



## A new species of *Manoharachariella* (hyphomycetes) from Central Anatolia, Turkey

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### Abstract

*Manoharachariella elsadii* is described as a new species from Turkey. It differs from the two known species by possessing smaller conidia with fewer septa. In addition, it has shorter conidiophores than *M. indica* and longer conidiophores than *M. lignicola*.

**Key words** – anamorphic fungi – Anatolian Peninsula – dematiaceous hyphomycete

### Introduction

Turkey has a very diverse flora, and the higher plants have been well studied. However, the mycobiota has not been extensively investigated and most studies deal with macromycetes especially agaricoid fungi. During the past two decades research on micromycetes (including hyphomycetes) in the country has intensified (Hüseyinov & Selçuk 1999, Braun et al. 2000, Hüseyin & Selçuk 2001, Hüseyin et al. 2003, 2005, Mel'nik et al. 2004, Selçuk et al. 2009, 2010, 2014).

A new hyphomycete species was found during a trip to Kervansaray Mountain, Kırşehir Province, Central Anatolian Peninsula. This mountain lies in the Irano-Turanian phytogeographic region (Hamzaoğlu 1996). The fungus belongs to the genus *Manoharachariella*, which was described by Bagyanarayana et al. (2009). They described the type species, *M. lignicola*, on an unidentified dead twig from Visakhapatnam, Andhra Pradesh, India. A second species was described as *M. indica* by Rajeshkumar & Singh (2012).

### Materials & Methods

Samples were collected during a mycological excursion to the Kervansaray Mountain in Boztepe District, Kırşehir Province of Turkey in 2012. Dead twigs were observed and photographed using an Olympus SZX 16 binocular stereomicroscope with an Olympus DP26 Digi-CAM camera. The collections were examined in distilled water and for microphotographs a Leica DM 3000 (Axio imager 2 equipped with Nomarski differential interference contrast optics) microscope was used. Identification was carried out through comparison with current taxonomic works of hyphomycetous fungi under consideration. The examined specimen is deposited at the Ahi Evran University, Arts and Sciences Faculty, Department of Biology, in Kırşehir Province of Turkey.

## Results

The following description is based on fungal material found in Central Anatolia (Turkey) on dead branches of *Pyrus elaeagnifolia* in 2012.

*Manoharachariella elsadii* F. Selçuk & E. Hüseyin, **sp.nov.**  
MycoBank MB 808450

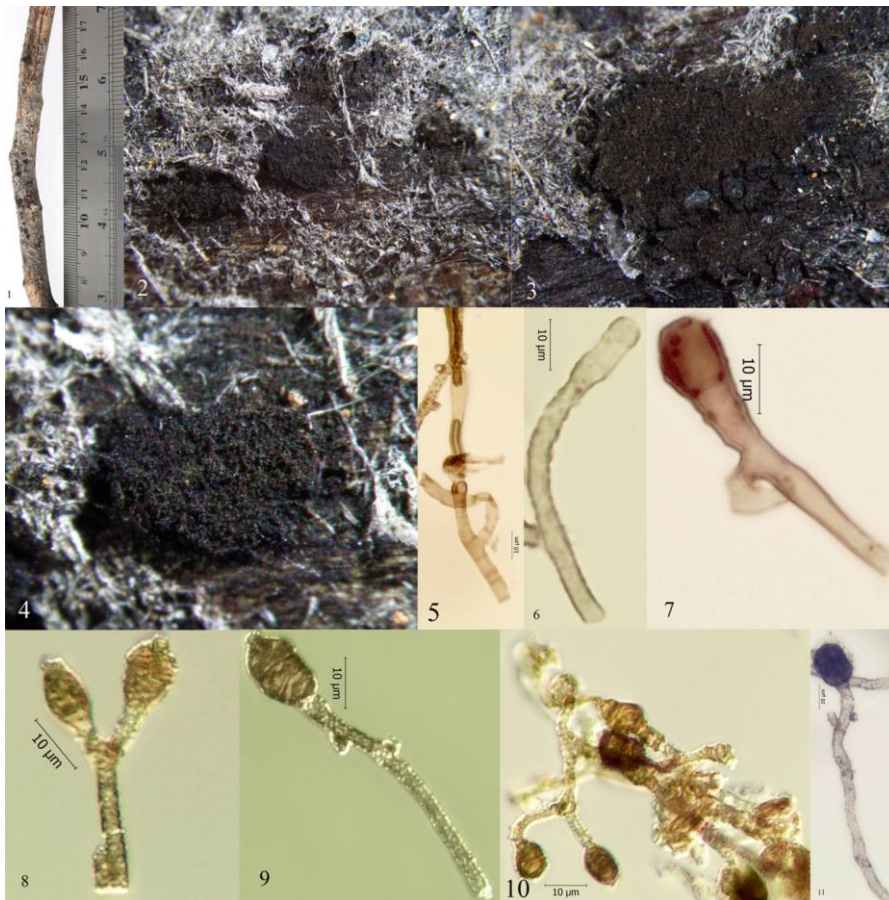
Figs 1–58

Etymology – Dedicated to Elşad Hüseyin for his great contribution to the knowledge of Turkish micromycetes.

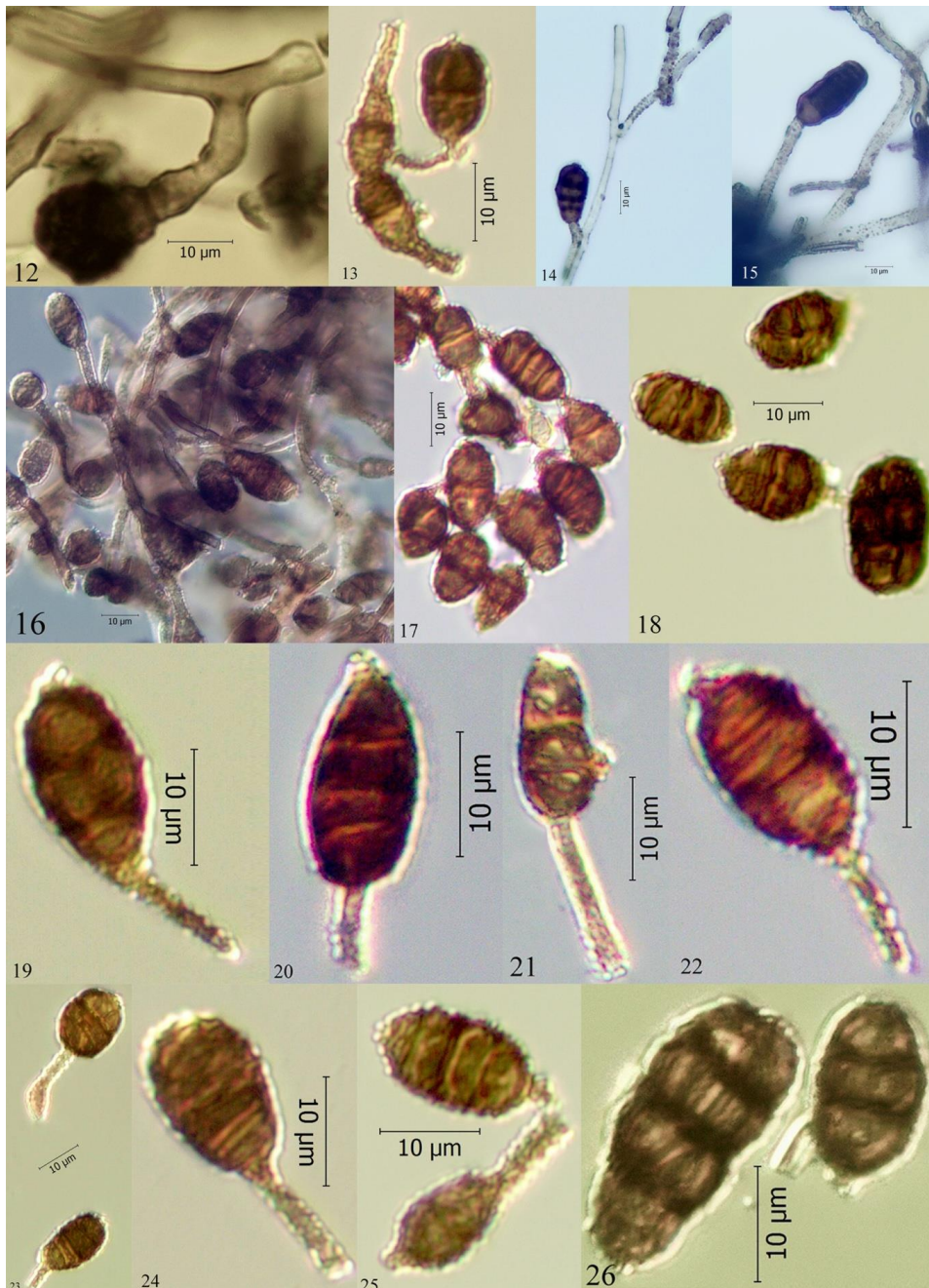
Species in genere *Manoharachariella* duae: *Manoharachariella lignicola* et *M. indica*, a quae a conidiis late ellipsoideis, ovoideis, dolioliformes,  $20\text{--}17.5 \times (9.5\text{--})10\text{--}12.5\text{--}(15) \mu\text{m}$  ab bene differt.

Colonies effuse, greenish black, blackish brown or brown, dense, velutinous,  $1\text{--}10 \times 0.5\text{--}4$  mm. Conidiophores macronematous, mononematous, straight or flexuous, sparsely branched, 5–20-septate, smooth, pale to dark brown,  $50\text{--}128 \times 3\text{--}5.5 \mu\text{m}$ . Conidiogenous cells monoblastic, integrated, indeterminate, terminal and lateral (or intercalary), cylindrical, pale brown, brown, (hyaline to subhyaline), pale brown towards the apex. Conidia solitary, dry, acropleurogenous, simple, dictyoseptate, tiered, 6–7 transverse septa, 1–2 longitudinal septa, septa dark brown, ellipsoidal, ovate, doliiform,  $20\text{--}17.5 \times (9.5\text{--})10\text{--}12.5\text{--}(15) \mu\text{m}$ , with a hyaline, conical nipple at the apex,  $4.3\text{--}6.8 \times 2.7\text{--}3.5 \mu\text{m}$ .

Material examined – Turkey, Kırşehir Province, Boztepe district, mountain sparse forest, on wood of dead twigs of *Pyrus elaeagnifolia* Pallas (Rosaceae),  $39^{\circ} 13' 285''$  N,  $34^{\circ} 13' 648''$  E, 4 November 2012, E. Hüseyin, F. Selçuk (KE 102, **holotype**).



**Figs 1–11** – *Manoharachariella elsadii*: 1, habit 2–4 colonies 5, branched conidiophore 6–7 conidiogenous cells 8–10 immature conidia and conidiophores 11, young conidium.

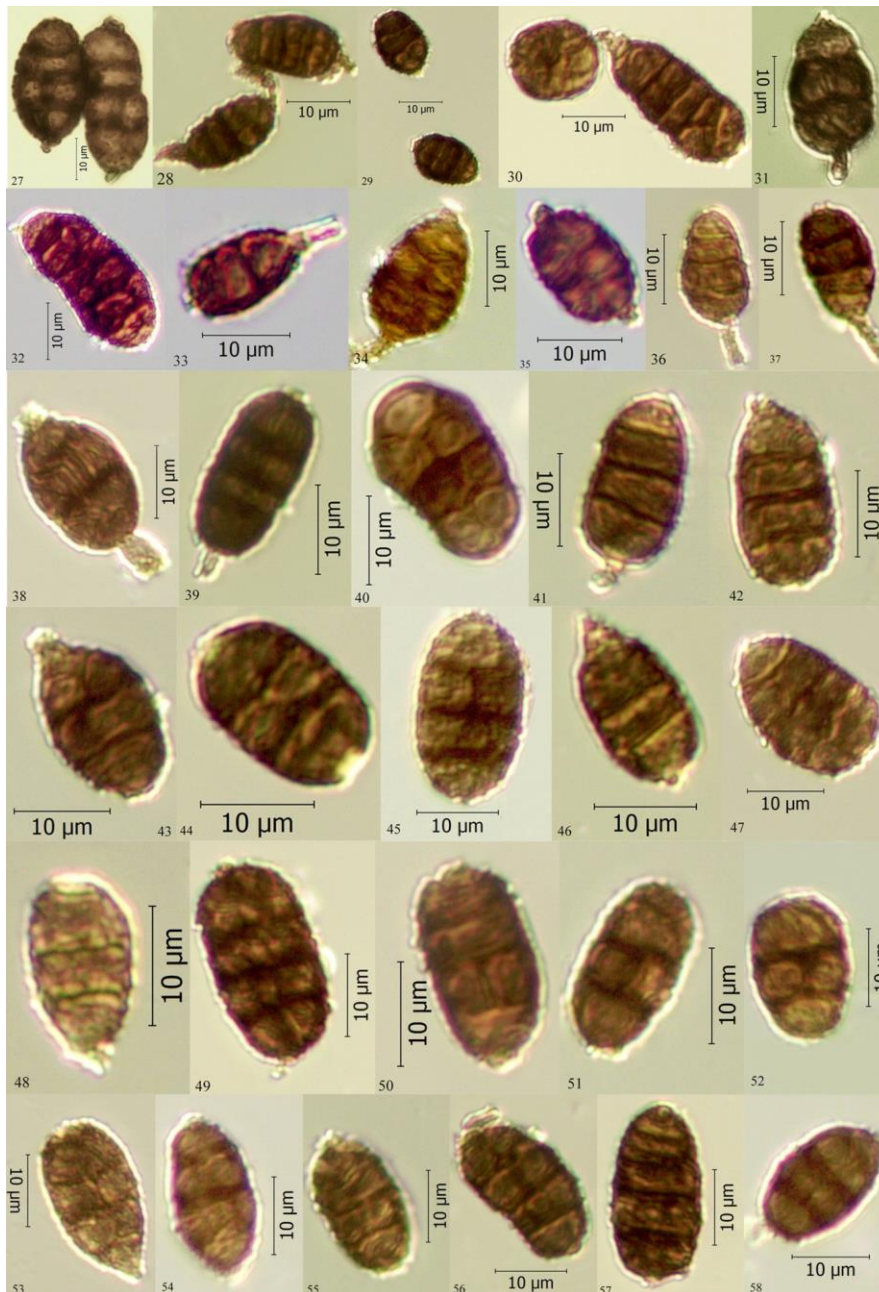


**Figs 12–26** – *Manoharachariella elsadii*: 12, conidiogenous cell with young conidium 13, immature and young conidia 14–15 branched conidiophores with conidia 16, conidia and conidiophores 17, conidial mass 18–26 variation in conidial size and shape.

### Discussion

The genus *Manoharachariella* Bagyan., N.K. Raj & Kunwar and its type species *M. lignicola* Bagyan., N.K. Raj & Kunwar was described from Andhra Pradesh, India (Bagyanarayana et al. 2009). Rajeshkumar & Singh (2012) described a second species, *M. indica* Rajeshkumar & S.K. Singh from eastern Ghats, India. Conidia of *M. lignicola* are doliiform, obpyriform, ellipsoidal, apiculate, dictyoseptate, smooth, tiered,  $42.5\text{--}50.5 \times 25\text{--}32 \mu\text{m}$  with several longitudinal septa (Bagyanarayana et al. 2009). Conidia of *M. indica* are doliiform, obpyriform, ellipsoidal or irregular, apiculate, dictyoseptate,  $84\text{--}110\text{--}(120) \times 31\text{--}44 \mu\text{m}$  with 10–13 longitudinal septa (Rajeshkumar & Singh 2012).

*Manoharachariella elsadii* differs from *M. lignicola* and *M. indica* by smaller conidia, number of conidial septa, and size of conidiophores.



**Figs 27–58** – *Manoharachiella elsadii*: 27–58 variation in conidial size and shape.

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