

*Tilia americana* L.

American linden



Left—leaves, note asymmetrical bases. Right—inflorescence with flower buds.

*Tilia americana* is a forest tree of rich, moist soils, including both upland slopes and floodplain habitats. It frequently grows with *Acer saccharum* (sugar maple) and *Fraxinus americana* (white ash). The large, more or less heart-shaped leaf blades with asymmetrical bases and unusual inflorescence (the stalk of the flower arrangement is fused to a long bract) make this tree easy to identify. The flowers appear primarily in the last three weeks of July. This species has many important uses to neo-aboriginals.

Beginning in the early spring, the winter buds (which can be eaten at any time of the year) begin to expand and offer a taste similar to peas. They are quite mucilaginous (as are other parts of the plant). The newly emerged leaves, while still somewhat translucent, can be eaten raw in salads or added to soups as a thickener (again, because of the mucilage). They are preferable to many other trees with edible young leaves because of their pleasant taste. The flowers, which appear around July, can be eaten raw or steeped to make a fragrant tea. The fruits, which are spherical and hairy around the outside surface, have been used in a variety of ways, including roasting and grinding to produce a coffee substitute.



Inner bark of *Tilia americana*. Left—raw strips of inner bark, removed after extended retting. Middle—raw inner bark reverse-wrapped into cord. Right—inner bark fibers after prolonged boiling in water and wood ash solution.

Linden plants have long been used by Native American tribes for various types of medicine, including the Algonquin, Cherokee, Iroquois, Malecite, Meskwaki, and Micmac. It is also used in Europe as a popular cold and flu remedy. Though other parts of the plant are frequently used, it is the flowers that are most often employed in modern herbology. They contain the polyphenols kaempferol, hesperidin, quercetin, astralagin, tiliroside (all types of flavonoids), as well as mucilage, phenolic acids, and tannins. Infusions made from the flowers (fresh or dry) are used to treat colds and cold-related coughs. Their success in treating these ailments is likely because of the nervine (i.e., relaxing the nervous system) and diaphoretic (i.e., inducing sweating) properties. Infusions are also used for their ability to assist with high blood pressure associated with nervous tension and arteriosclerosis. For these conditions, it may also have a preventative role in conjunction with life style changes.

One of this tree's best qualities is the excellent cordage that can be made from the inner bark. Furthering its use as cordage is the fact that the bark can be peeled from branches through most of the season using split separation (in addition to the normal period in late spring and early summer when the bark of most trees can be removed easily from the wood). Long sections (2 meters or more) can be easily removed if the bark is scored with a metal or stone blade. The outer bark can be removed and the inner bark immediately used as supple material for binding and weaving. It can also be braided and used as a quick cord for a bow drill for fire making. The highest quality and softest cord is made by retting the bark. This is accomplished by placing the bark in a body of water and keeping it submersed for 2–6 weeks (depending on the water temperature and amount of biological activity). The inner bark will eventually become slimy and can be removed in thin strips by carefully pulling away sections. The remaining bark can then be placed back in the water so that additional strips of inner bark can be removed. These strips of inner bark can be dried and then used as cordage and separated into strands of desired thickness. However, even higher quality (i.e., softer and thinner) fiber is produced by boiling the inner bark in a basic solution (wood ash can be used to alter the pH of the water; add enough to change the water color to gray). This act removes the material holding the strands together and reveals the soft, continuous fibers that can be used for a variety of purposes. Though the cordage is of excellent quality for inner tree barks, it does not equal the strength and abrasion resistance of fibers from herbaceous plants such as *Apocynum*, *Asclepias*, and *Urtica*. *Tilia americana* has a soft wood that is ideal for use as friction fire material. Both the fire board and spindle can be made from this plant. The coal it produces is dark and readily burns even if disturbed. However, the coal is more fragile than that produced from *Thuja occidentalis* and other quality fire woods. Live trees that are felled and split into fireboards of 2–3 cm thickness can be ready to use in two weeks or less (assuming warm, reasonably dry weather).