New combinations of *Passalora* from China

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The hyphomycetes *Phaeoramularia delphinii* and *Phaeoramularia cimicifugae* are recombined as *Passalora delphinii* and *Passalora cimicifugae*, respectively. The specimens were collected on leaves of *Delphinium* sp. and *Cimicifuga dahurica*, Ranunculaceae, during taxonomic surveys carried out in Inner Mongolia of China.

Keywords: anamorphic fungi, *Phaeoramularia*, taxonomy.

The genus *Phaeoramularia* Munt.-Cvetk. was introduced for Ramularia-like dematiaceous hyphomycetes with fasciculate, simple or branched conidiophores and catenate conidia. The genus *Phaeoramularia* has been widely used, while some researchers also once argued that *Phaeoramularia* was morphologically not distinguishable from *Mycovellosiella, Stenella,* and other allied genera.

Crous & Braun (2003) emended the circumscription of *Passalora*, reducing *Phaeoramularia* to synonymy with *Passalora*, which mainly differs from *Phaeoramularia* by forming solitary conidia. They claimed that amongst cercosporoid hyphomycetes the formation of single or catenate conidia was not tenable as a distinguishing character at generic rank, and this was supported by results from ITS and 5.8S rDNA sequence analysis (Crous *et al.* 2001). There is not a true basis for the separation of *Passalora* and *Phaeoramularia*, so that the latter genus is not tenable any longer as a separate genus, and should be seen as synonym of *Passalora*, which is in agreement with the molecular data. Accordingly, the reported species *Phaeoramularia delphinii* (Zhai *et al.* 2007) and *P. cimicifugae* (Zhai *et al.* 2008) is transferred into *Passalora* in this paper.

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Materials and Methods

Specimens for this study were collected on *Ranunculaceae* from Inner Mongolia, China. *Phaeoramularia delphinii* was on leaves of *Delphinium* sp. from Arxan, *P. cimicifugae* was on *Cimicifuga dahurica* (Turcz.) Maxim. from Motianling, Xingan, respectively.

The studied specimens are deposited at the Herbarium of the Mycological Institute of Jilin Agricultural University (HMJAU), Changchun and the Herbarium Mycologicum Academiae Sinicae (HMAS), Beijing.

Taxonomy

Passalora delphinii (F.Y. Zhai, Y.L. Guo & Yu Li) F.Y. Zhai, Y.L. Guo & Yu Li, ***comb. nov.***
MycoBank no.: MB 519616

Basionym. – *Phaeoramularia delphinii* F.Y. Zhai, Y.L. Guo & Yu Li, Mycotaxon 100: 189. 2007

Description and illustration. – Zhai *et al.* (2007: 190, Fig. 1)

Habitat and distribution. – On leaves of *Delphinium* sp. (Ranunculaceae), from Arxan, Inner Mongolia.

Holotypus. – HMAS 143918, HMAS 143919.

Passalora cimicifugae (F.Y. Zhai, Y.L. Guo & Yu Li) F.Y. Zhai, Y.L. Guo & Yu Li, ***comb. nov.***
MycoBank no.: MB 519617

Basionym. – *Phaeoramularia cimicifugae* F.Y. Zhai, Y.L. Guo & Yu Li, Mycotaxon 106: 203. 2008

Description and illustration. – Zhai *et al.* (2008: 205, Fig. 1)

Habitat and distribution. – On leaves of *Cimicifugae dahuricae* (Turcz.) Maxim. (Ranunculaceae), from Motianling, Xingan, Inner Mongolia.

Holotypus. – HMAS 143916, HMAS 143917.

Discussion

Passalora and *Phaeoramularia* are only differentiated by the mode of conidial formation, either formed singly or in chains. Conidial formation is, however, a weak feature to employ at the generic level in this complex. In *Passalora*, there are even several intermediate taxa which occasionally form short conidial chains, e.g., *Passalora heterospora* (Hohn.) Hohn. and *P. aratai* (Speg.) U. Braun.

More examples, the genus *Ramularia* comprises species with solitary as well as catenate conidia. The conidial formation, solitary or catenate, is not applicable with *Ramularia* s. lat. for separating the genus into smaller taxonomic units (Braun 1995). Even in *Cercospora* s. str. the conidia may occasionally be formed in short chains (Chupp 1954), e.g., in *C. lactucae-sativae* Saxada.

In conclusion, it must be stated that amongst cercosporoid hyphomycetes the formation of single or catenate conidia is not tenable as a distinguishing character at generic rank. *Phaeoramularia* has to be reduced to synonymy with *Passalora*, which has also been confirmed by molecular analyses conducted by Crous *et al.* (2001), in which *Passalora, Phaeoramularia* and *Mycovellosiella* form mixed clusters.

The differences between these two new combinations is that *P. delphinii* possesses well-developed stromata, produces conidiophores that are fairly densely fasciculate, unbranched, paler, shorter and narrower, and bear smaller conidial scars, and produces conidia that are catenulate and often in branched chains, ellipsoid to cylindric, fewer septate, paler, shorter and wider.

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