

TABLE II
Segregation of "green cotyledon" character

Cross particulars	F ₁		F ₂		X ² (3 : 1)	P value
	No. of plants	Phenotype	Yellow cotyledons	Green cotyledons		
Parent (S-8) × mutant	17	Yellow cotyledon	1573	543	0.818	0.50-0.30
Mutant × Parent (S-8)	14	„	1094	350	0.447	0.70-0.50
ML-5 × Mutant	3	„	248	74	0.699	0.50-0.30
PS-10 × Mutant	8	„	716	230	0.240	0.70-0.50

character is monogenic recessive. This was further confirmed from genetic segregation in the F₂ (108 homozygous, 207 heterozygous progenies, ratio 1 : 2, $\chi^2 = 0.13$, $P = 0.80-0.70$) in the case of mutant to parent cross.

In mung bean, red colour of cotyledons, hypocotyl and top of leaflet stalk has been reported to be controlled by the pleiotropic action of a single dominant gene². This would mean that cotyledon colour will be the same as the other two parts. The parent cultivar and the mutant of the present study have red hypocotyl, petiole and top of leaflet stalk; but have yellow and green cotyledons respectively. Moreover, a mutation has been induced for cotyledon colour without affecting the colour of the other plant parts. Thus, the gene for cotyledon colour is independent and we propose the symbol *gc gc* for green cotyledons.

Normally, in mung bean cotyledons are green to start with and become yellow at maturity—possibly due to the destruction of chlorophyll. Experiments (in progress) indicate that loss of chlorophyll is prevented in this mutant.

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PHAEOSARIOPSIS TEPHROSICOLA— A NEW SPECIES

DURING February, 1974 the leaves of *Tephrosia purpurea* were found to be severely infected by a fungus. Following is the description of the causal organism. The morphological characters of the fungus reveal that it is a species of *Phaeoisariopsis* Ferraris, which

differs from all the species of this genus, and hence is being reported as new.

Phaeoisariopsis tephrosicola Raghuveer sp. nov.

Colonies rusty brown, epiphyllous, irregular, 1-5 mm in diameter; mycelium internal, subhyaline to hyaline, branched, septate, 2-5 μ in diameter, closely aggregated to form a stroma; stromata superficial and subtending stomata, 50-112 × 23-48 μ consisting of thick walled loosely compact blackish brown, oval to angular cells, 6-18 × 5-13 μ ; conidiophores macro-nematous, mononematous, unbranched, deep brown, 0-3 septate, straight or curved, 15-85 μ long, 6-13 μ broad; conidiogenous cells integrated, terminal, polyblastic, sympodial, strongly cicatrized; conidia solitary dry, broadly obclavate, 1-3 septate, acropleurogenic deep to golden brown, 20-42 μ long, 4.8-8.0 μ broad at base and 3-5 μ broad at apex, proximal cells of conidia slightly swollen while distal cells gradually narrowing.

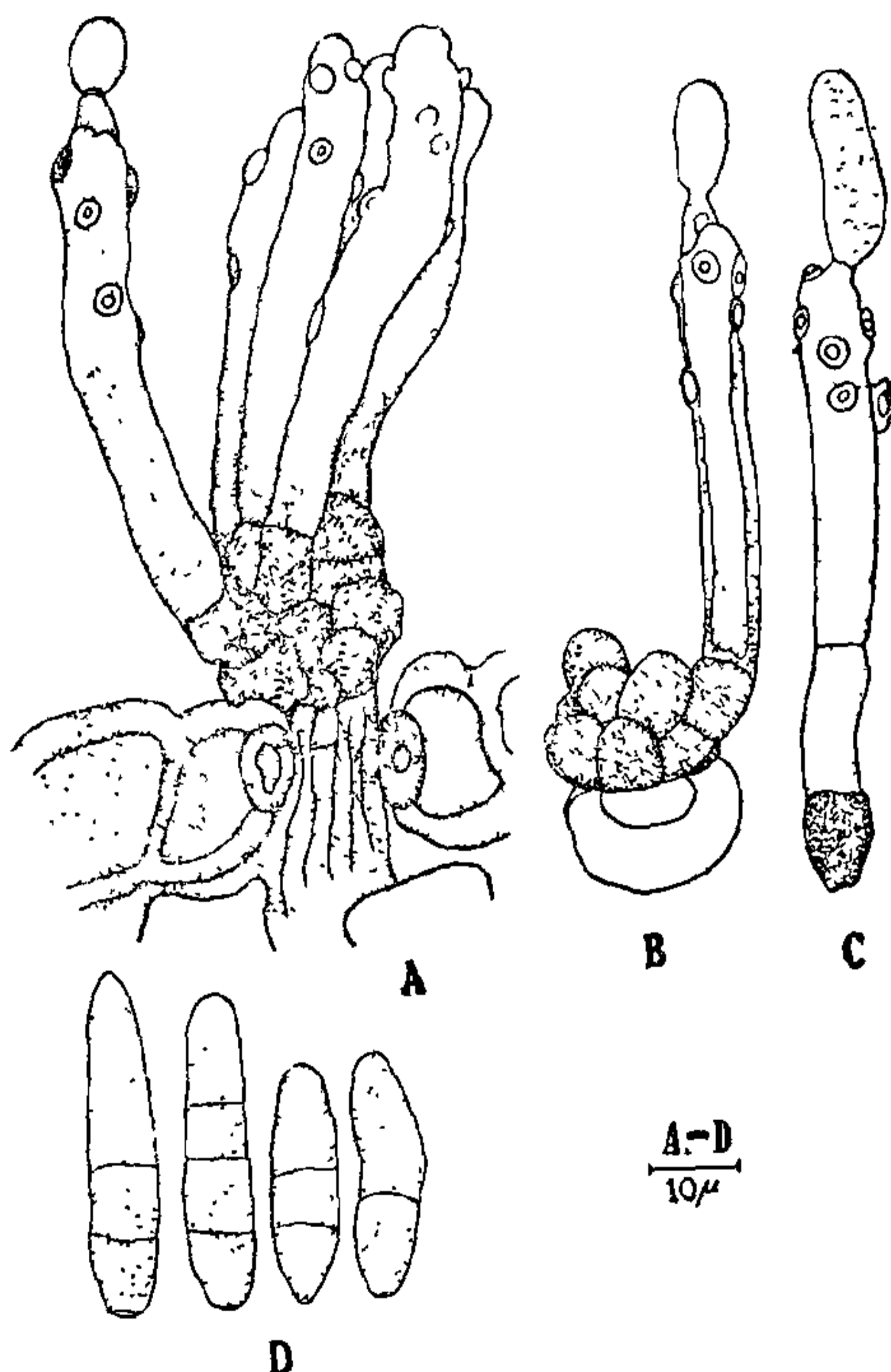
Infecting leaves of *Tephrosia purpurea* L., collected on 18-2-1974 on the University campus by P. Raghuveer Rao, deposited in O.U.B.L. No. 278.

Earlier, Agnihothrudu¹ described *Passalora tephrosiae* infecting the leaves of *Tephrosia candida* L., and Govindu and Thirumalachar² *Cercospora hardwarensis* Narasimhan, parasitizing *T. purpurea* L.

Obviously, the fungus described above differs from *C. hardwarensis* Narasimhan apud Govindu and Thirumalachar in producing supra stomatal stroma with aggregated cells, septation, dimensions of cicatrized conidiophores, conidial septation, colour and in being more broad. The gross morphological characters of conidiophores, conidia and their initiation found in this fungus are highly suggestive of *Phaeoisariopsis* Ferraris, which is treated to be congeneric. Of the ten species of *Phaeoisariopsis* known so far excluding the lectotype, only two of them, viz., *P. indica* (Subram) Deighton and *P. bondu-*

TABLE I

Fungus	Vegetative characters	Conidiophores	Conidia
<i>Cercospora hardwarensis</i>	Stroma subepidermal with compact cells 10-20 μ diam.	Unbranched, light brown 1-4 septate, not cicatrized, 21.5-57 \times 2.8-4.2 μ	Obclavate-cylindric, 1-5 septate, subhyaline to olivaceous 21.5-43 \times 2.8-5.2 μ
Present fungus	Stroma suprastomatal cells aggregated 6-18 \times 5-13 μ	Unbranched deep brown, 0-3 septate, strongly cicatrized, 15-85 \times 6-13 μ	Obclavate solitary, 1-3 septate, deep to golden brown; 20-42 \times 4.8-8.0 μ



FIGS. A-D. A. V.S. of host leaf showing superficial stroma and conidiophores. B. A part of stroma with conidiophore subtending a stoma. C. A conidiophore with cicatrices and a conidium. D. Conidia.

cella (P. Henn) Deighton are reported to infect leguminous hosts (see Ellis⁴). Further, *P. bonducella* parasitizes the leaves of *Caesalpinia bonducella* and *C. sepiaria* producing superficial stromata subtending stomata from which conidiophores arise in groups and hence is comparable to the fungus in discussion. However, the present fungus differs from it in conidiophore and conidial characters.

Accordingly, it is proposed to record as a new species, i.e., *Phaeoisariopsis tephrosicola*.

Phaeoisariopsis tephrosicola Raghuv eer sp. nov.

Coloniae robiginosa-brunneae, irregulares, epiphyllae, 1-5 mm diam; mycelium immersum ex hyphis, hyalinis vel subhyalinis, septatis, ramosis, 2-5 μ in diam; stromata superficialia posita supra stomatis, 50-112 \times 23-48 μ ad cellulis cum muris crasse, fusce brunneis; conidiophora fasciculata ex stromata oriunda, macronematicis simplicia, altus brunnea, 0-3 septata, recta vel curvata, 15-85 μ longa, 6-13 μ lata; cellae conidigenae in conidiophoris incorporatae terminales vel intercalares polyblasticae, cicatricibus; conidia producta acropleurogena, obclavata, 1-3 septata, aureobrunnea, 20-42 μ longa, 4.8-8.0 μ lata ad basim, 3-5 μ lata ad apicem.

In foliis viventibus *Tephrosia purpurea* L., a P.R.R. die 18th mensis February anni 1974, University Campus, Hyderabad, et posita in herbario O.U.B.L. sub-numero 278.

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