

## *Diatrypella placenta* (Ascomycota, Xylariales) in Bosnia and Herzegovina

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**Key words:**  
*Diatrypaceae*  
*Alnus*

**Abstract:** *Diatrypella placenta* is described from Bosnia with photographs of asci and main microcharacters. A comparison is made with similar members of the genus.

### INTRODUCTION

The species here treated is a so called pyrenomycetous fungus of the family Diatrypaceae Nitschke. It is composed of a hollow perithecium growing under tree bark and erumpent outside at maturity.

Its study was carried on both classical morphology-based literature (Glawe 1986, Glawe & Rogers 1984; Medardi 2006, Rehm 1882) and modern phylogeny-based literature (Konta *et al.* 2020; Vasilyeva & Stephenson 2005; Yang *et al.* 2022), some of the above-mentioned works also providing identification keys (Glawe & Rogers 1984; Vasilyeva & Stephenson 2005).

Basing on the morphological characters of the collection, among which the parameters of spores (allantoid, hyaline, aseptate), asci (polysporous: bearing more than eight spores, unitunicate), and the habitat (erumpent from *Alnus* bark), its identification search led to the genus *Diatrypella*. However, modern molecular analyses (e.g. Konta *et al.* 2020; Vasilyeva & Stephenson 2005; Yang *et al.* 2022) have shown that the morphology is not always coherent with the phylogeny; for instance species with 8-spored asci classically belonging to the genus *Diatrype* fall in the clade of the genus *Diatrypella* classically characterized by polysporous asci and vice versa. *Diatrypella placenta* is not present in the main fungal genetic repositories (GenBank, UNITE).

### MATERIALS AND METHODS

The asci were photographed in habitat; the micro characters were studied on fresh material in water. The spore width was measured from the midpoint dorsal side to the midpoint ventral side (width in front view), and from the midpoint dorsal side to the midpoint of a line connecting the ventral extremity at each end of the spore (width in side view). All images by the author.

### TAXONOMY

***Diatrypella placenta*** Rehm  
*Hedwigia* 21 (8): 117 (1882)

= *Diatrype discoidea* var. *alni* Ravenel, *Fungi Amer. exs.*, N 188, 1878 (fide Vasilyeva & Stephenson 2005)

#### Description of teleomorph

*Stromata* 1 – 4 mm broad, isolate (none found coalescing), erumpent through tree bark, more or less circular to sometimes elongate, pulvinate with upper surface very low convex to flat, with more or less distinct narrow grooves extending radially from the perithecial ostioles; brownish to purplish brown and blackish brown, bearing several perithecia; pseudoparenchymatous tissue whitish to brownish.

*Perithecia* black, usually homogeneously distributed, superiorly terminating in ostioles.

*Ostioles* circular, flattened, sulcate.

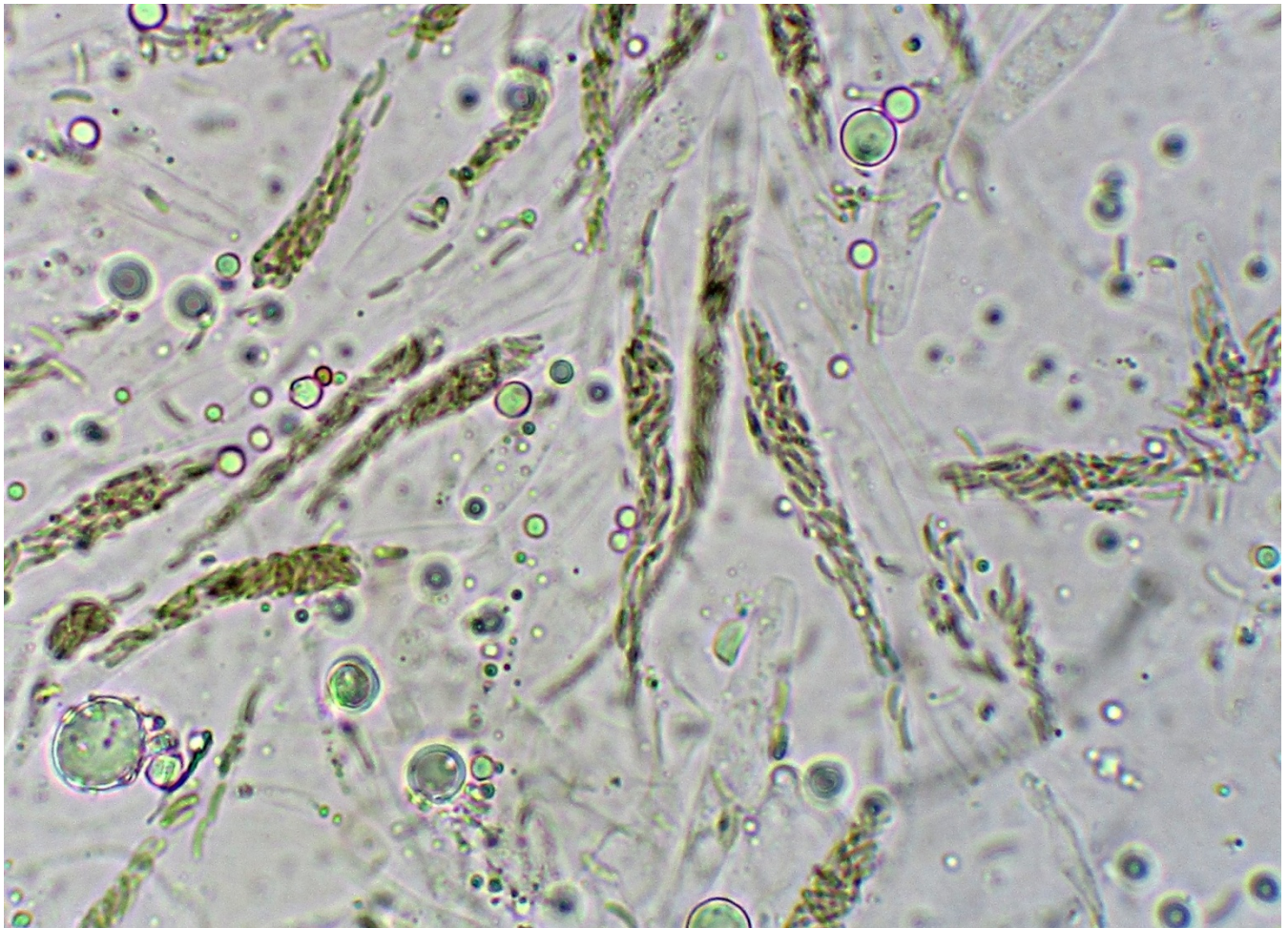
*Asci* 45 – 60 × 5 – 7 µm in the spore-bearing portion (p. sp.), narrowly fusiform-cylindrical, long- stipitate, polysporous, unitunicate, apical ring almost inamyloid.

*Ascospores* 4.50 – 5.20 µm long, 0.60 – 0.70 µm wide in front view, 1.15 – 1.30 µm in side view, cylindrical in front view, allantoid to suballantoid in side view, subhyaline.





Spores / spore (scale bar = 1 µm)



Asci

**Collection examined and Habitat:** Bosnia and Herzegovina, Banja Luka, Prijedor, Čejreci, on dead wood of *Alnus glutinosa*, 6 February 2024, legit D. Trivič, in the author's pers. herb

## NOTES

This species seems little reported both in published literature and in websites. It is reported from Europe [Austria (Kahr et al. 1996; Rehm 1882; marn.at website), France (Mombert website), Poland (Chlebicki 2008), Russia (inaturalist.org website)] and North America [Canada (Pilley & Trieselmann 1968), USA (Petersen 1979; Ravenel 1882 sub nom. *D. discoidea* var. *alni*)]. This Bosnian collection most likely is the first report from the entire Balkan area.

Very small spores, sulcate ostioles, narrow grooves more or less extending radially from the ostioles on the stromatal surface, and alder habitat are the main characteristics identifying *Diatrypella placenta*.

The two following species also are specialized with *Alnus* wood.

*Diatrypella rimosa* Shear (Shear 1902), described from USA, has somewhat similar stromata with weakly sulcate ostioles but differs by white to creamy white entostromata tissue, by transversally, not radially, fissured stromatal surface, and by longer spores ( $5 - 7 \times 1.5 \mu\text{m}$ ).

*Diatrypella verrucaeformis* (Ehrh. ex Pers.) Nitschke is distinguished by its sub conical stromata little emerging from the bark and  $6 - 8 \mu\text{m}$  long ascospores.

*Diatrypella discoidea* Cooke & Peck has ascospores of similar length and similarly sulcate ostioles but is a *Betula* host fungus.

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