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AN ENUMERATION OF YUNNAN CORNACEAE

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There is no comprehensive treatment on the Cornaceae of China. When Forbes and Hemsley enumerated the Chinese plants in 1888, no cornaceous plants were known from Yunnan (Journ. Linn. Soc. Bot. 23: 344-346, 1888). In 1909 Hemsley recorded, in connection with his discussion on *Cornus macrophylla* Wall. and related species (Kew Bull. 1909: 329-335), four species from Yunnan. Wangerin's monograph (Pflanzenr. 41 (IV, 229), 1910) of 1910 raised this to six species, one in *Helwingia*, one in *Aucuba*, and four in *Cornus*. This number was further increased to nine by Rehder in 1916 (in Sargent, Pl. Wils. 2: 569-579, 1916), who enumerated one species of *Toricellia*, two of *Helwingia*, one of *Aucuba*, and five of *Cornus* as occurring in Yunnan. In 1932, Chien enumerated nine species of Cornaceae from the neighbouring province Kweichow (Sinensia 2: 95-102, 1932). The latest treatment is by Handel-Mazzetti in 1933 (Symb. Sin. 7: 685-690, 1933) in which fifteen species were credited to Yunnan, one in *Toricellia*, three in *Helwingia*, one in *Aucuba*, and nine in *Cornus*. Of these and other scattered records, all the known species are noted in this study except *Cornus hongkongensis* Hemsley and *C. hongkongensis* var. *gigantea* Hand.-Maz. as recorded by Handel-Mazzetti from Yunnan, as I have seen no Yunnan material that I can with certainty refer to these forms.

This study is based on the collections in the herbarium of the Arnold Arboretum of Harvard University. A total of five genera with seventeen species including one in *Mastixia*, two in *Toricellia*, two in *Helwingia*, one in *Aucuba*, and eleven in *Cornus*, are recognized. A few varieties and forms are also noted. *Toricellia*, which has been made the basis of a distinct family by Hu (Bull. Fan Mem. Inst. Biol. 5: 311, 1934), is included in this study. The available study collections include material

secured by such early collectors as A. Henry, E. E. Maire, H. Handel-Mazzetti, G. Forrest, and others. Among the recent accessions are the very extensive collections made by H. T. Tsai, C. W. Wang, T. T. Yü, R. C. Ching, K. M. Feng, and a few others, most of these recent collections having been made on the basis of partial support of the field work through grants made to several Chinese botanical institutions by the Arnold Arboretum.

I. *Mastixia* BLUME

1. *Mastixia chinensis* Merr. in Sunyatsenia 3: 256. 1937.

Szema, A. *Henry 12414*; Che-li District, Dah-meng-lung, Meng-soong, C. W. Wang 78443, 78528, Sept. 1936.

DISTRIBUTION: Southern Yunnan.

The fruits of Wang's specimens are a little larger than are those of the type; otherwise the characters are the same.

II. *Toricellia* DE CANDOLLE

1. *Toricellia tiliifolia* DC., Prodr. 4: 257. 1830; Wang. in Pflanzenr. 41 (IV. 229): 31. 1910; Rehder in Sargent, Pl. Wils. 2: 569. 1916.
Sambucus? tiliaefolia Wall. List No. 483. 1828, *nomen nudum*.

Szema, A. *Henry 11909*; Puerh, A. *Henry 13297*; Puerh to Mohei, J. F. Rock 2875, 2876, March 1922; Chen-kan District, C. W. Wang 72155, 72408, 72484, March 1936; Shun-kiang District, C. W. Wang 73091, April 1936.

DISTRIBUTION: Northeastern Yunnan and southern Yunnan.

2. *Toricellia angulata* Oliv. in Hook. Icon. 29: t. 1893. 1889.

This species, found in Hupeh and Szechuan, has not been recorded from Yunnan. The following variety is represented.

- 2a. *Toricellia angulata* Oliv. var. *intermedia* (Harms) Hu in Journ. Arnold Arb. 13: 336. 1932; Hand.-Maz., Symb. Sin. 7: 685. 1933.
Toricellia intermedia Harms ex Diels in Bot. Jahrb. 29: 507. 1901
Wang. in Pflanzenr. 41 (IV. 229): 1910.

No precise locality, G. Forrest 10190; Tche-hai, E. E. Maire 294; Likiang City (in cultivation), R. C. Ching 21739, Sept. 1939.

DISTRIBUTION: Szechuan and Yunnan.

III. *Helwingia* WILLDENOW

1. *Helwingia japonica* (Thunb.) Dietr. in Nachtr. Vollst. Lex. Gartn. Bot. 3: 660. 1817; Steudel, Nomencl. 399. 1821; Wang. in Pflanzenr. 41 (IV. 229): 35. 1910; Rehder in Sargent, Pl. Wils. 2: 570. 1916; Hand.-Maz., Symb. Sin. 7: 685. 1933.

Osyris japonica Thunb., Fl. Jap. 31. 1784.

Helwingia rusciflora Willd., Sp. Pl. 4: 716. 1805; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 23: 341. 1888.

Tai-pou, *E. E. Maire* 154; Lao-keou, *E. E. Maire* 520; no data, *Delavay* 3718, *G. Forrest* 10060; Yangtze watershed, eastern slopes of Likiang Range, *J. F. Rock* 5895, May-Oct. 1922; between Chien-chuan plain and the Mekong drainage basin to Lachiming, *J. F. Rock* 8619, May 1923; Yong-shan District, *H. T. Tsai* 50967, 51002, June 1932; Liang-shan Lamašery, *H. T. Tsai* 51232, Aug. 1932; Chiu-pei District, *H. T. Tsai* 51436, Dec. 1932; Yi-liang District, *H. T. Tsai* 52029, May 1932; Chen-hsiung District, *H. T. Tsai* 52319, June 1932; Lan-pien District, *H. T. Tsai* 50419, Aug. 1933; no data, *H. T. Tsai* 57210, 57308; Che-tse-lo, *H. T. Tsai* 58492, 58489, Sept. 1934; Ping-pien District, *H. T. Tsai* 62407, July 1934; Wei-si District, *C. W. Wang* 63649, 64058, June 1935; Cham-pu tung, Soo-roo-la, *C. W. Wang* 66684, Sept. 1936; Cham-pu-tung, Shi-gi-tung, *C. W. Wang* 67113, Oct. 1935; Fo-hai District, Hei-lung-tarn, *C. W. Wang* 6729, July 1936; Wei-si District, Yeh-chih, *C. W. Wang* 68954, July 1935, 68259, Aug. 1935; Li-kiang District, *C. W. Wang* 70783, July 1935; no data, *T. T. Yü* 8292, 10107, 11168; Atungtze, Mt. Yangtse, *T. T. Yü* 10183, Sept. 1937; Likiang Snow Range, *T. T. Yü* 15042, May 1937; Kengma, Chin chan-ko, *T. T. Yü* 17295, Aug. 1938; Mekong-Salween divide, Tse chung, *T. T. Yü* 19026, June 1938; Taron-Taru Divide, Lungnan, *T. T. Yü* 20017, Aug. 1938; Anangu, southwest of Chungtien, *K. M. Feng* 1022, May 1939; south of Chungtien, Wu-tso on the bank of the Yangtze River, *K. M. Feng* 3318, Nov. 1938; western Likiang, Lutien, *R. C. Ching* 20568, May 1939; western Likiang, Tamichang, *R. C. Ching* 21503, Aug. 1939; northwestern Likiang, Si-fang-za, *R. C. Ching* 22002, Oct. 1939; eastern flank of Likiang Snow Range, *R. C. Ching* 30670, Sept. 1939; Likiang Snow Range, *R. C. Ching* 30226, June 1939.

DISTRIBUTION: Northeastern India; Upper Burma; western and central China: Yunnan, Szechuan, Kweichow, Kwangsi, Hupeh, Anhwei, Chekiang; Korea; Japan.

While most of the specimens cited are clearly *Helwingia japonica* (Thunb.) Dietr. in characters, a few of them have narrower leaves approaching *H. himalaica* Hook. f. et Thoms. and *H. chinensis* Bat.

2. *Helwingia himalaica* Hook. f. et Thoms. ex C. B. Clarke in Hook. f.,

Fl. Brit. Ind. 2: 726. 1879; Wang. in Pflanzenr. 41 (IV. 229): 37. 1910; Rehder in Sargent, Pl. Wils. 2: 571. 1916.

Mengtze, A. Henry 9032, 9032A, 9032B, 9032C; Szemao, A. Henry 11992, 11992B; Pe-yen-tsin, Simeon Ten 126, May 1916; Yunnanfu, Hsichan, H. Handel-Mazzetti 9037, June 1916; no data, G. Forrest 7554, 14646; Mekong-Salween Divide, G. Forrest 20395, Sept. 1921; Chien-Chuan-Mekong divide, G. Forrest 21942, July 1922; mountains of Londjre, Mekong-Salween watershed, J. F. Rock 8871, 1923; Kien-shuei District, H. T. Tsai 53068, 53135, April 1933; Lan-ping District, H. T. Tsai 54055, Aug. 1933; Ping-pien District, H. T. Tsai 55172, 55302, May 1934; 60460, 60471, June 1934; no data, H. T. Tsai 55915, 55970, 56099; Shang-pa District, H. T. Tsai 58867, Oct. 1934; Wei-si District, C. W. Wang 63609, June 1935; Wei-si District, Yeh-chih, C. W. Wang 67959, July 1935, 68298, Aug. 1935; Shunning, Huilungsu, T. T. Yü 16123, June 1938; Shunning, Holuntan, T. T. Yü 16202, June 1938.

DISTRIBUTION: Himalayan region and Szechuan, Yunnan, and Kweichow.

A number of the specimens cited above might with almost equal propriety be placed under *Helwingia chinensis* Bat., which is a variable species widely distributed in China. *Helwingia himalaica* Hook. f et Thoms., as I here interpret it, is quite variable in its leaves. Among the specimens cited above, *Simeon Ten 122*, *Forrest 20395*, and *Tsai 55172* have narrower leaves that approach the variety *stenophylla* Merr.

2a. *Helwingia himalaica* Hook. f. et Thoms. var. *crenata* (Lingelsch.) Li in Journ. Arnold Arb. 25: 30, 1944.

Helwingia crenata Lingelsch. ex Limpricht in Rep. Sp. Nov. Beih. 12: 453. 1922; Hand.-Maz., Symb. Sin. 7: 688: 1933; Chun in Sunyatsenia 4: 246. 1940.

Wei-si District, Kan-pu, C. W. Wang 64128, July 1945.

DISTRIBUTION: Szechuan, Yunnan, Hunan, Kwangtung.

2b. *Helwingia himalaica* Hook. f. et Thoms. var. *stenophylla* Merr. in Brittonia 4: 137. 1941.

Suen-oui, E. E. Maire 444, Pe-yen-tsin, Simeon Ten 127, May 1916; no data, G. Forrest 9828, H. T. Tsai 57590; Pin-chuan District, H. T. Tsai 52908, July 1933; Hokin, Luho near Sungkwei, K. M. Feng 863, April 1939.

DISTRIBUTION: Upper Burma and Yunnan.

- 2c. *Helwingia himalaica* Hook. f. et Thoms. var. *parviflora* Li in Journ. Arnold Arb. 25: 30. 1944.

Mountains of Londjre, Mekong-Salween watershed, *J. F. Rock* 8871, 1923; Kunming, *C. W. Wang* 62996, April 1935; Sung-tsu-yuan, Chen-kiang, *H. Wang* 41451, June 1939.

DISTRIBUTION: Yunnan.

IV. *Aucuba* THUNBERG

1. *Aucuba chinensis* Benth., Fl. Hongk. 138. 1861; Wang. in Pflanzenr. 41 (IV. 229): 40. f. 9 B, C. 1910; Rehder in Sargent, Pl. Wils. 2: 572. 1916.

Feng-chen-ling, *A. Henry* 10122; Foy-kou-lo (Kouty), *Simeon Ten* 472, Feb. 1918; no data, *G. Forrest* 15781, 17585, 17818; Salween Valley, *G. Forrest* 19374, April 1921; Wen-shan Distrinct, *H. T. Tsai* 51830, Feb. 1933; Lung-ling District, *H. T. Tsai* 55665, April 1954; no data, *H. T. Tsai* 58676, 59115, Oct. 1934; Ping-pien District, *H. T. Tsai* 60235, June 1934; Chen-kang District, *C. W. Wang* 72269, 72581, 72858, March 1936.

DISTRIBUTION: Upper Burma, southern and western China: Hupeh, Szechuan, Yunnan, Kwangtung.

This species is very variable especially in the leaves. The distinctions between the three species of *Aucuba* as recognized by Wangerin are not clear. Some of the specimens enumerated above, such as *Forrest* 15781, have small-toothed leaves and long inflorescences as in *A. himalaica* Hook. f. et Thoms. but with inflorescence-indumentum as in *A. chinensis* Benth. The extreme forms of the leaves are very distinct. The following forms are found in Yunnan.

- 1a. *Aucuba chinensis* Benth. f. *angustifolia* Rehder in Sargent, Pl. Wils. 2: 573. 1916; Hand.-Maz., Symb. Sin. 7: 689. 1933.

Feng-chen-ling Mt., *A. Henry* 10123; Mengtze, *A. Henry* 10123A; Yuancheng, *A. Henry* 10123B, 13300; Wen-shan District, *H. T. Tsai* 51756, Feb. 1945; Ping-pien District, *H. T. Tsai* 61399, Aug. 1934.

Henry 10123 and 10123A were included in the typical form by Rehder, but I am inclined to place them under this form.

- 1b. *Aucuba chinensis* Benth. f. *subintegra* Li in Journ. Arnold Arb. 25: 30. 1944.

Mong-ka, *H. T. Tsai* 56310, Feb. 1934.

V. *Cornus* LINNEAUS

1. *Cornus controversa* Hemsl. in Bot. Mag. 135: t. 8261. 1909, in Kew Bull. 1909: 331. 1909; Wang. in Pflanzenr. 41. (IV. 229): 49. f. 14 C-D. 1910; Rehder in Sargent, Pl. Wils. 2: 573. 1918; Hand.-Maz., Symb. Sin. 7: 689. 1933.

Red River Vallep, near Maupan, *A. Henry* 10747A; Likiang, *H. Handel Mazzetti* 8799, June 1916; no data, *G. Forrest* 8334, 11889, 17520, 17994, 26374, 27385; Yan-tsin District, *H. T. Tsai* 50803, April 1934; Liang-shan District, *H. T. Tsai* 51286, Aug. 1932; no data, *H. T. Tsai* 57311, 57805; Ping-pien District, *H. T. Tsai* 55156, 57887, May 1934, 62895, 62221, June 1934, 62768, July 1934, Wei-si District, *C. W. Wang* 63672, June 1935; Tsang Yuan, *C. W. Wang* 731676, April 1936; western Likiang, Tuchi, *R. C. Ching* 20467, May 1939, 21489, Aug. 1939; southern Chungtien, Chiao-tou on the bank of the Yangtze River, *K. M. Feng* 3082, Oct. 1939; southern Chungtien, Wu-tso on the bank of the Yangtze River, *K. M. Feng* 3277, Nov. 1939.

DISTRIBUTION: Eastern India; China: Kiangsi, Hupeh, Szechuan, Yunnan; Korea, and Japan.

This species is very similar to *Cornus macrophylla* Wall. in appearance and has about the same geographical range. It can be distinguished from the latter by its alternate leaves.

2. *Cornus oblonga* Wall. in Roxb., Fl. Ind. 1: 432: 1820; Hemsl. in Kew Bull. 1909: 334; Wang. in Pflanzenr. 41 (IV. 229): 64. 1910; Rehder in Sargent, Pl. Wils. 2: 579. 1916; Hand.-Maz., Symb. Sin. 7: 689. 1933.

Cai-pou, *E. E. Maire* 333; Siao-ou-long, *E. E. Maire* 405; Mengtze, *A. Henry* 11161, 11397; north of Yunnanfu, between Schinlu and Ta-sung-shu, *C. Schneider* 334, March 1914; between Hoching and Sungkweh, *C. Schneider* 3268, Oct. 1914; Choei-pan-tsin, Kouty, *Simeon Ten* 291, Sept. Ta-hou-chan, Pe-yen-tsin, *Simeon Ten* 312, Sept. 1916; Mekong, between Guta and Hera, *H. Handel-Mazzetti* 7992, Sept. 1915; Schuba, between the Yangtze and Mekong, *H. Handel-Mazzetti* 8818, Nov. 1918; no data, *G. Forrest* 10009, 10125, 10575, 11082, 11296, 11501, 15019, 18469; Mekong-Salween divide, *G. Forrest* 19803, July 1921; Chien-chuan-Mekong divide, *G. Forrest* 21511, July 1922; headwaters of the Red River, from Mao-kai to Tatsang, *J. F. Rock* 3052, April 1922; west of Talifu, Mekong watershed, on route to Youngchang and Tengyueh, *J. F. Rock* 6600, Sept.-Oct. 1922; mountains above Tseku and Tsehchung, Mekong-Salween watershed, *J. F. Rock* 11596, 1923; mountains of Londjre, Mekong-Salween divide, *J. F. Rock* 11650, 1413; Mong-ka, *H. T. Tsai* 56426, March 1934; Lu-se, *H. T. Tsai* 55991, Feb. 1934; Wei-si District, *H. T. Tsai* 59819, Oct. 1934; Ping-pien District, *H. T. Tsai* 62420, July 1944; Wei-si District, *C. W. Wang* 64153, Jul 1935; Atuntze, Huan-fu-ping, *C. W. Wang* 69257,

Sept. 1935; Wei-si District, Yeh-chih, C. W. Wang 70446, Oct. 1935; no data, T. T. Yü 8389, 14735; Muli, T. T. Yü 5879, June 1937; Shunning, Wumulung, T. T. Yü 16615, July 1938; upper Kiukiang Valley (Clulung), Srowsiang, T. T. Yü 19617, Aug. 1938; Kiukinang Valley, north of Kunming, T. T. Yü 20556, Oct. 1938; Salween Valley, Sekai, T. T. Yü 23007, Sept. 1938; western Likiang, eastern Litiping between Kikiang and Wei-si, R. C. Ching 21950, Oct. 1939; southern Chungtien, Bodo, K. M. Feng 2481, Oct. 1939.

DISTRIBUTION: Himalayan region, Burma, and Yunnan.

- 2a. *Cornus oblonga* Wall, f. *pilosula* Li in Journ. Arnold Arb. 25: 311. 1944.

Mi-le District, A. Henry 9930; Loping, Bentijian, H. Handel-Mazzetti 10163, Nov. 1917; mountains south of Likiang, near Hoching and Chiuho, J. F. Rock 4069, May 1922; Lu-se, H. T. Tsai 56983, Feb. 1934; Wei-si District, H. T. Tsai 59994, Nov. 1934; no data, T. T. Yü 8192; Meng-hau, Hsiachichang, T. T. Yü 16841, May 1938; southern Chungtien, Chiao-tou on the bank of the Yangtze River, K. M. Feng 3077, Oct. 1939.

DISTRIBUTION: Yunnan and Szechuan.

3. *Cornus Hemsleyi* Schneid. et Wang. in Rep. Sp. Nov. 7: 229. 1909; Hemsl. in Kew Bull. 1909: 334; Wang., Pflanzenr. 41 (IV. 229): 67. 1910.

Between Likiang and Young-ning, J. F. Rock 17228, May 1928; Chungtien, Haba, T. T. Yü 13495, Aug. 1937; no data, T. T. Yü 6100; Hokin, Shiang-hau-ho of Ma-erh-shan near Sungkwei, K. M. Feng 764, April 1939 (juvenile specimen); northwestern Likiang, R. C. Ching 20407, May 1839 (juvenile specimen).

4. *Cornus Monbeigii* Hemsl. in Kew Bull. 1909: 333; Wang., Pflanzenr. 41 (IV. 229): 68. 1910; Hand.-Maz., Symb. Sin. 7: 689. 1933; Rehder in Journ. Arnold Arb. 15: 116. 1934.

Cornus rosea H. Lévl. in Bull. Geogr. Bot. 24: 288. 1914, Cat. Pl. Yun-Nan 59. 1916.

Je-ma-tschouan, E. E. Maire s. n., July 1912; Cai-pou, E. E. Maire 156; Zao-keou-chun, E. E. Maire 514; between the Yangtze and Mekong, H. Handel-Mazzetti 8823, July 1916; no data, G. Forrest 14797; Liang-shan, A'Ho A'No, H. T. Tsai 51319, Sept. 1954; Wei-si District, H. T. Tsai 57860, Sept. 1934; no data, H. T. Tsai 57365, 57378, 57378; Wei-si District Kapu, C. W. Wang 67425, July 1935.

5. *Cornus macropnylla* Will. in Roxb., Fl. Ind. 1: 433. 1820; Hemsl. in Kew Bull. 1909: 330; Wang., Pflanzenr. 41 (IV. 229): 71. 1910; Rehder in Sargent, Pl. Wils. 2: 575. 1916; Hand.-Maz., Symb. Sin. 7: 689. 1933.

Cornus alosiphila W. W. Smith in Notes Bot. Gard. Edinb. 10: 19. 1917.

Che-ki, *E. E. Maire* 103; Mengtze, *A. Henry* 10747; on Tong-shan in the Yangtze bend *G. Forrest* 11176, Sept. 1903; Likang, *C. Schneider* 3080, Sept. 1914, 3302, Oct. 1914; Pe-yen-tsin, *S. Ten* 523, June 1918; Chien-chuan-Mekong divide, *G. Forrest* 22218, Aug. 1912, 23051, July 1922; mountains south of Likang, near Hochin and *J. F. Rock* 4061, May 1922; Yangtze watershed, western slopes of Likang Snow Range, *J. F. Rock* 4229, May-June 1922; Yangtze watershed, Likang, eastern slopes of Likang Snow Range, *J. F. Rock* 4552, 6170, May-Oct. 1922; between Likang, Young-ning and Youngpei, en route to Mili, *J. F. Rock* 5090, 5179, May-June 1922; Chungtien, mountains east of Hsiao-Chungtien, *J. F. Rock* 24620, April-May, 1932, 25249, Sept. 1932; no data, *H. T. Tsai* 57213, 57651, 57699 (fragmentary), 57822, 59811, Wei-si District, *H. T. Tsai* 57919, Oct. 1934, 59913, Sept. 1934, 63071, (fragmentary), 63098, Nov. 1934; Wei-si District, *C. W. Wang* 63603, June 1935, 67843, Aug.-Sept. 1935; Champutung, Soo-roo-la, *C. W. Wang* 66686, Sept. 1935; Likang District, *C. W. Wang* 70726, July 1935; no data, *T. T. Yü* 5786, 10377; Atunze, Mt. Yangtsa, *T. T. Yü* 10186, Sept. 1937; Atunze, Mt. Kaakerpu, *T. T. Yü* 10495, Sept. 1937; Muli, Woosi, *T. T. Yü* 10456, Aug. 1937; upper Kiukiang Valuley (Clulung), *T. T. Yü* 19555, 19586, Aug. 1938; Mekong-Salween divide, Londjre, *T. T. Yü* 23136, Sept. 1938; northern flank of the Likang Snow Range, *K. M. Feng* 1265, June 1939, 2240, Aug. 1939; western Likang, Tamichung, *R. C. Ching* 21489, Aug. 1939; Likang Snow Range, *R. C. Ching* 30138, June 1939; eastern flank of Likang Snow Range, *R. C. Ching* 30649, Sept. 1939.

DISTRIBUTION: Himalayan region through western and central China to Korea and Japan.

6. *Cornus yunnanensis* Li in Journ. Arnold Arb. 25: 312. 1944.

Southern Chungtien, between Zer-I and Kai-lou-wei on the Yangtze bank, *K. M. Feng* 3410, Nov. 1930.

DISTRIBUTION: Northwestern Yunnan.

7. *Cornus Walteri* Wang. in Rep. Sp. Nov. 6: 99. 1908, in Pflanzenr. 41 (IV. 229): 1910; Rehder in Sargent, Pl. Wils. 2: 576. 1916.

"*Cornus Wilsoniana*" sensu Hemsl. in Kew Bull. 1909: 334, non Wang.

Cornus Henryi Hemsl. apud Wang. in Pflanzenr. 41 (IV. 229): 90. 1910.

No data, *G. Forrest* 13889; mountains above Tseku and Tsechung, Mekong-Salween watershed, *J. F. Rock* 8764, 1923; Wei-si District, *C. W. Wang* 64139, 67892, July 1936, 67698, Aug.-Sept. 1936; no data, *T. T. Yü* 8469, 11308; Atuntze, Hungpoh, *T. T. Yü* 7987, Nov. 1937; Atuntze, Mt. Kaakerpu, *T. T. Yü* 10495, Sept. 1937, 10519, Oct. 1937; northwestern Likang, Chiao-tou on the bank of the Yangtze River, *R. C. Ching* 20713, May 1939; eastern flank of Likang Snow Range, *K. M. Feng* 3924, Oct. 1939.

DISTRIBUTION: Hupeh, Szechuan, Yunnan.

This species is near *Cornus macrophylla* Wall. from which it can be distinguished by its smaller and narrower leaves with 3 to 5 pairs of lateral nerves only. It has been confused with *C. Wilsoniana* Wang. of Hupeh and Szechuan which differs from *C. macrophylla* Wall. and *C. Walteri* Wang. chiefly in having cylindric styles instead of clavate ones. Hemsley (in Kew Bull. 1909: 334) considered that *C. Walteri* Wang. is synonymous with *C. Wilsoniana* Wang., while Wangerin and Rehder keep them separate. I doubt if the two are specifically distinct.

6. *Cornus paucinervis* Hance in Journ. Bot. 29: 217. 1881; Hemsl. in Kew Bull. 1909: 334; Wang. in Pflanz. 41 (IV. 229): 72. f. 18. a-e. 1910; Rehder in Sargent, Pl. Wils. 2: 577. 1916; Hand.-Maz. Symb. Sin. 7: 689. 1933.

Cornus quinquinervis Franch. in Journ. de Bot. 10: 307. 1896.

Suen-oui, *F. E. Maire* 419; Mengtze, *A. Henry* 10800, 10800A; Yunnanfu. *H. Handel-Mazzetti* 6105, April 1917, 10240, June 1917; Ta-ko-le, Hua-ning, *Y. Tsiang & H. Wang* 16337, March-May, 1939.

DISTRIBUTION: Hupeh, Szechuan, Yunnan, Kwangsi, Kwangtung.

9. *Cornus chinensis* Wang. in Rep. Sp. Nov. 6: 100. 1908; Hemsl. in Kew Bull. 1909: 335; Wang. in Pflanzenr. 41 (IV. 229): 80. 1910; Rehder in Sargent, Pl. Wils. 2: 577. 1916; Hand.-Maz. Symb. Sin. 7: 689. 1933.

Macrocarpium chinense Hutch. in Ann. Bot. 6 (21): 89. 1942.

Without localities or other data, *G. Forrest* 7734, 9530, 12045, 18026, 18582, *H. T. Tsai* 57165, 57406, 57446; Young-shan District, *H. T. Tsai* 51100, June 1932; Chen-hsiung District, *H. T. Tsai* 62337, June 1932; Lan-ping District, *H. T. Tsai* 54017, Aug. 1933; Wei-si District, *H. T. Tsai* 57893, 57920, 59584, Sept. 1934, *C. W. Wang* 63640, 63942, 67713, 67838, Aug.-Sept. 1935, 67993, July 1935, 71742, Oct. 1935; Kiukiang Valley, Kungmung, *T. T. Yu* 20552, Oct. 1938; northwestern Likiang, *R. C. Ching* 20465, 20471, May 1949, 21526, Aug. 1939, 21990, Oct. 1939.

DISTRIBUTION: Upper Burma and southwestern China: Yunnan, Szechuan, Hupeh, Kweichow, Hunan.

10. *Cornus kousa* Buerg. var. *chinensis* Osborn in Gard. Chron. III. 72: 310. 1922; Chun in Sunyatsenia 1: 284. 1934.

"*Cornus kousa*" *sensu* Wang. in Pflanzenr. 41 (IV. 229): 88. 1910, *pro parte*; Rehder in Sarg, ent, Pl. Wils. 2: 577. 1916; Hand.-Maz., Symb. Sin. 7: 689. 1933, *non* Buerger.

Young-shan District, *H T. Tsai* 51068, June 1934; Yi-liang District, *H T. Tsai* 52106, May 1935, 52135, Junk 1935.

DISTRIBUTION: Shansi, Szechuan, Yunnan, Kwangtung, Kiangsi, Anhwei, Chekiang, Hupeh.

The typical form of the species occurs in Japan.

11. *Cornus capitata* Wall. in Roxb., Fl. Ind. 1: 434. 1820, Pl. As. Rar. 3: 10. *t.* 214. 1832; Wang. in Pflanzenr. 41 (IV. 229): 89. 1910; Rehder in Sargent, Pl. Wils. 2: 578. 1916; Hand.-Maz. Symb. Sin. 7: 690. 1933.

Dendrobanthamia capitata Hutch. in Ann. Bot. 6 (21): 93. 1942.

No data: *H T. Tsai* 57078, 57126, 57227, 57408, 57449, 57480, 57779, 69930; Yong-shan District, *H T. Tsai* 51220, July 1932; Tsien-pien, *H T. Tsai* 52506, Dec. 1932; Yung jen District, *H T. Tsai* 52851, 52874, May 1933; Pin-chuan District, *H T. Tsai* 52943, July 1933; Shang-pa District, *H T. Tsai* 54499, 54841, 59191, Oct. 1933, 54699, 56596, Sept. 1933; Lan-ping District, *H T. Tsai* 56095, 56127, Sept. 1933, 56262, Oct. 1933; Wei-si District, *H T. Tsai* 57840, Sept. 1934; Ping-pien District, *H T. Tsai* 55436, March 1934, 60290, June 1934, 61972, Sept. 1934; Wei-si District, *C W. Wang* 63572, June 1935, 67703, Aug-Sept. 1935, 67871, July 1935; Likiang District, *H T. Tsai* 65076, 71188, July 1935; Champutung Sooroala, *C W. Wang* 66596, Sept. 1935; Atuntze, Huan-fu-ping, *C W. Wang* 68780, Aug. 1935, *T. T. Yü* 14845, Dec. 1937; Likiang Snow Range, *T. T. Yü* 15196, June 1937; Mekong-Salween, Chingpoh, *T. T. Yü* 19085, June 1938; Salween-Kiukiang divide, Newahlung, *T. T. Yü* 19211, July 1938; Kiukiang Valley (Taron) Lungzung, *T. T. Yü* 19462, July 1938; Salween Valley, Bahanlo, *T. T. Yü* 22908, Oct. 1938; Likiang, Weng-tze, *K M. Feng* 276, June 1939; Bodo, south of Chuntien, *K M. Feng* 1050, May 1939; northwestern Likiang, Kai-tse on the bank of the Yangtze River, *R. C. Ching* 20670, May 1939; Ahai, northwest of Likiong Snow Range, *R. C. Ching* 20736, June 1939; Helungtan near Likiang City, *R. C. Ching* 20767, June 1939, 22203, Aug. 1939; eastern Likiang, Tseng-meng on the bank of of the Yangtze River, *R. C. Ching* 22121, Nov. 1939; no data, *J. C. Liu and C. Wang* 82139, 1939.

DISTRIBUTION: Himalayan region and southwestern and southern China: Yunnan, Kweichow, Szechuan, Hupeh, Kwangtung.

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