

This document describes changes to the January 2006 draft classification, which were made in response to suggestions received by e-mail and discussions at Deep Hypha in Baton Rouge, LA, March 2006. Revisions were made in two phases, in July and September/October 2006. The groups that have been affected are highlighted in the file Classification\_draft7\_10-06.doc. Groups that were modified in July are highlighted in blue, and groups that were modified in September/October 2006 are highlighted in red. Earlier changes are described in the document Prop\_changes\_basidios\_etc.pdf.

**1. Include subphylum Zoopagomycotina, with order Zoopagales, in Fungi, incertae sedis.**  
This group was inadvertently excluded from the prior classification.

**2. Eliminate the infra-phylum level classification in the Microsporidiomycota.**

The taxonomy of microsporidia employed in the prior version of this classification followed Vossbrinck and Debrunner-Vossbrinck (2005), who recognized four classes, of which one (Aquasporidia) is diphyletic (see Prop\_changes\_basidios\_etc.pdf item 15). On reflection, we decided that it would be premature to suggest an ordinal level classification of microsporidia without multilocus data for diverse microsporidia, and the input of experts in this group.

**3. Elevate subphylum Blastocladiomycotina to phylum Blastocladiomycota, eliminate Blastocladiomycotina as a taxon.**

This is based on rRNA gene analyses and is being proposed by James et al. in the forthcoming Mycologia Deep Hypha issue.

**4. Change name of Uredinomycotina to Pucciniomycotina, with class Pucciniomycetes, and order Pucciniales.**

This change follows the earlier suggestion of Bauer et al. (see Prop\_changes\_basidios\_etc.pdf first item).

**5. Move Entorrhizomycetes, Entorrhizales, from Ustilaginomycotina to Basidiomycota incertae sedis.**

This is based on recent analyses of Matheny et al (in press), using nuc-lsu and nuc-ssu rRNA sequences, which suggest that Entorrhizomycetes are not in Ustilaginomycotina.

**6. Restore class Walleiomycetes for Walleiales.**

This is based on analyses of Matheny et al (in press) using *rpb1*, *rpb2*, *tef1* and nuc rRNA genes, which uphold the results of Zalar et al. (2005) based on nuc-ssu rRNA genes (see Prop\_changes\_basidios\_etc.pdf item 2).

**7. Transfer Coryneliales from Pezizomycotina incertae sedis to Eurotiomycetidae.**

As per analyses of Geiser et al. in forthcoming Deep Hypha Mycologia issue.

**8. Transfer Mycocaliciales from Pezizomycotina incertae sedis to Eurotiomycetes, and classify as Mycocaliciomycetidae.**

As per analyses of Geiser et al. in forthcoming Deep Hypha Mycologia issue.

**9. Recognize new subclass Dothideomycetidae, including Dothideales, Capnodiales, Myriangiales.**

As per analyses of Schoch et al in forthcoming Deep Hypha Mycologia issue.

**10. Recognize new subclass Pleosporomycetidae, including Pleosporales**

As per analyses of Schoch et al in forthcoming Deep Hypha Mycologia issue.

**11. Recognize new order Botryosphaerales, in Dothideomycetidae incertae sedis (with Hysteriales, Jahnulales, Patellariales).**

As per analyses of Schoch et al in forthcoming Deep Hypha *Mycologia* issue.

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Newest changes, September/October 2006 (in red font in Classification\_draft7\_10-06.doc):

**12. Include Rhizophydiales as a new order in the Chytridiomycetes**

**13. Move Malasseziales to Ustilaginomycetes**

As per analyses of Matheny et al. (in press) and Gossman et al. (in prep).

**14. Add classes Mixiomycetes, Classiculomycetes, Cryptomycocolacomycetes to Pucciniomycotina, for Mixiales, Classiculales, and Cryptomycocolacales.**

As per classification of Bauer et al. (2006).

**15. Change informal "Mycogloea group" to Spiculogloeales.**

As per classification of Bauer et al. (2006).

**16. Subsume the Ascospaerales and Arachnomycetales into the Onygenales (Eurotiomycetes).**

As per five-gene analyses of D. Geiser et al.

**17. Restore the Umbilicariales to the Lecanoromycetes as an order *incertae sedis*.**

May be a nomen nudum, and will therefore require validation.

**18. Change Harpellomycotina to Kickxellomycotina.**

As per suggestion of Paul Kirk, because stem name for Kickxellomycotina is older. Also, Harpellaceae is invalid (it will therefore be necessary to validate that name to support Harpellales).

**19. Add Pachnocybales to Pucciniomycetes.**

As per classification of Bauer et al. (2006)

**20. Add subphylum Taphrinomycotina to Ascomycota, including Taphrinomycetes, Schizosaccharomycetes, Pneumocystidomycetes, and Neolectomycetes.**

Based on analyses of Spatafora et al (2006, Deep Hypha volume article on Pezizomycotina) and James et al. (2006).

**21. Correct spelling of the following names**

Dacrymycetes → Dacryomycetomycetes

Mycocaliomycetidae → Mycocaliciomycetidae

Monoblepharomycetes → Monoblepharidomycetes

Mucormycotina → Mucoromycotina

**22. Subsume Halosphaerales into Microascales**, which is otherwise paraphyletic.