

## Research Note

### CLADOSPORIUM TENUISSIMUM COOKE CAUSING LEAF SPOTS IN TARO: A NEW DISEASE IN PUERTO RICO<sup>1,2</sup>

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A new disease in taro [*Colocasia esculenta* (L.) Schott] caused by *Cladosporium tenuissimum* Cooke has been identified in Puerto Rico. At the onset of symptoms in the field, the fungus causes reddish brown leaf spots that become tan to brown with age (Figure 1A and 1B); spots are circular or irregular. On the upper leaf surface, there are pale greenish-yellow spots that correspond with the spots on the lower leaf surface; when lesions coalesce they form larger necrotic areas. Colony growth in non-acidulated potato dextrose agar (PDA) showed a dark green color with a velvety appearance on one side and a black color on the reverse side. By using isolation and moist chamber procedures, and following the description of Barnett and Hunter (1998), the pathogen was identified as *Cladosporium* sp., a common fungus on taro throughout the Pacific that has been reported in Louisiana (Holcomb, 1989).

Fungal isolates were sent to the Centraalbureau voor Schimmelcultures (CBS) in the Netherlands for further identification by molecular procedures; findings indicated the species was *C. tenuissimum*. The identification was based on the DNA sequence of the ribosomal ITS region. Pathogenicity tests were performed with pure culture by spraying conidial suspensions ( $2.0 \times 10^6$  conidias/ml) in sterile distilled water on five healthy cultivated plants growing in pots under greenhouse conditions. Six days after inoculation leaves developed reddish brown leaf spots that became tan to brown with age; initially spots were circular. On the upper leaf surface, pale greenish yellow spots were observed that corresponded with spots on the underside of the leaf (Figure 1C and 1D). The fungus was reisolated from the symptoms developed on inoculated leaves; thus corroborating Koch's postulates. This fungus was previously reported in Puerto Rico and Cuba associated with juveniles of the insect *Plutella xylostella* on leaves of the palm *Roystonea regia*, and on two species of the fungus *Zygosporium* (Minter et al., 2001). This is the first report of the disease affecting both cultivated and non-cultivated (acid) taro in Puerto Rico.

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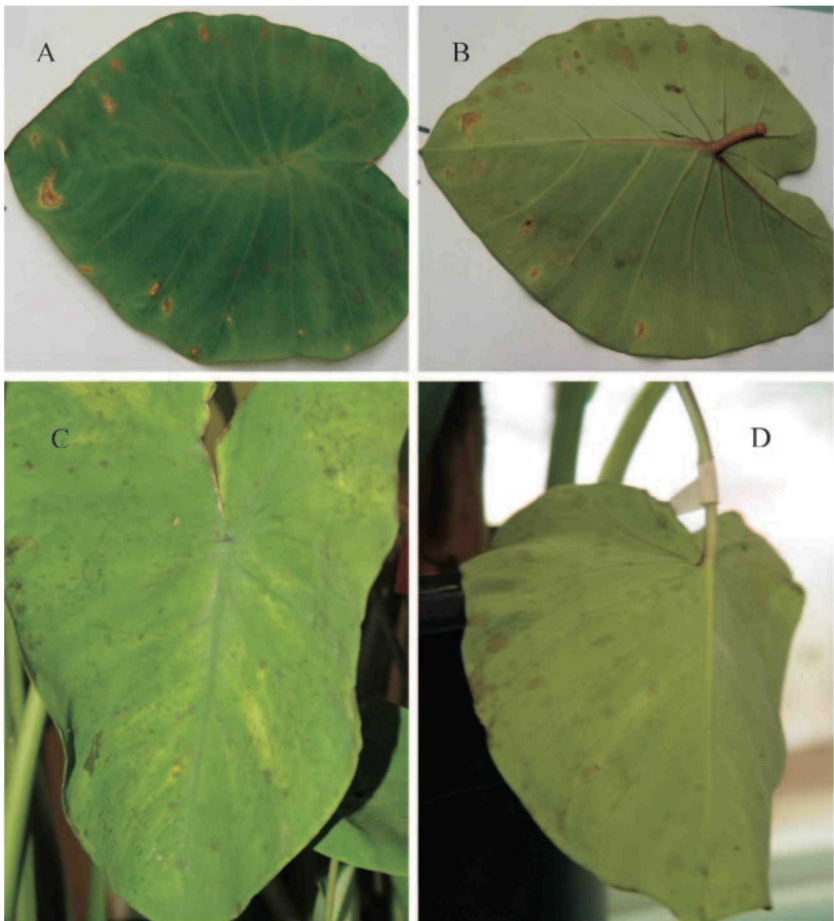


FIGURE 1. (A) Upper and (B) lower sides of taro leaves with visible symptoms of the disease caused by *Cladosporium tenuissimum*. These leaves, from Gurabo, Puerto Rico, were growing under natural conditions. (C) Upper and (D) lower sides of taro leaves six days after inoculation with *Cladosporium tenuissimum*.

#### LITERATURE CITED

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