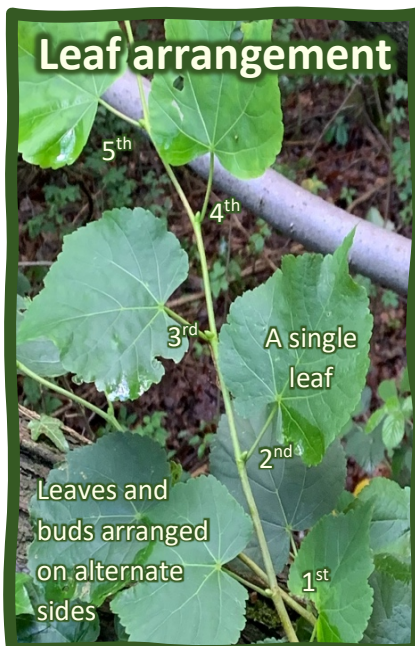
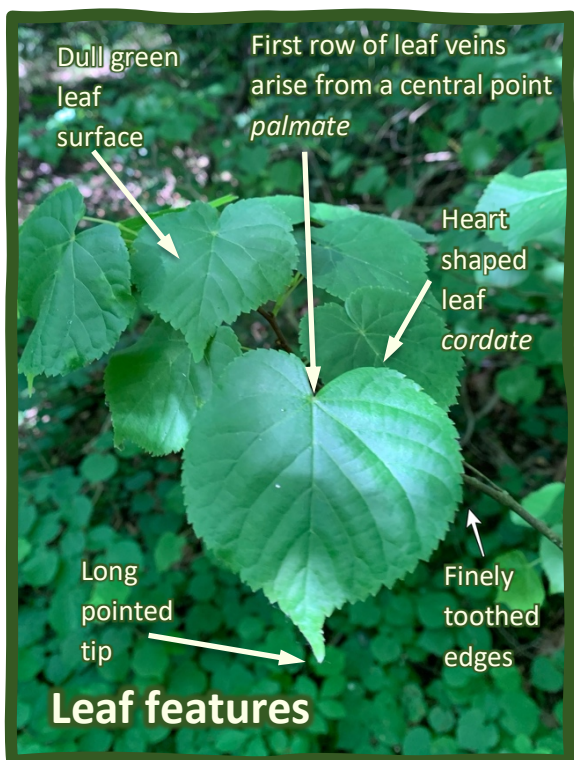
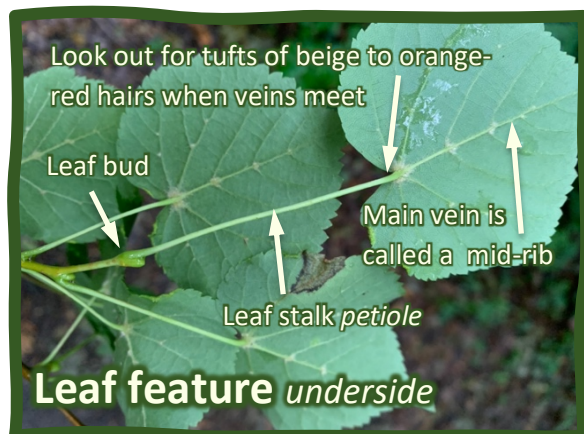


PLANT ID: small-leaved lime

Tilia cordata L.



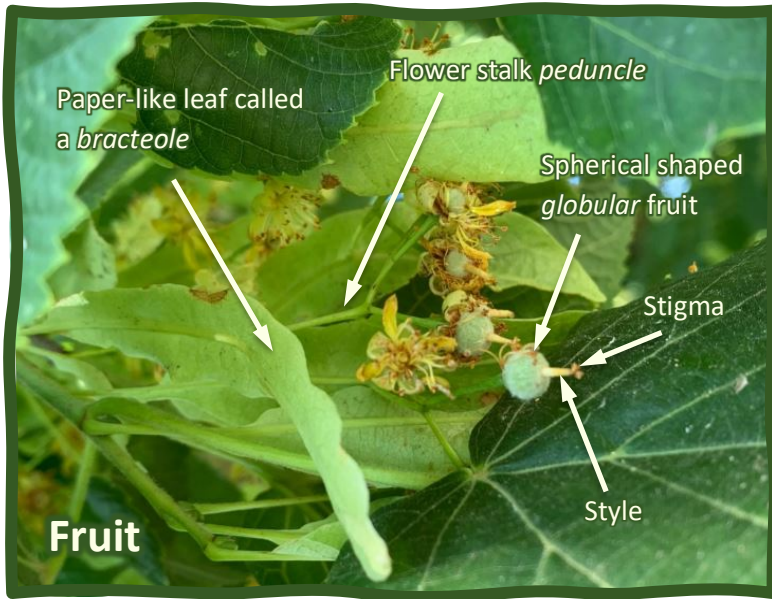
Practical uses
Fibres from its inner bark are used to make shoes, baskets, ropes and mats, while its soft, white and easily carved wood is used in making piano keys because it does not warp.



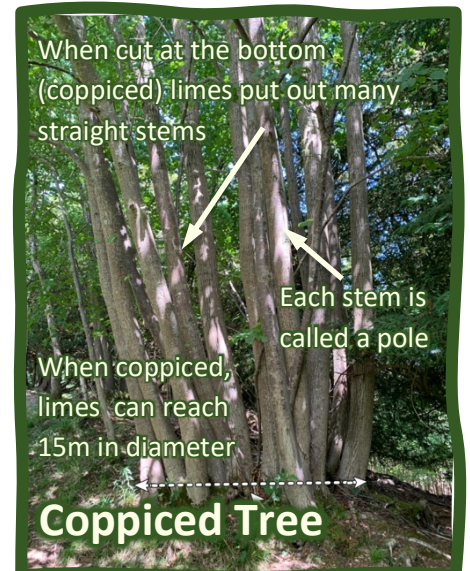
Lime hawk moths (*Mima tiliae*) crawl along its branches in May/June



PLANT ID: small-leaved lime *Tilia cordata* L.



Lime is not a toxic or poisonous plant, but it is very sticky!



Helpful ID Tips

Look at the location of, their colour and spread of leaf hairs on the leaf underside.

If there is a fruit, decide on its shape and whether it has or does not have distinct ribbing on its surface, and is it hairy or not.

Are there leaf galls and honeydew?

Do the flowers point upwards or hang downwards?

Where is the tree growing?

Edible

Lime flowers can be used to make a tea that will ease stiff muscles and help you sleep easier at night.

Collect the flowers and bracts when they are in full bloom (June – July) and dry them for a couple of weeks.

Add a couple of flowers to a cup of hot water.

Reproduction strategies

Pollination: pollinated by insects.

Seed dispersal: spread by mammals, birds, wind.

PLANT ID: small-leaved lime

Tilia cordata L.

Fact File:

CURRENT STATUS: Least concern of becoming extinct
LOCATION: Widespread across Europe and U.K.

ALIASES

Also known as the linden, baste tree, basswood, little-leaf linden or pry.

Plant Description (aka Taxonomy)

A member of the lime family (*Tiliaceae*), though recently molecularly re-classified as a part of the *Malvaceae* family. All members have long-stalked, simple **cordate** leaves and clusters of fragrant **actinomorphic** flowers each having a common stalk that has a fused, oblong, papery looking leaf called a **bracteole**. A **deciduous** tree, that when left to grow naturally can reach 38m. If they have been coppiced, they regrow quickly by putting out new straight poles from the base of the tree and have been known to be as large as 15m in diameter.



Flowers: Early June - July.

Flower Structure: Clusters of 5 to 10 yellowy green flowers and **bracteoles** that stick upwards through the leaves to be seen from afar.



Fruits: August - September.
Spherical (globose) in shape, sometimes with faint ribbing on its surface and usually hairless.



Leaf: Dull green heart shaped, finely toothed edges with a longish pointed tip that draws out the heart-shaped nature of the leaf. Underside of the leaf you will see that the first row of leaf veins is all palmate. In the armpit of the main veins you will see tufts of buff coloured hairs that become more orangey-red with summer age.



Habitat: A native tree of warmer lower slopes, lowland areas, especially upon limestone. It has been present in woodlands across Europe for more than 10,000 years. It is shade and drought tolerant.

Bud: Less than 4mm long. Look out for the colour of the young twigs, shoots and buds which are brownish red above and olive below.

What to look for



The toothed, heart shaped leaf is very distinctive of all species of lime (*Tilia spp.*) tree.

Best time to see it and use it

In summer, lime trees can be identified from afar by the presence of their fresh, electric green / yellow inflorescence that contrast against their darker strongly heart-shaped (cordate) green leaves.

Collect fresh summer flowers, then dry in the sun to make relaxing herbal teas that can help you sleep at night. Sit beneath a lime tree and be entertained by its buzzy insect orchestra.

Stem and trunk

Look out for smooth grey bark of young trees with developing brown cracks that slowly begin to fissure up and down the trunk as they get older. Older trees are more cracked and darker grey or brown. Fresh young shoots will be green but with summer, autumn and winter ageing, they become more olive-brown on the underside and mahogany red on the top side.

FOOD WEB

Nectar gathered by insects.
Fruits eaten by lime **aphids** (*Eucallipetrus tiliae*), who feed on sugars and amino acids it extracts from its leaf veins. Honeybees gather the honeydew produced by the aphids.

IMPERSONATORS: Key similar species are:

Generally, only other limes with cordate leaves will be confused with it. Common lime (*Tilia x europaea*) has white/buff tufts of hair in the join between leaf veins on the leaf underside. The flowers hang downwards, and the trunks often have large bosses. Look out for its very shiny leaves caused by infestations of aphids. Silver lime (*Tilia tomentosa*) has dense covering of pale grey hairs on the underside of its leaves that give it a silver appearance when you look up into the tree.



PLANT ID: small-leaved lime *Tilia cordata* L.

What's in a name? – Lime's common name lime has evolved from the medieval name, lind, while its Latin name *cordata* indicates that its leaves are of a heart-shape.

Botany glossary (part 1)

Aphid a small bug that feeds by sucking plant sap.
Deciduous trees that lose their leaves in winter time
Honeydew sticky and sweet residue secreted by aphids onto a plants stem and leaves.
Pedicel the stalk of a single plant flower.
Bract leaf like feature (usually green) immediately below a flower at a point where it joins the plant stem.
Stamen male part of the flower, each comprising a filament and anther.
Style related to the female parts of the flower. A stalk like feature that connects the stigma and ovary.

Botany glossary (part 2)

Stigma part of a flower that gets pollen from pollinators such as bees
Ovary a fused case. After fertilization the ovary develops into a fruit and the ovules develop into the seeds within.
Sepals the outermost of the two whorls (the inner ones being the petals) that surround the reproductive parts of the flower. Usually green in colour.
Bracteole tiny leaf like feature that sits at the base of the stem of an individual flower within a cluster of many others.
Leaf gall swelling of plant caused by parasites.



Get up close to the small-leaved lime by taking a virtual tour using the Pappus film library.

Oldest – Largest – Tallest

Czech Republic holds the record for the oldest tree – over 800 old.

The UK has the tallest at 40.5m metres.
Austria has a lime with the largest girth of 12.81 metres.

In the UK and across Europe you are more likely to come across common lime (*Tilia x europaea*) and the native large-leaved lime (*Tilia platyphyllos*), both of which are planted in parks and urban streets.

Their existence in a woodland suggests that it could have been part of an ancient woodland network connected to prehistoric times.

In the UK, look out for place names with the prefix 'Lynd' or 'Lin' which indicate a link to the presence of lime trees from the old wild woods of pre-historic times which may no longer survive there.

Global distribution

Small-leaved lime is associated with old woodlands. It is found across Europe with a core region in central and eastern Europe.



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Global species risk of extinction (IUCN – Red Data List)

