

SPHAEROPSIS WITCHES' BROOM OF HOLLY

H. N. Miller, J. J. McRitchie, and C. P. Seymour

Several species of holly (*Ilex* spp.), both native to Florida and introduced, are utilized in Florida landscaping. They are valued for their showy foliage and red berries. In addition, few diseases are reported to affect the genus. One, however, characterized by witches' broom, galling, and dieback, can be both unsightly and debilitating. It is caused by the fungus *Sphaeropsis tumefaciens* Hedges, which has been reported on a variety of hosts (1), but most commonly on species of *Callistemon*, *Carissa*, *Citrus*, *Merium*, and *Schinus* (1,2, A). *Ilex opaca* Ait. and *I. opaca* x *cassine* seem to be the most commonly affected hollies (1).

SYMPTOMS. Galls, ranging from slightly swollen young twigs (fig. 1A) to large, irregular, knobby swellings on mature branches (fig. 1B) are characteristic of the disease. Numerous branches often arise from a single node, giving witches' broom symptoms (fig. 1C).

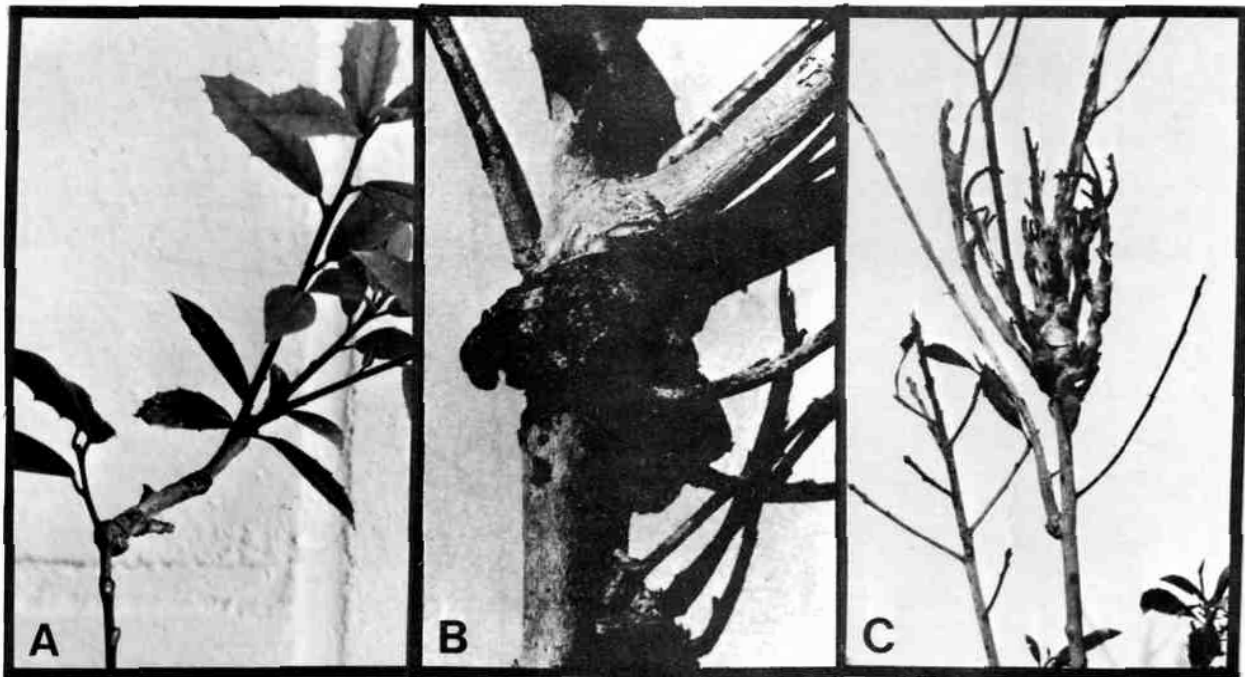


Fig. 1. Symptoms of *Sphaeropsis tumefaciens* infection of holly, showing A) small swollen gall on young twig, B) large irregular gall on mature branch, and C) witches' broom.

CONTROL. The disease appears to be easily spread by pruning tools and propagative cuttings. In one case, spread of the disease has been associated with infected stock plants; thus, care should be taken to inspect stock plants. Infected branches should be pruned well below any galls. Pruning implements

should be dipped between cuts in a disinfectant such as 10% Clorox. Although chemical control studies are incomplete, 2 applications of basic copper sulfate at the rate of 4 lbs/100 gal water at a 2-wk interval controlled the disease in a greenhouse experiment (3).

References Cited

1. Bureau of Plant Pathology (Plant Disease Records), Division of Plant Industry, Fla. Dept. Agric. and Consumer Serv., Gainesville. (Unpublished).
2. Marlatt, R. B., and W. H. Ridings. 1974. Sphaeropsis gall of bottlebrush tree, *Callistemon viminalis*, a new host. *Phytopathology* 64:1001-1003.
3. Miller, H. N. 1976. Report of work conducted on galls, witches' brooming, cankers and twig dieback of holly. IFAS, University of Florida. (Unpublished).
4. Ridings, W. H., and R. B. Marlatt. 1976. Sphaeropsis witches' broom of Nerium oleander. *Proc. Fla. State Hort. Soc.* 89 (in press).