

Acer robustum Pax (1902)^[1]

Robust Maple

by Peter Gregory, with photographs by Hugh Angus, Piotr Banaszczak and Emery Davis

Originally published in *The Maple Society Newsletter*, Spring 2010



A. robustum flowering branch (PB)

This rare hardy Chinese maple is closely related to the very popular Japanese *Acer palmatum*. It is similar to subspecies *Acer palmatum* subsp. *amoenum* but differs in having mainly 7-9 lobed leaves, leaf margins with coarse irregular saw teeth, shiny upper and lower leaf surfaces, silky hairs in the vein-axils of the leaf undersides which become small white “cocoons” later in the summer, and larger samaras. It forms a small to medium-sized tree and is quite sturdy – the

Latin name “robustum” means sturdy or robust. The leaves are an attractive yellow-red when they first appear in the spring, becoming green for the summer and then turning a deep red to purple-red in the autumn.^[2]

Distribution, Discovery and Introduction

Acer robustum is native throughout central China from Zhejiang Province on the east coast across to Sichuan and northern Yunnan provinces in the west. It grows in mixed forests and in thickets along streamsides in mountainous areas at elevations between 2,275-8,275ft (700-2,700m) above sea level.

This species was first discovered by the Italian missionary Giuseppe Giraldi in Shensu Province in

1895, and described by Pax in Engler’s *Das Pflanzenreich IV* (1902). The name *Acer robustum* had earlier been used in 1852 by Opiz for a maple which turned out to be the European sycamore, *Acer pseudoplatanus*, and hence was invalid.



Summer leaves (HA)



Autumn colours (ED)

According to Alfred Rehder, Ernest “Chinese” Wilson brought back seed of *Acer robustum* in 1907, but there seems to be no record of plants raised from this.



A. robustum at the Rogow Arboretum, leaf undersides and fruit (PB)

John Grimshaw (2009) ^[3] mentions the oldest known *Acer robustum* in cultivation appears to be a tree growing in the Rogow Arboretum in Poland, [of which pictures by PB appear in this article], from seed received from the Beijing Botanical Garden in the early 1970’s. Gordon Harris (2000) ^[4] mentions more recent introductions into cultivation in the 1990’s, but it is still extremely rare in cultivation in the West.

Classification

A. robustum belongs to the Series *Palmata* in Section *Palmata*. This embraces eleven species ^[5], all small to medium sized trees or shrubs. The main characteristics of this group are that the winter buds at the shoot ends are mostly paired, with the terminal bud usually missing. The valvate buds having 4-5 pairs of bud scales and there is a collar of light hairs around each bud base. The lobed leaves have distinctly saw-toothed margins. The flowers are in clusters at the end of the shoots, with one pair of leaves at the base.



Paired winter buds (HA)

The flowers have 5 sepals and petals, the former usually reddish, the latter white to cream-coloured. The 8 stamens are inserted on top of the round receptacle disc (extrastaminal) and have red anthers. The nutlets are round to ovoid and fattish.

Detailed Description

Small sturdy tree up to 33ft (10m) tall at maturity, but usually smaller. Bark brown, smoothish with light

fissuring. Current shoots slender, smooth, shiny, purplish to reddish-brown. 2nd year and older shoots purplish-brown to olive-brown. Buds reddish-purple, pyramidal with pointed tips, and fringe of whitish hairs around the base. Terminal bud usually absent. Each bud has 4 pairs of valvate scales.



Flowers are distinguished by showy red sepals (PB)



Leaf upper side (HA)

Leaves : Medium-sized 7-9 lobed leaves, slightly broader than long – 6-8cm long x 7-9cm broad – with shallow cordate base when 7-lobed, or with small narrow triangular basal lobes pointing back down petiole (hastate) when 9-lobed. Lobes ovate with triangular tail-like tips, divided one-third to halfway to the leaf-base.

Upper surface mid-green, lower surface slightly lighter green, both smooth with slight sheen. Light hairs on both surfaces when young, quickly disappearing on upper surface, reduced to white ‘cocoon’ in vein-axils beneath later in summer. Leaf margins with coarse irregular saw-teeth. The slender petioles are usually shorter than the leaves – 3-6cm and hairless or with soft whitish hairs towards the leaf junction. The petioles are

reddish on upper exposed side, pinkish-green on sheltered side.



Male and female flowers occurring in the same cluster (PB)

and petals, and 8 stamens. Sepals are deep red to purple, ovate, and with rounded or acute tips, 4-5mm long x 1.5-2mm wide, and with ciliate margins. Petals are greenish-white, broadly obovate, slightly crumpled towards tip, 3.5mm long x 2.5-3mm wide and hairless. Stamens are inserted on top of the hairless receptacle disc, 4mm long in male and perfect flowers, up to 2.5mm long in female flowers. Ovary is glabrous and sparsely hairy, style 3mm long with a short 1mm long pair of stigmas. The ovary is rudimentary in male flowers.

Flowers : Few-flowered (4-8) inflorescences in outwardly pointing clusters on terminal shoots, appearing with the leaves in April. The flower cluster is up to 7cm long, the main stalk (peduncle) slender, smooth and 3-4cm long. Flower stalks also slender and smooth and 1-1.5cm long. Male, female and perfect flowers occur on the same tree and may occur on the same flower cluster.

Each flower has 5 sepals



Samaras of Acer robustum (PB)

Fruits : The large fruits are up to 2.5-3.5cm long, with paired wings held at a very obtuse angle to horizontal. Wings are greenish-yellow to reddish, keeled and veined, broadest in outer third, and with rounded tips. The fat ovoid nutlets are heavily ribbed.



Leaves have 7-9 lobes with red upward-facing petioles (HA)



A young *Acer robustum*, private collection (ED)

[1] *Flora of China* gives precedence to *Acer ceriferum* Rehder (1911), with *Acer robustum* listed as a synonym due to its earlier use describing *A. pseudoplatanus*. However, Chang and Woo (2011) found so-called *A. robustum* and *A. ceriferum* to be different taxa, with the latter synonymous with *A. duplicatoserratum*. Given this scenario so-called '*robustum*' then requires the earliest available name, which is *A. anhweiense* W. P. Fang & M. Y. Fang.

[2] The editors have not observed autumn colours other than yellow, however leaf coloration may be effected by many different factors.

[3] John Grimshaw, Ross Bayton. *New Trees: Recent Introductions to Cultivation*, Royal Botanical Gardens, Kew, 2009.

[4] James G. S. Harris, *The Gardener's Guide to Growing Maples*, Timber Press, 2000.

[5] de Jong et al, *Maples of the World*, 1996. In *Worldwide Maple Diversity*, de Jong, *Proceedings of the International Maple Symposium 2002*, 41 species are listed in Section *Palmata* Series *Palmata*, which combined the former Series *Sinensia* Pojárkova (1933) with Series *Palmata*. *Flora of China* lists "about 35" species in Section *Palmata* as of 2019.



A fine specimen at Westonbirt in Autumn 2019. Accession in 2000, it was planted 2004 (HA)

Dendrology consultant Dan Crowley. Additional editing and layout by Emery Davis.