CERATOCYSTIS AND _OPHIOSTOMA_ SPECIES ASSOCIATED WITH WOUNDS ON NATIVE SOUTH AFRICAN TREES

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Ceratocystis and *Ophiostoma* species are *Ascomycetes* collectively referred to as Ophiostomatoid fungi. They are dispersed by insects and infect wounds on trees made or visited by these vectors. These fungi include many species of economic importance such as the Dutch Elm disease fungi *O. ulmi* and *O. novo-ulmi* and *C. fimbriata*, which causes canker and die-back of many woody plants worldwide. There have been few reports of *Ceratocystis* and *Ophiostoma* species from South Africa, especially from native trees. In this study, a survey of *Ceratocystis* and *Ophiostoma* species associated with wounds on native tree genera in South Africa was conducted. Both morphological observations and DNA sequence comparisons using portions of the ITS, β-tubulin and elongation factor 1-α gene regions were used to characterize the fungi. The pathogenicity of selected species was also assessed using artificial inoculation studies, under greenhouse conditions. *Ceratocystis* and *Ophiostoma* species were commonly isolated from wounds on most trees investigated. In many cases, they were associated with stain of the xylem tissue surrounding the wounds. *Ophiostoma quercus*, *P. fragrans*, *O. pluriannulatum*, *C. albifundus* as well as an undescribed *Ophiostoma* species and two undescribed *Ceratocystis* species were collected. In the pathogenicity tests one of the *Ceratocystis* species resulted in obvious lesions on *Rapanea melanophloeos*, while the other *Ceratocystis* species produced very small lesions on *Acacia nigrescens* and *Sclerocarya birrea* trees. This study provides concrete evidence that the diversity of the *Ceratocystis* and *Ophiostoma* species is incompletely understood in South Africa. The fact that potentially serious and previously unknown pathogens, have emerged from a relatively limited survey emphasizes the importance of continued surveys for these fungi in the country.