Special issue on freshwater ascomycetes and other aquatic fungi

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Published online: 18 April 2018

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This special issue on aquatic fungi is dedicated to Carol Shearer, and the late John Webster and Terrence Ingold, who initiated research on the fungi in these habitats. This special issue brings together ten papers on aquatic fungi, which are those taxa that grow on submerged substrates in aquatic bodies, such as ponds, streams, lakes, and rivers, as well as saline habitats. Aquatic fungi are both interesting and important and can be split into several ecological groups: the lignicolous freshwater fungi that generally grow on submerged wood, the Ingoldian or leaf-inhabiting fungi which grow on submerged leaves in freshwater, and those fungi that grow on substrates in saline habitats. Aquatic fungi are important in the decay of plant material in streams and thus nutrient cycling. Aquatic fungi in particular have the potential to monitor pollution and may be seriously affected with the effects of climate change. Therefore, their study has become important. Freshwater bodies are also one of the few habitats where fungi can be found all year round—because as long as the stream has water, it will have freshwater fungi. The fungi range from solely aquatic species to those that occur in terrestrial habitats and support a huge diversity, particularly across the ascomycetes. Thus, much novelty is yet to be found.

When we envisaged this special issue, we had hoped for papers from around the world. Previous hotspots for research on aquatic fungi were in the USA (Illinois, Shearer and co-workers), Australia (north Queensland, Hyde and co-workers), Canada (Bärlocher and co-workers), the Czech Republic (Marvanová and co-workers), mainland China (Yunnan Province, Hyde and co-workers), Hong Kong (Hyde and co-

workers), Spain, (Descals and co-workers), Thailand (Jones and co-workers), and the UK (Ingold, Webster and co-workers). More recently, several groups studying freshwater fungi have started research in China, because of the importance of water and the perceived drying out of water bodies which is expected with climate change. Eventually, we only received papers from the groups in the Asian region and from Iran which are presently most active. This special issue of *Mycological Progress* on aquatic fungi therefore provides ten papers on the taxonomy and phylogeny of freshwater fungi, mostly from the Asian region.

Papers can be categorized into two main themes. Most papers deal with the taxonomy and phylogeny of freshwater fungi, including novel species in the families Pleurotheciaceae (Luo et al. 2018), Torulaceae (Su et al. 2018), and *Jahnula dianchia* sp. nov. (Huang et al. 2018) from Yunnan Province in China. Two new helicosporous hyphomycetes from Taiwan are introduced (Kuo and Goh 2018). The new chaetothyrialean taxa, *Aculeata aquatica* gen. et sp. nov., *Minimelanolocus thailandensis* sp. nov., and *Thysanorea aquatica* sp. nov. (Herpotrichiellaceae), are introduced from northern Thailand (Wanasinghe et al. 2018). *Neohelicosporium* gen. nov. and five new species of helicosporous hyphomycetes are introduced in Tubeufiales (Yang et al. 2017), *Pseudostanjehughesia aquitropica* gen. et sp. nov., and *Sporidesmium* sensu lato species (Tian et al. 2016), and novel palm taxa within Pleosporales (Lu et al. 2017) are introduced from China and northern Thailand. Two novel species of bambusicolous fungi in the genus *Kamalomycetes*, were described from northern Thailand (Phookamsak et al. 2017). One paper deals with *Neocamarosporium* species from saline lakes in Iran (Papizadeh et al. 2017).

Section Editor: Kevin Hyde and Christiane Baschien

This article is part of the “Special Issue on Freshwater Ascomycota.”

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