Waitzinger

ELM TREES ON THE CAMPUS

Stanford 1975

For the general benefit of the public, we divided the Elms in two groups; large leaf and small leaf elms.

1. Ulmus americana The native elm of eastern United States and Canada with 4" - 6" leaves and growing up to 100 feet; however, I doubt if we have any true americana elms on the campus. This might be positively confirmed next spring when in bloom.

2. Ulmus campestris (English), Hollandeca (dutch elm), and the glabra or scotch elm, with numerous hybrids and variations in between, in the trade mostly known as the dutch elms. During the late 1800's and up to 1920, these were shipped to the United States by the thousands and thousands, mostly in bundles of 20, bareroot, dipped and packed in burlap. Since they can stand a long dormant season, they were ideal for shipping. They were used for street trees and windbreakers all over the United States.

   The elms along Salvatierra, Lasuen, Alvarado, and the Alleys were planted about that time (1890-1910). Also, the elms along Museum Way, Convalescent Home, and Frost Memorial Amphitheater were moved in 5' x 5' boxes during the construction of the bowl in 1936-37. For a nonnative tree they performed very well in this semiarid area with an average yearly rainfall of 14" which, in their native habitat of western Europe, the rainfall is 35" - 45" yearly.

   We might see the beneficial results of extra water at the Salvatierra Street between Campus Drive and Santa Ynez. The trees at the north side have the benefit of the lawn irrigation, while on the southside the trees never, at least in the last thirty years, have not had any extra water. The diameter B.H. for the north side is 35" - 45" and the trees at the south side 12" - 20". The periodic oiling of the ashpalt is not very beneficial for the growth of any street tree. We have seen this during the past thirty years where trees have blown over during the winter storms, not having any roots at all under the asphalt. This was one of the reasons why the elms were topped. The other reason was the tops were dying back, at that time (15-20 years ago) we already had the elm borer and the elm beetle. The power sprayer didn't always cover the top branches with spray material. At that same time, there was talk that we did have the Dutch Elm Disease but it was never proven positive but the tops of the trees were dying. The elms were sprayed regularly with DDT, arsenic, and oil in winter to stop the defoliation by the beetles. Also, the dead branches were removed and burned.

   Since then, restrictions on insecticides, fungicides, and burning are accepted as a health problem. Looking at the future for control of the elm decease, nothing seems to be promising and effective.

   A. Injecting the tree with a chemical is suggested but not proven to be successful, even if the chemical is found to give positive results. The cost might run from $50 to $200 per tree depending on its size.

   B. Control of the beetles and the removal of all infected and dead branches, plus keep the trees in a good growing and healthy condition.

   C. Let the Dutch Elm Disease run its natural course and clean up after the trees which are badly infected or dead.

Personally, I don't believe that the elm trees are wiped off this earth or the campus. Figuring that we have about 40,000 trees of all species on the campus, 20,000 of these trees were planted between 1949 and 1969. The 160 large leaf elms (called American elms by the general public) don't even amount to one-half percent of the total tree population. To remove these just to protect other trees at $300 is preposterous, let them die their natural death infected or not, and remove then when they become unsightly.

3. The small leaf elms:

A. Ulmus pumila syn: Planera, native of China. Leaves simple serrate 1½" - 2½" long. Total height +30 feet.

B. Ulmus parvifolia: Southern Siberia and China. Eighty feet, small leaves 2" - 3", semievergreen in northern California

C. Zelkova serrata: Asia minor and southern Russia. Small leaves 1½" - 2½" narrow, 60-80 feet in height.

D. Planera and other related to the ulmus: Apparently we haven't any.

The small leaf elms were all planted after 1945. So far, they haven't been reported as being susceptible to the Dutch Elm Disease which doesn't mean that they are immune to or could be carriers of the Dutch Elm Disease. They all are natives of countries with a milder climate and also with less rainfall as compared to the regions with more rainfall and colder climate as being the home of the large leaf elms of American and Western Europe.

Of the U. parvifolia, there are a number of varieties selected for having certain characteristics or habits. Sold in the trade under the name of Drake, Brea, LaBren and others, all originated in southern California.

We have about 538 small leaf elms on the campus, more than half at the married housing projects (Escondido Village).

It also might be that the Dutch Elm Disease after its rampage through the eastern United States will slow down and the casualties will be less. Another disease we have with us here at the campus and California is the Oakroot fungi, a slow disease, true, but it attacks not only oaks, but many other native and foreign trees, shrubs and plants. Some considerably strong and not easily destroyable trees: Pepper (native), eucalyptus, Ligustraum, Redwood, etc.

So far we haven't any remedy and we just have to live with it. The Elm Disease might have had too much publicity. For about thirty years the Arboretum, with a casualty rate of 20-30 dead trees per year, will always be a wooded area. There will be plenty of young trees for the future, not with eucalyptus, but with oak trees in spite of Oakroot fungi and the yearly denuding by the oak caterpillar.

The fungi is hard to control. Nature always beats the human being as an innocent bystander to the punch. The oak leaf caterpillar can easily be controlled with D.D.T. and once in the five years with one spraying of arsenic but heaven (general public) forbids, too dangerous. The California Oak natives of this region with 14" of yearly rainfall will soon be dead if planted in a lawn area with a regular sprinkler system, the oak tree wouldn't last many years. A large leaf elm would love it.

Total small leaf elms: 538

Total large leaf elms: 160

Injected three elm trees on Salvatierra Street and one tree southwest of the Medical Center along Medical Lane with thiobenzadol on September 25, 1975.

thiabenzadole.

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