



Prince Philip plants elm developed by Eugene Smalley (right)

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Disease Resistant Elms

A Wisconsin elm hobnobs with royalty on the grounds of Windsor Castle in England. Prince Philip, husband of Queen Elizabeth, planted the young tree in April 1980, using a silver-plated shovel, while its developer, Professor Eugene B. Smalley, of the University of Wisconsin–Madison, stood proudly by. The “Elms Across Europe” project was launched in 1979 by Pitney Bowes, an international business machine firm.

This elm, sometimes called a super elm, was gaining worldwide attention as the first commercially developed elm resistant to Dutch elm disease.

Since it was discovered in the Netherlands in 1929, Dutch elm disease has killed well over 50 million elm trees on both sides of the Atlantic. By 1980, Britain had lost more elms than most European countries, and the beauty of its landscape suffered accordingly. An elm tree that would resist the disease had long been sought.

When Professor Smalley joined the UW–Madison faculty in 1957 as a plant pathologist and mycologist, his mission was clear: to find a solution to Dutch elm disease. According to forest ecology and management professor Ray Guries, “One of the first things Gene did was to begin assembling genetic resources here in Wisconsin.” Smalley began planting seedlings at the 50-acre Arlington Experimental Farm north of Madison and on his own 20-acre property near Cot-

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tage Grove, informally known as “Smalley’s Mountain Research Sanctuary.”

After 20 years of collecting and testing elm seedlings from all over the world—including Europe, China, Canada, and other parts of the U.S.—Professor Smalley developed a hybrid that would be generally disease resistant, cold hardy, and immune to Dutch elm disease. He named his first hybrid Sapporo Autumn Gold because it grew from open-pollinated seeds collected from a Siberian elm growing in the Botanical Garden at Hokkaido University in Sapporo, Japan. The Hokkaido seeds had resulted from the natural hybridization of the Siberian elm, which was disease resistant, with a nearby Japanese elm, which had a pleasing shape. Other hybrids soon followed, including Regal, American Liberty Elm Independence,

New Horizon, and Cathedral.

Smalley’s disease resistant elms have been planted all over the world, including along the autobahns and Rhine River in Germany, in London’s Hyde Park and at Windsor Castle. They have also replaced dead elms on the UW–Madison campus, Wisconsin State Capitol Park, at Harvard University, and along streets in cities all across the U.S.

Professor Smalley died at the age of 75 in March 2002. Professor Guries described Smalley as someone “incredibly loyal to the university and the state of Wisconsin. Once Gene came and started the program, he stayed,” he said. “He came and he stayed because the trees were rooted here. And, in a funny kind of way, he became rooted here, too.”

Sources: Dr. Eugene B. Smalley, Madison
Dr. Raymond Guries, Madison