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## A New Classification of the Dictyostelids

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Traditional morphology-based taxonomy of dictyostelids is rejected by molecular phylogeny. A new classification is presented based on monophyletic entities with consistent and strong molecular phylogenetic support and that are, as far as possible, morphologically recognizable. All newly named clades are diagnosed with small subunit ribosomal RNA (18S rRNA) sequence signatures plus morphological synapomorphies where possible. The two major molecular clades are given the rank of order, as Acytosteliales ord. nov. and Dictyosteliales. The two major clades within each of these orders are recognized and given the rank of family as, respectively, Acytosteliaceae and Cavenderiaceae fam. nov. in Acytosteliales, and Dictyosteliaceae and Raperosteliaceae fam. nov. in Dictyosteliales. Twelve genera are

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