
Cookeina sinensis from India

Patil A, Patil MS and Dangat BT¹

Department of Botany, Rajaram College, ¹Shivaji University, Kolhapur, (M.S), India
 dhirajanj@gmail.com, ¹schndangat@gmail.com

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Discomycete *Cookeina sinensis* Z. Wang is reported for the first time from India.

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*Corresponding author: Dangat BT – e-mail – schndangat@gmail.com

Introduction

Cookeina Kuntze, a Discomycetes with eight recognized species, is one of the commonly encountered genera of the Sarcoscyphaceae (Pezizales) in tropical and subtropical areas around the world (Iturriaga & Pfister 2006). Morphologically the species are distinguished by combination of several features including ascospore shape and surface relief, presence and origin of apothecial hair and presence or absence of gelatinous material within the cortical layer of the excipular tissue (Weinstein & Pfister 2002).

The main characteristics are apothecia about 1cm in diameter, distinctly stipitate, deeply concave, with light or bright colours. The asci, simultaneously ripening, are cylindrical, suddenly contracted below, and not amyloid. Ascospores are more or less fusiform, hyaline, smooth or striate. Four species are known from India viz. *C. indica* Pfister & R. Kausal, *C. colensoi* (Berk.) Seaver, *C. Tricholoma* (Mont.) Kuntze and *C. sulcipes* (Berk.) Kuntze (Butler 1997, Bilgrami et.al. 1991, 2001).

During a mycological survey in the southwestern parts of Maharashtra (India) the authors collected a specimen belonging to the

genus *Cookeina*. Upon critical examination it was found to be *C. sinensis* Z.Wang, a new record to the fungi of India.

Material and methods

Collected on dead twigs at Amba (Shahuwadi) and Gawse (Ajara), District Kolhapur, Maharashtra, India in August 2011 and 2012, collected by Anjali Patil and B.T. Dangat. Photographs of fresh specimen were taken in field by digital camera. Laboratory observations were done following routine mycological methods. Dried specimens were deposited at National Fungal Culture Collection of India (NFCCI), Agharkar Research Institute, Pune, AMH No. 9461.

Cookeina sinensis Z. Wang, *Mycotaxon* 62: 293, 1997

Fig. 1a–d

Apothecia solitary and scattered, cupulate, centrally stipitate, up to 25 mm high and 50 mm in diameter when dry. Receptacle covered more or less uniformly with conspicuous long hairs. Stipe short, sub-cylindrical, disc deeply concave, pinkish orange, margin somewhat in-rolled Hairs fasciculate, stiff, bristle-like. Paraphyses slender, septate, branched and anatomizing,

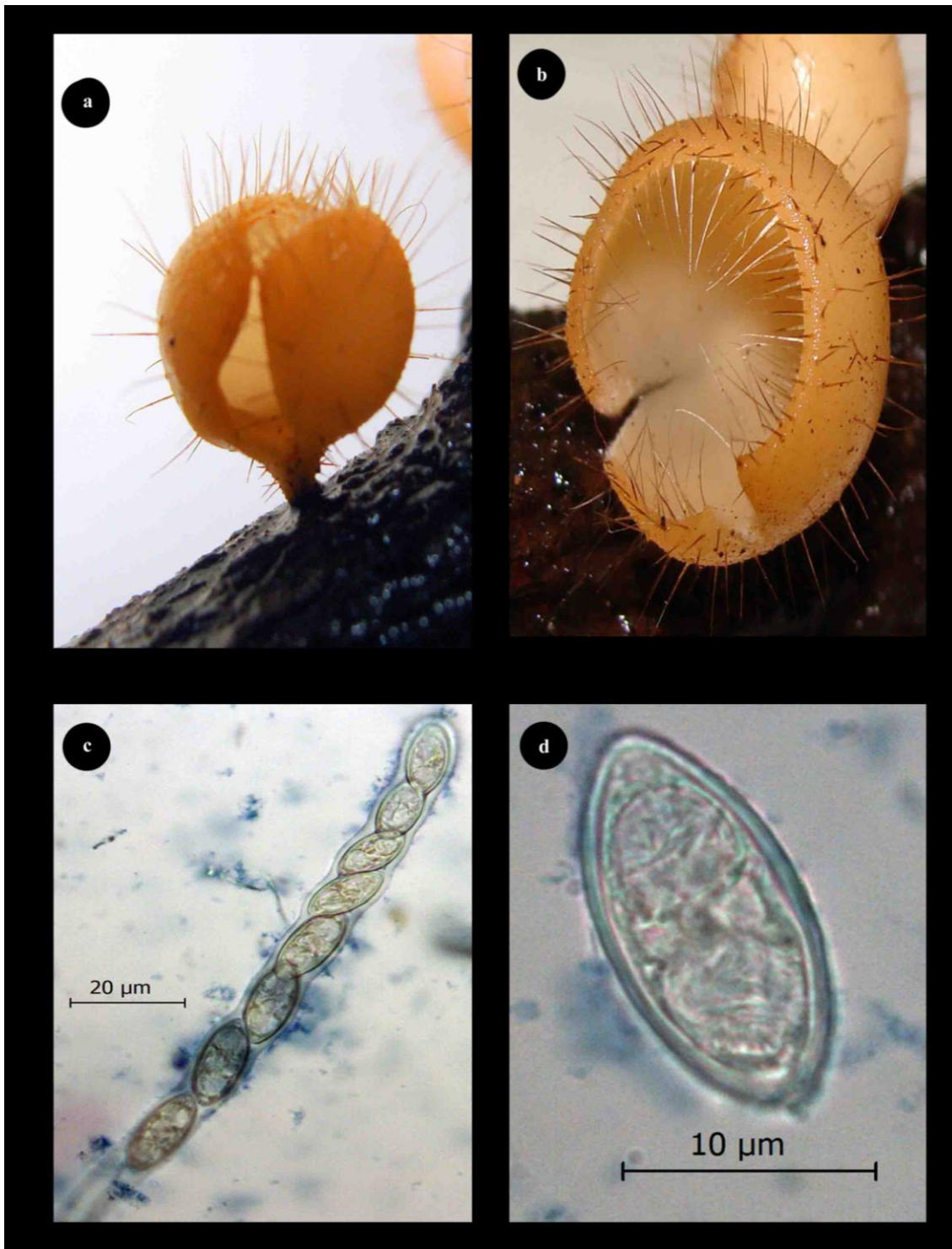


Fig. 1 – *Cookeina sinensis* Z.Wang. **a** front view of ascocarp. **b** lateral view of ascocarp. **c** single ascus with ascospores **d** single ascospore

2.5-4 µm. Asci cylindrical, long, 275-350 × 15-20 µm, narrow-hyphoid at base, thick-walled, with 8 ascospores. Ascospores broad ellipsoid, pointed at both ends, pale yellow, smooth-walled, biguttulate, 15.6 × 34-40 µm.

Remarks

The Five species of *Cookeina* are now known from India. These species are compared in Table 1.

Table 1 Comparative analysis of morphological and anatomical characters of *Cookeina* species known in India.

Species	Apothecia	Apothecium Sessile/stipitate	Hairs	Asci (µm)	Ascospores (µm)
<i>C. indica</i>	Deeply discoid, 15 mm diam., Ochraceous-orange	Sessile to stipitate	Few	320–350 × 5–18	3-guttulate, longitudinal ridges present 27.5–35 × 10–13
<i>C. colensoi</i>	Cupulate, 5–19 mm diam.	Sub-Sessile to stipitate	Glabrous	330–360 × 12.5–13	2-3 guttulate, smooth walled, 27–30 × 10.5–12
<i>C. tricholoma</i>	Goblet to funnel shaped with in - rolled margins, pale orange-red, 1–2 cm diam.	Stipitate 1–3 cm long	Hairy	280–350 × 13–18	2-guttulate, longitudinal ridges present, 25–35 × 11–13.5
<i>C. sulcipes</i>	Goblet to funnel shaped, pink to buff, 2–4 cm diam.	Stipitate, rarely sessile 1–4 cm long	Fine inconspicuo us hairs	275–325 × 10–15	2-guttulate, longitudinal ridges present, 25–33 × 14–18
<i>C. sinensis</i>	Cupulate, ochraceous-orange, 50 mm diam.	Stipitate	Hairy	280–290 × 16–7	2-guttulate, smooth walled, 28 × 12–12.5
Present collection	Cupulate, margin in-rolled, pinkish-orange, 50 mm diam.	Stipitate	Hairy	275–350 × 15–20	2-guttulate, smooth-walled, 15.6 × 34– 40

The apothecium in the present collection is cupulate as in *C. colensoi* with in-rolled margins like *C. tricholoma* (Kar & Pal 1970), but the structure, size (50 mm) and colour resemble *C. sinensis*. The apothecia in present specimens are stipitate, like *C. tricholoma*, but the stipe is shorter. Only the apothecia of *C. tricholoma* and *C. sinensis* are as conspicuously hairy as in the present specimen. The size of asci and ascospores in the present specimens match those in *C. tricholoma*, *C. sulcipes* and *C. sinensis*. Biguttulate smooth walled ascospores are only seen in *C. colensoi* (Denison 1967) but no other distinctive characters match well with species reported from India. Due to the ochraceous-orange coloured, cupulate, stipitate apothecia with in-rolled margins and conspicuous fasciculate, stiff bristle-like hairs arising from medullary excipulum, size of asci and biguttulate smooth-walled ascospores, the present collection is described as *C. sinensis*, and is a new record to the fungi of India.

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