

[A biosystematic revision of the family *Cribrariaceae*]

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Cribrariaceae systematics has largely been neglected in recent studies on *Myxomycetes*. The generic and species boundaries, as well as the evolution of phenotypic traits, have never been analyzed in detail, especially not in a phylogenetic context with modern techniques.

Since less than 20% of the accepted species have been sequenced up to date, we will first test the monophyly of the family using multilocus DNA-based phylogenetic analyses and fair taxonomic sampling. We will also evaluate the taxonomic boundaries of the three genera (*Cribraria*, *Lindbladia*, and *Licaethalium*) currently included in *Cribrariaceae* since preliminary data indicate that the generic circumscriptions may disagree with the phylogenetic relationships among species in these genera. We will further explore the evolution of some phenotypic traits and their significance for the taxonomy and diversification of the group. Finally, we will address the species-level taxonomy, trying to identify new species, cryptic taxa, and address synonymies. With all this information, we expect to propose a revised classification and an updated monograph of the family, to further accumulate knowledge in this group.

The ultimate goal would be to address the conservation status of the recognized species, in order to detect potentially threatened species or to identify habitats of special interest that may require protection.