421. LOROPETALUM CHINENSE
Hamamelidaceae

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Summary. The history, distribution, relationships and cultural requirements of *Loropetalum chinense* (R.Br.) Oliver (*Hamamelidaceae*) are discussed. A description and illustrations of the species are provided, together with a brief discussion of generic boundaries in related genera of *Hamamelidaceae*.

Among horticulturists the family *Hamamelidaceae* is best known from a handful of genera that are sufficiently hardy to be grown outdoors in temperate climates. Most familiar of these are *Hamamelis* Gronov. ex L. (WITCH HAZEL), *Fothergilla* Murr. ex L. (WITCH ALDER), *Corylopsis* Sieb. & Zucc., *Parrotia* C.A. Mey. (PERSIAN IRONWOOD) and *Liquidambar* L. Additionally, aficionados may grow *Sycopsis* Oliver, *Distylium* Sieb. & Zucc., *Disanthus* Maxim. and perhaps *Parrotiopsis* Schneider. It may come therefore as a surprise to learn that the *Hamamelidaceae* has over 20 further genera, all of varying degrees of horticultural worthiness, that are seldom if ever seen in cultivation. *Loropetalum* R.Br., figured here, is one of these.

That a family of such obvious horticultural importance is represented by so few species in cultivation may seem peculiar, although there are various reasons for this dearth of cultivated taxa. In some instances the lack of horticultural interest is attributable to unsuitability for cultivation outside of the tropics – the exquisite *Rhodoleia championii* Hook. [*Curtis's Botanical Magazine* t.4509 (1850)] and the equally meritorious *Maingaya malayana* Oliver [*Kew Magazine* t.222 (1993)] are in this category. Alternatively, some genera are dismissed as being 'of botanical interest only' implying, undeservedly, a rather dreary countenance. The quietly attractive, but sadly rarely encountered, *Sinowilsonia henryi* Hemsl. and *Fortunearia sinensis* Rehder & Wilson have suffered this fate. Then, some genera have simply never been introduced into mainstream cultivation, including the superb *Chungia* H.T. Chang, together with numerous species of genera otherwise represented in cultivation by a single species; *Sycopsis* for one. However, there are genera, and *Loropetalum* is one such, for which the lack of horticultural attention is puzzling in that they are of great horticultural merit and, furthermore, easily grown given the minimum of winter heat to prevent frost damage. Indeed,

Loropetalum chinense

Christabel King

Loropetalum may prove to be hardy in favoured spots in the temperate countries.

Loropetalum is a genus of three or five species, occurring from north-eastern India to southern Japan. The only species in cultivation is that figured here. In terms of flower colour *L. chinense* is a variable species. The typical form, which was figured in an earlier edition of the *Botanical Magazine* [t.7979 (1904)], has sweetly scented white spidery flowers and strongly resembles *Hamamelis* when in bloom. Until quite recently the white flowered plant was the only one that was occasionally offered for sale in Europe and North America. However, there is also a form with deep pink to almost red flowers (and correspondingly slightly darker stems and foliage), that received botanical recognition (as forma *rubrum*) in the early 1970s and which has now been established in cultivation from China through the efforts of renowned Japanese plantsman Mikinori Ogisu. The first introduction by him to Japan was in 1981 as cuttings from plants at the Wuhan Botanic Garden; later, *c.* 1987, a large consignment was imported into Japan from Shanghai Botanic Garden. He reports (pers. comm.) that there are many variations in flower colour – pink, red and bicoloured – and in flower size and leaf shape. It is one of the richer red forms that is illustrated here by Christabel King.

In general appearance the small elliptic leaves and twiggy habit readily separates *Loropetalum* from *Hamamelis* but, as with other *Hamamelidaceae*, the genera are primarily separated on flower and fruit characters. *Loropetalum* has two thecae per anther (one per anther in Hamamelis), a long anther connective (absent or very short in *Hamamelis*), a semi-inferior ovary (fully inferior in *Hamamelis*) and nectar-producing staminodes alternating with the stamens (scales on the floral disc in *Hamamelis*). As noted above, the number of species recognized for *Loropetalum* varies from three and five. The exact number is to an extent dependent upon how generic boundaries are set in *Hamamelidaceae*. In the case of *Loropetalum*, the genus *Tetrathyrium* Benth., with two published species (one endemic to Hong Kong, the other to Yunnan) may be congeneric. Indeed, Oliver (1883) made a combination in *Loropetalum* for the Hong Kong species, *T. subcordata* Benth. (syn. *Loropetalum subcordatum* (Benth.) Oliver).

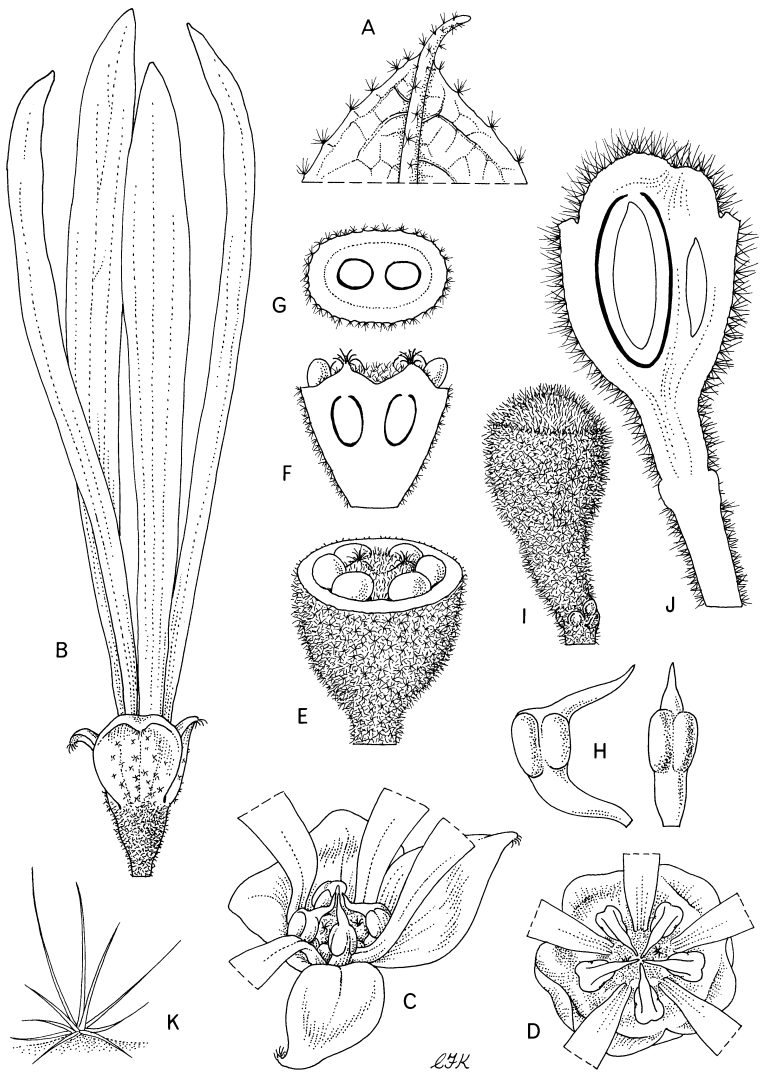
Loropetalum indicum Tong, described from the Khasia Hills in Meghalaya, north-eastern India is, based on examination of the

type and other collections at Kew, perhaps best treated as a tree-like manifestation of *L. chinense* since there are no readily discernible differences in the various fertile characters. It is, however, notable that while almost all Chinese and Japanese collections of *L. chinense* are described as being small shrubs, almost all Indian collections are tree-like. Interestingly, *L. chinense* has yet to be recorded from Myanmar (Burma), northern Thailand, Laos or Vietnam and thus the Chinese and Indian populations are apparently markedly disjunct. Other described species include *L. lanceum* Hand.-Mazz. and *L. subcapitatum* Chun ex H.T. Chang. Both are considerably larger trees and differ in a number of important floral and fruiting characters. As far as is recorded neither is presently in cultivation.

The primary distribution for *L. chinense* is southern China where it is widespread and common. While recorded from Japan, there are very few collections. It has also been recorded from Taiwan (Hayata, 1915 – but with only a Fujian (Fukien) collection cited), but I have been unable to trace any authentic Taiwanese herbarium specimens and it is not cited in any of the later literature on Taiwanese plants, including the current floras (Li *et al.*, 1977; Yang, 1982; Huang *et al.*, 1993).

CULTIVATION. *Loropetalum* is easily cultivated in a cool, barely frost-free and well-lit greenhouse or conservatory. At Kew *Loropetalum* is grown in the Asian section of the Temperate House in a large bed of humus-rich acid soil that is lightly shaded by taller trees. However, it also grows well in a lime-free, humus-rich soil in a large plastic container, kept outdoors from early April to late October and brought into a cool greenhouse for the winter. This latter method of cultivation had the advantage of thoroughly ripening the current season's growth and encouraging prolific flowering. It seems likely that the hardiness of *L. chinense* is more dependent on the ripeness attained by the current year's shoots more than a general inability to withstand winter cold. Certainly it would be worth trying *L. chinense* outdoors in the almost frost-free gardens of the south-west and north-west of Britain and Ireland and, of course, in those parts of the world that are perpetually frost free.

Propagation is most easily effected by cuttings of half-ripened shoots, removed with a heel and inserted into small plastic pots gritty, moisture retentive compost set over gentle bottom heat. Rooting takes as little as four weeks and the young plants can be



Loropetalum chinense. A, apex of leaf, underside, × 8; B, flower, × 4; C, 4-petalled flower, petals shortened, × 6; D, 5-petalled flower, with petals shortened, seen from above; E, gynoecium, × 12; F, gynoecium, longitudinal section, × 12; G, gynoecium, transverse section, × 12; H, stamen, two views, × 16; I, young fruit, × 4; J, young fruit, longitudinal section, × 6; K, stellate hair from surface of young fruit, × 30. Drawn by Christabel King.

potted individually at the onset of the new growing season. Given sufficient moisture and a regular balanced liquid feed, plants will flower modestly at the end of the first season.

Loropetalum chinense (R. Br.) Oliver, Trans. Linn. Soc. 23: 459 (1862); Hemsley, Bot. Mag. 130, t.7979 (1904); H.T. Chang & S.Z. Yan in H.T. Chang, Fl. Reip. Pop. Sinicae 35(2): 70–72, f.1 (1979); Wright, The Plantsman 4(1): 47 (1982). Types: China, Jiangsu ('Kiangsu'), walls of Nanjing ('Nanking'), Oct. 1817, *Abel s.n.* (BM!); China, Chusan Is., *Cunningham s.n.* (BM!).
Hamamelis chinensis R. Br. in Abel, Narr. Journ. Chin. 375 (1818).

DESCRIPTION. *Evergreen shrub or small tree*, twiggy, spreading, with stellate-pubescence, to 10 m (but Chinese and Japanese plants of considerably smaller stature). *Leaves* alternate, stipulate; stipules membranous, linear, soon falling; petioles 3–5 mm long; lamina 2.3–6.5 × 1.5–2.5 cm, elliptic to elliptic-ovate, dark semi-glossy green above, pale brown stellate-pubescent below, newest leaves flushed pinkish red, base markedly unequal, apex acute to ovate, minutely mucronulate. *Inflorescences* of 6–8 flowers in dense clusters at the tips of main and side shoots, more rarely in the axils of leaves on main and side branches. *Flowers* individually 1.5–2 cm across, paler forms sweetly almond-scented; calyx tubular with four shallow lobes, adnate to ovary; petals four, creamy white to deep pink or red, circinate in bud, spreading when open, linear, 1–1.5 cm × *c.* 1.2 mm. *Stamens* 4, epigynous, alternating with 4 nectar-producing staminodes; filaments very short; anthers basifixed, dehiscent in the middle by 2 valves, connective long-produced, acuminate. *Gynoecium* semi-inferior, 2-locular; styles 2, subulate; stigmas entire; ovule 1 per locule. *Fruit* a densely brown stellate-pubescent woody loculicidal 2-valved capsule, broadly ovoid with 2 apical cusps; seed oblong-cylindric, testa black, shining.

DISTRIBUTION. North-west India (Assam, Meghalaya); widespread throughout southern China, the two areas apparently disjunct. Also occurs in Japan (only 2 specimens seen) and allegedly also from Taiwan (no material seen.)

HABITAT. Evergreen broadleaf forest or scrub, 300–100 m.

FLOWERING TIME. January to May.

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