkish white, inner surface rose pink with purplish streaks; stamens 8, free, all closed together simulating a long column, declining towards the posterior petal; ovary pubescent; fruits subglobose to obovoid capsules, obscurely 3-angled, 3-valved, 3-celled; valves leathery thick, \pm verrucose; fruit stalks 2-3.6 cm long; seeds 0-2/cell, fleshy, yellowish orange.

T h a i l a n d. Nan, Pua, Doi Phu Kha National Park, 1,500 m; tree 25 m high, bark smooth, uncommon in lower montane rain forest; flowers white-rose; 20 Feb. 1989, *T. Santisuk 6915* (BKF); same locality, same tree; fruits brown; 27 May 1989, *T. Santisuk 6965* (BKF).

D i s t r i b u t i o n. China (Yunnan, Hunan), Vietnam (Tonkin-Chapa).

This is the sole representative of the family previously known from southern China and northern Vietnam. It is interesting to mark the southernmost distribution of this relict species in Doi Phu Kha Mountain of Nan Province. These areas, particularly the higher elevations, were hardly reached by the earlier local and foreign botanists. Thanks to the new strategic route "Pua – Doi Phu Kha" winding up slope over 1,500 m altitude, botanical surveys in the eastern ranges of Northern Thailand can be undertaken more extensively. The official establishment of Doi Phu Kha Range as a national park is now well under way.

The author had an opportunity to make a first visit to Doi Phu Kha

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Mountain on the clear sunny morning of 20 February 1989. At about 1,500 m elevation a notable blossoming tree was met with on a steep gully slope of the dense, lower montane rain forest. The tree in full bloom (with leaves) at a glance was reminiscent of an ornamental horse-chestnut (*Aesculus hippocastanum*) with respect to the large, terminal, upright racemes. The second visit to Doi Phu Kha mountain was successfully made for fruit collections of the same tree in late May 1989. Despite abundant fruit setting, only a few young seedlings survive on the damp, shady forest floor. The mature fruits dropped onto the ground were subject to heavy insect attack as evident from large holes through the valves (Fig. 5). However, a number of mature fruits with good seeds were secured by a tree climber for a germination trial at Mae Sa Botanical Garden in Chiang Mai.

In 1958, Woon-Young Chun and Foon-Chew How recognized the second species of *Bretschneidera*, *B. yunshanensis* as separable from *B. sinensis* mainly on account of the quantitative characters, i.e. difference in sizes of flowers, fruits and seeds. It must be noted that such size variation is normally encountered even in the same inflorescence/infructescence. The Thai specimens matched well the illustrated *B. yunshanensis* and also exhibited normal variation in the obovoid, ellipsoid, ellipsoid-obovoid, and subglobose fruits with \pm verrucose valves and 1-4 seeds in the same infructescence. Hence, the author feels that *B. yunshanensis* should be treated as conspecific with *B. sinensis*.

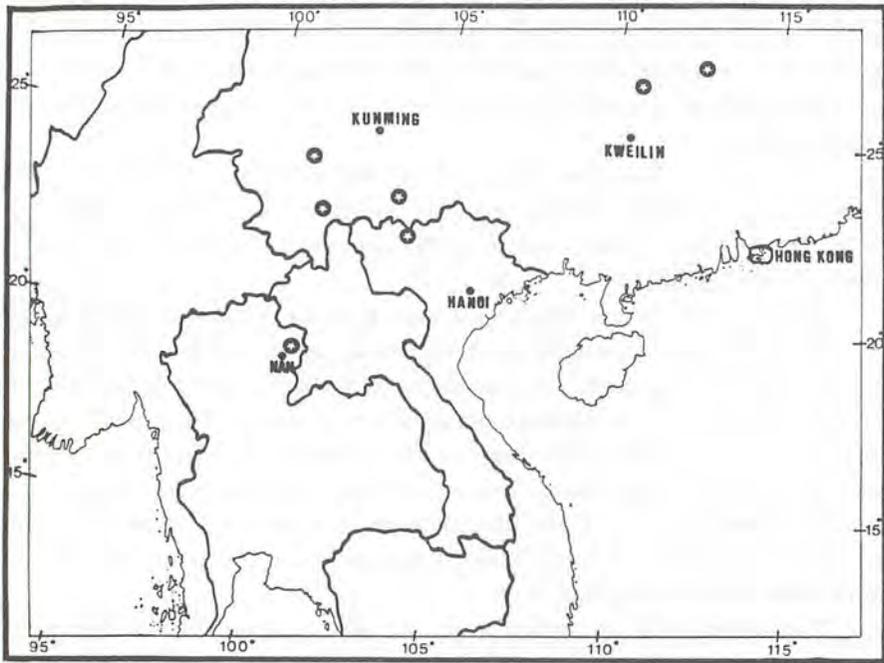


Figure 1. The distribution of *Bretschneidera sinensis* Hemsl. (★) in Southern China, Northern Vietnam and Northern Thailand.



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Figure 2. *Bretschneidera sinensis* in full bloom.

Figure 3. Stem and inner bark.

Figure 4. An inflorescence.

Figure 5. Fruits picked up on ground with traces of insect damage.



Figure 6. A fruiting branch.



Figure 7. Transverse and longitudinal sections of mature fruits showing 1-2 seeds/cell.