

A new and rare species of *Phlyctaeniella* from central India

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Phlyctaeniella indica sp. nov. from Chhattisgarh State, India is described, illustrated and discussed. It is a rare species occurring on stored logs of *Eucalyptus* sp. and collected only once in the past 20 years from central India.

Key words – Ascomycete – pezizomycotina – taxonomy – wood depots

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Introduction

During the past two decades, 1529 specimens of wood decay fungi have been collected from central India and 182 species have been identified and reported on 51 woods including many new records of polypore fungi from India (Harsh et al. 1997, Tiwari et al. 1987, 1989, 2005, 2009, 2010, 2011, Verma et al. 2008).

The present paper describes, illustrates and discusses a new and rare species of *Phlyctaeniella*. *Phlyctaeniella* is an anamorph (coelomycete) of Pezizomycotina (ascomycete) similar to *Septoria* but septate and irregularly branched conidiophores of *Phlyctaeniella* separate it from *Septoria* in which conidiophores are absent.

Methods

Conventional morphology based taxonomic methods were employed. For microscopic study slides were prepared in lactophenol cotton blue mountant and in water. Photographs were taken with a Sony Cybershot camera, macroscopic and microscopic characters were studied under Wild M3Z and advanced research microscope, Leitz DMRB with digital EC3 camera. Camera lucida drawings were prepared using an Olympus

research microscope. Identification was done with the aid of published works (Petrak 1922, 1929, Sydow 1930, Sutton 1980, Andrianova 1996). A key is provided to known species of *Phlyctaeniella*. The examined holotype specimen is deposited in the Mycology Herbarium, Forest Pathology Division, Tropical Forest Research Institute, Jabalpur, accession number TF 2681.

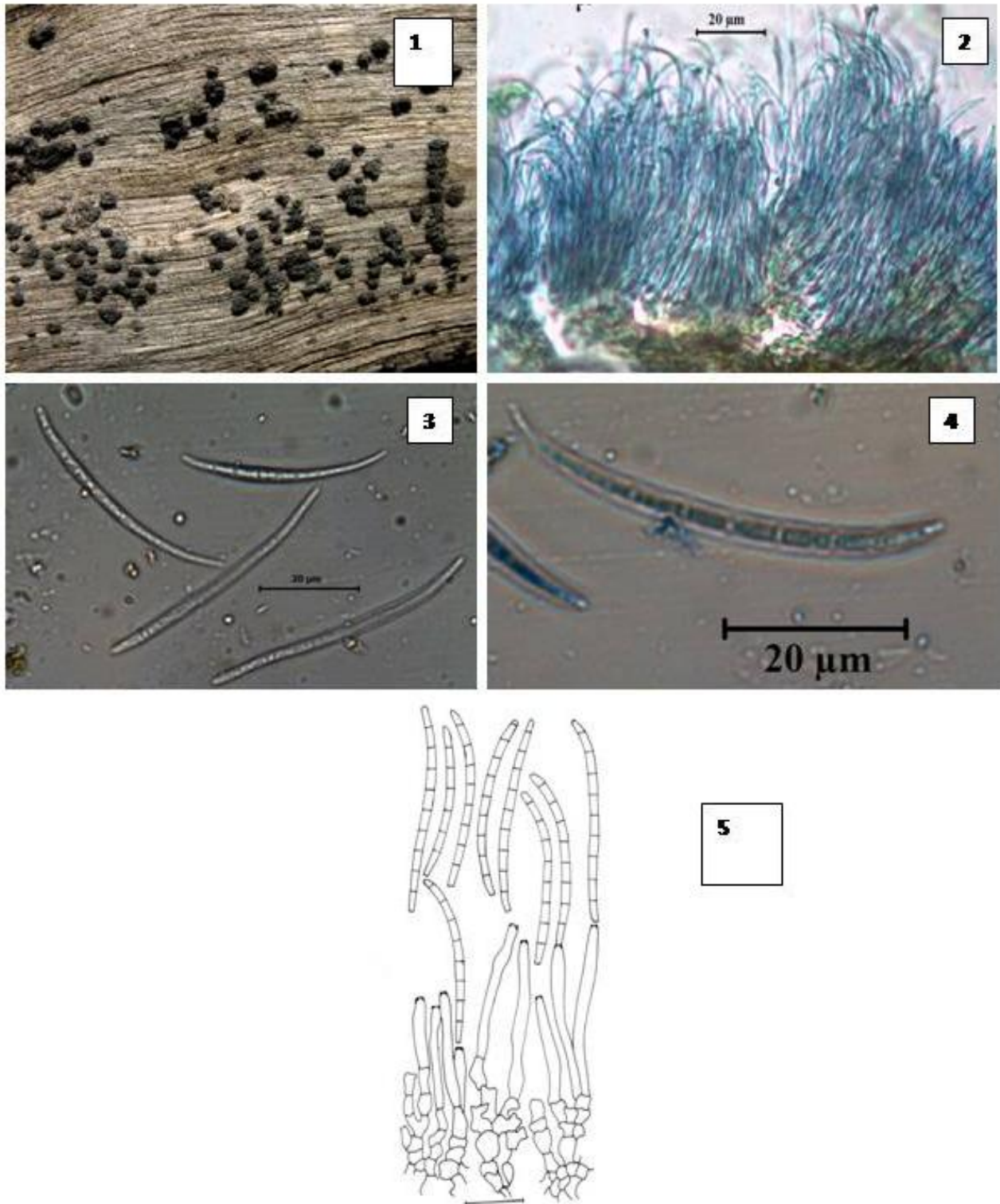
Results

After a study of 1529 specimens of fungi collected from stored logs in various wood depots of Chhattisgarh, Madhya Pradesh, Maharashtra and Orissa States of central India a single specimen was found of what proved to be a new species of *Phlyctaeniella*, which is described as follows:

Phlyctaeniella indica C.K. Tiwari, Parihar & R.K. Verma **sp. nov.** Figs. 1–5
MB 800820

Etymology – named after the country of occurrence, India

Mycelium immersed, branched, septate, hyaline. Conidiomata eustromatic dark brown-black, surface rough, erumpent crusted, measuring 5–10 × 1.0–2.0 mm, composed of 4–15 chambers, each chamber consisting of a



Figs 1-5 – *Phlyctaeniella indica* **1** stromatic conidiomata. **2** inner wall cells of conidioma with conidiophores and conidia. **3–4** conidia and **5** conidiophores, conidiogenous cells and conidia. Scale bar = 20 µm

Key to species of *Phlyctaeniella*

1. Conidia up to 21 µm long, conidiomata 90–130 µm, on leaves of *Eucalyptus obliqua* *P. cryptica*
1. Conidia more than 21 µm long 2
2. Conidia 33.5–58 × 4.5–7.5 µm, conidiophores 39.5–110 × 5–8 µm, on logs of *Eucalyptus* sp. *P. indica*
2. Conidia less than 3 µm wide 3
3. Conidia 25–45 × 1.5–2.0 µm, conidiomata 220–350 µm, on leaves of *Aruncus sylvestris* *P. polonica*
3. Conidia 34–55 × 2.5 µm, conidiophores 20 × 2.5–3.0 µm, on stem of *Humulus lupulus* *P. humuli*
3. Conidia 60 × 3 µm, 3 septate, on leaves of *Galium psilotum* *P. psilostega*

well developed pycnidium; pycnidia dark brown, globose to involvulate, 385 × 475 µm, wall several cells thick, inner side of wall containing hyaline thin-walled cells, outer cells are darker, ostiole indistinct, dehiscence by rupture of the upper wall. Conidiophores simple or irregularly branched, especially at the base, formed from the inner cells of the stomatal wall, hyaline, smooth-walled, septate, filamentous, loose to semi-compact, uniformly arranged, 39.5–110 × 6.5–8.0 µm. Conidiogenous cell enteroblastic, phialidic integrated or discrete, determinate, hyaline, tapered at apices, smooth, with apical aperture, 15–21 × 23–25 µm. Conidia abundant, hyaline, smooth, thin-walled, filiform, slightly curved at one end or sigmoid, 4–10 septate, 33.5–58 × 4.5–7.5 µm.

Habitat – On stored logs of *Eucalyptus* sp.

Known distribution – Marwahi, Bilaspur, Chhattisgarh, India

Material examined – INDIA, Chhattisgarh State, District Bilaspur, Marwahi wood depot, 28.7.2011, CK Tiwari and J Parihar, TF 2681, **holotype**

Discussion

The genus *Phlyctaeniella* was established by Petrak with its type species *P. polonica* Petr. (Petrak 1922). Since then only a further three species have been reported under this genus namely *P. humuli* Petr., *P. psilostega* (Ellis & G. Martin) Andrian. and *P. cryptica* Syd. from Austria, USA and South Australia. *P. psilostega* was originally described as *Septoria psilostega* Ellis & G. Martin and later transferred to *Phlyctaeniella*

(Andrianova 1996). Sutton (1980) gave an account of the genus based on the type specimen *P. humuli*. Species of this genus occur on leaves and stems. *P. indica* is compared with the other published species of *Phlyctaeniella* in the key. The conidia of *P. indica* are wider than those of other species including *P. cryptica* (2–3 µm wide) from other reported species. *P. indica* was collected on sapwood of stored logs of *Eucalyptus* sp. and no other *Phlyctaeniella* is reported on wood logs. This is the first time that a species of *Phlyctaeniella* has been reported from India.

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