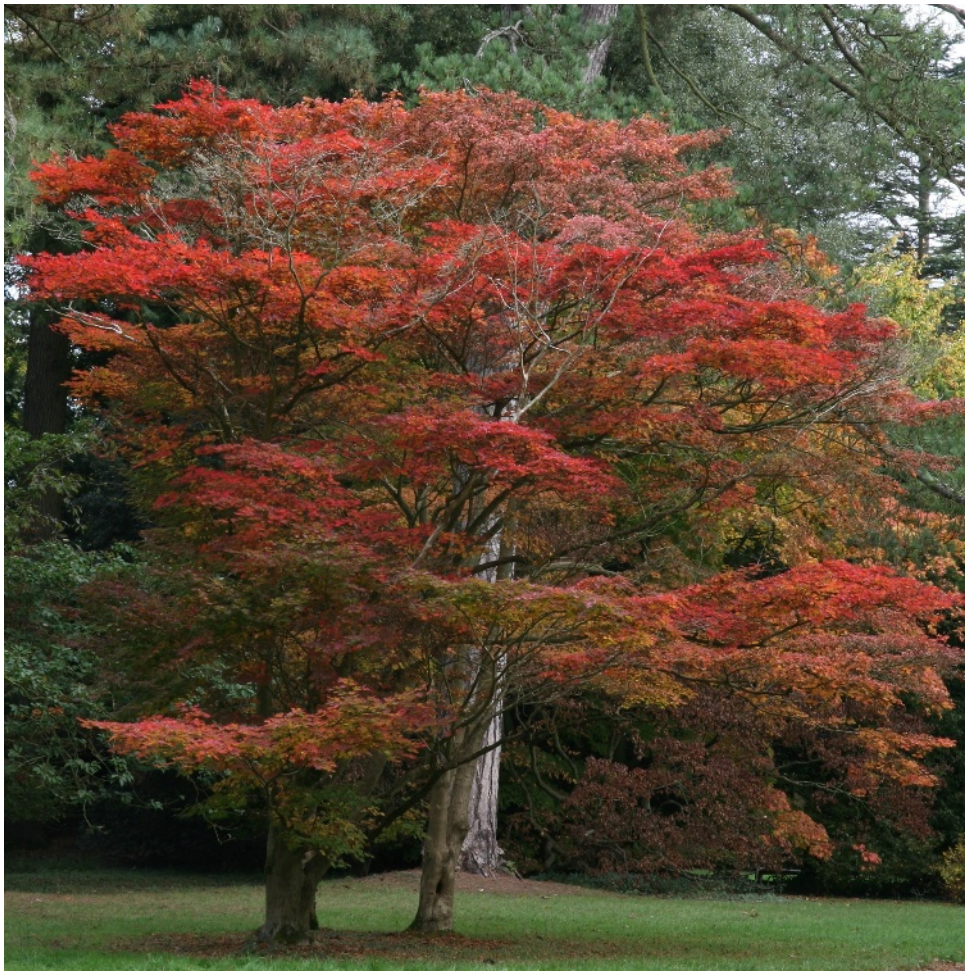
Acer sieboldianum Miquel (1865)

Siebold's maple

by Peter Gregory, with photographs by Hugh Angus

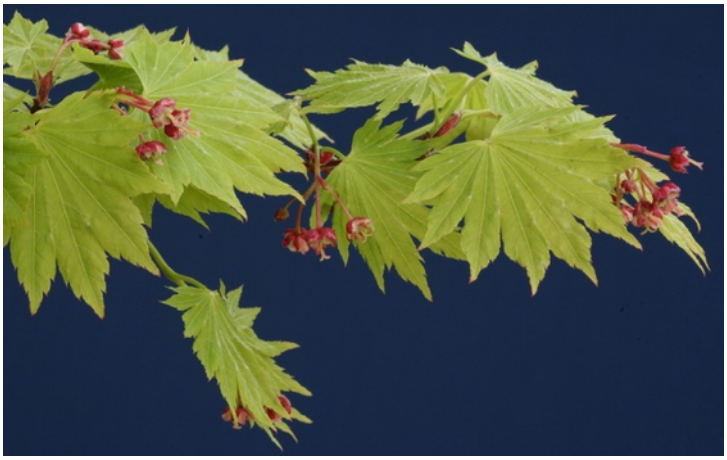
Originally published in The Maple Society Newsletter, Fall 2004

This beautiful small Japanese maple is closely related to *Acer palmatum, Acer shirasawanum* and *Acer japonicum*, also from Japan, and the American *Acer circinatum.* Siebold's maple is a hardy reliable plant, adaptable to almost any garden conditions. It is hardier and more resistant to spring frosts and diseases than *Acer palmatum*, and grows happily in any soil except compacted or heavy clay. It thrives best in moist conditions, when it will also tolerate full sun.



The autumn glory of Acer sieboldianum

Besides its hardiness, reliability and versatility in cultivation, the chief desirable features of *Acer sieboldianum* are the upright habit, attractive small, round, mainly nine-lobed leaves and clumps of small white to cream coloured flowers in the spring.

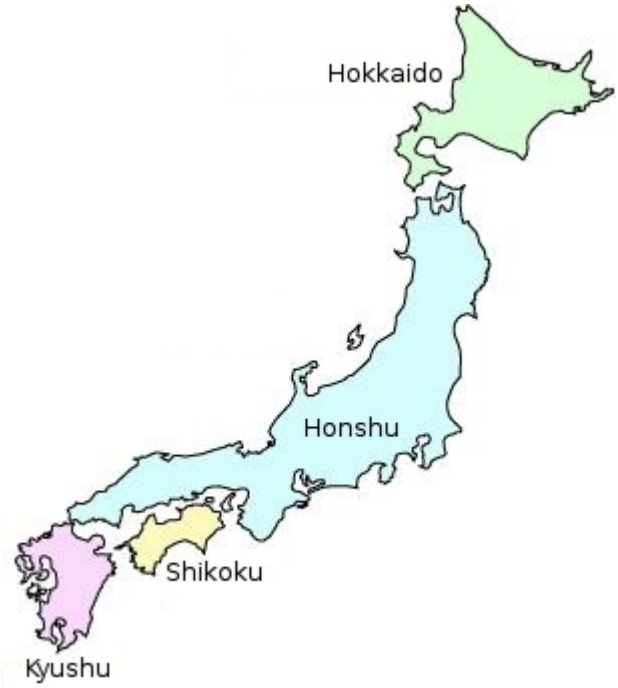


Elegant Flowers and Leaves in Spring

The young leaves are pink-red and velvety when they first emerge, turning to mid-to-dark green as they develop. The velvety appearance is due to a covering of soft white hairs all over the surfaces of the leaves, petioles and shoots, which mainly disappear as the season progresses. However, the autumn colour is probably the outstanding feature - beginning earlier than most maples, it turns from green to yellow,orange and pink, becoming a bright scarlet.

It is an easy species to propagate by grafting, and its seed germinates readily. However, seed from cultivated plants does not always come true as it hybridises readily with its relatives. There are many popular cultivars including 'Kinugasa yama' (silk canopy or

umbrella) and ‘Sode-no-uchi’, a dwarf form with tiny leaves popular among bonsai enthusiasts.



Main Islands of Japan

Distribution

Acer sieboldianum is one of the commonest maples in Japan, growing from around Lake Towada in northern Honshu, throughout the main islands of Honshu, Shikoku and Kyushu to the island of Yakushima, south of Kyushu. It is the most abundunt in southern Kyushu, but does not occur wild at all in the northernmost island of Hokkaido. It can be found in the cool-temperate mountain forests at elevations running from 1,300-5,850ft (400-1,800m) above sea level, and rarely grows in the warm-temperate or sub-alpine zones. It thrives best on sunny sites along streamsides, forest edges and clearings, and along ridges, but does prefer moist soils

Discovery and Introduction

This species, together with the Trident Maple, *Acer buergerianum*, was first described by Freidrich A.W. Miquel (1811-1871) in 1865 from herbarium material provided by the German physicist and botanist Philipp Franz von Siebold. Miquel named this species in his honour. Together with *Acer palmatum* and other maples, it was brought into cultivation in the St Petersburg Botanic Garden in the late 1860’s by Carl Maximowicz. In Britain, Siebold’s Maple was first described by G.Nicholson in 1881 in the *Gardener’s Chronicle*, and is thought to have been introduced into Britain at this time – possibly brought back from Japan by Charles Maries in early 1881, from his botanical expedition to Japan for the famous Veitch Nursery.


Blazing Reds and Oranges of Autumn

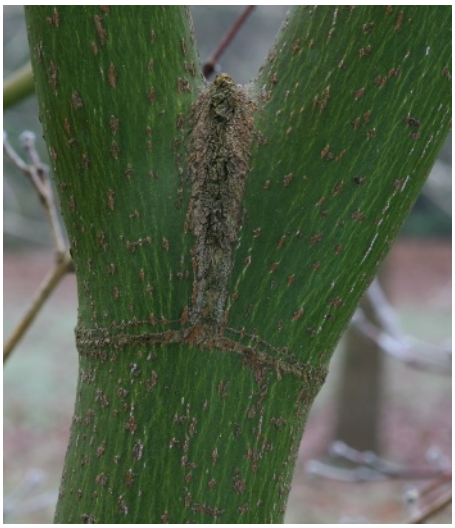
Siebold is notable as the first Westerner to remove living plant material from Japan. He went there in the early 1820’s as physician to the Dutch East Indies Company. Foreigners were restrained from travelling on the mainland, and were confined to Deshima Island in Nagasaki Bay – Holland’s last base in the Far East following the Napoleonic wars. His expertise as an eye-specialist was much valued, and he was allowed to travel to fellow doctors and their patients, collecting plant material on the way. It enabled

First Year Wood with 4 Distinct Scars

him to regenerate Deshima Botanic Garden, founded by his predecessors, Kaempferi and Thunberg, and smuggle a ship load of plants to Holland. That is how *Acer palmatum* and others came to Europe. Unfortunately, the Japanese authorites got to hear of this and banished him.

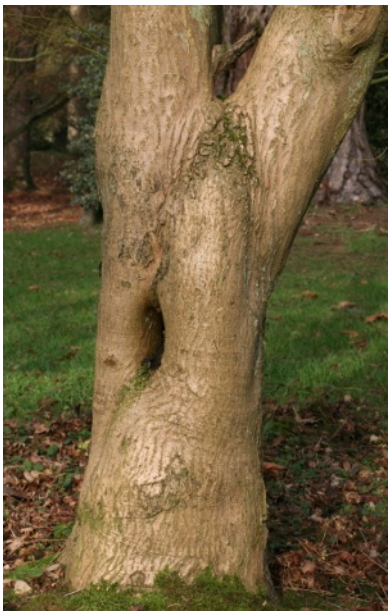
He was allowed back a year or two later and soon returned to his old habits. When the ship carrying his plants and maps foundered in a storm on its way back to Deshima, he was in serious trouble – smuggling maps was a head-from-body crime. Thanks to influential Japanese friends, von Siebold got away with a year's imprisonment and was kicked out again in 1830. He still managed to spirit away another ship-load of plants to Java, and used them to set up the Jakarta Botanic Garden before returning to Europe. Many maples were described for the first time in his *Flora Japonica Familiae Naturales* in 1845.

He returned to Japan yet again in 1859, as a political advisor to a Japanese privy counsellor, but involved himself in political intrigue which caused him to be booted out for the third time – taking yet more plants with him! On his return to Holland, he set up a plant nursery in Leiden, Holland, where he died in 1866, aged 70 years.



Attractive Young Stem

Classification



Trunk of a Mature Specimen

Acer sieboldianum belongs to the Section *Palmata*, Series *Palmata* together with ten other species. This embraces eleven species, 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. 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.

The hairiness of the young shoots, leaves and the leaf and flower stalks of *Acer sieboldianum*, combined with its small-to-medium sized (up to 8cm across) mainly nine-lobed leaves, divided to less than halfway to the leaf-base, plus the small white to cream coloured flowers, help to distinguish this species from its closer relatives.

Acer japonicum has larger (more than 8cm) leaves and relatively large, predominantly red flowers. *Acer shirasawanum* also has red flowers but in upright clusters, plus smooth shoots, leaves and stalks. *Acer palmatum* has only 5-7 lobed leaves, smooth shoots and mature leaves, plus red flowers.

Its relatives, *Acer pseudosieboldianum, Acer pubipalmatum* and *Acer duplicatoserratum*, like *Acer sieboldianum* have hairy shoots and leaves. *Acer pseudosieboldianum* differs in its red flowers and usually larger leaves than those of *Acer sieboldianum. Acer pubipalmatum* and *Acer duplicatoserratum* differ in having only 5-7 lobed leaves, the leaves of *Acer pubipalmatum* being much deeper lobed, divided to more than halfway. The teeth on the leaf margins of *Acer duplicatoserratum* are tiny, less than 1mm long, whereas those of *Acer sieboldianum* are coarse and 2-3mm long.

Koidzumi named eight varieties and subvarieties of *Acer sieboldianum*. Two of these are recognised in *Maples of the World* as varieties – *Acer sieboldianum* var. *microphyllum* and var. *tsushimense* – which also names a third, var. *yezoense*. [1]

- *Acer sieboldianum* var. *microphyllum* Maximowicz (1886)
  Small round leaves, only 2-4cm across, with short stubby lobes divided a ¼-way to the leaf-base.
- *Acer sieboldianum var. tsushimense* Koidzumi (1911)
  Deeply divided leaves, divided two-thirds of the way to the leaf-base.
- *Acer sieboldianum var. yezoense* Miyabe et Tatewaki (1938)
  With larger leaves 10-14cm wide. However, Ogata regards this as a hybrid between *Acer japonicum* and *Acer palmatum* subsp. *amoenum*.

Detailed Description

A deciduous, small, slender, erect-growing tree reaching 26-33ft (8-10m) tall on maturity, with a narrow crown broadening with age. The branches and bark of young trees are brown to grey-brown and smoothish, becoming darker grey and slightly roughened with age. The young, very slender current shoots are green and covered with white hairs when first appearing, usually becoming more or less glabrous later in the summer. The upper surface sometimes becomes reddish-purple on the exposed upper side, and on very vigorous shoots. The lenticels are minute and not obviously visible to the naked eye. The shoot broadens slightly at the nodes to form a platform for the attachment of the leaf-stalk.

There are four darkened rings around the base of each shoot where the bud scales were attached. The shoots remain green for several years, the surface becoming slightly roughened to the touch and often developing a grey bloom in the second year which may persist for 2-3 years. The lateral red buds are small, ovoid, triangular, lustrous and have four pairs of valvate scales. The terminal buds are absent.

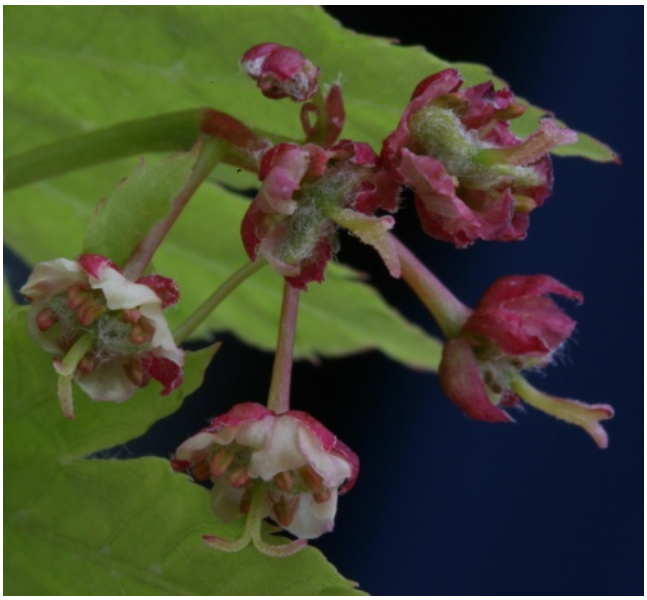
Downy Tufts on the Leaf Vein Axils

Leaves : The small nine-lobed leaves (sometimes 7-11) are almost circular, 6-9cm across, sometimes slightly longer than wide, and with a heart-shaped base. The ovate to ovate-oblong lobes are divided one-third to halfway to the leaf-base, with triangular sharp-pointed tips. The upper margins are coarsely double-toothed, less conspicuous on the lower margins. The lobe junctions (sinuses) are very acute and narrow, with adjacent sides sometimes overlapping.

The young leaves, when first emerging, are often orange-red and covered with down on both sides to give a velvety appearance. This soon disappears from the upper side except at the leaf “throat”, but persists along the veins and as tufts in the vein-axils on the lower side. The upper surface is a matt mid-to-dark green,

glabrous except at the “throat”. The lower surface is a lighter mid to grey-green. The leaf margins and teeth are sometimes red-purple tinged on leaves in open sunny positions. In the autumn, they turn an attractive orange to scarlet.

The slender, palmate venation is yellow-green, occasionally reddish, 7-11 veined with faint irregular laterals becoming reticulate. The slender stiff round petioles are usually shorter than the leaves, 3-5cm long with a central groove on the upper side and a slightly swollen, often kinked, base. The shoot is slightly widened at the junction with the petiole to form a platform on which the slightly swollen petiole base sits. They are usually light green but often red-bronzed on the upper exposed side. The petioles, like the leaves and shoots, are covered with downy hairs when young, becoming more or less glabrous later in the summer.



Flowers of Acer sieboldianum

<u>*Flowers*</u> : The male and female flowers can occur on the same tree and even on the same inflorescence. The numerous small yellowish flowers appear on terminal shoots with or soon after the leaves in early May. Each drooping cluster has 12-20 flowers on slender stalks attached to a 3-5cm long slender central stalk, and is subtended by one pair of leaves. The stalks, outside of the sepals and the ovaries are covered in soft light-coloured hairs.

Colourful Fruit

Each small flower is saucer-shaped, 4-5mm in diameter, and 5-merous. The 5 reddish, narrow long-pointed sepals are 2-3mm long and 1mm wide, and covered with whitish hairs on the outside. The 5 smaller, broader, round-tipped, hairless, light yellow petals are 1.5mm long and wide. The 8 stamens, with yellow rough-surfaced anthers on long, glabrous, slender filaments in male flowers, their bases inserted onto the round green receptacle disc, inside the disc edge (extrastaminal). The filaments are much shorter and anthers smaller in female flowers. The ovary, covered in whitish hairs, has a long slender style dividing into two short stigmas. It is very small, reduced to a tuft of whitish hairs in the male flower.

<u>*Fruit*</u> : The samaras are in 1-5 fruited clusters on a red, slightly hairy central stalk. Each samara (nutlet plus wing) is 1.5-2cm long. The wings are strongly keeled with conspicuous curved venation, broadest in the outer third (6mm wide) and with rounded tips, narrowing only slightly at the junction with the nutlets. The fat nutlets are ovoid, 5mm long x 4mm wide x 3mm thick, ribbed and with short white hairs at first becoming more or less glabrous when ripe in late September, early October. The wings of each pair of samaras is held at an obtuse angle to almost horizontal (130-160 degrees).

[1] Only *f. microphyllum* (rather than *var.*) is included at lower rank in the Flora of Japan. The note in the species account also states that *var. yezoense* is a questionable variety, with foliage more similar to *Acer amoenum* (syn. *Acer palmatum subsp. amoenum*) than to *A. sieboldianum*, though it is tomentose along the veins beneath. As stated, further study is required.

Dendrological consultant, Dan Crowley. Additional editing and layout by Emery Davis