

STUDIES ON THE COPROPHILOUS ASCOMYCETES OF PAKISTAN
III: *SEMIDELITSCHIA TETRASPORA* SP. NOV.

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Cain & Luck-Allen (1969) described a new monotypic genus, *Semidelitschia* which they tentatively placed in the coprophilous loculoascomycetous family Sporormiaceae. They consider it to be closely related to *Delitschia* from which it differs in having 1-celled ascospores. The only species included in *S. agasmatica* Cain & Luck-Allen.

The authors while studying coprophilous ascomycetous mycoflora of Pakistan, came across a fungus with 1-celled ascospores. It does not fit in any known taxon. It does resemble *S. agasmatica* in so far as the apical apparatus of asci, spore colour, shape, septation and presence of germ-slit are concerned. However, it differs from the above mentioned species in having smaller dimensions of its perithecia, asci and ascospores and in always having 4-spored asci. The species is therefore described here as new.

Semidelitschia tetraspora Mirza and Mahmood sp. nov. (Fig. 1).

Perithesiis superficialis, denudatis, nigris, globosus vel pyriformibus, ostiolatis, 90-280 × 122-220 μm. Collo peritheciis brevi nigri, circa 22 × 41 μm, periodo peritheciis membranaceo- Carbonaceo, pseudoparenchymatico. Ascis 4-sporis cylindraciis vel clavatis. Superne later rotundatis, 60-72 × 12-16.5 μm, in stipitatem brevum, inferne attenuatis. Ascosporis non-septatis, uniseriatis, 18-22 × 9-12 μm: ellipsoideis, primum hyalinis, deinde olivaceis, postremo olivaceo-brunneis, translucidis. Hilo germinali obliquo, in totam longitudinem ascospora extenso.

Perithecia superficial, bare, black, globose to pyriform, ostiolate 90-280 × 122-220 μm, neck short, black, without hairs, about 22 × 41 μm; peridium membranous-carbonaceous, pseudoparenchymatous. Cells of peridium brown, obscure. Ascii 4-spored, cylindrical to clavate, broadly rounded at the apex, 60-72 × 12-16.5 μm with short stipe at the base. Ascospores obliquely uniseriate, non-septate, ellipsoid, 18.0-22.0 × 9.0-12.0 μm, at first hyaline, then olivaceous and granular and finally olivaceous-brown and opaque. Germ-slit extending the full length of the ascospores.

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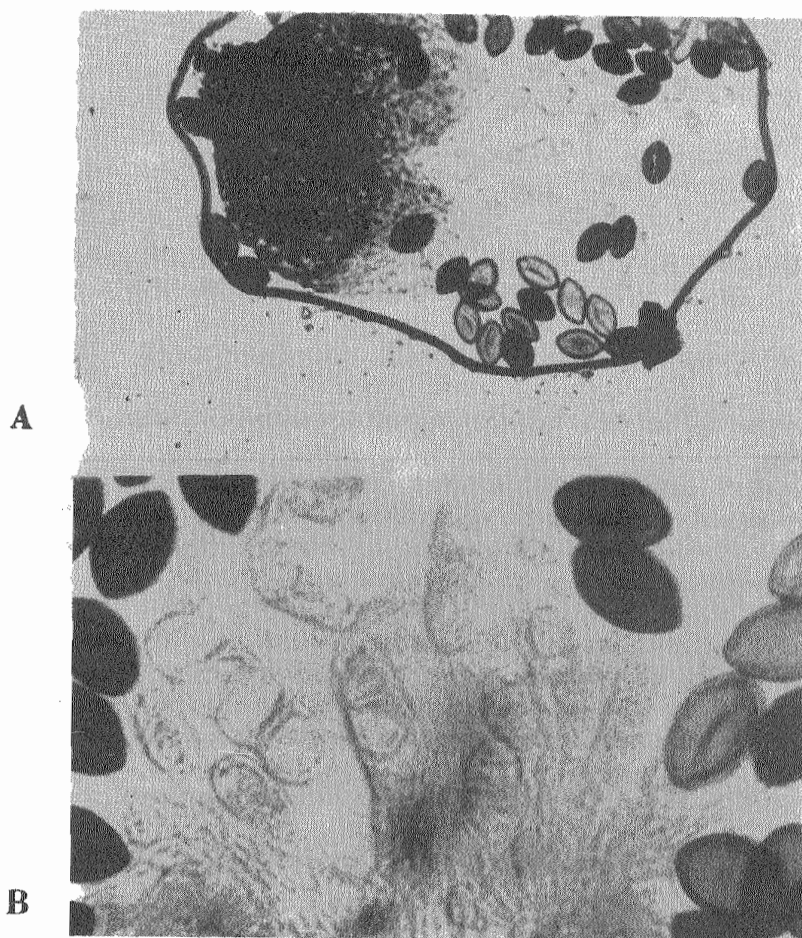


Fig. 1. *Semidelitschia tetraspora* A. Perithecium with asci & ascospore 100 x. B. asci with ascospore, 400 x.

Holotype: on Goat dung from University of Agriculture Campus, Faisalabad, Oct. 7, 1969 (LMH 1555).

The species of *Semidelitschia* resemble those of coprophilous genera *Sordaria* and *Hypocopra* in having 1-celled, dark coloured ascospores. *Sordaria* is however, different in having germ-pores instead of germ-slits. This character readily separates sordariaceous fungi from xylariaceous genera to which *Hypocopra* belongs. Species of *Hypocopra* are characterized by the presence of a stroma and a complex apical apparatus in asci which usually gives a positive reaction (blue) to Melzer's reagent. Species of *Semidelitschia* lack these characters.

Cain & Luck-Allen (1969) have tentatively placed, their new genus in the family Sporormiaceae. Members of this family have bitunicate asci. The bitunicate nature of asci of *S. tetraspora* is not very clear. From the drawings of *S. agasmatica* given by Cain & Luck-Allen, it appears that the bitunicate nature of asci is not as distinct in *Semidelitschia* as in *Sporormia*. In Loculoascomycetes, the peridium develops prior to the development of ascogonium. Neither of the species of *Semidelitschia* have been grown in culture. Therefore, the position of this genus still remains doubtful.

References

- Cain, R.F. and E.R. Luck-Allen. 1969. *Semidelitsechia*, a genus of the sporormiaceae. Mycologia 61: 580-585.