

**Puccinia psidii** (Winter, 1884)

*Puccinia psidii*, the cause of Eucalyptus rust is a pathogenic fungus with a very broad host range in the myrtle family (Myrtaceae). It was first described from common guava (*Psidium guajava*) in Brazil in the 1880s. *P. psidii* is native to South and Central America, but has spread to a number of Caribbean islands, Hawaii, Florida and California. The fungus attacks young tissues of plants and can cause deformation of leaves, heavy defoliation of branches, dieback, stunted growth and sometimes death. The rust disease has caused serious damage in Eucalyptus plantations in South and Central America, the Caribbean and North America with significant economic impacts.

Eucalyptus rust also threatens to disrupt ecosystems by causing damage to dominant forest trees, such as the ohia in Hawaii. Ohia (*Metrosideros polymorpha*) is the dominant tree in most of Hawaii’s forests. Thus a continuing outbreak on ohia could result in significant changes to the structure, composition, and potentially, the ecosystem function of forests on a landscape level. Many (one-third to one-half) of Hawaii’s approximately 300 endangered plant species also depend on critical habitat in the ohia forests. Loss of habitat would negatively affect opportunities for survival of endangered honeycreepers in Hawaii. Effects have been substantial on the ‘Endangered (EN)’ endemic *Eugenia koolauensis*.

There is concern that it may spread to New Zealand, Australia, South Africa and Brazil where many native species in the Myrtaceae family are widely distributed.

Quarantine restrictions are the most effective means of preventing introductions of potentially virulent strains of *P. psidii*. Fungicide use is most appropriate in nurseries and clonal hedge plantings, as it is not cost effective for large areas. Fungicides used include the protectant fungicide mancozeb and the systemic fungicides triameno and triforine. In most cases, however, resistant trees are chosen over susceptible varieties, eliminating the need for fungicides.

**Reference:**

Global Invasive Species Database (GISD), 2011. *Puccinia psidii* (Winter, 1884)

Click here to view archives of previous weeks’ species