BIOLOGY AND CONTROL OF LEAF RUST IN *PLUMERIA* SPP. CAUSED BY *COLEOSPORIUM* SP.

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The leaf rust disease in *Plumeria spp.* appeared recently in the Central Province and is now wide spread. Mature infected leaves show numerous tiny, raised, orange, rusty pustules. The pathogen is restricted to the abaxial surface of the leaf while chlorotic areas were visible on the adaxial surface of the infected sites. Symptoms were absent on the stem and flowers. The causal agent was identified as *Coleosporium sp.*

Two other fungi, *Absidia sp.* and *Verticillium sp.*, colonized the rust spots of more mature leaves in succession, *Absidia sp.* appearing first followed by *Verticillium sp.* These two fungi grew on the rust pathogen, having no direct contact with the leaf tissue and are probably mycoparasites on *Coleosporium sp.* However, colonization by these two fungi caused necrosis around the rust infection inflicting more damage to leaves than the rust lesions alone.

Microscopic studies of the rust pustules indicated the presence of only one type of fruiting structure, the uredium. The uredia are formed from the transversing mycelium and emerge through ruptured epidermis. The other fruiting structures, telium, aecium and spermatium were not encountered at any stage of the disease or in *Pinus*, which was previously reported as a secondary host. Rust infection in leaves reduces available photosynthetic area in general and severe infections in much older leaves result in premature leaf fall.

Young leaves down to about the fourth from the apical bud are resistant to rust infection. The young leaves contain more latex compared to mature leaves. In addition, the latex of young leaves shows a greater inhibitory action against germination of uredospores than the latex of mature leaves. Therefore, latex may be playing a role in the resistance of young leaves against rust infection. The disease level was fairly constant throughout the study period (June 2003 – March 2004) and showed little increase during rainy weather as even young leaves became infected and more mycoparasite colonization was seen on rust lesions. *Plumeria* leaf rust was successfully controlled by spraying plants with the fungicide Contaf 5% EC [(RS)-2-(2,4-dichlorophenyl)-1-(1H-1,2,4-triazole-1-yl) hexan-2-ol].