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A Eucalyptus Foliar Pathogen Reported from Sri Lanka

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ABSTRACT

Diaporthe, a genus of fungi, has been found to contain 1241 species names and 985 names that are attributable to its asexual form *Phomopsis*, according to the Index Fungorum 2023. It is distributed worldwide and associated with a wide range of host plants. Some members of this genus are significant pathogens that cause stem, root, fruit rots, gummosis, cankers, leaf spots, blights, diebacks, decay and wilts on host Plants. *Eucalyptus* is an exotic plant genus that was introduced to Sri Lanka in the 19th century. It is popular throughout the world for its fast growth, timber value, essential oils, and paper pulps. However, *Eucalyptus* is also susceptible to many root, trunk, and foliar diseases. In Sri Lanka, only a few studies have been conducted on *Eucalyptus*-related pathogenic fungi. This study reports the first occurrence of a pathogenic *Diaporthe* species in *Eucalyptus* trees in Sri Lanka. *Diaporthe* is a well-known fungal pathogenic genus that infects many economically important trees and crops, leading to huge economic losses. The fungus was isolated from *Eucalyptus camaldulensis* leaves showing symptoms of necrotic irregular spots collected from the Polonnaruwa district of Sri Lanka. The fungus was isolated and identified to the genus level using micromorphology and the DNA sequences of the rDNA ITS and LSU loci. The pathogenicity of the *Diaporthe* sp. on *E. camaldulensis* was confirmed. This study provides evidence that *Diaporthe* sp. is one of the causal agents of the leaf spot disease seen in *E. camaldulensis* trees in the Polonnaruwa district of Sri Lanka. It is important to perform pathogenicity tests on other *Eucalyptus* species in Sri Lanka to evaluate the future threats posed by this pathogen.

Keywords: *Diaporthe*, Future threats, Plant pathogens, rDNA, Timber.

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