27. Leafspot diseases can be confused with air-pollution or spray injury.
28. In air-pollution injury of pine, spots are the same point on all needles.
29. In spot-type spray injury, spots range from very tiny to very large.
30. Leafspot diseases can be confused with "shock" symptoms by some viruses.
31. Many tiny spots on leaves are caused by sucking insects, like leafhoppers.
32. All 8 of the preceding lines, no fungus or bacterium is present.
33. Pine-needle-scale insects can be confused with pine-needle-rust leafspot.
34. But pine needle scales are flat/streamlined while the rust is humped.
35. Spraying for leafspot diseases is worthless if it rains before sprays dry.
36. No spray now registered can remove or halt established leafspot infections.
37. Some leafspot diseases (like *Entomosporium* on hawthorn) make leaves fall.
38. Other leafspot diseases leave the leaves attached to the tree.
39. Defoliation in late spring or early fall does little harm to the tree.
40. Defoliation in mid-summer (e.g. hawthorn leafspot) weakens trees a lot.
41. Well nourished, properly watered trees endure leafspot infection weakening.
42. The Horse-chestnut "Leaf Blotch" is caused by *Guignardia aesculi.*
43. The Horse-chestnut "Leaf Blotch" fungus rarely crosses lateral leaf veins.
44. So Horse-chestnut "Leaf Blotch" has spots with some straight edges.
45. The Elm "Pepper-and-Salt Leafspot" is caused by an Anthracnose fungus.
46. The Elm "Pepper-and-Salt Leafspot" is caused by *Gnomonia ulmea.*
47. The Maple "Tar Spot" disease is caused by *Rhytisma acerinum.*
48. The Oak "Leaf Blister" disease is caused by *Taphrina coerulescens.*
49. Oak "Leaf Blister" was controlled by every fungicide that was tried.
50. Oak "Leaf Blister" contains NO fluid...the leaf merely bends upward there.

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Abstract

ROBINSON, DIANE. 1987. **The rise and fall of the beloved elm.** Am. Nurseryman 165(9): 121-122, 124, 126, 128.

The resurrection of the American elm *(Ulmus americana)* has been a dream of many horticulturists since its decline in the 1930s. And with current research and technology, that dream may become a reality. In 1983, the american liberty elm *(Ulmus americana libertas)* was introduced by plant pathologists at the University of Wisconsin, Madison. According to Dr. Eugene Smalley, plant pathologist at the University, these elms are a series of native American elms derived from controlled pollinations made in 1968 and 1970 between selected disease-resistant parents. The University had previously released the elm hybrid Sapporo 'Autumn Gold' and the complex elm hybrid *Ulmus* 'Regal'. These, however, did not have the form of the American elm. The *'Pioneer' elm,* a disease-resistant European-Asian hybrid, is a nice tree, but it doesn't have the canopy form of the American elm. It's not as majestic. No one has been able to breed the American elm with European and Asian elms due to genetic restrictions.