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A new name for a *Coltricia* (*Basidiomycota*) from India

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Abstract — Examination of the isotype of a *Coltricia* species described from India confirms it as a good morphological species. A new name, *Coltricia indica,* is proposed to replace its two previous illegitimate names. The species is characterized by very small, centrally stipitate basidiomes with shiny pilei when dried, lobed to serrate and ciliate margins, and oblong-ellipsoid, more or less thick-walled basidiospores.

Key words — *Coltricia parvula*, *Coltricia pusilla*, *Hymenochaetales*, *Hymenochaetaceae*, polypore

Introduction

Sharma & Wright (1992) described a new species *Coltricia pusilla* based on two collections of a small polypore found in two forests in Khasi Hills, Meghalaya State, India. However, their binomial was a later homonym of a name previously used by Imazeki & Kobayashi (1966) for a new species from Japan.

When J.E. Wright later became aware of Imazeki & Kobayashi's work, he proposed *Coltricia parvula* as a nom. nov. for the Indian species (Wright 1997). Unfortunately, this was also a later homonym of a combination previously published by Murrill (1904).

Our goal was to confirm the identity of Sharma & Wright's species and provide a legitimate name for it.

Materials & methods

The isotype of *Coltricia pusilla* J.R. Sharma & J.E. Wright was studied during a visit of the senior author to BAFC. Basidiomes were cut by hand for microscopic study, and sections were mounted in 3% KOH, water and Melzer's reagent (IKI). Herbaria acronyms follow Thiers (2011).

Taxonomy

Coltricia indica Baltazar, **nom. nov.** PLATE 1

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≡ *Coltricia pusilla* J.R. Sharma & J.E. Wright, Bull. Bot. Surv. India 31: 182, 1992 ["1989"], nom. illeg., non Imazeki & Kobayasi 1966.

≡ *Coltricia parvula* J.R. Sharma & J.E. Wright, in Wright, Mycotaxon 61: 419, 1997, nom. illeg., non (Klotzsch) Murrill 1904.

ETYMOLOGY: the new epithet refers to the type locality in India.

ORIGINAL DESCRIPTION (from Sharma & Wright 1992 with our additions within square brackets) — "FRUITBODY annual, centrally stipitate, coriaceous soft when fresh, hard and rigid on drying. PILEUS infundibuliform or depressed at centre, circular, 5–8 mm diam., 1–1.5 mm thick, finely depressed velutinate [to glabrous when dry], deep golden brown to cinnamon brown, shiny to glossy, narrowly concentrically zonate. MARGIN sharp, deflexed when dry, ciliate [lobed to serrate]. PORE SURFACE rusty brown, with a narrow sterile margin. PORES angular, 2–4 [2–3] per mm, entire, becoming uneven near stipe with age. TUBES ≤ 1 mm deep, light golden brown to ochraceous brown. CONTEXT ≤ 0.5 mm thick, rusty brown, fibrous. STIPE equal or tapering upwards, usually swollen at base, ≤ 2 cm × 1–1.5 mm, finely tomentose to more velutinate towards base, light rusty brown to dark brown [with a soft, loose discoid or globose base enclosing some substrate].

"HYPHAL SYSTEM monomitic, generative hyphae with simple septa, branched at broad [acute] angles, golden brown, 4–7 μm wide. SPORES oblong-ellipsoid [to ellipsoid, rarely with a tapering apex becoming almost navicular], smooth, slightly [to distinctly] thick-walled, [with a distinct apiculus,] golden brown [in KOH, lighter in water], inamyloid, [nondextrinoid,] 5–6 × 3–4.2 μm [(5–) 5.5–6(–7) × 3–4 μm]."

SPECIMEN EXAMINED: **INDIA**. **MEGHALAYA**, Khasi hills, Raliang forest, c. 1900 m [the protologue citation of "6500 m" is apparently an error for 6500 ft; the highest altitude in Meghalaya State is 1961 m (= 6434 ft), in the Khasi Hills], 25.IX.1986, on ground, leg. J.R. Sharma 60108 (BAFC isotype).

DISTRIBUTION: known only from two forests in the Khasi Hills, Meghalaya State, India.

Discussion

Coltricia indica is characterized by its very small, centrally stipitate basidiomes and a circular infundibuliform pileus with a lobed to serrated and ciliate margin. The stipe base is also noteworthy in that the isotype basidiomes have enlarged bases with soft and loose tissue enclosing a piece of substrate or forming a discus.

This species is very similar to *C. minor* Y.C. Dai, which also has very small basidiomes (< 0.5 cm long) and basidiospores almost identical in shape and

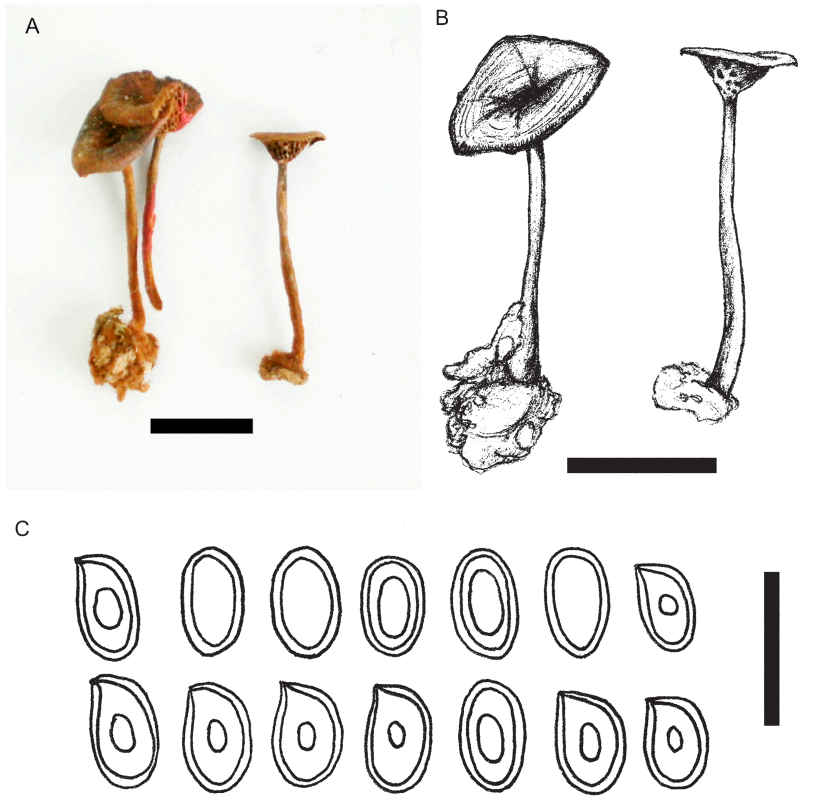

Plate 1. *Coltricia indica* (isotype).
A. Upper (left) and lateral (right) views of the pileus. B. Drawing of two basidiomes.
C. Basidiospores. Scale bars = 0.5 cm (A–B), 10 µm (C).

size. However, they differ both macroscopically and ecologically. *Coltricia minor* has laterally stipitate basidiomes, fan-shaped to spathulate pilei, non-ciliate margins, and regular stipe bases. Furthermore, *C. minor* was collected on angiosperm wood and is thus far known only from Hunan Province (China), which has a subtropical climate. *Coltricia indica*, on the other hand, was found growing on the ground of coniferous forests in India in a temperate climate due the altitude (Sharma & Wright 1992, Dai et al. 2010).

Coltricia barbata Ryvarden & de Meijer and *C. velutina* Baltazar & Gibertoni, known from Brazilian Atlantic Forest areas, also have ciliate margins and small basidiomes — pilei measuring ≤ 1.8 cm and ≤ 2.8 cm diam., respectively (Meijer 2006, Baltazar et al. 2010). However, *C. barbata* has basidiospores

that are globose to subglobose and 5–6 × 5–6 µm, compared to subglobose to broadly ellipsoid and 5.5–6.5(–7) × (4–)4.5–5.5(–6) µm in *C. velutina*. Both species also have smaller pores: 4–9 per mm in *C. barbata* and (4–)5–7 per mm in *C. velutina*.

Within *Hymenochaetaceae* Imazeki & Toki, stipitate poroid representatives with smooth basidiospores have been placed mainly in *Coltricia* Gray or *Phylloporia* Murrill. Traditionally *Phylloporia* species have a duplex pileal context with a black line below the tomentum, while *Coltricia* species have a homogeneous context and usually larger basidiospores. Ecological aspects were considered important but not decisive in circumscribing the two genera. However, recent studies have shown that some *Coltricia* species [including the type, *Coltricia perennis* (L.) Murrill] establish ectomycorrhizal associations (Tedersoo et al. 2007). Furthermore, a phylogenetic analysis by Valenzuela et al. (2011) supports *Coltricia stuckertiana* (Speg.) Rajchenb. & J.E. Wright within the *Phylloporia* clade. Except for its basidiospores, *C. stuckertiana* displays all other features typical of *Coltricia*. On the other hand, the type species of *Phylloporia* (*P. parasitica* Murrill) has not yet been included in any phylogenetic analysis. Its placement within the hymenochaetoid clade is needed for a reliable classification of the two genera, particularly as *P. parasitica* occurs in a very specialized substrate, i.e., living angiosperm leaves.

Perhaps *Coltricia* will eventually be restricted to ectomycorrhizal species. If so, we will only know the ectomycorrhizal status of *C. indica* by finding more specimens. For the time being we retain the species in *Coltricia* based on its morphology.

Based on its ornamented basidiospores, *Coltricia pusilla* Imazeki & Kobayashi is currently treated as *Coltriciella pusilla* (Imazeki & Kobayashi) Corner (Corner 1991) [≡ *Coltriciella pusilla* (Imazeki & Kobayashi) J.E. Wright, comb. superfl.]. *Coltricia parvula* (Klotzsch) Murrill is accepted as a heterotypic synonym of *Coltricia cinnamomea* (Jacq.) Murrill (Murrill 1908, Ryvarden 1976).

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