First Report of Vinca minor Co-infected with Puccinia vincae and Golovinomyces orontii in Texas

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Vinca spp. are commonly planted in gardens and landscapes as a groundcover. In May 2009, following extended periods of heavy dew and cool temperatures, diseased periwinkle (Vinca minor L.) plants were obtained from an established residential landscape in Muleshoe, TX. Both powdery mildew and rust were observed on leaves of all plants within the area. Powdery mildew colonies, comprised of white mycelia, appeared primarily on the adaxial leaf surface (Fig. 1). Slightly curved foot cells were observed at the base of conidiophores. Conidia were hyaline, formed in chains, ovoid to cylindrical, and measured 16.3 to 23.1 µm wide (18.93 ± 0.32, n = 50). These characteristics are consistent with Golovinomyces orontii (Castagne) V.P. Heluta (1). Dark-colored uredinia (1 to 3 × 1 mm) containing abundant urediniospores were commonly observed on the abaxial leaf surface (Fig. 2). Urediniospores were ellipsoidal, thick-walled (1 to 2 µm), cinnamon-brown, echinulate, and measured 24 to 36 × 18 to 25 µm. Although less frequent, teliospores were also observed from infected leaves. Teliospores were ellipsoidal to clavate with one septation, and measured 34 to 45 × 19 to 26 µm. Based on these characteristics, the fungus was identified as Puccinia vincae Burk. (Arthur). Similar observations of P. vincae infecting V. minor were made in Deaf Smith and Lubbock counties in 2008 and 2010, respectively. Whereas both G. orontii (1) and P. vincae (2) have been reported on Vinca minor in the United States, this is the first report of each in Texas.

Literature Cited