

A new Species of *Sphaceloma* on Cardamom from India.

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With 2 Figs. in the text.

In January 1965, leaves of *Elettaria cardamomum* Maton in Coorg district, Mysore State India, were found to be severely infected by blotches. These blotches were brownish in color, generally along the margins and were either-scattered or in groups producing large necrotic patches (Fig. 1). At the centre of the blotches tiny black fruiting bodies were observed.

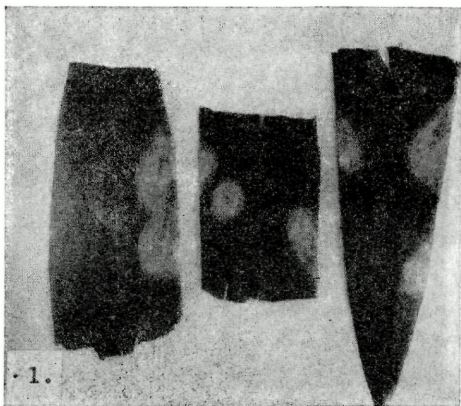


Fig. 1. Habit.

Critical microscopic examination revealed the presence of subcuticular, disc-shaped acervuli with aseptate, simple conidiophores arising from a basal stroma. Conidia ovoid, 1-celled. On the basis of these characters the fungus was identified as a species of *Sphaceloma* de Bary. M. J. Thirumalachar (1948) has reported a species of *Sphaceloma* occurring on *Curcuma* sp. of the family *Zingiberaceae* from Kemmangundi (Mysore State, India). Apart from this there is no other record of *Sphaceloma* occurring on host plants of

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Zingiberaceae. Therefore, a comparative study was made between the "Coorg" collection and *Sphaceloma curcumae* Thirumalachar. The results show that the "Coorg" collection is distinct from *S. curcumae* described earlier by M. J. Thirumalachar, besides being collected on a hitherto unreported host.

The "Coorg" collection of *Sphaceloma* therefore, merits accomodation as a new species on the basis of significant differences in morphological characters and dimensions.

Table.

Comparison between species of *Sphaceloma* affecting hosts of Zingiberaceae.

Species	Acervulus	Conidiophore	Conidia
<i>S. curcumae</i>	Subcuticular 31—50 μ broad	20—25 μ long coalescing laterally	not observed
<i>S. cardamomi</i>	Subcuticular 60—172 μ broad	8,64—17,28 \times 2,16 μ simple	4,32—6,48 \times 2,16 μ Ovoid

The fungus is, therefore presented as new to Science with Latin diagnosis:

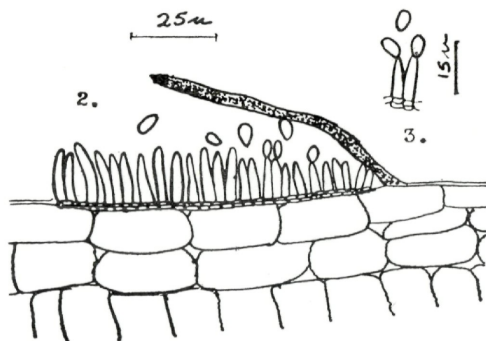


Fig. 2. Acervulus. — Fig. 3. Conidiophores and conidia.

Maculae epiphyllae, numerosae, ambitu ellipticae, saepe e folii margine ortae, tunc plus minusve irregulares, brunneae, ad marginem rubescentes, dispersae, postea plus minusve confluentes; acervuli numerosi, ambitu plus minusve orbiculares, subcuticulares, obscure brunneae, 50—172 μ diam.; strato basali minute pseudoparenchymatico, epidermidi arte adnato, strato tegente indistincte fibroso-celluloso, in maturitate irregulariter disrumpente; conidiophora continua, bacillaria, apicem versus attenuata, obtusiuscula, dense parallele ordinata, 8,64—17,28 \times 2,16 μ ; conidia acrogena, ellipsoidea, antice

late rotundata, postice saepe parum sed distincte attenuata, tunc plus minusve ovoidea, continua, hyalina, $4,32-6,48 \times 2,16 \mu$.

Sphaceloma cardamomi Muthappa sp. nov.

Infection spots epiphyllous, numerous, ovoid, brown with reddish margin, scattered initially coalescing in advanced stages. Acervuli numerous, disc-shaped, dark brown, $60-172 \mu$ broad. Conidiophores simple, hyaline, closely packed in parallel layers, arising from a basal stroma, $8,64-17,28 \times 2,16 \mu$. Conidia 1-celled, hyaline, borne singly on conidiophores, $4,32-6,48 \times 2,16 \mu$.

On the living leaves of *Elettaria cardamomum* Maton. Collected by B. N. Muthappa at Coorg district, Mysore State, India on 5th January 1965. M. A. C. S. No. 250 (Type).

The type is being deposited in the Herbarium Orientale, New Delhi, India and Herbarium C. M. I. Kew, England.

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Reference.

Thirumalachar, M. J., 1948: Some new Sphaceloma diseases of economic plants in Mysore. Trans. Brit. Mycol. Soc., 31: 1-6.

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