A new genus Harikrishnaella from India

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The family Sphaeriodeae comprises three important genera viz. Chaetomella Fuckel (1969) Volutellospora Mathur and Thirumalachar (1965) and Amerosporium Speg. (1882). The genus Chaetomella was erected by Fuckel to which he included two species Chaetomella oblonga Fuckel with hyaline spores and C. atra Fuckel with fuscous spores. The differences of the spore colour led Saccardo (1884) to divide this genus into two sub-genera Eu-Chaetomella Sacc. with fuscous spores and Melochaeta with hyaline spores. Höhnel (1915) treated Eu-Chaetomella as synonymous with Amerosporium Speg. Stolk (1963) made an extensive study of this genus and its related genera, and also made several synonymous of the same. She recognised only three important species of Chaetomella out of the thirty-two described and also separated the genus Amerosporium Speg. from it which included A. atrum (Fuckel) Höhnel (= C. atra Fuckel).

During our studies the authors found a genus resembling to Amerosporium, Volutellospora and Chaetomella associated with the leaves of groundnut (Arachis hypogaea L.). The present genus comes close to Amerosporium but it differs in not having the coloured pycnidiospores. Moreover it can not be placed even in Chaetomella as well as Volutellospora because the typical raphe is also absent. We, therefore, strongly suggest that the above characters are sufficient to warrant a new generic name in the honour of Dr. Harikrishna Saksena, Professor of Plant Pathology, U. P. Institute of Agricultural Sciences, Kanpur India.

Harikrishnaella Singh and Sarbhoy, gen. nov.

Coloniae in agaro 'oat meal' brunneae, ad 25° C. Pycnidia brunnea, globosa vel subglobosa, obsita setis brunneis rigidis. Paries pycnidialis densus in parte apicale pycnidi. Raphe typica abest. Pycnidiosporae portatae apice conidiophorum hyalinae, aseptate, elliptical vel naviformes inclusae in massa mucosa, liberataque fissione irregulare.

Colonies on oat meal agar brown at 25° C, pycnidia brown globose to subglose, beset with brown rigid setae of two types, pyc-

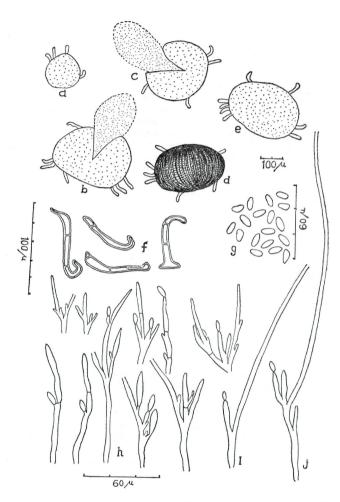


Fig. 1. Harikrishnaella arachitis, a—e Developmental stages of the Pycnidia; f, two types of setae; g, Pycnidiospores; h—i, Developmental stages of conidiophores attached with pycniospore.

nidial wall thick apically, typical raphe is absent, pycnidiospores borne at the tip of the conidiophores, hyaline, aseptate, elliptical to boat shaped, pycnidiophores embeded in a mass of mucous and release through irregular splitting.

Type species: Harikrishnaella arachidis Singh and Sarbhoy (Fig. 1)

Colonies in agaro 'oat meal' brunneae attingentes 4 cm. diam. ad. 25° C. Pycnidia brunnea, globosa vel subglobosa, $145-312\times112-245$ μm obsita setis brunneis rigidis. Setae 96–108.4 μm applanatae et 4.4–11.0 μm in basi, plerumque gradatim augustatae ad 2.2–4.4 μ ad apicem, in nonnullis apice leniter incurvae. Paries pycnidialis densus in parte apicale pycnidi. Raphe typica abest. Cellulae pycnidiales dispositae radiatim. Conidiophora filiformia, ramosa, 39.78–91.68 (61–27 μm) exorentia e basi pycnidi. Pycnidiosporae portatae apice conidiophorum hyalinae aseptatae, ellipticae vel naviformes, 3.6–9.6 μm inclusae in massa mucosa, liberataque fissione irregulare. Status perfectus non observatus.

Colonies on oat meal agar brown, attaining a diameter of 4 cm at 25° C, pycnidia brown, globose to subglobose, $145-312\times112-245~\mu m$ beset with brown rigid setae of two types. Setae $96-108.4~\mu m$ flattened and $4.4\times11.0~\mu m$ at the base, mostly tapering $2.2-4.4~\mu m$ at the tip, slightly incurved in other type, pycnidial wall thick apically, a typical raphe is absent. Cells of the pycnidia are arranged radially. From the base of the pycnidium arise thread like conidiophores $39.78-91.68~(61-27)~\mu m$ branched in an irregular verticillate manner, pycnidiospores borne at the tip of the conidiophores, hyaline, aseptate, elliptical to boat shaped $3.5-9.6\times3.06~\mu m$; pycnidiospores embeded in a mass of mucous and release through irregular splitting. No perfect state has been observed.

Holotype culture desposited at Indian Type Culture Collection, I. A. R. I., New Delhi No. 1377. Isolated from the leaves of *Arachis hypogaea* L. as a sapropyte from Kanpur U. P. India.

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References

- Fuckel, L., 1869: Symbolae Mycologiae f. Nassau ver. Naturk., Nos. 23—24, 402.
- Höhnel, F. V., 1915: Über Chaetomella atra Fuck. S. B. Akad. Wiss. Wein (Math.) Nat. K. Abt. 1, 124, 114.

- Mathur, P. N. and M. J. Thirumalachar, 1965: Volutellospora a new genus of Sphaeropsidales. Sydowia, 18: 35—40.
- 4. Saccardo, P. A., 1884: Sylloge Fungorum. 3: 321-323.
- 5. Spegazzini, 1882: Anal. Soc. Cient. Argentina XIII, p. 20.
- Stolk, C. A., 1963: The genus Chaetomella Fuckel. Trans. Brit. mycol. Soc. 46: 409—425.

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