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Stilbosporaceae resurrected: generic reclassification and speciation

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Following the abolishment of dual nomenclature, *Stilbospora* is recognised as having priority over *Prosthecium*. The type species of *Stilbospora*, *S. macrosperma*, is the correct name for *P. ellipso sporum*, the type species of *Prosthecium*. The closely related genus *Stegonsporium* is maintained as distinct from *Stilbospora* based on molecular phylogeny, morphology and host range. *Stilbospora longicornuta* and *S. orientalis* are described as new species from *Carpinus betulus* and *C. orientalis*, respectively. They differ from the closely related *Stilbospora macrosperma*, which also occurs on *Carpinus*, by longer, tapering gelatinous ascospore appendages and by distinct LSU, ITS rDNA, *rpb2* and *tef1* sequences. The asexual morphs of *Stilbospora macrosperma*, *S. longicornuta* and *S. orientalis* are morphologically indistinguishable; the connection to their sexual morphs is demonstrated by morphology and DNA sequences of single spore cultures derived from both ascospores and conidia. Both morphs of the three *Stilbospora* species on *Carpinus* are described and illustrated. Other species previously recognised in *Prosthecium*, specifically *P. acerophilum*, *P. galeatum* and *P. opalus*, are determined to belong to and are formally transferred to *Stegonsporium*. Isolates previously recognised as *Stegonsporium pyriforme* (syn. *Prosthecium pyriforme*) are determined to consist of three phylogenetically distinct lineages by *rpb2* and *tef1* sequence data, two of which are described as new species (*S. protopyriforme*, *S. pseudopyriforme*). *Stegonsporium pyriforme* is lectotypified and this species and *Stilbospora macrosperma* are epitypified. Based on DNA sequence data, the North American *Stegonsporium acerophilum* is recorded from Europe for the first time, and new hosts from *Acer* sect. *Acer* are reported for *S. opalus* and *S. pyriforme*. *Stilbospora* and *Stegonsporium* are classified within the revived family *Stilbosporaceae*. *Prosthecium appendiculatum*, *P. auctum* and *P. innesii* are shown to be unrelated to the *Stilbosporaceae* and are recognised in three distinct genera, *Phaeodiaporthe appendiculata*, *Alnecium auctum* n. gen. and *Calosporella innesii* within *Diaporthaceae*, *Gnomoniaceae* and *Sydowiellaceae*, respectively. The generic types of these three monotypic genera are briefly described, illustrated and lecto- and epitypified.

Keywords: [ALNECIUM](#); [CALOSPORA](#); [CALOSPORELLA](#); [ITS](#); [LSU](#); [MOLECULAR PHYLOGENY](#); [PHAEODIAPORTHE](#); [RPB2](#); [SYSTEMATICS](#); [TEF1](#)

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