

Second Contribution towards Indian Phyllachoraceae

By S. T. Tilak

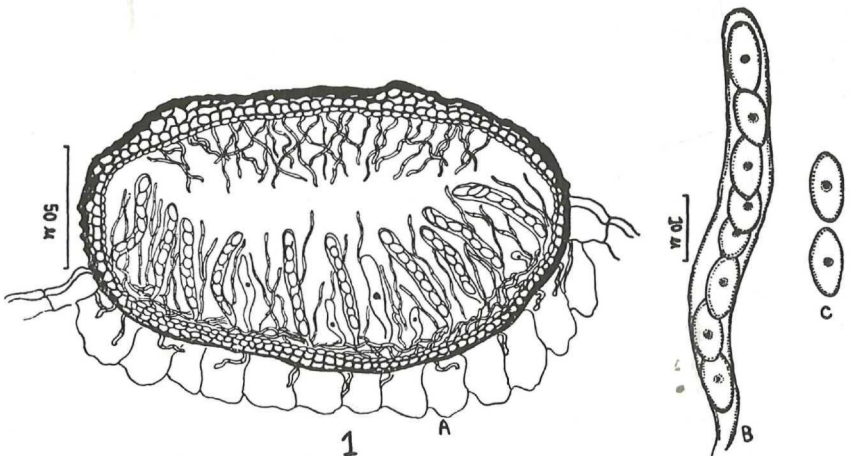
(M. A. C. S. Laboratories, Poona-4, India.)

With two text figures

In an earlier contribution on the Indian *Phyllachoraceae*, the writer (1958) had reported a new species of *Phyllachora*, *P. ectophytica* Tilak, with entirely superficial ascocarp, a feature not usually met with in this genus. As normally defined, the genus *Phyllachora* is characterised by ostiolate perithecia embedded inside the host tissue and provided with a clypeus above. This conception has now undergone a change due to discovery of several intergrading and intermediate forms ranging from entirely embedded perithecia to entirely ectophytic habit of ascocarps, absence of a predetermined ostiole and even clypeus depending upon their location in relation to host tissue. The writer collected two such intermediate forms of *Phyllachora* from *Acacia suma* Buch. Ham. and *Eleocarpus oblongus* Gaerten, which are described as new to science on the basis of morphological characters and host relationship.

1. *Phyllachora ortonii* Tilak sp. nov.

Stroma amphigenous, black, shiny, more or less circular, intra epidermal; perithecia oblong 204—255 \Rightarrow 170—221 μ . Asci 8-spored, cylindrical, hyaline, unitunicate, pedicillate and provided with an



1. *Phyllachora ortonii*. — a) Section through ascocarp; b) Ascus; c) Ascospores.

apical plug, $50-68 \rightleftharpoons 6-9 \mu$. Ascospores uniseriate, hyaline, oblong, $8-14 \rightleftharpoons 3-6 \mu$. Paraphysis and periphysis present. Collected on leaves of *Acacia suma* Buch. Ham. 20th Oct. 1957, Poona, by S. T. Tilak.

Stromata amphigena, irregulariter dispersa, atra, nitida, in epidermide evoluta, ambitu plus minusve orbicularia; perithecia globosa vel ellipsoidea, plus minusve depressa, $204-255 \rightleftharpoons 170-221 \mu$; asci cylindranei, antice late rotundati, postice in stipitem brevem attenuati, tenuiter tunicati, $50-68 \rightleftharpoons 6-9 \mu$; sporae monostichae, ellipsoideae vel oblongo-ovoideae utrinque vix vel lenissime attenuatae, rectae, raro inaequilatae, hyalinae, continuae, $8-14 \rightleftharpoons 3-6 \mu$; paraphyses et periphyses subnumerosae, filiformes.

Theissen & Sydow (1915) have reported *P. indica* on *Acacia penninervis* Siber. The present collection was compared with *P. indica* Theis. & Syd. and found to be quite distinct in having much smaller dimensions of ascocarps, asci and ascospores, uniseriate ascospores and presence of periphysis, as can be seen from the comparative table given below:

Comparative Table of *Phyllachora* from *Acacia* sp.

Species	Perithecia	Ascus	Ascospores	Periphyses
<i>P. indica</i>	$300-350 \rightleftharpoons 180-220 \mu$	$80-90 \rightleftharpoons 16-20 \mu$	$18-20 \rightleftharpoons 7-8 \mu$ biseriate	Absent
New species on <i>Acacia suma</i>	$204-255 \rightleftharpoons 170-221 \mu$	$50-68 \rightleftharpoons 6-9 \mu$	$8-14 \rightleftharpoons 3-6 \mu$ uniseriate	Present

This species is described in honour of Prof. C. R. Orton in recognition of his pioneer contributions to the genus *Phyllachora* and Kindred genera.

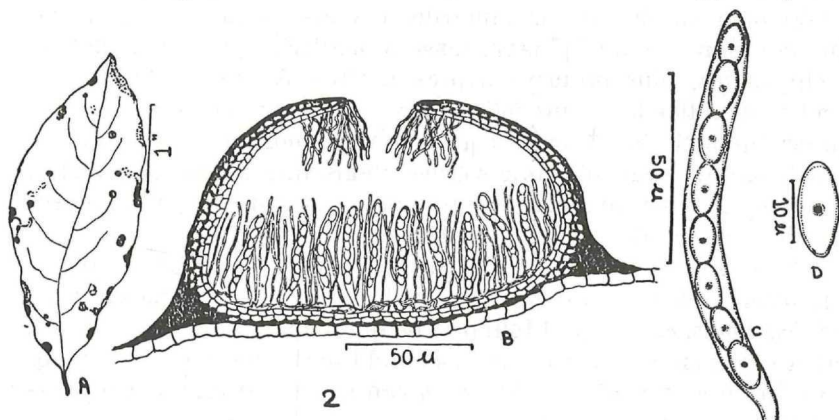
2. *Phyllachora agharkarii* Tilak sp. nov.

Stroma epiphyllous, black, irregular, scattered, uniloculate. Perithecia ostiolate bowl-shaped $250-340 \rightleftharpoons 200-300 \mu$. Asci 8-spored, hyaline, cylindrical, unitunicate, parallel, provided with an apical plug. $90-110 \rightleftharpoons 17-20 \mu$. Ascospores uniseriate, hyaline, 1-celled, oblong, $12-18 \rightleftharpoons 5-9 \mu$. Paraphysis numerous, filiform. Periphysis lining the ostiole. Collected on leaves of *Eleocarpus oblongus* Gaerten. 26th Jan. 1959. Mahabaleshwar by S. T. Tilak.

Stromata epiphylla, atra, dispersa, irregularia, unilocularia; perithecia globosa, plus minusve depressa, ostiolata, $250-340 \rightleftharpoons 200-300 \mu$; asci cylindranei, antice late rotundati, postice in stipitem brevem attenuati, 8-sporei, $90-110 \rightleftharpoons 17-20 \mu$; sporae monostichae, ellipsoideae vel oblongo-ovoideae, utrinque vix vel parum attenuatae, rectae, raro inaequilatae, hyalinae, continuae, $12-18 \rightleftharpoons 5-9 \mu$; para-

physes filiformes, numerosae; periphyses filiformes subnumerosae, parietis superficiem interiorem circa ostiolum circumdantes.

The fungus is characterised by the formation of typically bowl-



2. *Phyllachora agharkarii*. — a) Habit; b) Section through ascocarp; c) Ascus; d) Ascospores.

shaped ectophytic broadly ostiolate ascocarps which show great resemblance to the hysterothecia of the family *Hypodermataceae* of the *Discomycetes*.

The species is described after Dr. S. P. Agharkar in recognition for facilities at this Laboratory.

Ramkrishnan T. S. & K. (1948) have described a similar fungus collected from this host as *Catacuma eleocarp*, which, according to them, has multiloculate stroma, intra epidermal, round ascocarps and irregularly arranged ascospores. The collection made by the writer, thus is distinct from *C. eleocarp* in several morphological characters. Besides, the genus *Catacuma* is considered a synonym of the genus *Phyllachora*.

The type specimens have been deposited in the Herbaria of the Commonwealth Mycological Institute, Kew, England and Indian Agricultural Research institute, New Delhi, India.

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Literature.

- Ramkrishnan, T. S. & K. 1948. Proceedings, Ind. Acad. Sci., Sect. B, **28**; 57.
 Theissen, F. & Sydow, H. 1915. Die Dothideales. Ann. Myco. XXIII, p. 488.
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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

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