

Maples * 11–12 May

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Without pause to acclimatise or set root, the assembled IDS members departed Warsaw driving eastwards for two hours, passing through alluvial flatlands to Rogów Arboretum, some 100 km east of Warsaw.

Our group of 36 had gathered from eight European countries the previous evening in Warsaw Old Town, the medieval quarter miraculously reconstructed in the late 1950s, 1960s and even into the 1970s after its destruction in 1942.

We were welcomed by Piotr Banaszczyk, curator of the Rogów Arboretum for Warsaw University of Life Science. Having introduced the Arboretum and its history, the seminar began with Piotr's PowerPoint presentation, based on which I have composed a summary. Rogów's systematic collections comprise 3,500 specimens including 60 Japanese maples, laid out in the woodland arboretum. Emerging into bright sunlight we walked through an arcade of textures and forms. The unfolding foliage was displayed in glamorous array, reiterating many of the subjects of Piotr Banaszczyk's seminar.

Maples in their sections and series by Dr. Piotr Banaszczyk

The genus *Acer* is distributed across North and Central America as far south as Honduras, in Europe and North Africa, and from the Middle East through the Himalayas. Although primarily a temperate genus, several species occur in tropical Asia.

It is divided into sections and series, based on a variety of floral, leaf and bud characters. The leaves are deciduous or evergreen, opposite and typically palmate. They may be entire or with 3–13 lobes, or pinnate with 3, 5 or rarely 9 leaflets. Hairs are often present in the vein axils of the leaf undersides and often elsewhere.

Inflorescences are variable in form – compound or simple, corymbose, panicle, racemose or umbellate – and are produced terminally or laterally. Flowering occurs before or as the leaves emerge. The flowers are hermaphrodite or unisexual. The fruit is a two-seeded schizocarp (samara). Some species such as *Acer hyrcanum* are adapted to dry habitats; others like *A. laurinum* show rainforest features of leathery evergreen, simple leaves with a long drip-tip.

According to various authorities, up to 18 Sections can be distinguished, based on gross morphology and qualified by their molecular phylogenies. More than 1,000 named selections of Japanese maple are in cultivation. The simplest approach to this identity parade seems to be comparison of easily-confused sections.

[*Acer* is being revised on [Trees and Shrubs Online](#); see the detailed genus page.]

SECTION PALMATA

The largest of the genus, and includes the 'Japanese maples'. The majority of these derive from *Acer palmatum*, to a lesser extent from *A. japonicum*, *A. shirasawanum* and other species in the *Palmata* Series.

Palmata have abortive terminal buds, usually with four pairs of scales, unlobed or three to 13-lobed leaves, corymbose inflorescences with terminal or axillary pedicels of male flowers often shed after flowering. The pentamerous flowers each have eight stamens inserted on the outside of the nectar disc.

Acer palmatum comprises three subspecies (some regard them as two separate species).

The *A. campbellii* complex (Series *Sinensia*) are distributed across south-east Asia from Nepal to Laos and western China.

A. sinense from south-east and central China prefers forested valleys at 500–2,500 m altitude. It has a distinctive brown-purple spring leaf becoming olive green, and is distinguished from *A. wilsonii* by compound corymbose panicles of 60–70 flowers, pedicels of 5–6 mm and nutlet/ovary features.

Acer tenuifolium (9–11 deeply serrate lobes. Leaf non-acuminate and papery) was compared with *A. shirasawanum*: 11–13 shallowly incised lobes. Leaf fine serrate, acuminate.

Their close relatives *A. japonicum*, *A. sieboldianum* and *A. pseudosieboldianum* subsp. *takesimense* (treated as *A. takesimense* by some) are hardy and have good autumn colour. The latter is endemic to Ulleung-do island, South Korea.

SECTION MACRANTHA

The 'snake-barks' are mostly hardy trees from eastern Asia (mainly China, Japan and Taiwan) and cool temperate eastern North America. They are notable for their patterned and coloured bark as well as autumn colour.

A. davidii is another widely represented member of *Macrantha*, with numerous named selections such as 'George Forrest' and 'Ernest Wilson'.

Selections of debated origin and parentage include those sometimes listed under *A. davidii* (eg. 'Serpentine', 'Cascade', 'Mindavi' / VIPER).

A. davidii subsp. *grosseri* matches the more recently introduced *A. metcalfii* in some of its characters.

A. forrestii has also produced some exceptional red fruited forms.

SECTION NEGUNDO

Series *Negundo* is represented by a single species in North and Central America: *Acer negundo*, while Series *Cissifolia* has a single species in China (*A. henryi*) and one in Japan (*A. cissifolium*).

SECTION TRIFOLIATA

Acer griseum is most notable, largely for its characteristic bark. This species has nearly entire leaflets and racemose, stalkless flowers and blue-striated stems.

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Acer cissifolium, its racemose flowers developing into samaras. Section *Negundo*



Acer henryi, Section *Negundo*



Acer forrestii (syn. *Acer pectinatum* subsp. *forrestii*), Section *Macrantha*



Acer sempervirens, Cretan maple, a xerophile from the eastern Mediterranean.

The dioecious *A. sutchuenense* appears affiliated to *A. negundo* but the flowers are stalkless and the leaflet margins are often entire.

Acer maximowiczianum (synonym *A. nikoense*) has pubescent leaf undersides, pedicels and nutlets. It bears corymbose flowers.

A. mandschuricum is elegantly trifoliate. Hard to propagate as the seeds are seldom viable, requiring cross-pollination of several specimens.

SECTION PLATANOIDEA

Buds with five to eight pairs of imbricate scales, lactiferous petioles. Leaf three to seven-lobed (rarely unlobed), margins entire, terminal inflorescences with octistaminate flowers, and fruits usually with flattened nutlets. With distribution from Europe eastwards to Japan, it is represented in Europe by *Acer campestre*. Asian equivalents of *A. campestre* are the Japanese *A. miyabei* and the Chinese *A. miaotaiense*, the latter only recently in cultivation.

A. platanoides is ubiquitous and has invaded the temperate forests of eastern North America.

The Italian *A. lobelii* belongs to the *A. cappadocicum* complex, members of which also occur in western and central Asia as far as China.

SECTION RUBRA

Two species in North America and three in South-East Asia.

Acer rubrum, renowned for autumn colour, is widespread across eastern USA with numerous selections, as well as hybrids with *A. saccharinum*, both in the wild and in cultivation. The Asian equivalent of *A. rubrum*, *A. pycnanthum*, is endemic to Japan. Section *Rubra* is represented south of the equator by *Acer laurinum*, and *A. pinnatinervium*.

SECTION ACER

We moved on to the native maples of Europe and the Caucasus, many closely related, frequently hybridised. Leaf shape is a conspicuous but unreliable feature, except in old collections of known provenance.

Acer heldreichii, a rare high elevation and alpine species from south-eastern Europe. The leaf is obovate with obtuse serrations. This species is very consistent in form. *A. heldreichii* subsp. *trautvetterii* was also discussed.

Buds are probably the most important feature. *A. pseudoplatanus* and hybrids are usually green.

A. velutinum has a larger leaf, longer petioles and brown sharply pointed buds. Inflorescence type is also important, since *A. pseudoplatanus* has pendent panicles whilst some in this section bear erect/semi-erect panicles.

A. granatense (Series *Monspessulana*) from south-eastern Spain is related to *A. opalus* but may be closer to *A. hyrcanum*.

SECTION LITHOCARPA

Includes *Acer diabolicum* (referring to the horns between the fruit), *A. sinopurpurascens* and *A. tsinglingense*. This is one of the best in autumn, doesn't discolour in western Europe, varying from orange to yellow according to the amount of shade.

Acer amamiense (Amami maple) was discovered in 1999 on Oshima island in south-west Japan. Only 12 mature specimens, of which three are female, are known in the wild. See <https://www.forestryengland.uk/westonbirt/amami-maple> for an account of its discovery.

Maples in the wild, from California to Hokkaido

Philippe de Spoelberch then gave an annotated slideshow portraying spectacular specimens in their native settings and in cultivation. Their personalities emerged from his stories in this review of the genus. I have summarised some of the most notable with their facts and features:

- *Acer macrophyllum* typifies the variability of its genus extending from the Pacific North-West from shrubby to tall in habit.
- *Acer glabrum* and its few varieties become more deeply lobed as they range southward from northern California.
- *Acer circinatum*, a forest edge species, stands in for *Acer japonicum*, its Asian counterpart.
- By contrast *Acer pensylvanicum* (3 lobed, unbloomed shoots) is similar in form to *A. tegmentosum* (5 lobed, bloomed shoot). They both prefer shade.
- The dioecious *Acer negundo* var. *californicum* bears distinctive male tassels.
- *A. sempervirens* is often evergreen, leaves frequently aligning vertically to minimise UV exposure.



Above: *Acer platanoides* 'Tharandt'

Below: a selection of *Acer platanoides* cultivars; 'Paldiski' is elongated and deeply dissected.



- The fast-growing *Acer saccharinum* is a lowland species becoming huge and frangible, it lacks a persistent central axis.
- The hybrid *A × freemanii* is shapely and colours well but is equally fragile.
- All snake-barks are in Section *Macrantha*, with long racemes of short-lived flowers.
- *A. campestre* is normally 5 lobed, sometimes 3, typically horizontal and opposite samaras.
- *A. pseudoplatanus* is distinguished by its green rather than brown bud from *opalus*. The stamens emerge from a single point, whilst *A. opalus* is racemose. Their European ranges overlap.
- *A. monspessulanum* is 3 lobed, it sometimes hybridises with *A. campestre*.
- *Acer rubrum* is named for the colour of its flowers. In Poland the leaf is generally yellow.
- *A. velutinum* with distinctive pyramidal flower trusses, growing to an enormous size in Hyrcanian, the lowland wet forests of northern Iran.

As a finale we reviewed some *Acer tataricum* subspecies in Section *Ginnala*.



Acer tataricum subsp. *ginnala*.
A. tataricum is the only species in Section *Ginnala*, with four subspecies.

The following day we reached the Szmit Nursery, a family business established in 1982 and covering 54 hectares. Annual rainfall here averages 600mm. Szmit are now the largest nursery propagators in Poland supplying clients in 47 Asian and European countries. They deliver as far west as Iceland and until Putin's Ukrainian war as far east as Vladivostok. They have amassed a historical and genetic archive and living collections of over 6,000 species and cultivars.



Display of precious old books and nursery catalogues from the library archives, Szmit Nursery.

Our visit comprised sessions in the lecture theatre punctuated by meanderings among the collections. We were privileged to visit and browse the botanical library archives. Rare volumes of legendary status were laid out for our enjoyment. These texts are kept under climate-controlled conditions.

A selection of cultivars presented by Bronisław (Bronek) Szmit

Accompanied by a kaleidoscope of pictorial illustrations we reviewed the complex taxonomy of the maple and an identity system based on morphology and genetic affinities.

The many clones from years of selection of *A. platanoides* cultivars were described by Bronek Szmit and compared. These constitute an important reference collection for these often confused horticultural selections:

Special leaf forms: 'Lobergii' has a red petiole and is a bigger tree than 'Palmatifidum', which has a green petiole; 'Dissectum' is similar but reddish in spring; 'Cucullatum' is a well-known old cultivar; 'Tharandt' with its curious obtuse leaves; 'Paldiski' has deeply dissected and elongated leaves.

Red leaf forms: 'Schwedleri' is light red then green in summer; 'Reitenbachii' is green in spring and red in summer, with margins folding up (folding

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The group with newly planted *Nyssa sylvatica* at Szmit Nursery.

down in 'Schwedleri'). 'Goldsworth Purple' is purple all year, very similar to 'Crimson King' and 'Faassen's Black'; 'Royal Red' has a darker underside, not greenish, the best purple *platanoides* selection; 'Meyering' is purple in spring only, later turning olive green; 'Deborah' is similar to 'Schwedleri' but has a more upright habit; 'Crimson Sentry' is columnar to ovate; 'Purple Globe' is also egg-shaped, but prone to mildew.

Yellow and variegated leaf forms: 'Maculatum' is yellow only in spring; 'Walderseei' is better, a good yellow, no colour in the veins; 'Princeton Gold' from the USA, a good yellow at first; 'Samuli' is stable, with white variegation; 'Frisine' is more stable than 'Drummondii' (yellow margins).

Columnar habit: 'Columnare' by van Houtte 1855; 'Olmsted' (USA).

We wandered again through the nursery, show gardens and arboretum, musing on what we had learned during our study weekend before thanking our hosts for their hospitality and bidding goodbye.

My weekend favourite was *Acer laxiflorum* (single-lobed, with shiny leaf), a short-lived pioneer with wide-shouldered red samaras and long racemes. This might describe an early plant hunter, to round off the tour.