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originated in Asia, allowing these varieties to build their resistance to the disease, and then spread to Western Europe.

Dutch elm disease first appeared in the United States in Ohio in 1930. Commercial importation of infected elm wood was blamed for bringing the disease across the Atlantic Ocean and giving it a strong foothold in North America.

An often-cited example of that foothold describes the distribution of one shipload of elm burl logs imported from France for veneer in 1934.

The cargo entered the United States at four separate points on the East Coast. When an infected log was found in Baltimore, the rest of the shipment was traced. The logs already had been transported 13,000 miles on 16 railroads through 21 states, apparently touching down at unloading points in at least seven. Elm bark beetles, the primary carrier of the disease, could have hatched anytime during the shipment, spreading Dutch elm disease throughout the country.

Movement of infected elm wood is blamed for spreading the epidemic west of the Rocky Mountains. Scientists were convinced that the beetles couldn't get past the mountain range by flying, but they didn't realize people would transport beetle-laden wood to the West Coast.

The disease first appeared in Oregon in 1973, when an infected tree was found in the town of Union in northeast corner of the state. By 1977 the disease had spread to Portland.

Dutch elm disease probably reached Eugene in late 1985, but it wasn't until the spring of 1986 when trees began to display symptoms, Hale said. Hale's crew found 18 dead or dying elms in the University area. After lab tests confirmed the trees were infected, all were cut down.

Removal is the best way to prevent spread of the disease

because it is more effective and less expensive than using chemicals, he said.

One study suggested if an infected tree is found soon enough, before 5 percent of the leaves wilt and turn brown, heavy pruning may save the tree. The key is to remove the infected limbs before the infection spreads, which happens very quickly during the growing season.

"Last year, I saw one dead limb in an infected tree that had a trunk two to three feet in diameter," Hale said. "Within three weeks the tree was dead," he said.

Hale said the city of Eugene spent an average of \$753 for each of the diseased trees found last year. The money was spent on cutting down all the trees and replacing some of them. Lane County paid for hauling the infected wood to area landfills, said Hale.

Of the 18 trees lost to Dutch elm disease last year, 14 were replaced with red oaks, Hale said. The city paid for replacing 13 trees that were in the public right of way. The city replaced one tree on privately owned land, sharing the cost with the landowner.

Hale said red oaks were used as replacements because they are big trees that would grow to similar proportions of the elms that were cut down.

The other alternative in controlling Dutch elm disease is the use of chemicals. However, Hale said chemicals are expensive and aren't always effective.

"We considered running some tests out by Hayward Field, Hale said. "But we couldn't justify spending \$12,000 to \$13,000 on repeating chemical tests that haven't worked anywhere else," he said.

There are more American elms, about 70, in the three-block area west of Hayward Field on the University campus than anywhere else in Eugene.

The other 220 or so trees are scattered throughout the city in pockets of five to 10 trees.

Hale said he is also reluctant to use chemicals in Eugene because of the public outcry that would probably result. People here are very aware of chemical use in the city, he said.

Chemicals are used in some parts of the United States though, both as injections into infected trees, which doesn't always work, and spraying to control the elm bark beetle population, the primary carrier of Dutch elm disease.

Injecting chemicals into trees has never been effective in stopping the spread of the disease. Some individual trees have been saved with injections, but the chemicals do nothing to stop beetles from spreading the disease.

The beetles transport fungal spores of Dutch elm disease when they feed on newly sprouted limbs or lay eggs in dead or dying elms. If the beetles' feed or brood trees are infected, fungal spores stick to the beetles' legs and are carried to any other trees the beetles visit.

If the beetles deposit the spores beneath the bark of American elms, the trees die and become potential breeding sites for more beetles.

Hale said the key to stopping the spread of Dutch elm disease is controlling the beetle population.

"Last year we had three (beetle) hatches," Hale said. "Most other areas only have two. That really hurt us," he said. There already has been one hatch this year, and Hale said he expects at least one more depending on the weather.

Controlling the beetle population was the goal of early Dutch elm disease eradication efforts, and scientists rushed to find an effective chemical to kill the beetle and preserve the trees. They were successful, and

created an insecticide that eradication leaders quickly embraced as the miracle cure for the epidemic.

The miracle insecticide was dichlorodiphenyltrichloroethane, better known as DDT. The toxic effects from the widespread use of DDT to control elm bark beetles in the Eastern United States are still being felt.

Besides causing the extinction of the eastern peregrine falcon, DDT spraying also killed millions of other birds. A 1961 study by the Cranbrook Institute of Science in Michigan listed hundreds of bird species killed as a result of DDT poisoning. The study also reported that fish and aquatic invertebrates were infected as well.

More recent efforts to control Dutch elm disease have focused

on breeding hybrid elms resistant to the disease. Borrowing the disease resistant qualities of the Asiatic elm varieties, scientists say they have developed more than 20 cross-bred elms to replace American elms.

Scientists also say that although older generations of American elms face certain death from Dutch elm disease, newer generations have been sprouting up resistant to the disease. They anticipate that future generations will eventually evolve that will be immune to the disease.

Hale, however, is concentrating on saving the elms that are in Eugene right now, but there is little more he can do than hope for the best.

"The prognosis doesn't look good," Hale said. "We've got our fingers crossed."

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opening while 70 favored the change.

Still, a substantial minority spoke in favor of the plan.

Steve Hammaker, a partner in Skeie's Jewellers, said he believes the closing of Willamette Street in the early '70s was a mistake that "choked off the heart of the city."

Hammaker also commented the re-opening of auto traffic on Willamette Street between 10th and 11th streets helped his

business a great deal.

Larry Douglas, executive vice president of the Eugene Chamber of Commerce, also spoke in support of the proposal, claiming the re-introduction of traffic would "attract and stimulate additional businesses" along the street.

Douglas expressed reservations though because of the intense public debate "a final decision does not seem to be in order now."

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To obtain entry-level reporting position.

EDUCATION:
B.A.: University of Oregon, 1985
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GPA: 3.8

JOURNALISTIC EXPERIENCE:
Managing Editor, Miami Herald, 1987
Covered local public affairs; also worked part-time as a Copy Editor.
Legislative Reporting Intern, Greenburg Tidings, Winter 1986
Worked at the State Capitol covering legislative issues of concern to Greenburg residents.
Reporting Intern, Medford Daily News, Fall 1986
Researched and wrote articles.
Freelance Reporter, Oregon Daily Emerald, 1984-85
Reporting and feature writing, including meetings, speeches, and interviews on