

## Fungi of Coorg (India)-II.

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With 3 Fig. in the text.

This paper, second in the series, describes three new species of follicolous Hyphomycetes collected by the writer from Coorg, Mysore State, India.

### 1. *Prathigada* C. V. Subram.

Leaves of *Albizia procera* Benth. (Leguminosae) were found infected with black spots. The disease was severe on the lower surface of the matured leaves. Microscopic examination of sections through the infection spots revealed to possess non-septate conidiophores, emerging in fascicles through the stomata and bearing solitary coloured, multi-septate conidia at the apex on the basis of which it was identified as a species of the dematiaceous form-genus *Prathigada* Subram. This form-genus is represented by three known species all from India viz. *P. crataevea* (Syd.) C. V. Subram., *P. punjabensis* C. V. Subram. and *P. tamarindi* Muthappa, the first two being collected on *Cratoeva religiosa* Frost. from Madras and Karnal (Punjab), respectively and the 3rd from Coorg, Mysore State on leaves of *Tamarindus indica* L.

Recently Venkatrao & K. Ramakrishnan (1965) have described a fungus collected by them on *Zizyphus nummularia* Vahl. from Coimba-

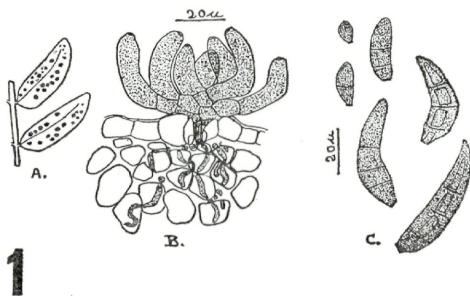


Fig. 1. *Prathigada indica*: — A: Habit, B: Conidiophores, C: Conidia.

tore, Madras, India as a new species of *Prathigada* viz. *P. zizyphi*. This fungus, however, is characterised by geniculate, septate conidiophores, which are not associated with the form-genus *Prathigada* Subr. This genus established and described by C. V. Subramaniam (1956) has non-geniculate and non-septate conidiophores which distinguish it from the closely allied dematiaceous genera *Exosporium* and *Helminthosporium*.

The writer's (1966) first collection of this fungus was on *Tamarindus indica* L. a legume host. A detailed comparative study was, therefore, carried out between the present collection and the earlier described species parasitizing a legume host with the following results.

Comparison between species of *Prathigada* infecting Legume hosts.

Species	Host	Stroma	Conidiophores	Conidia
1. <i>P. tamarindi</i> Muthappa	<i>Tamarindus indica</i> L.	Present	30.24—43.25 × 4.32— 8.64 μ, thin & erect.	21.6—30.24 × 8.64—13.00 μ, smooth walled
2. <i>Prathigada</i> spp.	<i>Albizia procera</i> Benth.	Absent	28—36 × 8—10 μ, stout and falcate	48.25—60 × 10—12.32 μ, distinctly serrated.

From the table of results it is evident that the present collection of *Prathigada* Subram. is significantly distinct from *P. tamarindi* both in respect of habit, morphological characters as well as dimensions of the conidiophores and conidia. The absence of basal stroma, the stout helicoid conidiophores emerging in tufts, the distinctly serrated walls of the conidia, and their uniform brown color, entirely distinguish this species from *P. tamarindi* Muthappa described earlier by the writer (1966). The fungus collected on *Albizia procera* Benth. is therefore presented as a new species of the genus *Prathigada* with the following Latin diagnosis.

***Prathigada indica* Muthappa sp. nov.**

Maculae hypophyllae, orbiculares, nigrescentes, dispersae, raro plus minusve aggregatae, 0.5 mm diam.; conidiophora e stomatiis erumpentia, fasciculata, dense stipata, simplicia, non septata nec geniculata, crassiuscula, helicoidea, brunnea, 20—30 × 8—10 μ; conidia acrogena, in conidiophorum apice singularia, obclavata, antice plus minusve attenuata, 3-septata, brunnea, 48.25—60 × 10—12.32 μ.

Infection spots hypophyllous, black, circular, scattered, rarely aggregated, 0.5 mm in diameter. Basal stroma lacking, conidiophores simple, unbranched, non-geniculate, non-septate, stout, helicoid, brown, densely crowded in tufts, emerging through stomata, with a solitary prominent conidial scar at the tip, 28—36 × 8—10 μ. Conidia acro-

genous, produced singly at the apex of conidiophores obclavate, slightly bent in the apical region, 3-septate, tapering towards apex, uniformly brown,  $48.25-60 \times 10-12.32 \mu$ .

Incites leaf spots on living leaves of *Albizia procera* Benth., (Leguminosae) collected by B. N. Muthappa at Coorg, Mysore State, India on 15th May, 1966 M. A. C. S. Herb. No. 273.

### 2. *Colletotrichum* Corda.

Leaves of *Olex weightiana* Wall. showing blotches infested with black fruting bodies were collected. Examination under the microscope revealed the presence of acervulus and setae, on the basis of which it was identified as a species of *Colletotrichum* Corda.

Even though there are numerous reports of *Colletotrichum* ssp. parasitizing a large number of hosts belonging to various host families, it was interesting to note that this fungus has, so far not been, reported on any host of the family Olacaceae. This being the first host for this fungus in the family Olacaceae it is accommodated in a new taxon with the following Latin diagnosis.

#### *Colletotrichum olacicola* Muthappa sp. nov.

Maculae epiphyllae, plerumque marginales; acervuli dispersi, raro plus minusve gregarii, subcuticulares,  $160-220 \mu$  diam.; setis atro-olivaceis, strictis, septatis,  $40-48 \times 5.25-6 \mu$  aucti; conidiophora simplicia, uniseptata, breviuscula, hyalina,  $10-20 \times 4-6.25 \mu$ ; conidia oblonga vel ovoidea, continua, hyalina,  $14-16.25 \times 4.25-6 \mu$ .

Blotches epiphyllous, generally marginal, fruting bodies (acervulii) scattered, rarely gregarious, subcuticular,  $160-220 \mu$  broad, setae intermingled with conidiophores, dark, stiff, septate  $40-48 \times 5.25-6.0 \mu$ . Conidiophores simple 1-septate, short, hyaline,  $16-20 \times 4.0-6.25 \mu$ . Conidia oblong to ovoid, 1-celled hyaline,  $14.00-16.25 \times 4.25-6.00 \mu$ .

Incites leaf blotches on *Olex weightiana* Wall., collected by B. N. Muthappa at Coorg, Mysore State, India on 15th May, 1966 M. A. C. S. Herb. No. 274.

### 3. *Cercospora* Fres.

This fungus was also found to be closely associated with the species of *Colletotrichum* described above on *Olex weightiana* Wall. It was interesting to note that although not less than over 260 species of this form-genus are known and described in literature, there is no report of *Cercospora* Fres. on any hosts belonging to the family Olacaceae. This being the first record of this fungus in the family Olacaceae, it is accommodated in a new taxon with Latin diagnosis.

#### *Cercospora olacicola* Muthappa sp. nov.

Maculae epiphyllae, raro amphigenae, dispersae, orbiculares,  $9-15 \text{ mm}$  diam., confluento etiam majores sordide albidae, distincte

nigro-marginatae; hypostroma sub epidermide evolutum, plus minusve prominulum, pseudoparenchymaticum,  $60-80 \times 32-40 \mu$ ; conidiophora pallide olivacea, septata, simplicia, non geniculata, ad hypostromatis superficiem in seriebus parallelis ordinata,  $28-40 \times 4.5-6 \mu$ ; conidia subhyalina, acicularia, recta vel parum curvula, multiseptata, postice truncata,  $40-56.5 \times 4.25-6 \mu$ .

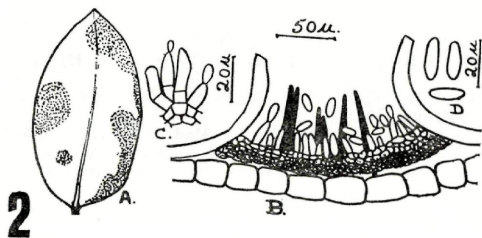


Fig. 2. *Colletotrichum olacicola*. — A: Habit, B: Acervulus, C: Conidiophores, D: Conidia.

Infection spots, epiphyllous, rarely amphigenous, circular, often 9—15 mm in diameter, center dirty white with a distinct black margin, scattered, coalescing later on. Stroma prominent, sub-epidermal brown with pseudoparenchymatous cells,  $60-80 \times 32-40 \mu$ . Conidiophores pale olivaceous brown, septate, simple, not geniculate, with a spore scar at the tip arranged in parallel rows over the stroma,  $28-40 \times 4.5-6.0 \mu$ . Conidia sub-hyaline, acicular, straight to slightly curved, multi-septate, with a truncate base,  $30.00-56.5 \times 4.25-6.00 \mu$ .

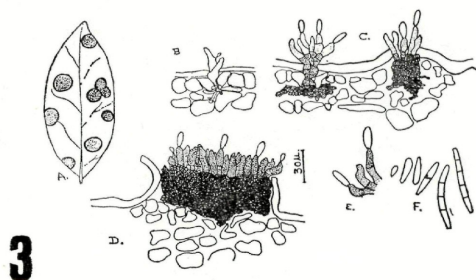


Fig. 3. *Cercospora olacicola*. — A: Habit, B—D: Different stages of development, E: Conidiophores, F: Conidia.

Incites leaf spots on *Olex weightiana* Wall., collected by B. N. Muthappa at Coorg, Mysore State, India on 15th May 1966, M. A. C. S. Herb. No. 275.

The type of three new species described above have been deposited at Herb. orientalis New Delhi and C. M. I., Kew, England.

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