

Studies in Indian Phyllachoraceae XI.

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With 2 Fig. in the text

This is the eleventh contribution in the series of papers published from this laboratory on Indian Phyllachoraceae and presents two more new species of *Phyllachora* collected at Coorg (Mysore State) India, parasitizing the leaves of *Eugenia jambolana* Lamk and *Ficus asperima* Roxb.

Phyllachora eugeniae Anahosur, sp. nov. (Fig. 1).

Stromata raro amphigena, nigra, nitida, carbonacea, orbicularia vel irregularia, 20 × 10 mm, subcuticularia; perithecia numerosa, usque ad 20 in quoque stromate, globosa, plus minusve depressa, ostiolata, 300—500 μ diam.; asci clavati, tenuiter tunicati, breviter stipitati, 8-spори, in

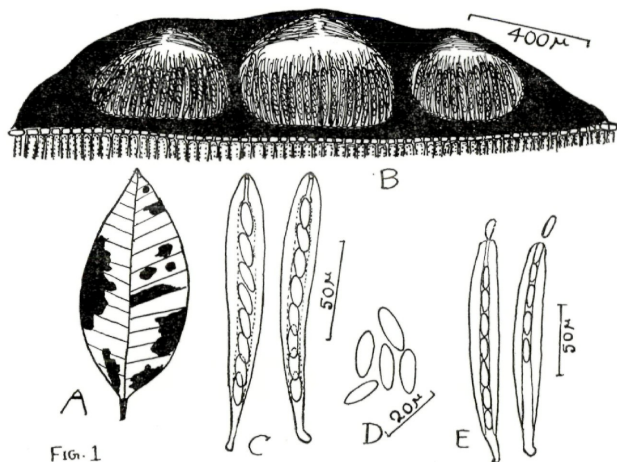


FIG. 1

Fig. 1. *Phyllachora eugeniae* Anahosur. — A. Habit. — B. Section through the infection sport. — C. Asci. — D. Ascospores. — E. Discharge of Ascospores.

apice poro minuto pertusi, $150-180 \times 10-14 \mu$; sporae monastichae, oblongo-ellipsoideae vel anguste ovoideae, utrinque obtusae, vix vel parum angustatae, rectae, raro inaequilatae, hyalinae, continuae, $14-18 \times 4-6 \mu$; paraphyses numerosae, tenuiter fibrosae.

Stromata black, shining, carbonaceous, raised, cushion like, rarely amphigenous, aggregated, circular to irregular, 20×10 mm, subcuticular, multiloculated, upto 20 locules in each stroma. Perithecia globose, hard, black, stromatic, ostiolated, with clypeus, $300-500 \mu$ diam. Asci clavate, unitunicate, pedicellate, octosporous on wall-layers, provided with an apical canal and pore, $150-180 \times 10-14 \mu$. Ascospores ovoid, uniseriate, 1-celled, hyaline, $14-18 \times 4-6 \mu$. Paraphyses and periphyses abundant, slender filiform and thin.

Causes tar-spots on the living leaves of *Eugenia jambolana* Lamk collected by the writer at Coorg, Mysore State, India on 15th October 1966, M. A. C. S. Herb. No. 453 (Type).

This material is characterised by the production of abnormally large tar-like legions which distinguish it from those produced by the earlier described species viz. *Phyllachora ambigua* on the same host. Therefore comparative studies between the Coorg collection and *P. ambigua* were carried out with the following result.

Table I

Species	Stroma	Perithecia	Asci	Ascospores
1. <i>Phyllachora ambigua</i> Syd.	1.5—4 mm	150—200 μ	$48-60 \times 8-12 \mu$ Cylindrical	$9-11 \times 6-8 \mu$ sub-globose
2. <i>Phyllachora</i> species	20×10 mm upto 20 locules	350—500 μ	$150-180 \times 10-14 \mu$ clavate	$14-18 \times 4-6 \mu$ Ovoid

It is quite clear from the above table that the Coorg collection of *Phyllachora* on *Eugenia jambolana* Lamk. is significantly distinct from *Phyllachora ambigua* Syd. in all respects viz. in having abnormally large multiloculate stromata, perithecia, asci and ascospores, which justify accommodation in a new taxon.

Phyllachora ficus-asperrimae Anahosur sp. nov. (Fig. 2).

Stromata dispersa, amphigena, nigra, carbonacea, nitida, pulvinata, subepidermalia, orbicularia vel plus minusve irregularia, 2×0.8 mm; perithecia usque 6 in quoque stromate, depresso-globosa, ostiolata, $220-320.4 \times 300-452.4 \mu$; asci cylindranei, breviter et crassiuscule stipitati, tenuiter tunicati, 8-spори, $90-112.4 \times 10-14 \mu$; sporae ellipsoideae vel ovoideae, utrinque late rotundatae, vix vel lenissime attenuatae, hyalinae,

rectiusculae, continuae, $14-18 \times 6-8 \mu$; paraphyses numerosas, tenuiter fibrosae.

Stromata black, carbonaceous, shining, amphigenous, scattered, circular to irregular, sub-epidermal, multiloculate, upto 6 locules in each stroma, upto 2 mm. long and 0.8 broad, perithecia black, hard, stromatic, flask-shaped, with clypeus, ostiolated, $220.0-310.4 \times 300.0-452.4 \mu$. Asci cylindrical with short pedicel, thin-walled, unitunicate, octosporous, arranged in wall-layers $90.0-112.4 \times 10-14 \mu$. Ascospores cylindrical, uniseriate, 1-celled, hyaline, $14-18 \times 6-8 \mu$, paraphyses and periphyses numerous, slender, filiform and thin.

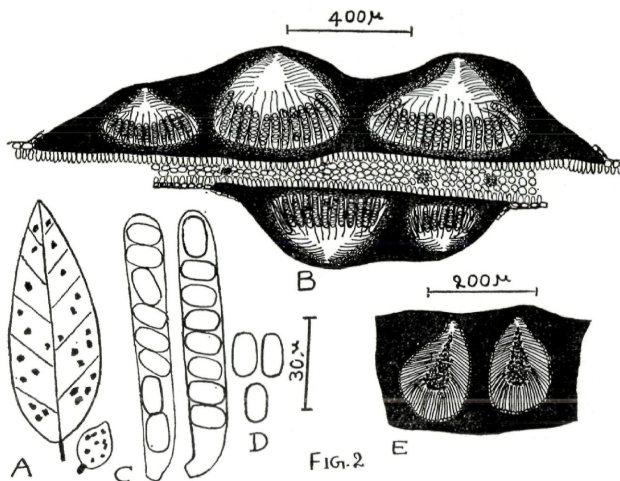


Fig. 2. *Phyllachora Ficus asperirmae* Anahosur. — A. Habit. — B. Section through the infection spot. — C. Asci. — D. Ascospores. — E. Spermatogonial chambers.

Causes tar-spots on the living leaves and fruits of *Ficus asperirma* Roxb. collected by the writer at Coorg Mysore State, India, on 12th October 1966. M. A. C. S. Herb. No. 452. Type.

Many species of *Phyllachora* have been reported to parasitize species of the host genus *Ficus*, but none on *Ficus asperirma*. This collection was therefore compared with *Phyllachora poonensis* Seshadri and *P. ficus hispidae* Seshadri, with the help of the key presented by Seshadri (1967). The results so obtained, are presented in Table II.

Table II

Species	Stroma	Perithecia	Asci	Ascospores
1. <i>P. poonensis</i> Seshadri	Epi- phyllous, multi- loculate	130.5—188.5 × 174—290 μ	50.9—74.4 × 14.8—25.2 μ Clavate, in basal layers	9.25—11.4 μ globular, uniseriate
2. <i>Phyllachora</i> <i>ficus-hispidae</i>	Hypo- phyllous, multi- loculate	176—232 × 261—536.5 μ	51.8—70.5 × 11.1 μ Clavate, in basal layers	5.5—9.25 μ globular, biseriate
3. <i>Phyllachora</i> sp.	Amphi- genous, multi- loculate (3—6 locules)	220—310.4 × 300—452.4 μ	90—113.4 × 10—14 μ Cylindrical, in wall layers	14—18 × 6.8 μ Cylindrical uniseriate

The Coorg Collection parasitizing *Ficus asperima* is thus found to be distinct from the two Indian species in having amphigenous habit, multiloculate stroma, with cylindrical and bigger asci and uniseriate arrangement of ascospores, and hitherto collected on an unreported host. Hence described as a new species.

The spermatogonial chambers were noticed in association with the perithecia in the same stroma of this material significance of which needs further studies into developmental aspects.

The two type materials of the new species have been deposited in C. M. I. and in Herb. Orientalis, New Delhi, India besides M. A. C. S.

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sydowia](#)

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