Chinese or Lace-Bark Elm – The Tough City Tree
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Throughout the western U.S., the name Chinese elm is commonly misused when referring to the Siberian elm. This is truly unfortunate. The Siberian elm (Ulmus pumila L.) is a less desirable shade tree than the true Chinese, Lace-bark or Evergreen elm (Ulmus parvifolia Jacq.) and is often weedy and trashy in the landscape.

Elms are adapted to and grow throughout Nevada, but the true Chinese elm tolerates the summer heat of Southern Nevada better than the Siberian elm. Extremely cold, harsh winters in Ely and Elko may damage or kill the Chinese, but not the Siberian elm.

Both species belong to the elm family which consists of fifteen genera and about 150 species worldwide. These dicots are mostly deciduous trees and are native to the temperate regions of the world, particularly the northern hemisphere. They have simple alternate leaves with one or two rows of serrations or teeth at the margins and asymmetrical leaf bases.

Petalless flowers are inconspicuous and usually appear in spring, but several species flower in late summer. Fruits are small drupes (cherry-like fruit), nuts or single samara (single winged nuts). Genera of the elm family native to the United States include five hackberry species (Celtis), one species of water elm (Planera), two species of nettle trees (Trema) and six species of elm (Ulmus).

Forty-five species of elms are indigenous to temperate zones of Europe, North Africa, Asia and North America. American natives grow east of the Rocky Mountains to the east coast and north of Mexico to southern Canada. Elms tolerate a wide range of soil textures and alkalinity (pH 6.0 to 7.5 preferred). They also tolerate high salty and sodic (alkali) soil conditions. Rich, moist soils stimulate tremendous growth, but most elms grow rapidly even in poor, dry soils— they do poorly or die in water-logged sites. Elms are also tolerant of the harsh conditions and pollution found in cities. Root systems are very fibrous and shallow compared to most trees; consequently, elms transplant easily and are heavy feeders.

The simple, alternate, often doubly toothed leaves are yellow or yellow-green in fall except the Chinese elm (U. Parvifolia L.) which may produce orange-red colors. Most elms- are cold hardy to -20 F: the American elm (U. Americana L.) may tolerate temperatures to -40 F. Until recently, elms were commonly recommended for fast growing, hardy, street and shade trees and were the principle city trees in many communities in the central and northeastern U.S., until Dutch elm disease was spread by the elm beetle. Elms also have been economically important for their yellow to yellowish-brown wood. A strong, durable, heavy wood, it has been used in furniture, paneling and ship building. Due to its strength, elms often sustain less damage by heavy snow or ice storms than other large ornamentals. They also provide most cover, seed and browse for wildlife.
Unfortunately, elms have a host of insect and disease problems. Two of the most devastating, Dutch elm disease and elm yellows (phloem necrosis), are epidemic. Fortunately, elm yellows has occurred only in the eastern U.S. Isolated infections of Dutch elm disease have been reported in the western U.S.: there have been no reports of the disease in Utah, Nevada, Arizona, or New Mexico. Wetwood, cankers, viruses—wills and decays are prevalent and, although not always life threatening, they weaken the plant and contribute to its decline. Likewise, aphids, bark beetles (several transmit Dutch elm disease), leaf beetles, leafhoppers and mites attack elms creating poor health, a ragged appearance, and maintenance problems for homeowners and tree specialists.

The true Chinese or Lace-bark elm (parvifolia L.) is often called the "Evergreen elm" in the southern U.S., where it grows well under mild climates. In fact, it may be mislabeled and sold as Evergreen elm (E. parvifolia sempervirens). Cultivars 'Drake', 'Sempervirers' and 'True Green' are popular for their dark, glossy almost evergreen leaf habit. Both Siberian and Chinese elms have small leaves, 3/4 to 3 inches long, with single serrations along the margins. Leaves of the true Chinese elm are more leathery, the upper surface is glossy, and a few tufts of hair are produced in the axils of the veins in the lower surfaces. Unlike the Siberian elm, which produces poor, yellow-green, fall foliage, if any, the Chinese elm may have red or red-orange fall color. It flowers and fruits in September or October, whereas the Siberian elm flowers and fruits in early spring. Bark of the Chinese elm is mottled reddish to light brown and tan on branches that spread in a silhouette likeness of a small American elm. A steel gray, fissured bark is characteristic of the Siberian elm.

Both trees may range from 50 to 75 feet in height in mature size, however, Siberian elms often are smaller and have a shrubby appearance. Elms may be subject to storm damage, but of the two, the Chinese elm has stronger limbs: most authorities rate the Chinese elm less hardy than the Siberian elm. This reflects their origins. The Siberian elm is native to the harsh climates of eastern Siberia, northern China and Turkestan, whereas the Chinese elm is indigenous to north and central China, Korea and Japan. Both were introduced into the U.S. for shade trees.

The Siberian elm was introduced into the U.S. in 1860 and the Chinese elm in 1794. Compared with the Chinese elm, the Siberian is more tolerant and more adaptable to harsh environmental conditions, poor soils, variations in pH, high salts, sodic soils, and low soil moisture. Both trees however, tolerate such adverse conditions better than do most ornamentals and may be considered for use on problem sites where other trees fail. They also have tolerance, or a mild degree of resistance to the Dutch elm disease and phloem necrosis. Chinese elm is the most resistant and also exhibits less wetwood and little susceptibility to elm leaf beetle damage. Siberian elm may be nearly defoliated when leaf beetles are present. The Siberian elm's flower and fruit debris from early spring to early summer and it is considered a major weed in many communities because trees volunteer from seed in fence lines, around buildings and in vacant lots. Either species will heave sidewalks, as both are shallow rooted and they should not be planted close to pavements.

The true Chinese or Lace-bark elm is, for the most part, a desirable shade, park or street tree, tolerant of city conditions, including pollution, poor soils, low soil moisture, strong winds and soil compaction. This elm comes in elegant, graceful forms, has glossy green foliage which may be red-orange colored in fall and has attractively mottled bark on strong limbs which make wistful silhouettes.

The Chinese elm grows well in many soil types and under varying climatic conditions. This adaptable plant requires little care and grows rapidly with minimum amounts of applied fertilizer and uniform soil moisture. It often grows well with neglect, but certainly is more handsome with proper care. Unfortunately this excellent plant is little known and often maligned because it is confused with the common, trashy Siberian elm.

No, Virginia, that weedy poor tree is not Chinese elm - it is a Siberian elm, an ornamental wayward cousin.

The following cultivars of Chinese elm are available from wholesale nurseries in California, Oregon and Washington and may be requested through local retail nurseries:

- Ulmus parvifolia 'Brea' - see ~ Ulmus parvifolia 'Drake'
- Ulmus parvifolia 'Drake' - a very upright tree that retains its rich, dark green leaves longer than the species, particularly in the climates of the South and Southwest.
- Ulmus parvifolia 'Simpervirers' - rounded tree with evergreen leaf habit.
- Ulmus parvifolia 'True Green' - a graceful rounded tree with glossy green, nearly evergreen foliage.

In 1984, the United States National Arboretum released 'Dynasty', a new cultivar of Chinese elm resistant to Dutch elm disease. It is a fast-growing, vase-shaped tree with a broad spreading crown. The young bark is smooth and dark gray with irregular patches that are not ornamental, older bark is fissured with rust colored lenticels. Leaves are red in fall where climates are cold. Two hybrid elms recently released by the U.S. National Arboretum are 'Homestead' and 'Pioneer'. Both are resistant to Dutch elm disease, fast growing and very suitable for home, street and park use. 'Homestead' has a dense, pyramidal crown while 'Pioneer' is dense and globe-shaped and 'Pioneer' has light green, young foliage which turns rich, parsley-green when mature, then bright 'Empire yellow' in fall.