

## Some Fungi-Imperfecti from Maharashtra

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In course of their survey for the fungi of Maharashtra the writers collected several fungi Imperfecti. Critical survey of the literature and comparative studies revealed the 7 species to be new to Science.

### 1) *Robillarda matheranensis* sp. nov.

Infection spots irregular in outline, dark brown, necrotic. Pycnidia brown black in necrotic spots, subepidermal to deeply embedded, lenticular to globose, ostiolate;  $64-160 \times 144-320 \mu$ . Conidiophores simple, hyaline;  $14-18 \mu$ . Conidia 2-celled, hyaline, cylindrical with 3-4 hyaline setae at one end;  $14.8-18.5 \times 3.7 \mu$ .

Maculae irregulares, obscure brunneae; pycnidia atrobrunnea, subepidermalia vel profunde immersa, lenticularia vel globosa, ostiolata,  $64-160 \times 144-320 \mu$ ; conidiophora simplicia, hyalina,  $14-18 \mu$ ; conidia bilocularia, hyalina, cylindracea, setis 3-4 hyalinis praedita,  $14.8-18.5 \times 3.7 \mu$ .

On living leaves of *Randia dumetorum*, Lam. (Rubiaceae) collected by P. G. Patwardhan at Matheran on 26th Sept., 65, M. A. C. S. Myco. Herb. No. 289.

*Remarks:* So far only 4 species of this rare fungus — *Robillarda* — have been described from India.

### 2) *Septoria peucedani* sp. nov.

Spots amphigenous, necrotic with brown to black margin, circular to irregular. Pycnidia dark, separate, amphigenous, globose, subepidermal to erumpent ostiolate;  $70-85 \times 63-97 \mu$ . Conidiophores short hyaline. Conidia narrowly elongate to filiform, straight or slightly curved, multiseptate, hyaline to olivaceous in colour;  $18-29.5 \times 3.4 \mu$ .

Maculae amphigenae, orbiculares vel irregulares, obscure brunneo — vel atro-marginatae; pycnidia amphigena, obscura, globosa, ostiolata,  $70-85 \times 62-97 \mu$ ; conidiophora brevia, hyalina, conidia filiformia recta vel leniter curvula, multiseptata, hyalina vel olivacea,  $18-29.5 \times 3.4 \mu$ .

On living leaves of *Peucedanum grande*, Clke. (Umbelliferae) collected by P. G. Patwardhan at Purandar on 16th Sept., 64, M. A. C. S. Myco. Herb. No. 290.

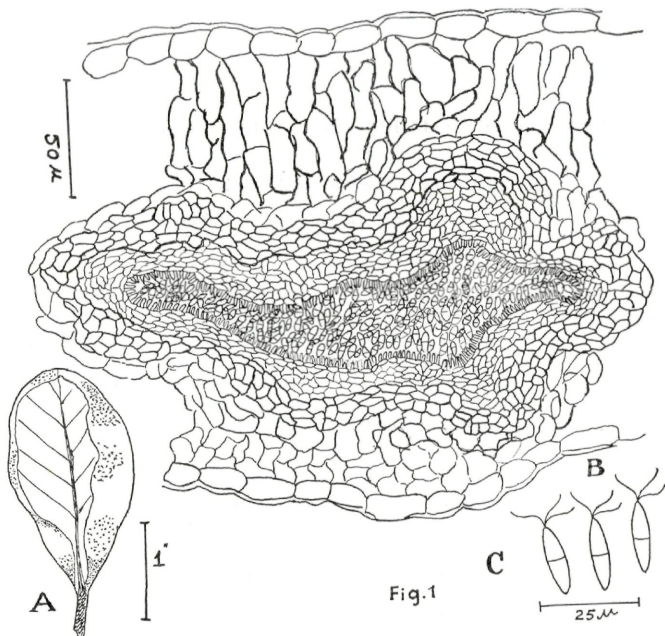


Fig.1

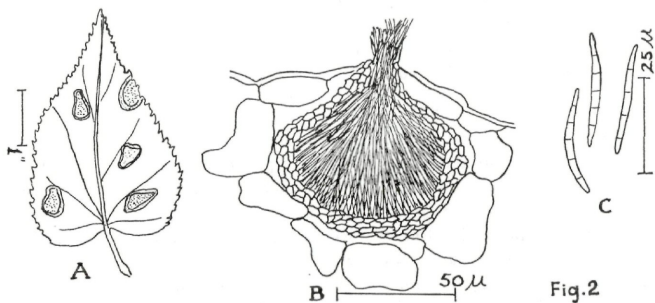
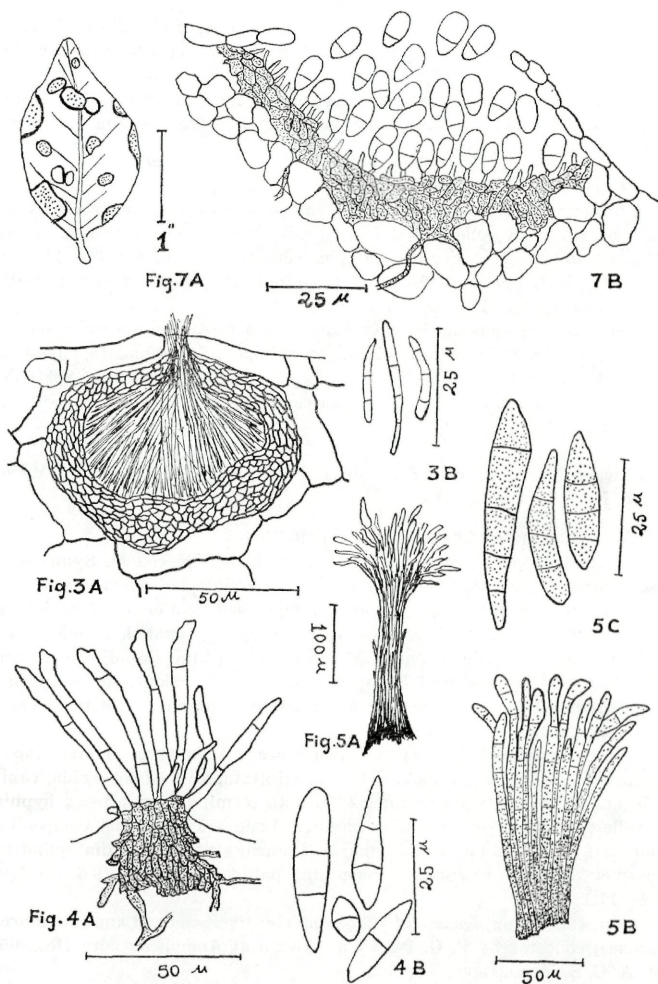


Fig.2

3) *Septoria singhadensis* sp. nov.

Infection spots small yellow, scattered, amphigenous. Pycnidia dark, separate, globose, subepidermal ostiolate;  $37-74 \times 26-63 \mu$ . Conidiophores short hyaline. Conidia filiform, slightly curved, hyaline, 3-4 septate;  $19-33 \times 3.7 \mu$ .



Maculae dispersae, amphigenae, parvae, luteolae; pycnidia obscura, globosa, subepidermalia, ostiolata,  $27-74 \times 26-69 \mu$ ; conidiophora brevia, hyalina; conidia filiformia, leniter curvula, hyalina, 2-4septata,  $19-33 \times 3.7 \mu$ .

On living leaves of *Polygala persicarifolia*, DC. (Polygalaceae) collected by P. G. Patwardhan at Sinhagad on 13th August, 65, M. A. C. S. Myco. Herb. No. 291.

The present species is characterised by the presence of abundant, scattered pycnidia on the lower surface of leaves without showing distinct infection spots.

4) *Ramularia khandalensis* sp. nov.

Infection typically causing leaf spots, mostly hypogenous. Stroma dark brown many celled; 7—26  $\mu$ . Conidiophores emerging through the stomata in fascicles hyaline, simple, septate, geniculate; 37—103  $\times$  7.4  $\mu$ . Conidia, hyaline, cylindrical to spindle shaped, 1—2 septate with distinct basal scar; 11—40  $\times$  7.4—11  $\mu$ .

Maculae plerumque hypophyllae; hypostroma brunneum, pseudo-parenchymaticum, 7—26  $\mu$  diam.; conidiophora fasciculata, hyalina, simplicia, geniculata, 37—103  $\times$  7.4  $\mu$ ; conidia cylindracea vel subfusoida, 1—2-septata, hyalina, postice distincte truncata, 11—40  $\times$  7.4—11  $\mu$ .

On living leaves of *Vitis glauca* (Ampelidaceae) collected by P. G. Patwardhan at Khandala on 6th Oct., 1965, M. A. C. S. Myco. Herb. No. 292.

5) *Dendrographium calycoptercola* sp. nov.

Infection spots hypophyllous, small & brown in colour. Synnemata erect, straight, separate or crowded, each having a distinct cylindrical stalk, a swollen base and expanded apical head composed of radiating free conidiophores. Stalk composed of closely aggregated, simple, dark brown, septate parallel hyphae 230—272  $\times$  32—48  $\mu$ . Conidiophores are free ends of the hyphae of the synnema, brown in colour, septate. Conidia cylindrical to oblong, mostly 3 septate, pale brown in colour; 29.6—51.8  $\mu$  long and 7.4—11.1  $\mu$  wide.

Maculae hypophyllae, minutae, brunneae; synnemata erecta, singularia vel complura aggregata, distincte stipitata, ad basim turgida, capitulo apicali e conidiophoris liberis formato terminata; stipite ex hyphis parallele stipatis simplicibus, obscure brunneis, septatis composito, 230—272  $\times$  32—48  $\mu$ ; conidiophora brunnea, septata; conidia cylindracea vel oblonga, plerumque 2-septata, pallide brunnea, 29.6—51.8  $\times$  7.4—11.1  $\mu$ .

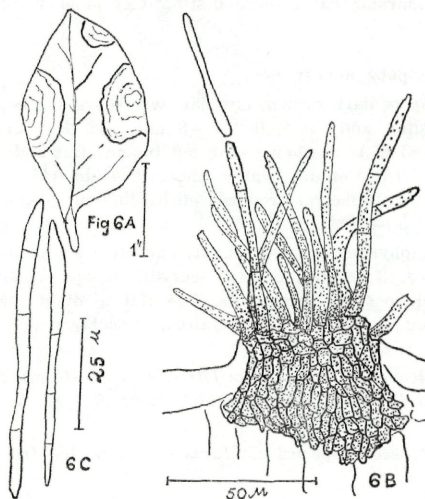
On the living leaves of *Calycopteris floribunda*, Lam. (Combretaceae), collected by P. G. Patwardhan at Amboli on 26th Dec., 65, M. A. C. S. Myco. Herb. No. 293.

6) *Cercospora pupalae* sp. nov.

Leaf spots circular to irregular, grey to dirty brown in colour, margin brown to black, mostly epiphyllous. Stroma dark brown, many celled, 11—30  $\mu$ . Conidiophores in fascicles of 4—10, divergent, pale to

dark brown at base, paler or subhyaline towards the tip, septate, simple;  $18.5-96.6 \times 3.7 \mu$ . Conidia hyaline to olivaceous, acicular, straight, multiseptate, tip acute;  $51.8-70 \times 3.7 \mu$ .

Maculae plerumque epiphyllae, orbiculares vel irregulares, griseae vel obscure brunneae, brunneo- vel atro-marginatae; hypostromate obscure brunneo, pseudoparenchymatico,  $11-30 \mu$  diam.; conidiophora 4-10 fasciculata, divergentia, ad basim pallide vel obscure brunnea,



antice pallidiora vel subhyalina, septata, simplicia,  $18.5-96.6 \times 3.7 \mu$ ; conidia hyalina vel olivacea, acicularia, recta, multiseptata, antice acuminata,  $51.8-70 \times 3.7 \mu$ .

	Host	Stromata	Conidiophores	Conidia
<i>Cercospora</i>	<i>Achyranthus</i>	25 $\mu$	15-80 $\times 4-4.5 \mu$	35-130 $\times 2.5-5 \mu$
	<i>achyranthina</i> , <i>aspera</i> L.			
<i>Cercospora</i>	<i>Pupalia</i>	11-30 $\mu$	18.5-96.6 $\times 3.7 \mu$	51.8-70 $\times 3.7 \mu$
	<i>orbiculata</i> Wt.			



Collected on *Pupalia orbiculata* Wt (Amarantaceae) by P. G. Patwardhan at Poona on 23rd August 66, M. A. C. S. Myco. Herb. No. 294.

This species is compared with *Cercospora achyranthina* Thirum + Chupp. on *Achyranthus aspera* L.

Careful comparison of the present species with *C. achyranthina* parasitising *Achyranthus aspera* L. a very close and allied host of the same family Amarantaceae showed distinctively smaller conidia in the present species.

7) **Marssonina poonensis** sp. nov.

Infection spots dark brown, circular, with dark black margin, epiphyllous, spreading and coalescing, 3—8 mm. broad. Acervuli subepidermal, depressed globose when young but become flat and lenticular at maturity, 70—130  $\mu$ . Conidia hyaline, 2-celled, ovoid to broadly conical, broader at apex, asymmetrical produced on hyaline, simple, short-conidiophores, 6—16  $\times$  3—5  $\mu$ .

Maculae epiphyllae, orbiculares, atro-marginatae, dispersae, interdum confluentes, 3—8 mm diam.; acervuli subepidermales, primum depresso-globosi, postea lenticulares, 70—130  $\mu$  diam.; conidiophora hyalina, simplicia, brevia; conidia hyalina, bilocularia, ovoidea vel late conoidea, 6—16  $\times$  3—5  $\mu$ .

On living leaves of *Anogeissus latifolia* Wall. (Combretaceae) leg. P. G. Patwardhan at Poona on 17th July, 1963 M. A. C. S. Myco. Herb. No. 295.

This is the second species of *Marssonina* reported from India.

#### A c k n o w l e d g e m e n t

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#### E x p l a n a t i o n o f F i g u r e s

- 1) *Robillarda matheranensis* sp. nov. — A Habit — B T. S. of leaf through Pycnidium. — C Conidia.
- 2) *Septoria Peucedanae* sp. nov. — A Habit — B T. S. through Pycnidium — C Conidia.
- 3) *Septoria sinhagadensis* sp. nov. — A T. S. of Pycnidium — B Conidia.
- 4) *Ramularia khandalensis* sp. nov. — A Conidiophores — B Conidia.
- 5) *Dendrographium calycoptercola* sp. nov. — A Synnema — B Apical portion of synnema enlarged. — C Conidia.
- 6) *Cercospora pupalae* sp. nov. — A Habit — B Conidiophores — C Conidia.
- 7) *Marssonina poonensis* sp. nov. — A Habit — B T. S. through acervulus.

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