

CERATOCYSTIS SPECIES IN THE CERATOCYSTIS FIMBRIATA SENSU LATO SPECIES COMPLEX

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Ceratocystis fimbriata was first described in 1891 from sweet potato (*Ipomoea batatas*) in the USA. Subsequent to its discovery, *C. fimbriata* was recorded from many plants and various countries. In the 1960's, it was suggested that *C. fimbriata* represents a complex. However, it was only in the 1990's, when DNA sequence comparisons to reflect monophyletic lineages became commonly available, that discrete groupings in the *C. fimbriata* complex emerged. The first species to be recognised as a segregate of *C. fimbriata* was *C. albifundus*, which is a serious pathogen of *Acacia mearnsii* in South Africa. Recognition of this species as distinct from *C. fimbriata* was based primarily on DNA sequence comparisons, although morphological characters supported the separation. More recently, numerous cryptic species have recently been recognised in the *C. fimbriata sensu lato* species complex. These are *C. pirilliformis*, *C. polychroma*, *C. platani*, *C. cacaofunesta*, *C. variospora*, *C. smalleyi*, *C. caraye* and *C. populicola*, and they include serious pathogens of trees. *Ceratocystis fimbriata* is specifically retained for the fungus originally described from sweet potato in the USA. Some of these species are clearly host specific while the host range and specificity of others has not been considered. Large numbers of isolates reside in phylogenetic clades for which names have not yet been assigned and collections from new locations are leading to the discovery of what appear to be new species in this group. For the present, the *Ceratocystis fimbriata* species complex is defined specifically based on phylogenetic inference and it is a group that is distinct from at least two other major lineages in *Ceratocystis sensu lato*. Most species in the *C. fimbriata* complex are virtually impossible to distinguish based on morphology. Thus, DNA sequence comparisons are essential for reliable identification.