

IMPORTANT NOTE:

REVISED TAXONOMY FOR *VERTICILLIUM* SPECIES AFFECTING INVERTEBRATES

The natural and appropriate course of fungal systematics is to move towards genera that are monophyletic rather than strictly morphologically based. The long-familiar taxonomy of *Verticillium* based on the monograph by Walter Gams (1971. *Cephalosporium*-artige Schimmelpilze (Hyphomycetes). Stuttgart: Gustav Fischer Verlag) divided *Verticillium* into to sections, Section *Verticillium* (containing the type species of the genus) comprised the major phytopathogenic species of *Verticillium*, and all included species bear their whorls of conidiogenous cells on erect, well differentiated conidiophores; the teleomorphs (sexual states) of none of the species in Sect. *Verticillium* belonged in the family Clavicipitaceae (Hypocreales). All species of *Verticillium* affecting insects, nematodes, or other invertebrates were referable to the other section, *Verticillium* Section *Prostrata*. The following papers present this expected and extensive taxonomic revision:

Zare R; Gams W; Culham A (2000). A revision of *Verticillium* sect. *Prostrata* I. Phylogenetic studies using ITS sequences. *Nova Hedwigia* 71: 465-480.

Sung GH; Spatafora JW; Zare R; Hodge KT; Gams W (2001). A revision of *Verticillium* sect. *Prostrata*. II. Phylogenetic analyses of SSU and LSU nuclear rDNA sequences from anamorphs and teleomorphs of the Clavicipitaceae. *Nova Hedwigia* 72: 311-328.

Gams W; Zare R (2001). A revision of *Verticillium* sect. *Prostrata*. III. Generic classification. *Nova Hedwigia* 72: 329-337.

Zare R; Gams W (2001). A revision of *Verticillium* section *Prostrata*. IV. The genera *Lecanicillium* and *Simplicillium*. *Nova Hedwigia* 73: 1-50.

Zare R; Gams W; Evans HC (2001). A revision of *Verticillium* section *Prostrata*. V. The genus *Pochonia*, with notes on *Rotiferophthora*. *Nova Hedwigia* 73: 51-86.

Zare R; Gams W (2001). A revision of *Verticillium* section *Prostrata*. IV. The genera *Lecanicillium* and *Simplicillium*. *Nova Hedwigia* 73: 271-292.

The classification in these publications leaves no entomopathogenic species in *Verticillium*; all of these fungi have been dispersed among a series of other genera, primarily into *Lecanicillium* whose type species is *Lecanicillium lecanii* (Zimmerman) Gams & Zare [= *Verticillium lecanii* (Zimm.) Viégas]. And it is important to note that *V. lecanii*, a highly variable taxon in the Gams (1971) taxonomy, has been split appropriately into a series of segregate species that can be separated using traditional diagnostic characters.

None of these changes has yet been incorporated into the ARSEF database because all ARSEF isolates of *Verticillium lecanii* must be reidentified following the segregation of this widespread, common species in Part 4 of Zare revision. **Such taxonomic advances are appropriate, progressive, and are a positive step towards a more stable taxonomic future. These changes should be accepted and adopted globally as quickly as possible. The ARSEF collection will reidentify our *Verticillium* isolates in the near future, and new catalogs will be issued reflecting these significant name changes.**

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