**Tilia cordata**: Littleleaf Linden

Edward F. Gilman and Dennis G. Watson

### Introduction

Littleleaf Linden grows 80 feet tall and can spread 40 to 50 feet, but is normally seen 40 to 50 feet tall with a 35- to 40-foot-spread in most landscapes. This tree has a slower growth rate than other lindens but has a dense pyramidal to oval crown which casts deep shade. Architects enjoy using the tree due to its predictably symmetrical shape. Littleleaf linden is a prolific bloomer, the small, fragrant flowers appearing in late June and into July. Many bees are attracted to the flowers, and the dried flowers persist on the tree for some time. Japanese beetles often skeletonize linden foliage, in certain areas in the northern part of its range. Defoliation can be nearly total and mature trees can be killed by severe infestations. Planting linden in areas with severe infestations of this pest may not be wise. However, at least one reference reports that defoliation by Japanese beetles is common, but control is seldom needed.

### General Information

**Scientific name**: *Tilia cordata*

**Pronunciation**: TILL-ee-uh kor-DAY-tuh

**Common name(s)**: Littleleaf linden

**Family**: Tiliaceae

**USDA hardiness zones**: 4A through 7A (Fig. 2)

**Origin**: not native to North America

**Invasive potential**: little invasive potential

**Uses**: hedge; container or planter; street without sidewalk; screen; shade; specimen; parking lot island > 200 sq ft; sidewalk cutout (tree pit); tree lawn 4-6 feet wide; tree lawn > 6 ft wide; urban tolerant; highway median

**Availability**: not native to North America

### Description

**Height**: 60 to 70 feet

**Spread**: 35 to 50 feet

**Crown uniformity**: symmetrical

**Crown shape**: pyramidal, oval

**Crown density**: dense

**Growth rate**: moderate

**Texture**: medium

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**Foliage**
Leaf arrangement: alternate (Fig. 3)
Leaf type: simple
Leaf margin: serrate
Leaf shape: orbiculate, cordate
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: 2 to 4 inches
Leaf color: green
Fall color: yellow
Fall characteristic: not showy

**Flower**
Flower color: yellow
Flower characteristics: showy

**Fruit**
Fruit shape: round
Fruit length: less than .5 inch
Fruit covering: dry or hard
Fruit color: brown, tan
Fruit characteristics: does not attract wildlife; showy; fruit/leaves not a litter problem

**Trunk and Branches**
Trunk/bark/branches: branches droop; not showy; typically one trunk; thorns
Pruning requirement: needed for strong structure
Breakage: resistant
Current year twig color: brown, green
Current year twig thickness: thin
Wood specific gravity: unknown

**Culture**
Light requirement: full sun, partial sun, or partial shade
Soil tolerances: sand; loam; clay; acidic; alkaline; well-drained; occasionally wet
Drought tolerance: moderate
Aerosol salt tolerance: none

**Other**
Roots: not a problem
Winter interest: no
Outstanding tree: no
Ozone sensitivity: tolerant
Verticillium wilt susceptibility: susceptible
Pest resistance: resistant to pests/diseases

**Use and Management**
Small lateral branches arise from the trunk in an upswept curve but quickly bend gracefully toward the ground. Multiple trunks and upright, large-diameter branches develop on some trees and they may be poorly attached to the trunk. These can initiate decay or, as with other trees with the same defect, they can fall from the tree. Be sure to purchase and train linden to one central trunk with well-spaced, small-diameter lateral branches. The cultivars ‘Glenleven’, ‘Greenspire’, and ‘June Bride’ have been developed for their very straight trunk. Linden may sprout from the base and these sprouts will have to be removed from time to time.

The tree grows in sun or partial shade, will tolerate alkaline soil if it is moist, and it transplants well. It is not particularly tolerant of drought, scorching at the leaf margins in summer drought. But this apparently does little long-term harm. It is more tolerant of heat and compact soil than American basswood. Many communities plant linden along the streets due to its rapid growth rate and dense, symmetrical crown but littleleaf linden is sensitive to road salt. There are a number of cultivars with a variety of habits.
The wood of linden is clear white, soft and often used for
drawer sides in inexpensive furniture. Though not as soft as
balsa wood, it sands poorly and is difficult to finish.

There are several cultivars: ‘Chancellor’—upright when
young but becoming pyramidal, fast growth, with a straight,
single trunk; ‘Glenleven’—conical (pyramidal), fast growth,
straight trunk, more open canopy than species; ‘Green-
spire’—straight trunk and radially produced branches—may
be the least-maintenance cultivar; ‘June Bride’—pyramidal,
glossy leaves, very slow growing, profuse flowering; ‘Py-
ramidalis’—widely pyramidal; ‘Rancho’—narrow, upright
growth habit, very small, fine textured leaf—a beautiful
tree; ‘Sterling’ is supposed to resist Japanese beetles.

**Pests**

Despite susceptibility to various insects and diseases,
control is usually not needed except for Japanese beetle.

Japanese beetles often skeletonize linden foliage, in certain
areas in the northern part of its range. Defoliation can be
nearly total and mature trees can be killed by severe infesta-
tions. Planting linden in areas with severe infestations of
this pest is not recommended.

Aphids can be a problem on linden causing the production
of honeydew. This is more of a nuisance than a life threaten-
ing problem.

Several caterpillars feed on linden. Have the insect identi-
fied then apply the appropriate control, if needed. *Bacillus
thuringiensis* will not be effective against sawfly larvae. Fall
webworm nests can be pruned out when still small.

Lace bugs cause discoloration of the leaves. The insects are
found on the undersides of the leaves, and can cause some
early defoliation but are otherwise harmless.

Spider mites cause leaves to become stippled and yellowed.
The mites are usually not discovered until there is a signifi-
cant infestation.

**Diseases**

No diseases are usually serious.

Anthracnose caused by *Gnomonia tiliae* causes elongated
light brown areas next to the veins. The spots may be
anywhere on the leaf but are most often near the tip.
The spots are bordered by a distinct black band. Severe
infections defoliate the tree. The disease does not require
chemical controls every year but repeated severe infections
may justify spraying.

Leaf blight causes leaves to brown and fall. The early
symptoms are round, brown spots with dark borders. The
spots become numerous leading to leaf browning and drop.

Several fungi cause cankers and dieback on branches and
trunks. Remove infected branches as they occur and avoid
wounding the tree. Fertilizing infected trees may help.

Powdery mildew forms a white coating on the leaves but is
usually not serious and does not require treatment.

Verticillium wilt causes dieback and death of individual
branches or the entire tree. Keep trees healthy with a
regular fertilizer program to help prevent the disease.