

Taxonomic study of *Verrucariaceae* (lichenized fungi) in Bulgaria

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Summary

Verrucariaceae (Ascomycota) are a family including mostly lichenized fungi, comprising a large diversity in habits.

A taxonomic study of *Verrucariaceae* in Bulgaria was carried out. Sixty two species and two varietates belonging to eighteen genera (*Agonimia*, *Bagliettoa*, *Catapyrenium*, *Dermatocarpon*, *Endocarpon*, *Hydropunctaria*, *Muellerella*, *Normandina*, *Parabagliettoa*, *Placidium*, *Placocarpus*, *Placopyrenium*, *Polyblastia*, *Staurothele*, *Thelidium*, *Verrucaria*, *Verruculopsis*, and *Wahlenbergiella*) were recognized.

The maritime genus *Wahlenbergiella* is reported for the first time from Bulgarian Black Sea Coast. The widespread maritime species *Hydropunctaria maura* is not confirmed from Bulgaria. All of the examined specimens belong to species or a group of cryptic species closely related to *H. adriatica*.

Fifteen lichenized fungi are recorded for the first time from Bulgaria: *Hydropunctaria rheitrophila* (Zschacke) Keller et al.; *Polyblastia cupularis* A. Massal.; *P. dermatodes* A. Massal.; *Staurothele clopima* (Wahlenb.) Th. Fr.; *S. hymenogonia* (Nyl.) Th. Fr.; *Thelidium fontigenum* A. Massal.; *T. zwackhii* (Hepp) A. Massal.; *Verrucaria aquatilis* Mudd; *V. elaeina* Borrer; *V. elaeomelaena* (A. Massal.) Arnold; *V. pachyderma* (Arnold) Arnold; *V. praetermissa* (Trevis.) Anzi; *V. umbrinula* Nyl.; *V. viridula* (Schrad.) Ach., and *Wahlenbergiella striatula* (Wahlenb.) Gueidan.

The distributions of the included species in this treatment are given by the floristic regions of Bulgaria. Forty four species are recorded as new for eleven floristic regions. Ecological preferences and vertical distributions of all taxa are also given. The study emphasizes freshwater and amphibious lichenized fungi from *Verrucariaceae* as a possible future bioindicators for monitoring of water quality in Bulgaria. Typical freshwater lichenized fungi are reported for the first time from Bulgarian rivers and high mountain streams. A correlation between vertical distribution and variation of the form of hymenial algae is observed in the members of genus *Staurothele*.