

EDIBLE MUSHROOMS OF WEST BENGAL IV. *TERMITOMYCES*
STRIATUS (BEELI) HEIM.

BY

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One new edible mushroom viz., *Termitomyces striatus* (Beeli) Heim. is reported for the first time from India.

Mushroom is gradually becoming popular as food item in India. The present paper is the fourth in the series to prepare a scientific account of the naturally growing local edible mushrooms which are consumed by the common people during the rainy season only.

The basidiocarps of the mushrooms were collected during the rainy season from Midnapur and 24-Parganas districts of West Bengal and during collection the soil was carefully digged to track the pseudorhizal connection with the termite nests. The entire basidiocarps were brought into the laboratory and immediately spore deposits were taken aseptically. All the morphological descriptions along with notes on habit and habitat were noted. The anatomical observations were made from free hand sections of the different parts of the basidiocarp. The descriptions and observations were made on the basis of standard methods. All the specimens were dried and kept in the herbarium of the Mushroom Research Centre, Calcutta University.

Termitomyces striatus (Beeli) Heim.,
in Me'm. Acad. Sci. Inst. France 64 : 47,
H. 1-10 (1941).

Schulzeria striata Beeli,.....in Bull. Jard. Bot.
Brux. 15 : 29, t. 1/6 (1938).

Now named as *T. aurantiacus* (Heim) Heim.,.....Termites
champignous (Paris) : 56 (1977).

T. striatus (Beeli) Heim forma griseus
Heim.,.....in Fl. icon Champ. Congo
7, p. 144, 1958-Congo-Kinshasa.
(Figs. a-e)

The basidiocarp is found to grow on termite nest. During collection living termites are found to grow within the termite hills. The pseudorhiza originates from the fungal bed in the termite nest at a depth of 6-9 cm below the soil level.

Pileus 3.5-5.0 cm in diameter ; convex to campanulate ; then flattened with maturity ; with a slight pointed perforatorium, fleshy, surface white to creamish coloured ; cuticle smooth, viscid with minute scales, perforatorium deep mouse grey coloured ; margin fleshy, thin striated, fissured, *Context* white thick, 2.0-6.0 mm in depth ; *Stipe* 7.0-9.6 in length ground and pseudorhiza extends below upto 6.0-9.0 cm ; 0.8-1.2 cm in diameter above the grounds and 0.3-1.4 cm in

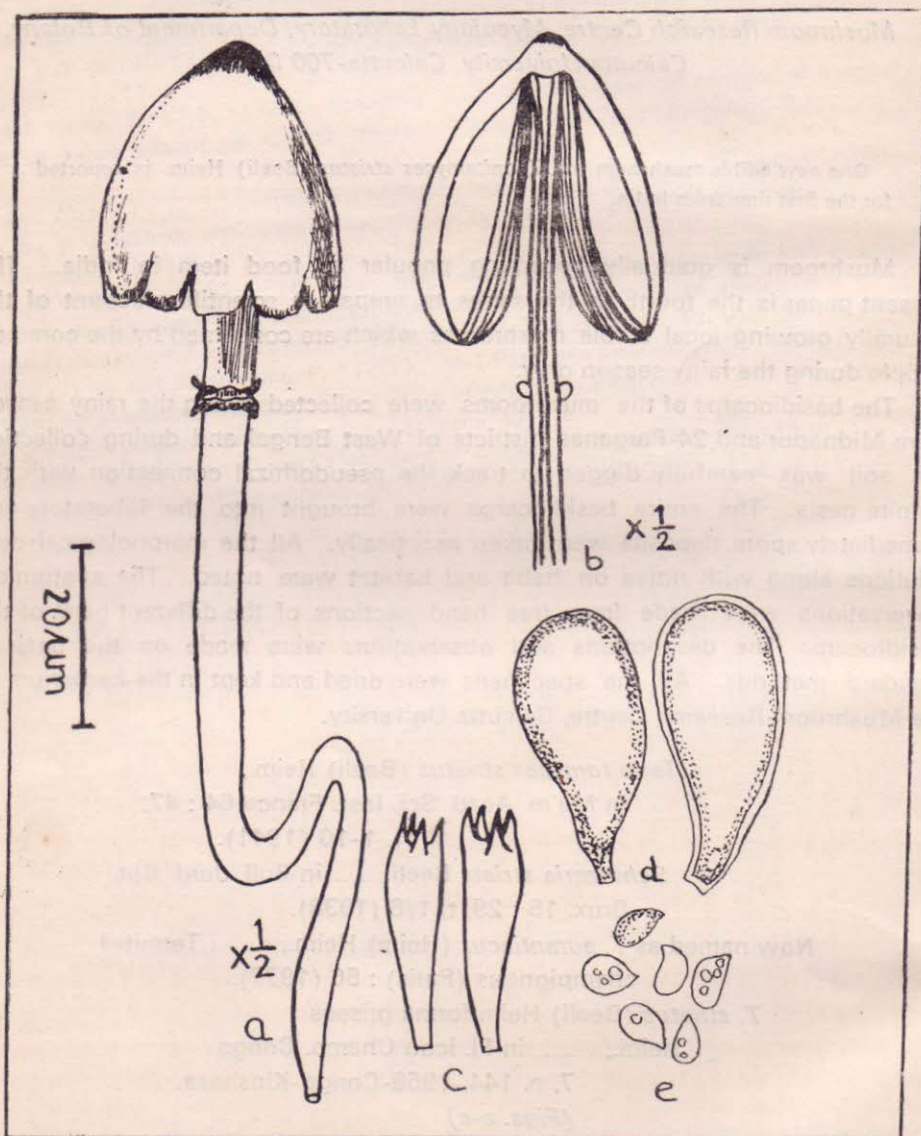


Figure 1. Sketch of *T. striatus* (Beeli) Heim. a) Habit of the basidiocarp ; b) V.S. through basidiocarp showing attachment of gills ; c) Basidia ; d) Cystidia ; e) Basidiospores.

diameter below the ground (pseudorhiza), cylindric, fleshy, central, stout, surface white, solid, gradually becoming hollow with a slender central free core of tissues in the pseudorhizal portion; scaly ring adpressed to the surface of the stipe; with annular ring; white to creamish white in colour; brownish minute scales covering the stipe just below the ring; the juncture point of the stipe and pseudorhizal portion slightly enlarged in diameter and pseudorhiza becomes abruptly tapered and radiceform and ends to a minute holdfast like structure (0.2-0.3 cm in diameter) which ultimately establishes the connection with the termite nest. *Lamellae* free, close, crowded, 5-8 mm broad, equal in length; whitish to light pink colour with paler edges; *Basidia* 18.2-28.6 x 7.8-10.4 μm ; cylindric to clavate; thin walled; tetrasterigmatic; *Spore* 7.8-10.4 x 6.5-7.8 μm ; ellipsoid, thin walled, nonamyloid; *Hymenophoral trama* regular, homoimerous with parallel thin walled hyphae, measuring 7.8-26 μm in diameter; subhymenium well developed; cellular; interovens *Cheilocystidia* numerous forming a sterile lamellar edge; various in shape; puriform; clavate, cylindric with broad and acute apex; sometimes truncate, 26-31.2 x 14.3-18.2 μm ; *Pleurocystidia* rare, various in shape, clavate to lageniform with broad and acute apex; 23.4-39 x 7.8-10.4 μm . *Pileus trama* monomitic with filamentous thin walled hyphae; 7.8-13 μm in diameter; pileal surface with a thick separable epicutis of repent parallel hyphae; noninflated hyphae; *Spore Print* light pinkish cream;

The fungus is found to grow on termite nest in Pratappur, Midnapur during September-October, 1977.

Uptil now very few works have so far been done on Indian *Termitomyces* except some scanty and sporadic attempts (Bose, 1923; Chopra and Chopra, 1955; Natarajan, 1975; Purkayastha and Chandra, 1975). In order to have a comprehensive idea on the topic, extensive research works are in progress in the laboratory and three species of *Termitomyces* have already been reported earlier (Aich *et al.*, 1977). In this report another one species is reported. All these four species are edible and highly delicious. Further research works are in progress to evaluate the nutritive value of these mushroom and to evaluate the nature of association of these mushrooms with termites.

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The fungus is found to grow on termite nest in Ghatampur, Midnapur during September-October 1977.

Until now very few works have so far been done on Indian Termitomyces except some sporadic and sporadic attempts (Bose, 1923; Chopra and Chopra, 1955; Natarajan, 1975; Purkayastha and Chandra, 1975). In order to have a comprehensive idea on the topic, extensive research work is in progress in the laboratory and this species of Termitomyces have already been reported earlier (Roy et al., 1977). In this report another one species is reported. All these four species are edible and highly delicious. Further research work is in progress to evaluate the nutritive value of these mushrooms and to evaluate the nature of association of these mushrooms with termites.

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