

HOSTS OF PUCCINIA IRIDIS IN FLORIDA

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INTRODUCTION.--One of the most common leafspotting diseases of iridaceous plants grown in Florida is caused by a rust, *Puccinia iridis* (DC.) Wallr. During the past two years this rust has been identified on leaves of the following hosts collected in the state: *Belamcanda chinensis* DC., *Iris douglasiana* Herb., *I. fulva* Ker., *I. hexagona* Walt. var. *savannarum* R. Foster, *I. kimballiae* Small, *I. missouriensis* Nutt., *I. versicolor* L., *I. virginica* L., *I. xiphium* L., and *Moraea iridioides* L. Additional species of *Iris* known to be susceptible to *I. iridis*, but not yet observed in Florida, include: *I. bucharica* M. Foster, *I. chamaeiris* Bertolini, *I. dichotoma* Pall., *I. histrio* Reichenb., *I. hoogiana* Dykes, *I. mesopotamica* Dykes, *I. miraculosa* Small, *I. macrosiphon* Torr., *I. longipetala* Herb., *I. pallida* Lam., *I. reticulata* Bieb., *I. spuria* L., *I. stolonifera* Maxim., *I. tectorum* Maxim., *I. tenax* Dougl., *I. tuberosa* L., *I. variegata* L., *I. violipurpurea* Small, and *I. xiphioides* Ehrh. (1,2,3).

DISTRIBUTION.--Although *P. iridis* has been reported in only 28 states, it is very likely that the fungus can be found wherever species of *Iris* are grown. In addition, the disease has been reported in Nova Scotia, Ontario, Quebec, Europe, Asia, Great Britain, and Japan.

SYMPTOMATOLOGY.--The symptom description which follows is subject to some variation depending on the species affected. Such variation, however, involves lesion shape which may vary from circular to elliptical, and size which is usually 0.5-5 mm diam for circular lesions and 0.5-1 X 1-5 mm for elliptical lesions.

Lesions first appear as irregularly circular chlorotic spots up to 3 mm diam (Fig. 1-A). A raised, dark brown structure (sorus) soon develops in the center of each lesion, and the surrounding yellow chlorotic tissue becomes necrotic as it assumes a tan to light brown color (Fig. 1-B). Maturing lesions develop a dark brown to reddish brown border surrounded by a slight area of chlorotic tissue, and sori begin to rupture, exuding masses of bright orange urediospores (Fig. 1-C). As the number of lesions increase, a general chlorosis of the leaf may be observed (Fig. 1-D). In late spring and early summer, the sori are usually orange-brown as the teliospores become apparent.

CONTROL.--Applications of zineb or mancozeb should be made as soon as the disease is first observed. Diseased plants may be cut back after flowering to prevent fungus spores from over-wintering in the soil and plant debris.



Fig. 1, A-D. Leaves of *Belamcanda chinensis* DC. showing various stages of infection by *Puccinia iridis* (DC.) Wallr.

References

1. Arthur, J. C. 1934. Manual of the rusts in United States and Canada. Purdue Research Foundation, Lafayette, Indiana, p. 227-228.
2. Mains, E. B. 1933. Host specialization in the rust of Iris, *Puccinia iridis*. Am. J. Botan. 21:23-33.
3. Mains, E. B. 1938. Additional studies concerning the rust of Iris, *Puccinia iridis*. Phytopathology 28:67-71.