
Clematoclethra scandens

ERIC WAHLSTEEN writes about an overlooked Chinese endemic climber, a close relative of *Actinidia*.

Clematoclethra is a garden worthy plant which produces an abundance of white, pendent, lily of the valley scented flowers in May and ornamental black berries in the summer.

Following the latest revision of the genus (Tang and Xiang, 1989) it includes only one species and four subspecies distributed in central China from Gansu in the north to Guangxi in the south and from Qinghai in the west to Henan in the east. The first plant was collected by the Lazarist missionary Armand David (1826–1900) in July 1869 in central Sichuan and sent to Adrien Franchet (1834–1900) in Paris. Franchet identified it as a *Clethra* (Clethraceae) and named it *Clethra scandens* referring to its climbing habit (Franchet, 1888). The following year Carl Maximowicz (1827–1891) reclassified it in Actinidiaceae and placed it in its own genus, *Clematoclethra* and described three additional species (Maximowicz, 1889).

The family placement stands strong but the number of accepted species has varied from 20 to just one with four subspecies. In the Chinese flora the family Actinidiaceae includes the three genera *Saurauia*, *Actinidia* and *Clematoclethra*, whereof *Saurauia* includes non-climbers such as trees and shrubs. The distinction between *Actinidia* and *Clematoclethra* in the *Flora of China* (Jianqiang et al., 2007) is somewhat theoretical and may mislead the reader when considering the number of styles. The main difference between the two genera is numerous styles in *Actinidia* and only one in *Clematoclethra*. However, in the key of the *Flora of China* this is expressed as 5 styles in *Clematoclethra*, explained in the diagnosis as they are connate into a cylindrical structure. Two more characters other than the style are useful for identification; *Clematoclethra* produces only five seeds (*Actinidia* numerous) and ten stamens (*Actinidia* 15 or more). In addition, *Clematoclethra* always has functionally bisexual (perfect) flowers but *Actinidia* have functionally dioecious or polygamous flowers. In late summer the difference is more obvious when *Clematoclethra* produces rather small azure blue berries turning black when ripe. They are juicy but not particularly tasty, however, the weak taste resembles that of blueberries. They produce a strong dye and toxicity or allergens are not reported in reviewed literature.

Clematoclethra scandens is divided in four subspecies where subspecies *scandens* has setose branches and scarlet fruits; subspecies *hemsleyi* has nearly glabrous branches, dark fruits, pedicel and calyx woolly and inflorescence 3–7-flowered; subspecies *tomentella* has nearly glabrous branches, dark fruits, pedicel and calyx glabrous and underside of leaves and annual branches tomentose; subspecies *actinidioides* has glabrous branches, dark fruits, glabrous leaves and annual branches and inflorescence with 1–3 flowers.

During a journey in Chinese Sichuan in 2011 we made two collections of



The greyish green foliage of *Clematoclethra scandens* subsp. *actinidioides* contrasts attractively with the red petiole.

Below left, the white, scented bisexual flowers are either solitary or in two- to three-flowered cymes and **right**, the spherical, five-ribbed fruit are matt black once fully ripened.

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Clematoclethra in the northern parts of Aba County on the border to Gansu. At an elevation of 3,000 m in a sparse forest of *Abies fargesii*, *Betula albosinensis*, *Acer caudatum* and *Picea asperata*, plants of *Clematoclethra* climbed and scram-

bled over the shrubs. One of the collections (WBL11045) now thrives in our garden in southern Sweden where it covers a large steel mesh, reaching into a neighbouring walnut tree. It has been growing in open ground for five years and has so far been totally hardy with no winter dieback. However, it flushes a bit too early and is susceptible to late spring frost. For several years the first growth has been frosted, but without killing the plants. It would seem that *Clematoclethra* has evolved in a monsoon climate and suffers in hot and dry conditions, so ample supply of water is essential.

There are very few records of *Clematoclethra* in recent literature on gardening and plant hunting. However, Dan Hinkley mentions briefly the genus in his book on shrubs and vines (Hinkley, 2009) but not with any particular enthusiasm. Besides this, Hinkley wrongly points out the need of both male and female clones for fruit production (*Clematoclethra* has in fact bisexual flowers and is totally capable of self-pollination and fruit production).

Hinkley suggests propagation by softwood cuttings under mist or by seed which germinate after a cold winter of stratification. Our own collection WBL11045 was introduced as fresh seeds and germinated prolifically the next spring. From this stock, cuttings were rooted in June and July using standard compost and covered with a thin plastic sheet.

Using the key in the *Flora of China*, based on the revision of Tang and Xiang (1989), the collection WBL11045 turned out to be subspecies *actinidioides*. The diagnosis is from this particular collection:

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Clematoclethra scandens subspecies ***actinidioides*** (Maxim.) Y. C. Tang & Q. Y. Xiang, Acta Phytotax. Sin. 27: 91. 1989. Selected synonyms: *Clematoclethra actinidioides* Maximowicz, *C. argentifolia* C. F. Liang & Y. C. Chen; *C. faberi* Franchet; *C. franchetii* Komarov; *C. grandis* Hemsley; *C. integrifolia* Maximowicz; *C. lasioclada* Maximowicz; *C. pingwuensis* C. Y. Chang & Y. C. Chen; *C. prattii* Komarov.

WBL11045, China, Sichuan, NE Aba, 3000 m. In forest of *Abies fargesii*, *Betula albosinensis*, *Acer caudatum* and *Picea asperata*. Dried specimens are stored at LD.

Vine, woody, deciduous. **Branchlets** brown, glabrous with linear lenticels, somewhat angled. **Bud** obtuse, scales few, reddish, persistent. **Leaves** ovate, tip acuminate to apiculate, base cordate, veins pinnate, margin entire with few teeth, adaxial silvery midgreen, abaxial greyish green, leaf blade 60–30 × 30–12 mm, petiole adaxially furrowed, red, 10–25 mm. **Flowers** bisexual, in 2-3-flowered cymes, or solitary, white, scented, pedicel very shortly pubescent, bracts 2, linear, filiform. **Sepals** 5, elliptic to ovate, persistent in fruit, green, margin shortly ciliate, 4 × 3 mm. **Petals** 5, orbicular to elliptic, white 6 × 5 mm. **Stamens** 10, filaments glabrous, dilated at base, anthers dorsifixed, ovoid, 2-celled, dehiscing through two longitudinal slits, greyish blue. **Ovary** globose, **Style** 1, persistent in fruit, stigma capitate. **Fruit** spherical, 5-ribbed



The original engraving for the publication of the new species *Clethra scandens* by Adrien Franchet. Just a year later Carl Maximowicz raised the species to its own genus *Clematoclethra*.

(most prominent in unripe fruit), fleshy, length 5 mm, width 6 mm, matt black.
Seeds 4–5, flattish, 3.5 × 2 mm.

References

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