Trichodelitschia microspora, a new coprophilous species from South Africa

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Trichodelitschia microspora n. sp. is described and illustrated. It occurred on freshly collected giraffe (*Giraffa camelopardalis*) dung from the Kruger National Park, South Africa.

Trichodelitschia microspora n. sp. word beskryf en geïllustreer. Dit het op varsversamelde mis van 'n kameelperd (*Giraffa camelopardalis*) in die Nasionale Krugerwildtuin, Suid-Afrika, voorgekom.

Keywords: Ascomycetes, coprophilous fungi, taxonomy, *Giraffa camelopardalis, Trichodelitschia microspora.*

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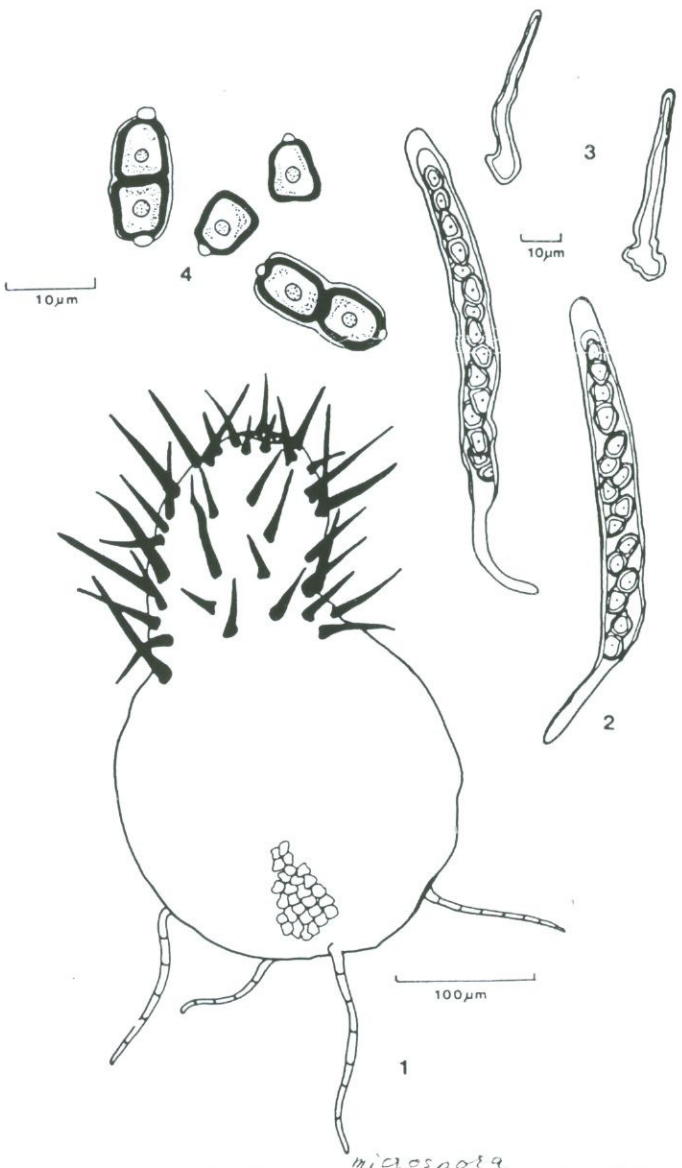
Introduction

The genus *Trichodelitschia* was erected by Munk (1953) based on *Hormospora bisporula* Cr. Since the binomial was incompletely cited, it was validated by Lundqvist (1964) who also described *T. munkii* Lindq. Additional species were added by Luck-Allen (1970) and Lundqvist (1972). During 1984 – 1986 numerous freshly voided dung samples from a number of herbivores were collected in the Kruger National Park, South Africa. The subsequent microscopic examination of the dung substrates revealed, amongst various other coprophilous fungus species, a pseudothecial species that clearly belonged to *Trichodelitschia*; however, it did not fit the descriptions of any of the known species, and it could not be identified using the existing key (Luck-Allen 1970). It is therefore included here as a new species to the genus *Trichodelitschia*.

Trichodelitschia microspora *Ebersohn et Eicker* sp. nov. (Figures 1 – 4)

Pseudothecia sparsa, immersa ad semi-immersa, subglobosa asque pyriformia, semitranslucida ad nigra et opaca, 327 – 433 × 213 – 258 µm. Collum breve, crassum, cylindraceum, nigrum, opacum, 98 – 158 × 85 – 150 µm. Pili recti, rigidi, fusci ad nigri, non nisi circa collum, 50 – 60 µm longi, 5.4 × 9.5 µm diam. in basi. Cellulae pseudothecia tenues, irregulares vel angulares, atrobrunnea, opacae, 9 – 13 µm diam. *Asci* octospori, cylindracei, in apicibus rotundati, decrescentes in stipitem longum, 108 – 162 × 11 – 15 µm. *Paraphyses* filiformes, septatae, hyalinae, tam longae quam asci, 1.5 µm diam. *Ascosporae* oblique uniseriatae, ellipsoideae vel oblongae, transverse uniseptatae, ad septa constrictae, metientes 13 – 18 × 5 – 8 µm, initio hyalinae, postremo atrobrunneae, opacae. Cellulae sporarum apophysibus apicalibus hyalinis et poris germinalibus. Vagina gelatinosa, crassa, tenuis ubi matura. Exosporium 1.5 µm crassum.

HOLOTYPUS:— Africa Australis, Kruger National Park, prope Sweni rivulum rocatum, in stercore recenti Giraffa camelopardalis lecto a C. Ebersohn et G.T. Erasmus, 16 Nov. 1984 (PRUM 2757).



Figures 1 – 4 *Trichodelitschia ~~sweniensis~~ microspora*. **1**. Pseudothecium. **2**. Asci and ascospores. **3**. Spiny appendages. **4**. Ascospores.

Pseudothecia scattered, immersed to semi-immersed, sometimes superficial, subglobose to pyriform, semitransparent and membranaceous below the substrate, to black, opaque and coriaceous above the substrate, 327 – 433 × 213 – 258 µm. Neck short, stout, cylindrical to subcylindrical, black and opaque, 98 – 158 × 85 – 150 µm,

with straight dark brown to black spiny appendages measuring 50 – 60 µm in length, slightly bulbous at the base, measuring 5.4 – 9.5 µm in diameter. The spiny appendages restricted to the neck region, lower part of the pseudothecia naked or with a very few thin light brown sparsely septate rhizoid-type hairs. *Pseudothecium cells* thin-walled, irregular to angular, dark brown, opaque, 8.8 – 12.7 µm in diameter. *Asci* eight-spored, cylindrical, rounded at the apices, narrowing below to form a long stipe, 108 – 162 × 11 – 15 µm. *Paraphyses* slender, filiform, septate, hyaline, as long as the asci and 13 µm in diameter. *Ascospores* obliquely, uniseriately arranged, ellipsoid to oblong and slightly irregular, transversely uniseptate, constricted and separable at the septa, 13 – 18 × 5 – 8 µm, hyaline when young becoming brown to dark brown and opaque; with hyaline raised apophyses and apical germ pores measuring 3 µm in diameter at the apices. Ascospores surrounded by a thick gelatinous sheath when immature which often disappears or is very thin at maturity. Exosporium of mature ascospores dark, 1.5 µ4m thick.

Specimen examined

Holotype: South Africa, Kruger National Park: along the Sweni River, on fresh giraffe dung, 16 Nov. 1984. C. Ebersohn & G.T. Erasmus (PRUM 2757).

Etymology: Referring to the small ascospores.

Discussion

This species exhibits all the attributes characteristic of the genus *Trichodelitschia* and resembles, in most aspects, the known species. All the species have dark thick-walled spiny appendages, dark two-celled ascospores with hyaline to subhyaline terminal apophyses and circular germ pores at the apices of the spores. The essential differences are found in the dimensions of the asci and the ascospores, and the presence or absence of long flexous septate hairs on the pseudothecia. It differs from the setu taxa in possessing smaller ascospores. *T. microspora* is distinguished from *T. adelphica* by the smaller asci and ascospores, and differs from *T. munkii* by the absence of long flexuous septate hairs and by the smaller ascospores. It is also well differentiated from *T. bisporula* by the overall smaller ascospores and the absence of long flexuous septate hairs.

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