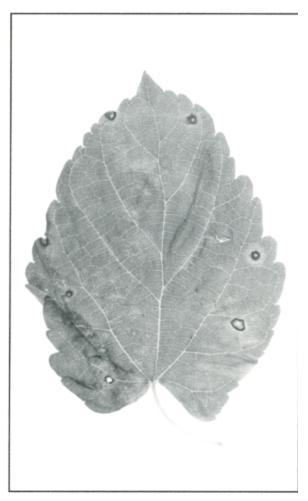
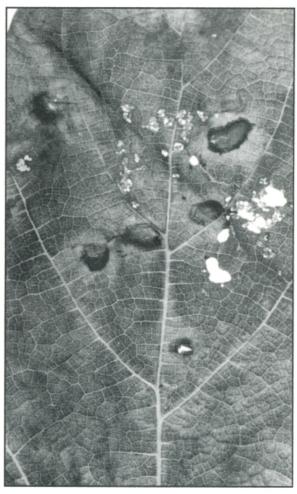
## PHLOEOSPORA LEAF SPOT OF MULBERRY

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Mulberry, <u>Morus</u> spp., is a tree of many uses, ranging from its ornamental value, its fruit, to food for silkworms. It is also an attractant to birds. It should not, however, be planted near sidewalks, patios, or other locations where staining from fallen fruit would be unsightly (5). Some communities also discourage the planting of <u>Morus</u> because of a profuse volunteer seedling crop. Fortunately, fruitless varieties and weeping varieties are available.



**Figure 1.** Leaf of Morus nigra L. showing characteristic dry, necrotic, circular leaf spots caused by Mycosphaerella mori (Fuckel) F. A. Wolf. DPI File No. 88281, Jeffrey Lotz.



**Figure 2.** Leaf undersurface of black mulberry with dry circular leaf spots and white conidial masses. DPI File No. 88281, Jeffrey Lotz.

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Mulberry plants have good vigor and require low maintenance. <u>Morus rubra</u> is native to Florida and M. <u>nigra</u> to western Asia. Black Mulberry is sometimes planted in Florida and occasionally naturalizes but Red Mulberry is found in greater numbers.

One common leaf spot of mulberry is caused by the fungus Mycosphaerella mori (Fuckel) F. A. Wolf, usually found in its anamorphic form Phloeospora maculans (Berenger) Allesch., which has also been referred to as Cvlindrosporium in the literature (1,3). Pseudothecia form on dead leaves and the conidial state is formed in acervuli on living leaves (6). The mechanism of inoculum dispersal is not known.

**SYMPTOMS:** Infection by this fungus results in rather large (1 cm), dry, necrotic, circular leaf spots (Fig. 1). Dark, dry, subcuticular acervuli develop on the leaf undersurface, and eventually produce a profusion of conidia resembling a white powdery coating (4) (Fig. 2). Conidia produced in the acervulus are hyaline, 2-4 septate, and 30-55 x 4-5  $\mu$ m (2).

<u>CONTROL</u>: This disease is most severe under shady conditions (4). Specific chemical control recommendations may be obtained from the Cooperative Extension Service Office.

**SURVEY AND DETECTION:** Look for dry, necrotic, circular leaf spots. On the leaf undersurface, a profusion of conidia resembling a white powdery coating can be observed.

An additional <u>Mycosphaerella</u> species may cause a leaf spot on <u>Morus</u> in Florida. M. <u>arachnoidea</u> (anamorph <u>Cercosporella arachnoidea</u>) causes a disease called "false mildew.

## LITERATURE CITED

- 1. Alfieri, S. A., Jr., K. R. Langdon, C. Wehlburg, and J. W. Kimbrough. 1984. Index of Plant Diseases in Florida. Fla. Dept. Agric. & Consumer Serv., Div. Plant Industry. Bull. No. 11 (Revised). p. 159.
- 2. Ellis, M. B. and J. P. Ellis. 1985. Microfungi on land plants. Macmillan Publ. Co. New York. p. 165.
- 3. Farr, D. F., G. F. Bills, G. P. Chamuris, and A. Y. Rossman, eds. 1989. Fungi on plants and plant products in the United States. APS Press. St. Paul. p. 301 and 804.
- 4. Horst, R. K. 1979. Westcott's Plant Disease Handbook. Fourth ed. Van Nostrand Reinhold Co., New York. p. 227.
- 5. Liberty Hyde Bailey Hortorium Staff. 1976. Hortus third. Macmillan Publ. Co., New York. p. 744.
- 6. Sivanesan, A. 1984. The Bitunicate Ascomycetes. J. Cramer, Germany. p. 234.

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