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Gloiocephala cerkezii (Basidiomycota, Physalacriaceae) in Bosnia and Herzegovina

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Abstract: The first record of *Gloiocephala cerkezii* from Bosnia is presented, accompanied by a detailed description and imagery of its macro- and microcharacters.

INTRODUCTION

The genus *Gloiocephala* Masee (Masee 1892), which was for a long period included in *Marasmius* Fr. as *Marasmius* subgen. *Gloiocephala* (Masee) Bon and recently re-elevated to generic level following phylogenetic analyses, contains only five species in Europe (Tkalčec & Mešić 2008). One of their most peculiar morphological characteristics among the genera of the suborder *Marasmiineae* is a vein-like hymenium or, when sufficiently developed, extremely few lamellae.

Gloiocephala cerkezii Tkalčec & Mešić was described in 2008 from a series of collections in neighbouring Croatia, around Zagreb (Tkalčec & Mešić 2008). More recently, Tkalčec, Mešić, Ainsworth & Jordal (2019) assessed its rarity, reporting that it was still only known 'from two small localities in Croatia; a small grassland and a disused orchard, the latter of which is now destroyed'. Consequently, this Bosnian collection expands its range, although only by less than 150 km to the southeast (town of Prijedor, locality Raškovac). The species range beyond the north-western Balkans still remains to be certified.

MATERIALS AND METHODS

Basidiomes were photographed in the field using Canon Ixus 185 and Canon Ixus 285 HS cameras. Microscopy data and images were obtained from fresh material stained with Congo red and observed in water; spores were also observed in Melzer's reagent.



TAXONOMY

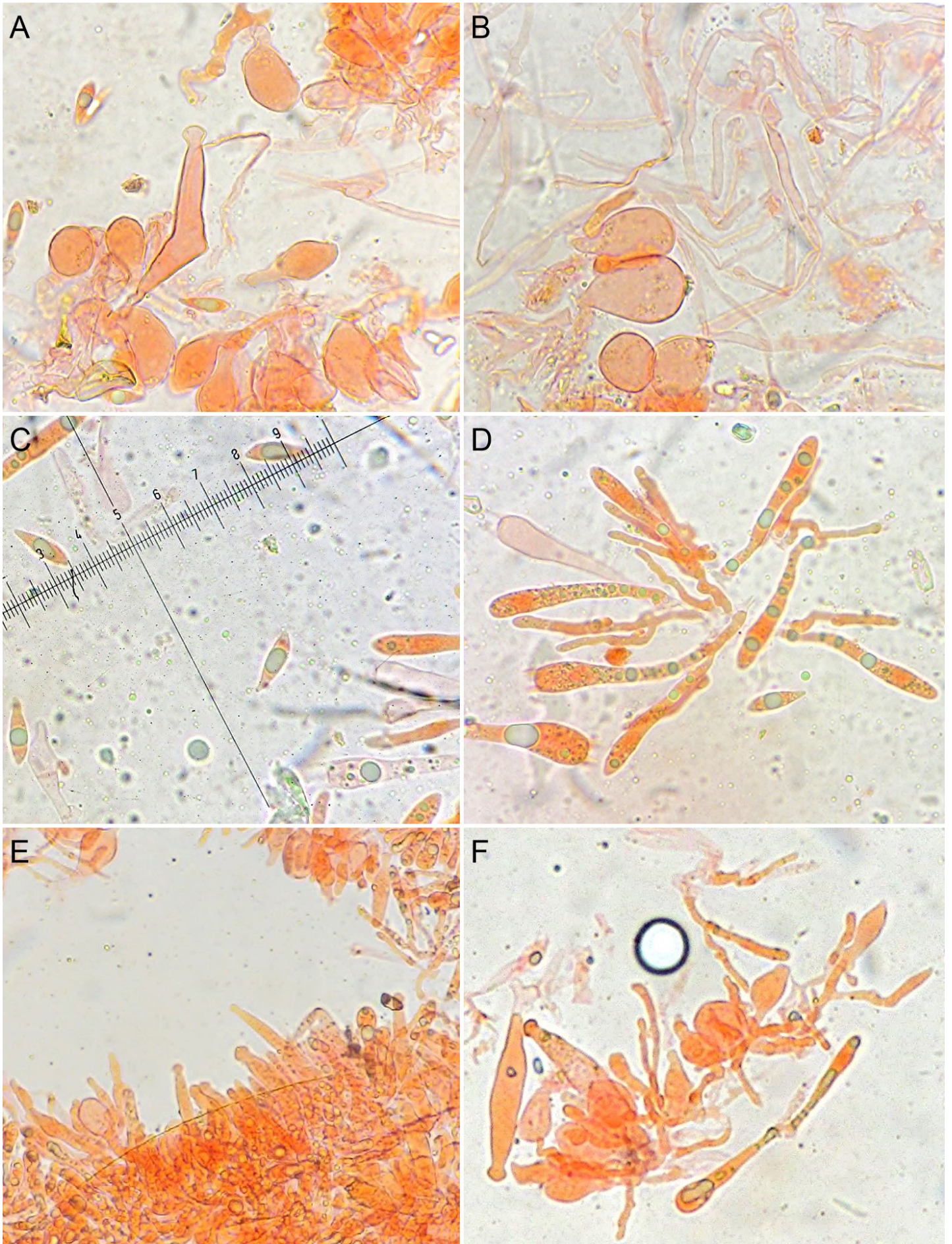
Gloiocephala cerkezii Tkalčec & Mešić*Mycologia* 100(2): 320 (2008)**Macroscopic characters**

Pileus 3–5 mm broad, convex, sometimes irregular to somewhat lobed; whitish to beige with a concolourous or slightly darker centre, often strewn with brownish dots, sometimes brownish areas irregularly cover portion of pileus; margin thin.

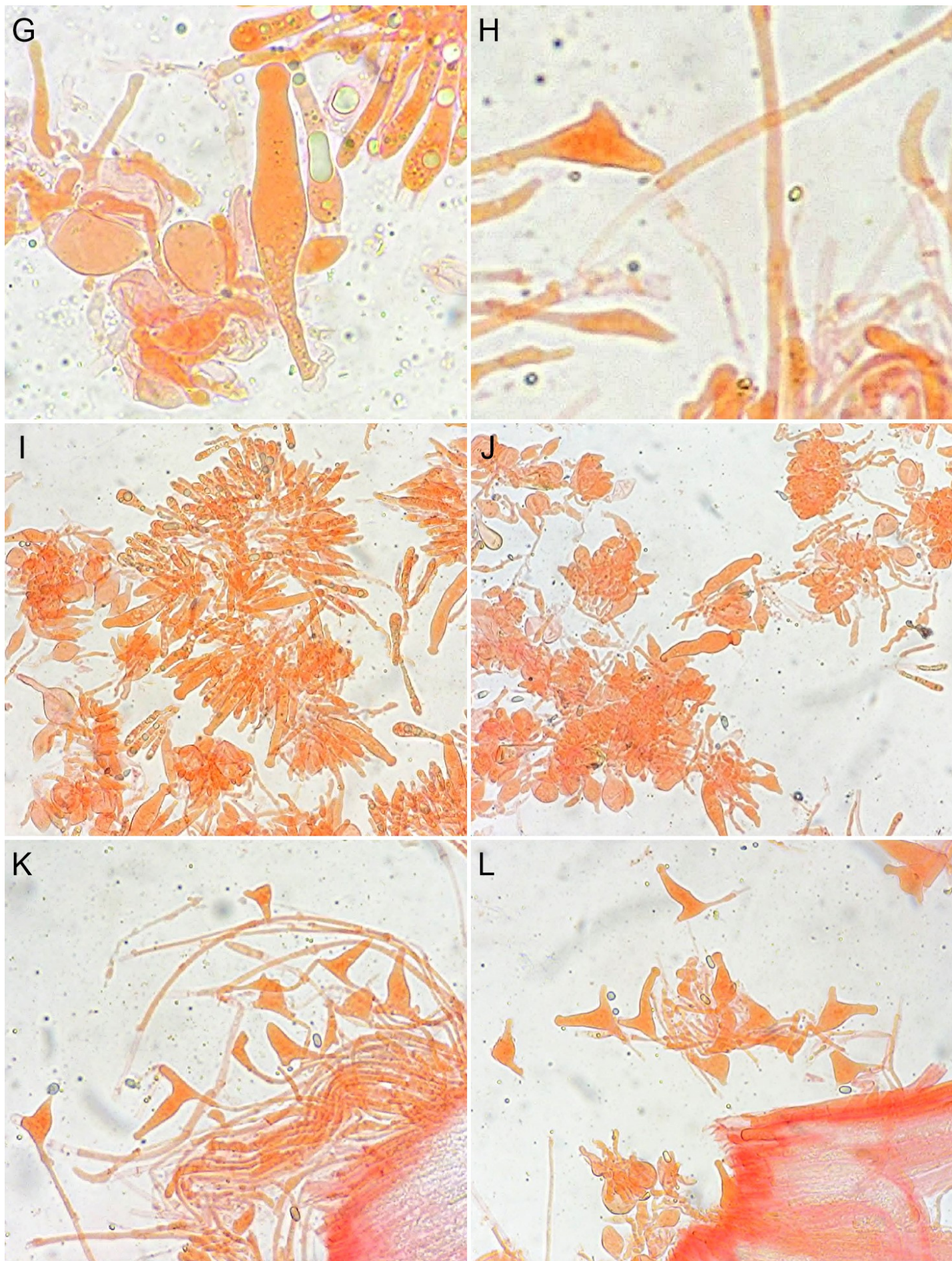
Hymenium composed of very distant wrinkles or scarcely developed and forked to intervenose lamellae, rarely reaching the margin of pileus, whitish.

Stipe 13–18 mm long, up to 1 mm broad, cylindrical, base somewhat bulbillose, central; white above, dark brown to blackish below, with a central zone of progressive passage between the two extreme colour tints, the dark portion more and more expanded upwards while basidiomes age; pubescent; insititious.





A-B: Pileipellis and gelified subpellis; C: Spores; D: Basidia; E-F: Cheilocystidia



G: Pleurocystidium; H: Clamp connections; I-J: Hymenial overview; K-L: Caulocystidia

Microscopic characters

Spores 14.0–17.5 × 3.8–4.2 µm; very narrow, in front view oblong, in side view subamygdaliform, in both views base tapering and apex somewhat prolonged; usually with a large guttula, hyaline; congophilous, inamyloid, indexinoid; without germ pore.

Basidia 4-spored, narrowly clavate.

Cheilocystidia of three intermixed types: (a) capitate and narrowly fusiform-utriform to narrowly fusiform or cylindraceous, sometimes narrowly lageniform to utriform and non-capitate; wall thin to slightly thickened, numerous; (b) irregularly filiform and sometimes forked, diffuse; (c) claviform and similar to those in the pileipellis, occasional.

Pleurocystidia similar to the type (a) of the cheilocystidia, numerous.

Pileipellis a hymeniderm of clavate to ellipsoid or thickly subutriform elements intermixed with pileocystidia similar to cheilocystidia of the type (a); subpellis a hyphal layer immersed in a strongly gelified matrix.

Caulocystidia mostly similar to the type (a) of the cheilocystidia but often with an added lateral projection.

Clamp connections present everywhere.

Collections examined: Bosnia and Herzegovina, Republika Srpska, Prijedor, Raškovac, in a flooded meadow along the Sana river bank, among *Lolium* sp., 11 and 12 June 2026, legit D. Trivič (pers. herb.).

NOTES

The Bosnian collections differ slightly from the original description as the gill edge seems to occasionally have clavate cystidia which resemble the pileal cells. However, all other characteristics align well.

Gloiocephala cerkezii has a clear set of morphological characteristics which facilitate its identification among the only four other species so far known from Europe.

Its elongate stipe is unique, as the stipe of the other four European species is very short to almost absent [not more than 6(10) mm long].

Gloiocephala menieri (Boud.) Singer also differs by a lateral or strongly eccentric stipe, and wider spores (5.5–7.5 mm); *G. cornelii* (Læssøe & Noordel.) E. Horak has a usually spathuloid pileus; *G. caricis* (P. Karst.) Bas has predominantly 2-spored basidia; and *G. pseudocaricis* (Noordel.) Tkalčec & Mešić has a pinkish-ochraceous pileus and lacks capitate pileocystidia.

Based on this and the Croatian findings *Gloiocephala cerkezii* grows both on herbal culms and tree twigs, in humid to dry habitats.

ACKNOWLEDGMENTS

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