

enolization. Bonding through  $\text{NCO}^-$  groups is evident from a strong band around  $1525 \text{ cm}^{-1}$ .

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## CONTRIBUTION TO THE INDIAN CAPNODIACEAE

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#### INTRODUCTION

DURING the fungal survey of some of the forests of Western Ghats the authors collected a number of plants infected with sooty moulds. Critical study revealed that they belong to the genus *Capnodium* Mont. Batista and Cifferi<sup>1</sup> (1963) have recognised 13 species of this genus distributed throughout the world, based on the morphology of perithecia, asci and ascospores. From India 12 species are recorded (Butler and Bisby<sup>2</sup>, 1931 and 1962), but their identity is doubtful. It is therefore worthwhile to revise the Indian species of *Capnodium*, in the light of Batista and Cifferi's work (1963).

The authors made intensive collection of the species of *Capnodium* and the specimens have been deposited in the mycological herbarium of the Botany Department, Shivaji University. This paper deals with two new species of *Capnodium* Mont, collected during their studies.

#### (1) *Capnodium batistae* sp. nov.

Mycelium moniliform, septate with subglobose cells  $8.5-10 \times 4.5-8 \mu$ , usually dark brown, forms subiculum on the leaves.

Pycnidia flasklike, occasionally round, when flasklike often branched, narrow at the upper part and swollen at the middle part, dark brown,  $400-520 \mu$  in height,  $32-40 \mu$  in breadth at the middle part and  $16-18 \mu$  in breadth at the upper part. Pycnidiospores hyaline  $1-1.5 \mu$ , round.

Perithecia dark brown,  $80-96 \times 75-85 \mu$ , oval to round, but slightly narrow at the tip and arise usually from the base of the pycnidia. Perithecial wall made up of polygonal cells  $4.7-4.5 \times 6-6.5 \mu$ . Asci elliptical, bitunicate and 8-spored,  $24-28 \times$

$10-11.5 \mu$ , sessile, aparaphysate. Ascospores elliptical to elongate, with 2 transverse septa but without vertical septa, hyaline, slightly pointed at the tips,  $8-9 \times 1-1.5 \mu$ .

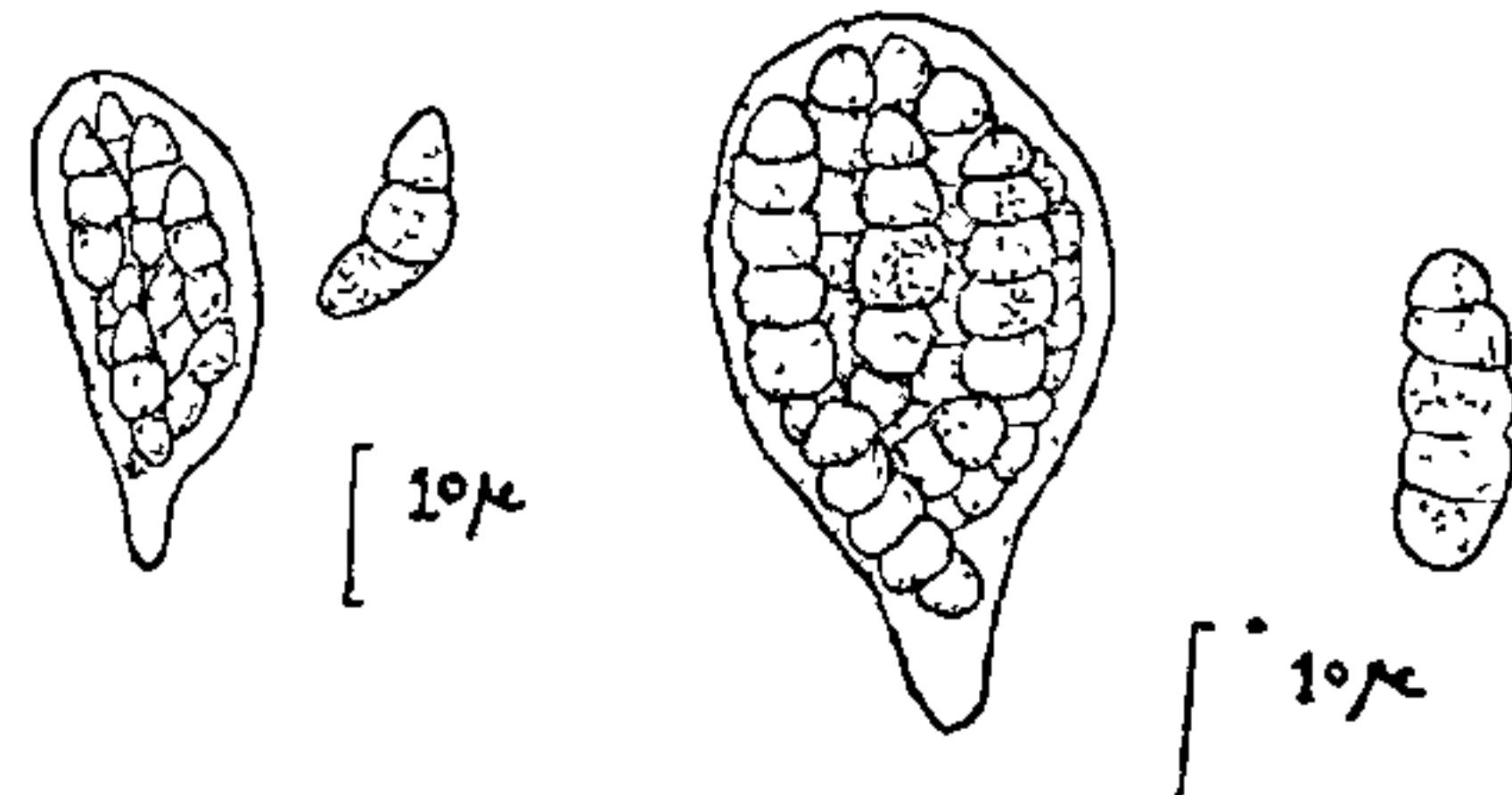


FIG. 1

Figs. 1-2. Fig. 1. Ascus and ascospore of *Capnodium batistae*. Fig. 2. Ascus and ascospore of *Capnodium kamatii*.

On the leaves of *Ficus carica* L. (Urticaceae) Agri. College Campus, Kolhapur, collected by D. K. Kulkarni on 7-7-1976. Maintained under reference number Cap. No. 1 (Holotype).

Table I clearly shows the difference between new species on *F. carica*, L. and *C. anoneae* Pat. which is reported on *F. glomerata*, L., *F. bengalensis*, L., *F. retusa*, L. and *F. bengamina*.

*Latin diagnosis.*—Mycelium moniliformae septatae cellulis subglobosae, magnit  $8.5-10 \mu \times 4.5-8 \mu$ , plerumque atro-brunneis, subiculum formentibus in foliis.

Pycnidia ampuliformiae, raro sphaerica, ubi ampuliformia sepe ramasae, angustatae ad apicem, et inflata, bulbosa, ad median; atro-brunneis  $400-520 \mu$  alta,  $32-40 \mu$  lata ad median,  $16-18 \mu$  lata ad apicem. Pycnidiosporae hyalinae, globosae  $1-1.5 \mu$  in diam.

TABLE I

Comparison between *C. anonae* Pat. on various *Ficus* hosts and *C. batistae*

Cap. sps.	Height of Perithecia	Width of Perithecia	Asci	Ascospores
1. <i>C. anonae</i> Pat. on various <i>Ficus</i> hosts except <i>F. carica</i> , L.	130-380 $\mu$	65-80 $\mu$	50-58 $\times$ 24-26 $\mu$	14-22.5 $\times$ 7.5-11 $\mu$ brown 1-4 vertical septa.
2. <i>C. batistae</i> sp. nov. on <i>F. carica</i> , L.	80-96 $\mu$	75-85 $\mu$	24-28 $\times$ 10-11.5 $\mu$	8-9 $\times$ 1-1.5 $\mu$ hyaline, 2 transverse septa, no vertical septa.

Perithecia atro-brunneis, 80-96  $\times$  75-85  $\mu$  ovoidea vel sphaerica, leviter angustata ad apicem, formentae plerumque ad basim, pycnidis. Peridis cellulis polygonis, 4.7-4.5  $\times$  6-6.5  $\mu$ . Asci bitunicatae, ellipsoideae, octosporae 24-28  $\times$  10-11.5  $\mu$ . Sessilae, a paraphysatae. Ascospores ellipsoidea vel elongatae, bi-septatae, verticalis-septa, nullae, hylinae 8-9  $\times$  1-1.5  $\mu$ .

This species is described after Professor A. C. Batista, the well-known Mycologist.

#### (2) *Capnodium ramatii* sp. nov.

Mycelium amphiphyllous, septate, constricted, cylindrical, branched, not hypopodiate 6-7.4  $\times$  9-10  $\mu$  forms subiculum on the leaves and petioles.

Pycnidia globose to subglobose 90-110  $\mu$  in diameter, blackish brown. Pycnidiospores hyaline 3-4.5  $\mu$ , round.

Perithecia globose to oval 100-112  $\mu$  in height. Perithecial wall made up of slightly round cells, 4-6.5  $\mu$ , Asci hyaline, elliptical to ovoid bitunicate sessile 8-spored, 40-42  $\times$  14-16.5  $\mu$ , Ascospores 4 septate blunt at the tip, 16-19  $\times$  3-3.5  $\mu$ .

On the leaves of *Mimusops elangii* L. (Sapotaceae) at Panhala collected by D. K. Kulkarni on 12-5-1976. Maintained under reference number Cap. No. 2 (Holotype).

*Latin diagnosis.*—Mycelium amphiphyllae, septatae, constricti, cylindracea, ramosis, non hypopodiata, 6-7.4  $\times$  9-10  $\mu$ , subiculum formentibus in foliis et petioli.

Pycnidia globosa, vel subglobosa, 90-110  $\mu$ , in diam. atrobrunneis, pycnidiospores sphaericae, hyalinae, magnit 3-4.5  $\mu$ .

Perithecia globosa, vel ovoidea, 100-112  $\mu$  alta, peridis, cellulis rotundatae, 4-6.5  $\mu$ , Asci hyalineae, ellipsoidea vel ovoidea, bitunicatae, sessils, octosporae, 40-42  $\times$  14-16.5  $\mu$ , Ascospores quadri-septatae, apicem obtusae, magnit 16-19  $\times$  3-3.5  $\mu$ .

The species is described after well-known Indian Plant Pathologist Prof. M. N. Kamat.

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#### INDIAN PHARMACEUTICAL CONGRESS

The Twenty-ninth Session of the Indian Pharmaceutical Congress will be held at Andhra University, Waltair, from 28th to 31st December, 1977. A steering committee with Shri M. R. Appa Row, Vice-Chancellor, Andhra University, as

Chairman and Prof. V. Subba Rao, Head of the Department of Pharmaceutical Sciences, Andhra University, as Organising Secretary will work out the details of the Congress. Further information can be had from the Organising Secretary.