Maple




	maple – клён	[meɪpl]
	sugar maple - сахарный клён	[ˈʃʊgə meɪpl]
	vine maple - виноградный клён	[vaɪn meɪpl]

	red maple – красный клён	[red meɪpl]
	Japanese maple - Японский клён	[ʤæpəˈniːz meɪpl]
	paperbark maple – клён бумажнокорый	[ˈpeɪpəbæɜːk meɪpl]

	silver maple – серебристый клён	[ˈsɪlvə meɪpl]
	bigleaf maple - крупнолистный клён	[bigleaf meɪpl]
	Cretan maple – Критский клён	[ˈkriːtən meɪpl]

	**Amur maple –** **Амурский клён**	**[ɑːˈmʊə meɪpl]**
	**bigtooth maple -** **крупнозубчатый клён**	**[bigtooth meɪpl]**
	**Norway maple –** **Норвежский клён**	**[ˈnɔːweɪ meɪpl]**

MAPLE

Acer is a genus of trees and shrubs commonly known as maples. The genus is placed in the family Sapindaceae. There are approximately 128 species, most of which are native to Asia, with a number also appearing in Europe, northern Africa, and North America. Only one species, Acer laurinum, extends to the Southern Hemisphere. The type species of the genus is the sycamore maple, Acer pseudoplatanus, the most common maple species in Europe. The maples usually have easily recognizable palmate leaves and distinctive winged fruits. The closest relatives of the maples are the horse chestnuts. Maple syrup is made from the sap of some maple species.

Most maples are trees growing to a height of 10–45 m. Others are shrubs less than 10 meters tall with a number of small trunks originating at ground level. Most species are deciduous, and many are renowned for their autumn leaf colour, but a few in southern Asia and the Mediterranean region are evergreen. Most are shade-tolerant when young and are often riparian, understory, or pioneer species rather than climax overstory trees. There are a few exceptions such as sugar maple. Many of the root systems are typically dense and fibrous, inhibiting the growth of other vegetation underneath them. A few species, notably Acer cappadocicum, frequently produce root sprouts, which can develop into clonal colonies.

Maples are distinguished by opposite leaf arrangement. The leaves in most species are palmate veined and lobed, with 3 to 9 (rarely to 13) veins each leading to a lobe, one of which is central or apical.

A small number of species differ in having palmate compound, pinnate compound, pinnate veined or unlobed leaves. Several species, including Acer griseum (paperbark maple), Acer mandshuricum (Manchurian maple), Acer maximowiczianum (Nikko maple) and Acer triflorum (three-flowered maple), have trifoliate leaves. One species, Acer negundo (box-elder or Manitoba maple), has pinnately compound leaves that may be simply trifoliate or may have five, seven, or rarely nine leaflets. A few, such as Acer laevigatum (Nepal maple) and Acer carpinifolium (hornbeam maple), have pinnately veined simple leaves.

Maple species, such as Acer rubrum, may be monoecious, dioecious or polygamodioecious. The flowers are regular, pentamerous, and borne in racemes, corymbs, or umbels. They have four or five sepals, four or five petals about 1 – 6 mm long (absent in some species), four to ten stamens about 6 – 10 mm long, and two pistils or a pistil with two styles. The ovary is superior and has two carpels, whose wings elongate the flowers, making it easy to tell which flowers are female. Maples flower in late winter or early spring, in most species with or just after the appearance of the leaves, but in some before the trees leaf out.

Maple flowers are green, yellow, orange or red. Though individually small, the effect of an entire tree in flower can be striking in several species. Some maples are an early spring source of pollen and nectar for bees.

SUGAR MAPLE

Acer saccharum, the sugar maple, is a species of flowering plant in the soapberry and lychee family Sapindaceae. It is native to the hardwood forests of eastern Canada, from Nova Scotia west through southern Quebec, central and southern Ontario to southeastern Manitoba around Lake of the Woods, and northcentral and northeastern United States, from Minnesota eastward to Maine and southward to northern Virginia, Tennessee and Missouri. Sugar maple is best known for being the primary source of maple syrup and for its brightly colored fall foliage. It may also be known as "rock maple", "sugar tree", "birds-eye maple", "sweet maple", "curly maple", or "hard maple", particularly when referring to the wood.

Acer saccharum is a deciduous tree normally reaching heights of 25–35 m, and exceptionally up to 45 m. A 10-year-old tree is typically about 5 m tall. As with most trees, forest-grown sugar maples form a much taller trunk and narrower canopy than open-growth ones.

The leaves are deciduous, up to 20 cm long and wide, palmate, with five lobes and borne in opposite pairs. The basal lobes are relatively small, while the upper lobes are larger and deeply notched. In contrast with the angular notching of the silver maple, however, the notches tend to be rounded at their interior. The fall color is often spectacular, ranging from bright yellow on some trees through orange to fluorescent red-orange on others. Sugar maples also have a tendency to color unevenly in fall. In some trees, all colors above can be seen at the same time. They also share a tendency with red maples for certain parts of a mature tree to change color weeks ahead of or behind the remainder of the tree. The leaf buds are pointy and brown-colored. The recent year's growth twigs are green, and turn dark brown.

The flowers are in panicles of five to ten together, yellow-green and without petals; flowering occurs in early spring after 30–55 growing degree days. The sugar maple will generally begin flowering when it is between 10 and 200 years old. The fruit is a pair of samaras (winged seeds). The seeds are globose, 7–10 mm in diameter, the wing 2–3 cm long. The seeds fall from the tree in autumn, where they must be exposed to 45 days of temperatures below 4 °C to break their coating down. Germination of A. saccharum is slow, not taking place until the following spring when the soil has warmed and all frost danger is past. It is closely related to the black maple, which is sometimes included in this species, but sometimes separated as Acer nigrum. The western American bigtooth maple (Acer grandidentatum) is also treated as a variety or subspecies of sugar maple by some botanists.

The sugar maple can be confused with the Norway maple, which is not native to America but is commonly planted in cities and suburbs, and they are not closely related within the genus. The sugar maple is most easily identified by clear sap in the leaf petiole (the Norway maple has white sap), brown, sharp-tipped buds (the Norway maple has blunt, green or reddish-purple buds), and shaggy bark on older trees (the Norway maple bark has small grooves). Also, the leaf lobes of the sugar maple have a more triangular shape, in contrast to the squarish lobes of the Norway maple.

Although many people think a red sugar maple leaf is featured on the flag of Canada, the official maple leaf does not belong to any particular maple species; although it perhaps most closely resembles a sugar maple leaf of all the maple species in Canada, the leaf on the flag was specially designed to be as identifiable as possible on a flag waving in the wind without regard to whether it resembled a particular species' foliage.

VINE MAPLE

Acer circinatum, the vine maple, is a species of maple native to western North America, from southwest British Columbia to northern California, usually within 300 kilometres of the Pacific Ocean coast, found along the Columbia Gorge and Coastal Forest. It belongs to the Palmatum group of maple trees native to East Asia with its closest relatives being the Acer japonicum (Fullmoon Maple) and Acer pseudosieboldianum (Korean Maple). It can be difficult to distinguish from these species in cultivation. It is the only member of the Palmatum group that resides outside of Asia.

It most commonly grows as a large shrub growing to around 5 to 8 metres tall, but it will occasionally form a small to medium-sized tree, exceptionally to 18 metres tall. The shoots are slender and hairless. It typically grows in the under story below much taller forest trees, but can sometimes be found in open ground, and occurs at altitudes from sea level up to 1,500 metres.

The leaves are opposite, and palmately lobed with 7 to 11 lobes, almost circular in outline, 3 to 14 centimetres long and broad, and thinly hairy on the underside; the lobes are pointed and with coarsely toothed margins. The leaves turn bright yellow to orange-red in fall. The flowers are small, 6 to 9 millimetres in diameter, with a dark red calyx and five short greenish-yellow petals; they are produced in open corymbs of 4 to 20 together in spring. The fruit is a two-seeded samara, each seed 8 to 10 millimetres in diameter, with a lateral wing 2 to 4 centimetres long.

Vine maple trees can bend over easily. Sometimes, this can cause the top of the tree to grow into the ground and send out a new root system, creating a natural arch. This characteristic makes it the only maple capable of layering.

It is occasionally cultivated outside its native range as an ornamental tree, from Juneau, Alaska and Ottawa, Ontario[8] to Huntsville, Alabama, and also in northwestern Europe.

RED MAPLE

Acer rubrum, the red maple, also known as swamp, water or soft maple, is one of the most common and widespread deciduous trees of eastern and central North America. The U.S. Forest service recognizes it as the most abundant native tree in eastern North America. The red maple ranges from southeastern Manitoba around the Lake of the Woods on the border with Ontario and Minnesota, east to Newfoundland, south to Florida, and southwest to East Texas. Many of its features, especially its leaves, are quite variable in form. At maturity, it often attains a height of around 30 m. Its flowers, petioles, twigs and seeds are all red to varying degrees. Among these features, however, it is best known for its brilliant deep scarlet foliage in autumn.

Over most of its range, red maple is adaptable to a very wide range of site conditions, perhaps more so than any other tree in eastern North America. It can be found growing in swamps, on poor dry soils, and almost anywhere in between. It grows well from sea level to about 900 m. Due to its attractive fall foliage and pleasing form, it is often used as a shade tree for landscapes. It is used commercially on a small scale for maple syrup production as well as for its medium to high quality lumber. It is also the state tree of Rhode Island. The red maple can be considered weedy or even invasive in young, highly disturbed forests, especially frequently logged forests. In a mature or old growth northern hardwood forest, red maple only has a sparse presence, while shade tolerant trees such as sugar maples, beeches, and hemlocks thrive. By removing red maple from a young forest recovering from disturbance, the natural cycle of forest regeneration is altered, changing the diversity of the forest for centuries to come.

Though A. rubrum is usually easy to identify, it is highly changeable in morphological characteristics. It is a medium to large sized tree, reaching heights of 27 to 38 metres and exceptionally over 41 metres in the southern Appalachians where conditions favor its growth. The leaves are usually 9 to 11 centimetres long on a full-grown tree. The trunk diameter often ranges from 46 to 88 cm; depending on the growing conditions, however, open grown trees can attain diameters of up to 153 centimetres. The trunk will remain free of branches until some distance up the tree on forest grown trees, while individuals grown in the open are shorter and thicker with a more rounded crown. Trees on poorer sites often become malformed and scraggly. Generally the crown is irregularly ovoid with ascending whip-like curved shoots. The bark is a pale grey and smooth when the individual is young. As the tree grows the bark becomes darker and cracks into slightly raised long plates. The largest known living red maple is located near Armada, Michigan, at a height of 38.1 m and a bole circumference, at breast height, of 4.95 m.

The leaves of the red maple offer the easiest way to distinguish it from its relatives. As with all North American maple trees, they are deciduous and arranged oppositely on the twig. They are typically 5–10 cm long and wide with 3-5 palmate lobes with a serrated margin. The sinuses are typically narrow, but the leaves can exhibit considerable variation. When five lobes are present, the three at the terminal end are larger than the other two near the base. In contrast, the leaves of the related silver maple, A. saccharinum, are much more deeply lobed, more sharply toothed and characteristically have 5 lobes. The upper side of A. rubrum's leaf is light green and the underside is whitish and can be either glaucous or hairy. The leaf stalks are usually red and are up to 10 cm long. The leaves can turn a characteristic brilliant red in autumn, but can also become yellow or orange on some individuals. Soil acidity can influence the color of the foliage and trees with female flowers are more likely to produce orange coloration while male trees produce red. The fall colors of red maple are most spectacular in the northern part of its range where climates are cooler.

JAPANESE MAPLE

Acer palmatum, commonly known as Japanese maple, palmate maple, or smooth Japanese maple, is a species of woody plant native to Japan, Korea, China, eastern Mongolia, and southeast Russia. Many different cultivars of this maple have been selected and they are grown worldwide for their large variety of attractive forms, leaf shapes, and spectacular colors.

Acer palmatum is a deciduous shrub or small tree reaching heights of 6 to 10 m, rarely 16 metres, reaching a mature width of 4.5 to 10 metres, often growing as an understory plant in shady woodlands. It may have multiple trunks joining close to the ground. In habit, its canopy often takes on a dome-like form, especially when mature. The leaves are 4–12 cm long and wide, palmately lobed with five, seven, or nine acutely pointed lobes. The flowers are produced in small cymes, the individual flowers with five red or purple sepals and five whitish petals. The fruit is a pair of winged samaras, each samara 2–3 cm long with a 6–8 mm seed. The seeds of Acer palmatum and similar species require stratification in order to germinate.

Even in nature, Acer palmatum displays considerable genetic variation, with seedlings from the same parent tree typically showing differences in such traits as leaf size, shape, and color. Overall form of the tree can vary from upright to weeping.

PAPERBARK MAPLE

Acer griseum, the paperbark maple, is a species of flowering plant in the family Sapindaceae, native to central China. Acer griseum is found in the Chinese provinces of Gansu, Henan, Hubei, Hunan, Shaanxi, Shanxi and Sichuan, at altitudes of 1,500–2,000 m.

It is a small to medium-sized deciduous tree, reaching 6–9 m tall and 5–6 m wide, with a trunk up to 70 cm in circumference. The bark is smooth, shiny orange-red, peeling in thin, papery layers; it may become fissured in old trees. The shoots are densely downy at first, this wearing off by the second or third year and the bark exfoliating by the third or fourth year.

The leaves are compound, with a 2–4 cm petiole with three leaflets, each 3–10 cm long and 2–6 cm broad, dark green above, bright glaucous blue-green beneath, with several blunt teeth on the margins.

The yellow flowers are androdioecious, produced in small pendent corymbs in spring, the fruit being a paired samara with two winged seeds about 1 cm long with a 3 cm wing.

SILVER MAPLE

Acer saccharinum, commonly known as silver maple, creek maple, silverleaf maple, soft maple, large maple, water maple, swamp maple, or white maple, is a species of maple native to the eastern and central United States and southeastern Canada. It is one of the most common trees in the United States.

Although the silver maple's Latin name is similar, it should not be confused with Acer saccharum, the sugar maple. Some of the common names are also applied to other maples, especially Acer rubrum.

The silver maple tree is a relatively fast-growing deciduous tree, commonly reaching a height of 15–25 m, exceptionally 35 m. Its spread will generally be 11–15 m wide. A 10-year-old sapling will stand about 8 m tall. It is often found along waterways and in wetlands, leading to the colloquial name "water maple". It is a highly adaptable tree, although it has higher sunlight requirements than other maple trees.

The leaves are simple and palmately veined, 8–16 cm long and 6–12 cm broad, with deep angular notches between the five lobes. The 5–12 cm long, slender stalks of the leaves mean that even a light breeze can produce a striking effect as the downy silver undersides of the leaves are exposed. The autumn color is less pronounced than in many maples, generally ending up a pale yellow, although some specimens can produce a more brilliant yellow and even orange and red colorations. The tree has a tendency to color and drop its leaves slightly earlier in autumn than other maples.

The flowers are in dense clusters, produced before the leaves in early spring, with the seeds maturing in early summer. The fruit are samaras, each containing a single seed, and winged, in pairs, small, the wing about 3–5 cm long. The fruit are the largest of any native maple. Although the wings provide for some transport by air, the fruit are heavy and are also transported by water. Silver maple and its close cousin red maple are the only Acer species which produce their fruit crop in spring instead of fall. The seeds of both trees have no epigeal dormancy and will germinate immediately. Seed production begins at 11 years of age and large crops are produced most years. Like most maples, silver maple can be variably dioecious (separate male or female trees) or monoecious (male and female flowers on the same tree) but dioecious trees are far more common. They can also change sex from year to year.

On mature trunks, the bark is gray and shaggy. On branches and young trunks, the bark is smooth and silvery gray.

BIGLEAF MAPLE

Acer macrophyllum, the bigleaf mapleor Oregon maple, is a large deciduous tree in the genus Acer.

Big Leaf Maple can grow up to 157.80 feet tall, but more commonly reaches 15–20 m tall. It is native to western North America, mostly near the Pacific coast, from southernmost Alaska to southern California. Some stands are also found inland in the foothills of the Sierra Nevada mountains of central California, and a tiny population occurs in central Idaho.

Big Leaf Maple has the largest leaves of any maple, typically 15–30 cm across, with five deeply incised palmate lobes, with the largest running to 61 centimetres. In the fall, the leaves turn to gold and yellow, often to spectacular effect against the backdrop of evergreen conifers.

The flowers Big Leaf Maple produces in spring in pendulous racemes 10–15 cm long, greenish-yellow with inconspicuous petals. The fruit is a paired winged samara, each seed 1–1.5 centimetres in diameter with a 4–5-centimetre wing.

In the more humid parts of its range, such as in the Olympic National Park, Big Leaf Maple's bark is covered with epiphytic moss and fern species.

CRETAN MAPLE

Acer sempervirens, the Cretan maple, is a species of maple native to southern Greece and southern Turkey.

Acer sempervirens is an evergreen or semi-evergreen shrub or small tree, one of the very few evergreen species in the genus. It grows to 10 metres tall with a trunk up to 50 centimetres in diameter. The bark is dark grey, smooth in young trees, becoming scaly and shallowly fissured in mature trees. The shoots are green at first, becoming dull brown in the second year. The leaves are opposite, hard and leathery in texture, 1–4 centimetres long and 1–3 centimetres across, glossy dark green with a yellow 1 centimetre petiole, variably unlobed or three-lobed (often on the same shoot); the lobes have an entire (toothless) margin. The flowers are yellow-green, produced in small pendulous corymbs. The fruit is a double samara with two rounded, winged seeds, the wings 1.5–3 centimetres long, spread at an acute angle.

It is one of the most drought- and heat-tolerant species in the genus, occurring on dry, sunny hillsides at moderate elevations. It is closely related to Acer monspessulanum from further north and west in Europe, differing from it in being a smaller, often shrubby tree, and in its smaller, evergreen leaves.

AMUR MAPLE

Acer ginnala, the Amur maple, is a plant species with woody stems native to northeastern Asia from easternmost Mongolia east to Korea and Japan, and north to the Russian Far East in the Amur River valley. It is a small maple with deciduous leaves that is sometimes grown as a garden subject or boulevard tree.

Acer ginnala is a deciduous spreading shrub or small tree growing to 3–10 m tall, with a short trunk up to 20–40 cm diameter and slender branches. The bark is thin, dull gray-brown, and smooth at first but becoming shallowly fissured on old plants. The leaves are opposite and simple, 4–10 cm long and 3–6 cm wide, deeply palmately lobed with three or five lobes, of which two small basal lobes (sometimes absent) and three larger apical lobes; the lobes are coarsely and irregularly toothed, and the upper leaf surface glossy. The leaves turn brilliant orange to red in autumn, and are on slender, often pink-tinged, petioles 3–5 cm long. The flowers are yellow-green, 5–8 mm diameter, produced in spreading panicles in spring as the leaves open. The fruit is a paired reddish samara, 8–10 mm long with a 1.5–2 cm wing, maturing in late summer to early autumn.

BIGTOOTH MAPLE

Acer grandidentatum, commonly called bigtooth maple, is a species of maple native to interior western North America. It occurs in scattered populations from western Montana to central Texas in the United States and south to Coahuila in northern Mexico.

It is a small to medium-sized deciduous tree growing to 10–15 m tall and a trunk of 20–35 cm diameter. The bark is dark brown to gray, with narrow fissures and flat ridges creating plate-like scales; it is thin and easily damaged. The leaves are opposite, simple, 6–12 cm long and broad, with three to five deep, bluntly-pointed lobes, three of the lobes large and two small ones (not always present) at the leaf base; the three major lobes each have 3–5 small subsidiary lobules. The leaves turn golden yellow to red in fall (this trait is less reliable in warmer areas).

The flowers appear with the leaves in mid spring; they are produced in corymbs of 5–15 together, each flower yellow-green, about 4–5 mm diameter, with no petals. The fruit is a paired samara (two winged seeds joined at the base), green to reddish-pink in color, maturing brown in early fall; each seed is globose, 7–10 mm diameter, with a single wing 2–3 cm long.

NORWAY MAPLE

Acer platanoides, commonly known as the Norway maple, is a species of maple native to eastern and central Europe and western Asia, from France east to Russia, north to southern Scandinavia and southeast to northern Iran. It was brought to North America in the mid-1700s as a shade tree. It is a member of the family Sapindaceae.

Acer platanoides is a deciduous tree, growing to 20–30 m tall with a trunk up to 1.5 m in diameter, and a broad, rounded crown. The bark is grey-brown and shallowly grooved. Unlike many other maples, mature trees do not tend to develop a shaggy bark. The shoots are green at first, soon becoming pale brown. The winter buds are shiny red-brown.

The leaves are opposite, palmately lobed with five lobes, 7–14 cm long and 8–20 cm or 3 1⁄4–7 3⁄4 in across; the lobes each bear one to three side teeth, and an otherwise smooth margin. The leaf petiole is 8–20 cm long, and secretes a milky juice when broken. The autumn colour is usually yellow, occasionally orange-red.

The flowers are in corymbs of 15–30 together, yellow to yellow-green with five sepals and five petals 3–4 mm long; flowering occurs in early spring before the new leaves emerge. The fruit is a double samara Acer platanoides scanned fruit cropped.jpg with two winged seeds. the seeds are disc-shaped, strongly flattened, 10–15 mm across and 3 mm thick. The wings are 3–5 cm long, widely spread, approaching a 180° angle. It typically produces a large quantity of viable seeds.Under ideal conditions in its native range, Norway maple may live up to 250 years, but often has a much shorter life expectancy; in North America, for example, sometimes only 60 years. Especially when used on streets, it can have insufficient space for its root network and is prone to the roots wrapping around themselves, girdling and killing the tree. In addition, their roots tend to be quite shallow and thereby they easily out-compete nearby plants for nutrient uptake.[9] Norway maples often cause significant damage and cleanup costs for municipalities and homeowners when branches break off in storms as it does not have strong wood.