

TWO NEW HYPHOMYCETOUS FUNGAL SPECIES FROM INDIA

BUSSA SATHYANARAYANA REDDY, C. MANOHARA CHARY* AND VASANTH RAO⁺

Department of Botany, Govt. Degree College, Ramannapet

* *Department of Botany, Osmania University, Hyderabad-500 007*

+ *Department of Botany, Nizam College, Hyderabad*

(Accepted July, 1997)

Two interesting hyphomycetes viz: *Ampulliferina aseptoconidiata* sp. nov. and *Taeniolella bhagavatiense* sp. nov. are described.

Key Words : Dematiaceous Hyphomycetes, New Taxa.

During the survey of Hyphomycetous fungi, two interesting taxa were collected from Western ghats of Karnataka, India during 1986 and 1987 and were identified as species belonging to *Ampulliferina* Sutton and *Taeniolella* Hughes. The present fungal isolates are different from earlier reported species (Bilgrami *et al.*, 1981, Ellis, 1971 & 1979, Huges, 1958) in morphology and dimensions of hyphopodia and conidia, hence they are being described as new taxa. The type materials have also been deposited as HCIO at IARI, New Delhi, India.

Ampulliferina aseptoconidiata Bussa *et al.* Anamorph sp. nov (Fig.1) Coloniae effusae, pallide brunnii. Mycelium superficialia, ex hyphis hyphopodiatis, ramosis, septatis, brunneis vel atro-brunneis, laevibus, 3-6 µm crassa. Hyphopodia brunnea cylindrica vel clavata, aseptata vel septata, 4-8 µm lata. Conidiophora macronemata, mononemata. Singula ex lateribus hypharum oriunda, brevia, erecta, 5-6 µm longa, usque 5 µm lata, brunnea, leavia, Cellae conidiogenae in conidiophoris incorporatae, terminales vel intercalares; thallicae, pallide brunnea. Conida catemata, recta vel flexuosa, doliformia, basitruccata, apice truncata vel rotunda, O-septata, atrobrunnea, laevia, 10-20 µm longa, 5-7 µm crassa.

In emortio the callis epicarpi, Westernghats, civitas Karnataka, India, V.M.R.L. Subnurero 759, 16th Nov., 1986, leg B.S.R.

Ampulliferina aseptoconidiata Bussa *et al.*, Anamorph Sp. nov (Fig. 1) Colonies effuse, pale brown to dark brown. Mycelium superficial, composed of hyphopodia, branched, septate, brown or dark brown, smooth, 3-6 µm thick hyphae. Hyphopodia brown,

cylindrical or clavate, with or without septa, 4-8 µm wide. Conidiophores macronematous, mononematous arising singly from the sides of the hyphae, short, straight, 5-6 µm long wide, upto 5 µm broad, brown, smooth. Conidiogenous cells integrated, terminal or intercalary, thallic. pale brown. Conidia catenate, straight or glexuous doliform, truncate at the base, truncate or founded at the apex, o-septate, dark brown, smooth, 10-20 µm long, 5-7 µm thick.

On unidentified decaying fruit wall, Westerm ghats, Karnataka, India, V.M.R.L. No. 759, 16th November, 1986, Coll, B.S.R.

A aseptoconidiata resembles *A persimplex* Sutton and A. Fagi Ellis in the conidial shape but differs in having o-sepate and smaller conidia. (Table 1)

Taeniolella bhagavatiense Bussa *et al.* Anamorph sp. nov (Fig. 2).

Coloniae effusae, punctiformia, velutinae, rubra. Mycelium superficiale ex-hyphis rubri, ramosis, septatis, laevia, 3-4 µm crassa. Conidiophora semimacronemata, mononemata, brevia, pallide brunnea, indiscreta ex hyphis, 1-2 cellae, 5-10 µm longa, 3-5 µm crassa. Cellae conidiogenae monoblasticæ, in conidiophoris incorporatae, terminales, pallide rubra. Conidia cylindrica vel doliformia, laevia, atrobrunnea, in catenulas simplicis vel rarer ramosus, 9-16 septata, euseptata, ramosus advento ab cellae terminale, cellae basem et cellae apicem subhyalina, 30-90 µm longa, 7-15 µm crassa.

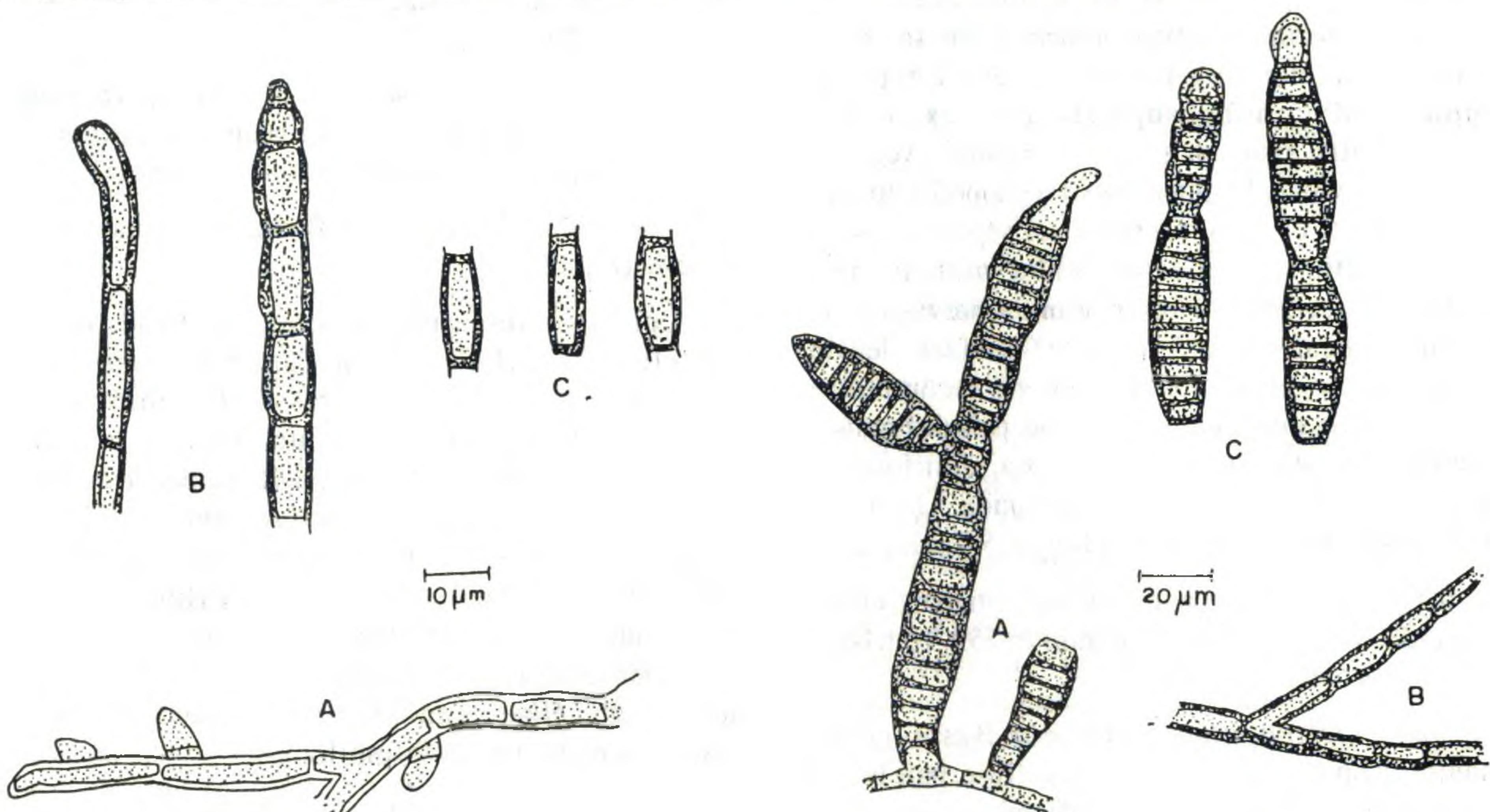
In enortio lingno, Bhaguti, civitas karnataka, India ad positus. V.M.R.L. sub-numero 1130, 26th Nov., 1987, leg, B.S.R.

Table 1: Comparison of *Ampulliferina* Spp.

Species	Hyphopodia	Conidia
<i>A. persimilis</i> Sutton.	Spherical ellipsoidal or clavate, greyish brown, 3-7 μm diam.	Catenate, formed by fragmentation cylindrical, 10-12 x 4-5 μm . 1-septate, brown, smooth.
<i>A. fagi</i> Ellis.	Stipitate, cylindrical, clavate or hemispherical, brown, smooth 5-6 μm wide	Catenate, straight or flexuous cylindrical or doliiform, 2-5 septate, dark brown, smooth 21-30 x 7-10 μm .
<i>A. aseptoconidiata</i> sp. nov.	Brown, cylindrical or clavate, 4-8 μm wide	Thallic, pale brown catenate, doliiform, O-septate, dark brown, smooth, 10-20 x 5-7 μm .

Table 2: Comparison of some *Taeniolella* Spp.

species	Description
<i>T. pulvillus</i> (Ber. & Br.) Ellis	Colonies pulvinate, compact, black Conidiophores caespitose, pale to mid brown, smooth or occasionally verrucose, 2-11 septate, 25-90 x 7-9 μm .
<i>T. rufa</i> (Sacc.) Huges.	Colonies effuse black, velvety. Conidiophores short, pale to mid brown. Conidia in long unbranched chains, smooth, dark brown, 40-60 x 10-13 μm thick.
<i>T. bhagavatiense</i> sp. nov.	Colonies effuse, velvety, reddish. Conidiophores short, pale brown. Conidia cylindrical or doliiform, smooth, dark reddish brown, in simple or rarely branched chains 30-90 x 7-15 μm .

Figure 1. *Ampulliferina aseptoconidiata* sp. nov. A. Hyphae with hyphopodia. B&C. Conidia.Figure 2. *Taeniolella bhagavatiense* sp. nov.
A. Semi-macronematous Conidiophore portion with branched Conidial Chain. B. Hyphae. C. Conidia.

Taeniolella bhagavatiense Bussa et al. anamorph
Sp. nov. (Fig. 2)

Colonies effuse, punctiformis, velvety, reddish. Mycelium superficial composed of reddish, branched, septate, smooth, 3-4 μm thick hyphae. Conidiophores semi-macronematous, mononematous, short, pale brown, sometimes indistinguishable from the hyphae, 1-2 celled, 5-10 μm long, 3-5 μm broad. Conidiogenous cells monoblastic, integrated, terminal, pale to dark reddish brown. Conidia cylindrical or doliiform, smooth, dark reddish brown, in simple or rarely branched chains, 9-16 μm septate, euseptate, branches arising from any terminal cell of the conidium. The basal and apical cells sub-hyaline or less pigmented, 30-90 μm long, 7-15 μm broad.

On unidentified wood Bhagavati, Karnataka, India, V.M.R.L. No. 1130, 26th Nov. 1987, coll. B.S.R.

A survey of literature (Ellis, 1971 & 1976) reveals that the present taxon is comparable to *Taeniolella pulvillus* (Berk. & Br) Ellis and *Taeniolella rufis* (Sacc.) Hughes. The present isolate differs from the above in having pigmentation of basal and apical

cells of the conidium, branched conidial chains and smooth walled conidia (Table 2).

The authors are thankful to Prof. P. Raghuvir Rao, Dept. of Botany, Osmania University, Hyderabad, B.S. Reddy is grateful to Dr. B. Madhava Reddy, former Secretary, Board of Intermediate Education for his encouragement and permission.

REFERENCES

- Bilgrami K S, Jamaluddin & Rizvi M A 1970 *Fungi of India*, Part I Today & Tomorrow's Pr & Publ New Delhi p 467.
- Bilgrami K S, Jamaluddin & Rizvi M A 1981 *Fungi of India* Part II Today & Tomorrow's Pr & Publ New Delhi, p 128.
- Ellis M B 1971 *Dematiaceous Hyphomycetes* CMI, Kew U K p 608.
- Ellis M B 1976 *More Dematiaceous Hyphomycetes* CMI, Kew U K p 507.
- Hughes S J 1958 Revisions of *Hyphomycetum Aliquot Cum Appendice De Nominibus Rejiciendis Canad J Bot* 36 817.