

***Microsporium appendiculatum* sp. nov. on goat dung from India**

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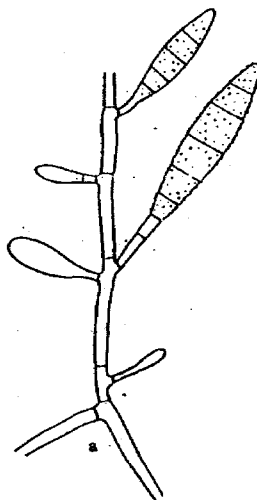
**ABSTRACT**

*Microsporium appendiculatum* sp. nov., characterized by fusiform, phragmo-septate, echinulate, hyaline and apically 1-setulate conidia, developing on short conidiophores and isolated from goat dung, from Goa, India is described and illustrated. It is compared with other known species of the genus *Microsporium*.

During a survey of microfungi associated with herbivore dung, we isolated a species of *Microsporium* Gruby from dried and partially decomposed droppings of a stray goat, collected from Goa University Campus, Taleigao Plateau, Goa, India, following incubation in a moist chamber under normal day light and temperature (28-32°C) conditions. After 7 days of incubation, the fungus produced greenish white mycelium with fusiform, 4-6 phragmo-septate, echinulate, hyaline, apically 1-setulate conidia developing on short and simple conidiophores. None of the species of *Microsporium* described so far are known to produce setulate conidia, a prominent character of our isolate. Hence this fungus is accommodated in a new species, *M. appendiculatum* Bhat and Miriam. Our attempt to grow the fungus in culture was not successful.

*Microsporium appendiculatum* Bhat and Miriam sp. nov. (Fig. 1)

Coloniae effusae, atroviridio-albidae. Mycelium semi-immersum, partim superficiale ex hyphis septatis, ramosis, ad 5 µm latis. Conidiophora solitaria, erecta, 1-2-septata, simplicia vel ramosa, hyalina, 15-30 µm longa, 2.5-4.0 µm crassa. Cellulae conidiogenae holoblasticae. Conidia solitaria, large, fusiform vel falcata, apice minusve rotundata, basi truncata, 4-6 phragmoseptata, verruculosa, hyalina, 10-60 × 10-15 µm, cum una hyalina setula apicalis ad 35 µm longa; ochraceo-albidae in massa.



*Microsporium appendiculatum*  
Fig. 1-a : Portion of branched conidiophores showing developing and mature conidia.

Colonies effuse on dung, greenish white, moderately fast growing. Mycelium partially immersed, partially superficial, with branched, septate, hyphae up to 5 µm wide. Conidiophores mononematous, erect, 1-2-septate, simple or branched, hyaline, 15-30 µm long, 2.5-4 µm wide. Conidiogenous cells holoblastic. Conidia solitary, large, fusiform to spindle-shaped, truncate at the base, narrowly rounded at the tip, thick-walled, 4-6 phragmoseptate, minutely echinulate, hyaline, 10-60 × 10-15 µm, with a hyaline setula at

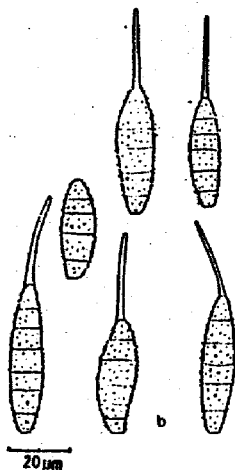


Fig. 1-b: Conidia

the tip up to 35  $\mu\text{m}$  long; in mass greenish white. Microconidia not observed.

*Holotype*: On partially decomposed goat dung, Goa University Campus, Taleigao Plateau, Goa, India, leg. Miriam J.: May 25 1996; Herb GUFH No. 010.

Ajello (1974) recognized 15 species of *Microsporium* and none of the hitherto known species produce 'setulate macroconidia' as in *M. appendiculatum* though the species is similar to *M. gypseum*

in its conidial dimensions. Although frequently isolated from soil or dung as saprophytes, almost all the described species of *Microsporium* are said to be pathogens of humans and other mammals causing 'microsporoses' (Beneke, 1958, Hawksworth *et al.*, 1995). These organisms are known to invade superficial keratinized areas of the body such as skin, hair and nails. The species of *Microsporium* are also widely distributed around the world (Hawksworth *et al.*, 1995). We have observed several goat skin-hairs mixed with the dung pellets and presume that the new species described here could also be keratinophilic.

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