

SPECIES OF *CERATOCYSTIS*: EMERGING EVIDENCE FOR DISCRETE GENERIC BOUNDARIES

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The genus *Ceratocystis* dates back to late 1800's and the description of the sweet potato black rot pathogen *Ceratocystis fimbriata*. Subsequent to this, species in this genus have had a complicated taxonomic history involving substantial confusion with fungi now treated in *Ophiostoma*. Phylogenetic analyses based on DNA sequence data have clearly shown that *Ophiostoma* and *Ceratocystis* represent different orders of fungi. DNA sequence data have also made it possible to recognize distinct taxa amongst isolates previously treated as single entities and to identify cryptic species from new collections. The number of taxa assigned to *Ceratocystis* has, therefore, increased markedly, especially during the past decade and this is likely to continue as knowledge of the group increases. Analyses of DNA sequence data show clearly that *Ceratocystis sensu lato* represents various distinct phylogenetic lineages. Three of these lineages are well defined and include well-known species. They are typified by the species *Ceratocystis coerulescens*, *Ceratocystis moniliformis* and *Ceratocystis fimbriata*. Importantly, these groups can be characterized by distinct morphological characteristics and occupy defined ecological niches. Generic status is currently being provided for species in these three groups. Further collections and phylogenetic analysis are required before other generic placements can be determined. Fifteen years ago, only a small number of species were known in *Ceratocystis*, however, modern taxonomic techniques have led to the discovery of many additional taxa and this is a trend that is likely to continue. Higher order divisions such as those proposed here should also provide a foundation for a better understanding of the biology and distribution of this important group of fungi.