

Division of Mycology K. S. M. SASTRY.
and Plant Pathology,
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OCCURRENCE OF *GNOMONIA* *LEPTOSTYLA* (FR.) CES. AND DE NOT. ON WALNUT IN INDIA

It has been observed for the past five to six years that walnut trees in almost all the localities of the Kashmir valley are subject to a leaf blotch disease caused by a fungus the conidial stage of which is known as *Marssonina juglandis* (Lib.) Magn. and the perfect stage as *Gnomonia leptostyla* (Fr.) Ces. and De Not.

The disease appears conspicuously on the leaves in the month of July forming small circular light-brown spots 3-5 mm. in diameter. Later on these develop into large blotches, irregular in outline, sometimes involving a major portion of leaf lamina. Acervuli appear as small black spocks on the lower surface of the diseased leaves in early August. A section through the acervulus shows short, simple, hyaline, elliptic, one-celled conidiophores packed together in a small layer bearing a conidium each at their tips. The conidia are variously shaped being straight, ovoid, falcate or with only one end rounded and the other pointed. They are one septate, the two cells being unequal with prominent oil globules and measure $15-26 \mu \times 2-5 \mu$.

Towards the end of February, on dead, fallen and overwintered diseased leaves, brown coloured perithecia appear chiefly on the infected portions. The body of perithecium is immersed in the leaf lamina while the beak protrudes considerably outside the leaf surface. They are amphigenous, solitary, scattered globose, reddish brown with long cylindric neck which is $1-1\frac{1}{2}$ times the diameter of perithecium. The beak measures $140-170 \mu$ in length and $25-40 \mu$ in breadth while the globose base has a diameter varying from $120-150 \mu$.

The ostiole at the apex of beak is round and measures $25-30 \mu$. The outer wall of the perithecium is dark brown and is composed of parenchymatic cells, while the inner layers are formed of irregular hyaline cells. The outer wall of the beak is composed of elongated, septate hyphae. The inner cavity of the perithecium is lined with club-shaped to fusoid asci in which 8 ascospores are arranged in two rows or rarely in one row in an oblique fashion. The neck is provided with short silky hairs-periphyses and has a broad ostiole at the tip. The asci are hyaline, paraphysate, 8-spored and measure $56-62 \times 14-16 \mu$. The ascospores are fusoid, straight or slightly curved, septate, $15-19 \mu \times 4-5 \mu$ and hyaline.

The specimens have been deposited in Herbarium Cryptogrammæ indiæ Orientalis, New-Delhi.

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Kashmir, September 8, 1961.

TWO NEW FUNGI FROM HYDERABAD

DURING the routine collection, two interesting fungi were collected by the author of which one was growing as a saprophyte and the other as a parasite. On examination it was found that they were not reported earlier.

Phæosaccardinula marsiliæ RAGHU. SP. NOV.

Infection spots round, dark brown, 1-3 mm. in diameter initially, coalescing into irregular patches later, ultimately infecting leaves completely, vegetative mycelium meagre, brown, branched, septate, $3-7 \mu$ broad, perithecia produced in older parts, superficial, single, commonly produced near or on the veins, globular, $60-105 \mu$ in diameter, glabrous, ostiolate, ostiole $19-30 \mu$ across, perithecial wall consisting of pentagonal to polyhedral light-brown cells; ascic 6-12 in each fruit body, maturing in succession, club-shaped when young, ovate to oblong with truncate ends when mature, bitunicate, $36-60 \mu$ long, $18-25 \mu$ broad, octosporous; ascospores irregular or biseriolate, ellipsoidal to oval, muriform, 3-septate, dictyosporous, with 1 to 2 longitudinal walls, hyaline to subhyaline when young, brown when mature, $22-31 \mu$ long, $9-15 \mu$ broad.

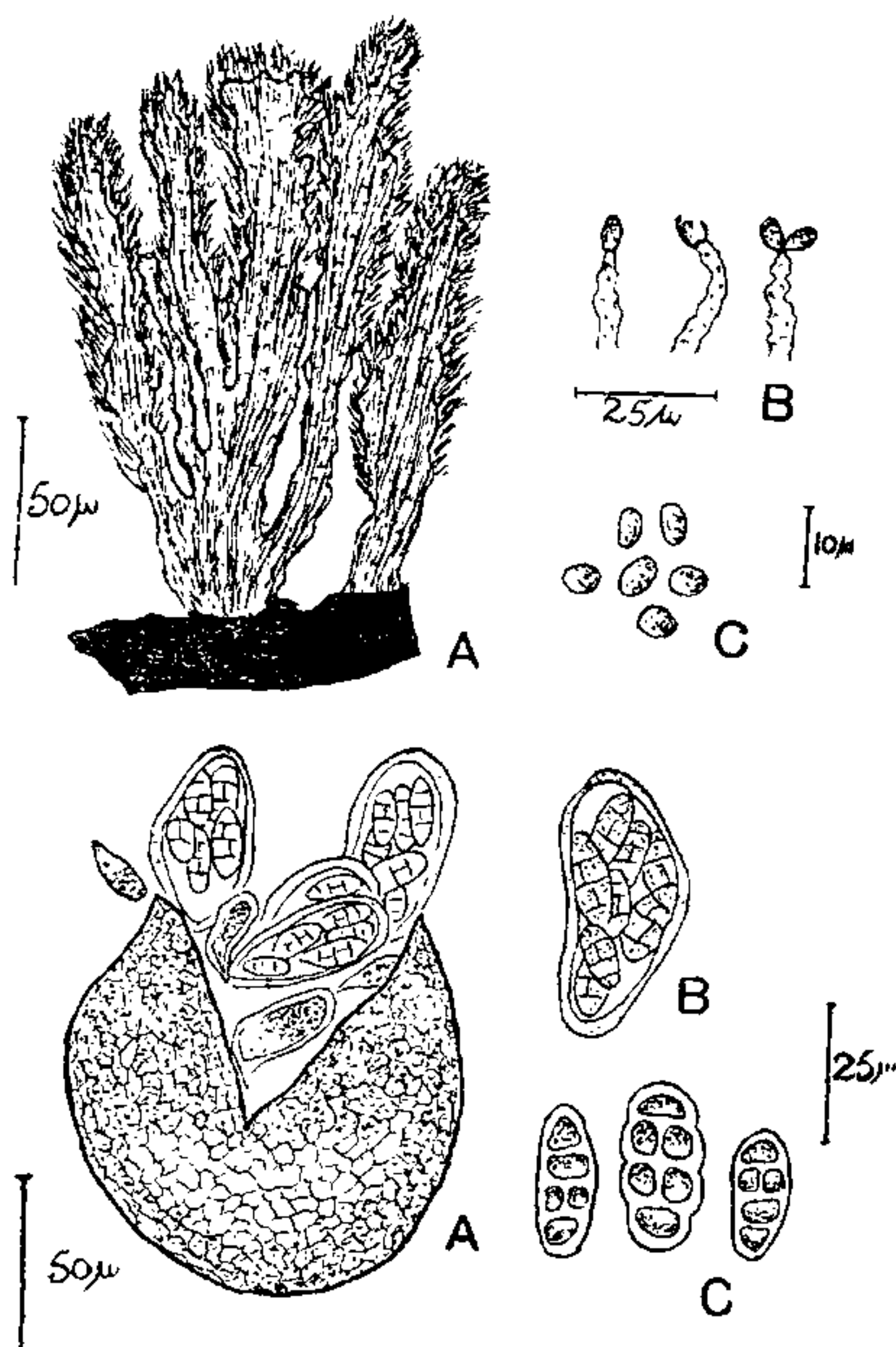
This fungus is identified as *Phæosaccardinula* P. Henn as the characters of the fruit body, asci and ascospores are highly suggestive and

reported as a new species as it differs with species of *Phaeosaccardinula* P. Henn so far known.

Infecting leaves of *Marsilea quadrifolia* Linn., Hyderabad, 11th November 1961, Raghuveer, Herb. Hyd. N.C.B.L. No. 5.

Phaeosaccardinula marsiliae RAGHU. SPEC. NOV.

Infectionis maculae diametientes 1–3 mm., coalescentes in maculas irregulares latiores; mycelium exiguum, ramosum, septatum, brunneum, 3–7 μ latum; perithecia producta in partibus vetustioribus, singula, superficialia, glabra, globosa, 60–105 μ diam., ostiolata 19–30 μ diam., continentia ascos 6–12; asci bitunicati, juveniles quidem clavati, maturiores vero ovaes vel oblongi apicibus truncatis, 36–60 μ longi, 18–25 μ lati, maturescentes successive, octospori; ascosporae irregulares vel biseriatae, ex ellipsoideis ovaes, 3-septatae, dictyosporae, 1–2 parietibus longitudinalibus ornatae, juveniles quidem hyalinae vel subhyalinae, maturae vero brunneae, 22–31 μ longae, 9–15 μ latae.



FIGS. 1–2. Fig. 1. *Melanographium thunbergiae* from type specimen. A. Synnemata; B. Conidiophores with conidia; C. Conidia. Fig. 2. *Phaeosaccardinula marsiliae* from type specimen. A. Fruit body with asci; B. Young ascus with ascospores; C. Mature ascospores.

Inficit folia *Marsileae quadrifoliae* Linn. ad Hyderabad, die 11 novembris, 1961, Raghuveer, et positus in 'Herb. Hyd.' N.C.B.L. sub humero 5.

Melanographium thunbergiae RAGHU. SP. NOV.

Synnemata arise from a common dark-brown stroma, long, cylindrical to clavate, branched or unbranched, consisting of septate unbranched; dark-brown hyphae, becoming free and loose in the fertile apical region, gradually turning light-brown. synnemata 210–994 μ long, 14–60 μ broad at the base, 42–112 μ broad apically, fertile apical ends of the hyphae (conidiophores) measure up to 30 μ in length and 2–5 μ in breadth, simple or geniculate with dentate margins due to successive production of conidia, conidia, acrogenous, continuous, ellipsoidal to oval, subhyaline when young, brown when old, 4–6 μ long and 2–4 μ broad.

This is a *Melanographium* Sacc. (= *Sporostachys* Sacc.) (see Saccardo, 1931, p. 936). Although *Melanographium* Sacc. (= *Sporostachys* Sacc.) is described to produce lenticular or reniform, continuous, fuliginous conidia, *M. anceps* Sacc. produces variable conidia somewhat nearer to the present fungus. But the fungus under consideration is distinct from *M. anceps* Sacc. in synnemal and conidial measurements. Hence it is reported as a new species. Growing saprophytically on the stems of *Thunbergia grandiflora* Roxb.; Hyderabad, 18th August 1960, Raghuveer, 'Herb. Hyd.' N.C.B.L. No. 6.

Melanographium thunbergiae RAGHU. SP. NOV.

Synnemate fasciculata e stromate basali emergentia, e longo-cylindricis clavata, ramosa vel integra, 210–994 μ longa, 14–60 μ lata ad basin, 42–112 μ lata at apices; synnemata constant e hyphis brunneis septatis simplicibus, apicibus evadentibus laxis et pallide brunneis in regione fertili producentibus conidia; conidiophori simplices vel geniculati, usque ad 30 μ longi, 2–5 μ lati, denticulati; conidia acrogena, continua, ex ellipsoideis ovalia, juvenilia quidem subhyalina, maturiora vero fusce brunnea, 4–6 μ longa, 2–4 μ lata.

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