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Cyathus stercoreus (Schwein.) De Toni: A new distribution record from Gorakhpur, Uttar Pradesh, India

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ABSTRACT

In present paper the fungus Cyathus stercoreus which belongs to family Nidulariaceae is described as a new addition to the fungus flora of Uttar Pradesh. A thorough description with photographs is delivered here to easily identify the specimen.

Keywords: *Addition, Bird's nest fungi, Cyathus, Gorakhpur, Uttar Pradesh*

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1. Introduction

Fungi are an important organism in world as they play crucial role in ecosystem functions, industry, agriculture, medicine, influence human and human related activities [5]. *Cyathus* belongs to the family Nidulariaceae which have five genera; *Crucibulum*, *Cyathus*, *Mycocalia*, *Nidula* and *Nidularia* [1]. Members of this family are known as bird's nest fungi because they have cup like basidiomata which resemble with nest of bird and have lenticular periodioles like eggs [3]. *Cyathus* is representative genera of family Nidulariaceae by having peridioles that range in colour from grey to black and have funicular cords, as well as peridia that are composed of three layers of tissues [3]. There are 61 species of *Cyahtus* in world [7], which are cosmopolitan in distribution and found commonly in temperate and tropical country, rarely found in polar or glacial regions [2]. Out of 61 species, 17 different species of *Cyathus* are reported from India [7]. *Cyathus stercoreus* is one of the reported species, also known as "Dung Loving Bird's Nest Fungus" because it prefers to grow on dung or soil that contains dung, some scientist claim that *C. stercoreus* is an endangered species in many of European nations [1].

Recent researcher does not report *Cyathus* from Gorakhpur, Uttar Pradesh [12,13]. Present paper deals with the morphological account of genus *Cyathus* collected from wetland of Gorakhpur called Turra Nala. Turra Nala is canal which flow southward along Ramgarh forest of Gorakhpur. Gorakhpur lies at 26°46' N latitude and 83°22' E longitude and area of the district is 3448 km2 in which 27916 hectares area is wetland. The climate of Gorakhpur is subtropical, with a rainy season. Average rainfall is 1812 mm and during summer temperature is 23°C-40°C. In present paper complete description of the specimen is provided along with a photo illustration for easy identification of species.

2. Methodology

Specimen were collected in the field and kept in sterile polythene bags. After collection returned to the laboratory for identification of species and to study their taxonomy. The peridioles were sliced by hand and examined using a binocular microscope. The specimen is then identified according to the standard literature [1,4,9,10,11].

3. Taxonomic Description

Saprobic on decaying wood. Basidiomata 6-8 x 5-6 mm diameter, shape typically resembles with inverted cone. Stipe attached to wood, exoperidium moderate brownish to greyish buff to deep brown; shaggy or hairy pointing downward. Endoperidium striated or grooved and shiny. Epiphragm thin, membranous, covers cup opening; hairy. Peridium attached to surface through closely packed hyphae; emplacement. Peridiole 1-1.5 mm wide, dark or light grey, covered with a thin membrane tunicam, disc-shaped but appear angularn due to pressure. Basidia club-shaped, stalked, 4 sessile spores attached with the surface of the basidium. Spore about 10-20 µm long, 8-12 µm wide, elliptic, smooth, hyaline, notched at one end (Fig. 1).

3.1 Specimens Examined: India, Uttar Pradesh, Gorakhpur, 26°46' N latitude and 83°22' E longitude on 18 September 2023, on decaying wood, collected by Ankita Verma, identified by Alok Kumar Singh voucher number: CMP-0023, deposited in Department of Botany, CMP Degree College, Prayagraj.

4. Distribution

Species of *Cyathus stercoreus* is distributed in India, the West Indies, Europe, New Zealand, Hawaii, Hawaiian Island, United States and Canada [9].

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Figure 1. A. *Fruiting body in top view,* ***B.*** *Side view of fruiting body with shaggy hairs* ***C.*** *L.S. of fruiting body exhibiting peridioles and plications,* ***D.*** *Basidiospores*

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