Tilia cordata 'Glenleven'
'Glenleven' Littleleaf Linden[1]

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INTRODUCTION

'Glenleven' Littleleaf Linden grows in a cone shape about 50 to 70 feet tall and can spread 40 to 50 feet in most landscapes (Fig. 1). This tree has a faster growth rate than other littleleaf Lindens with a more open, canopy forming a moderately dense pyramidal to oval crown which casts moderate shade. 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 its range. Defoliation can be nearly total and mature trees can be killed by repeated 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* 'Glenleven'
Pronunciation: TILL-ee-uh kor-DAY-tuh
Common name(s): 'Glenleven' Littleleaf Linden
Family: *Tiliaceae*
USDA hardiness zones: 4 through 7A (Fig. 2)
Origin: not native to North America
Uses: container or above-ground planter; hedge; large parking lot islands (> 200 square feet in size); wide tree lawns (>6 feet wide); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; screen; shade tree; specimen; sidewalk cutout (tree pit); residential street tree; tree has been
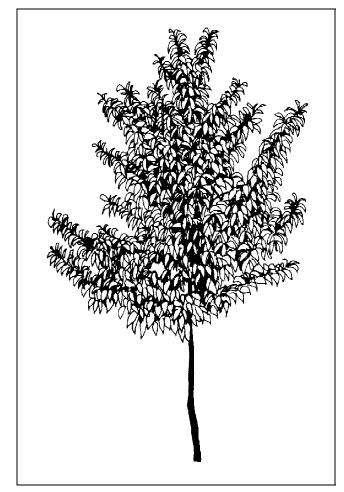

Figure 1. Middle-aged 'Glenleven' Littleleaf Linden.

successfully grown in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common
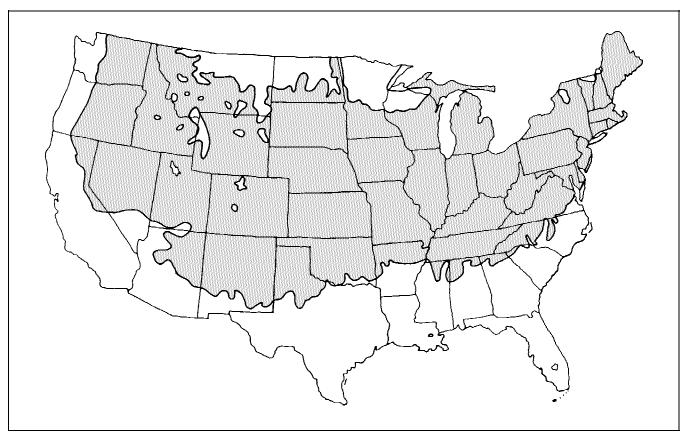

Figure 2. Shaded area represents potential planting range.

Availability: somewhat available, may have to go out of the region to find the tree

DESCRIPTION

Height: 50 to 70 feet
Spread: 40 to 50 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: oval; pyramidal
Crown density: moderate
Growth rate: fast
Texture: medium

Foliage

Leaf arrangement: alternate (Fig. 3)
Leaf type: simple
Leaf margin: serrate
Leaf shape: cordate; orbiculate
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: pleasant fragrance; showy; summer flowering

Fruit

Fruit shape: round
Fruit length: < .5 inch
Fruit covering: dry or hard
Fruit color: brown; tan
Fruit characteristics: does not attract wildlife; no significant litter problem; persistent on the tree; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns
Pruning requirement: needs little pruning to develop a strong structure
Breakage: resistant
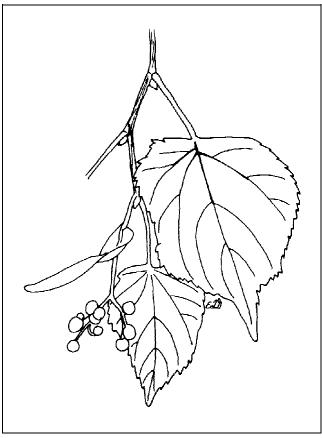**Current year twig color:** brown; green
Current year twig thickness: thin

Figure 3. Foliage of 'Glenleven' Littleleaf Linden.

Culture

Light requirement: tree grows in part shade/part sun; tree grows in full sun
Soil tolerances: clay; loam; sand; acidic; occasionally wet; alkaline; well-drained
Drought tolerance: moderate
Aerosol salt tolerance: none

Other

Roots: surface roots are usually not a problem
Winter interest: no special winter interest
Outstanding tree: tree has outstanding ornamental features and could be planted more
Invasive potential: little, if any, potential at this time
Verticillium wilt susceptibility: susceptible
Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

Small lateral branches arise from the single, straight trunk in an upswept curve but quickly bend gracefully toward the ground. Middle aged and old trees somewhat resemble the pin oak with its single trunk and drooping lower branches. Be sure to purchase and train Linden to one central trunk with well-spaced, small-diameter lateral branches. The cultivars 'Greenspire' and 'June Bride' have also been developed for their very straight trunk. Linden may sprout from the base and these 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.

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: 'Greenspire' - straight trunk and radially produced branches-may be the least-maintenance cultivar; 'June Bride' - pyramidal, glossy leaves, profuse flowering; 'Pyramidalis' - 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 infestations. 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 threatening problem.

Several caterpillars feed on Linden. Have the insect identified 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 significant infestation.

Diseases

No diseases are usually serious.

Anthracnose 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.