

A RUST ON TILLANDSIA NEW TO THE UNITED STATES

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Bromeliads are becoming increasingly popular as ornamental plants. Because of this popularity, plants are often collected from their native habitats in this and other countries. Unfortunately, diseases are often present on these plants and could easily be imported into areas where they were previously not reported.

Four rusts have been reported on bromeliads (1), and until now, none have become established in the United States. In November 1980, however, quarantine inspector F. Matthews recognized a rust on *Tillandsia fasciculata* Swartz, a native Florida bromeliad which had been collected in Palm Beach, Florida. The identity of this rust was confirmed by Dr. J. F. Hennen as *Puccinia tillandsiae* Cummins & Pollack, and the specimen is deposited in the Arthur Herbarium, Purdue University. In January 1981, this disease was found at Ft. Lauderdale, Florida.



Fig. 1. *Tillandsia fasciculata* with small tan to brown leaf spots caused by *Puccinia tillandsiae*.

Of interest is the fact that the original description of this rust was made from diseased plants from Costa Rica, intercepted by plant quarantine at Miami, Florida, by the same inspector, Frank Matthews. Additional interceptions have been made from Guatemala, Honduras, Jamaica, Mexico, Nicaragua, and Panama on Tillandsia sp.

It is not known how long this rust has been established in Florida; however, the area in Palm Beach was, until recently, an isolated area which is now being developed for housing. The distribution of the rust will not be known until surveys are completed.

SYMPTOMS. Symptoms of *P. tillandsiae* are unlike many other rusts in that typical erumpent "rust-like" sori do not always develop. The sori originate between the vascular bundles and develop outwardly, sometimes pushing through the thick epidermis of the leaf. At other times, however, a pustule does not develop, and symptoms are small tan to brown leaf spots which are most easily seen with back lighting (Fig. 1). Dissecting of the tissue is then required to expose the spores.

SURVEY AND DETECTION. Any rust-like symptoms on bromeliads must be considered new reports in Florida. *P. tillandsiae* often forms non-erumpent spots on *Tillandsia* leaves. These are most readily observed against a bright background, such as a bright sky.

LITERATURE CITED.

1. CUMMINS, G. B., and F. G. POLLACK. 1974. The rust fungi of Bromeliaceae. *Mycologia* 66:533-536.

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