

## Salmonomyces — a new member of the Erysiphaceae

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With two Plates.

An ectophytic powdery mildew with profuse formation of perithecia was collected by the writer on *Acalypha ciliata* Forsk. near Poona, India during September 1956 and again in 1957. Ascigerous stages of the powdery mildews are generally encountered in the tropics never earlier than the close of the cold season viz. February-March. The collection of this state of the mildew at such an early period therefore, aroused unusual interest and the mildew was studied in detail. Causal observations of the perithecia showed, at first sight, resemblance of the genus *Phyllactinia* with its typical acicular bristle-like appendages. A more critical examination of the perithecia, however, revealed that the appendages, though stiff and bristle-like as in the genus *Phyllactinia* lacked the bulbous base, so characteristic of that genus. Besides unlike in *Phyllactinia*, where the appendages are few and placed equatorially, the Poona mildew had numerous appendages packed closely on the body of the perithecium. The mildew was typically ectophytic, a character not possessed by the genus *Phyllactinia*. The profuse formation of the ascigerous stage so early in the season is also a characteristic feature of the mildew. Combinations of these characters have so far not been previously described for any of the known genera of the *Erysiphaceae*. The fungus is, therefore, considered new to science and is accommodated as a new genus of the powdery mildew family and described after the Late Prof. E. S. Salmon in recognition of his pioneer monographic contributions to these fungi.

### **Salmonomyces** Chiddarwar nov. gen.

Mycelium hyaline, ectophytic with epidermal haustoria, Perithecia dark brown, globose; appendages acicular, bristle-like, simple, generally 1-septate, constricted at the septum, slightly swollen at base, never bulbous, light brown at the base, subhyaline at apex, usually tapering to a hyaline knob, numerous, closely packed; asci many.

Latin version: Mycelium hyalinum, superficiale, haustoriis in epidermidem penetrans; perithecia obscure brunnea, globosa; appendices numerosae aciculares, setiformes, simplices, plerumque 1-septatae, basin versus parum intumescens nec bulbosae, inferne pallide brunneae, superne expallescentes, in apice subhyalinae et saepe plus minusve noduloso-incrassatae; asci subnumerosi.

**Salmonomyces kamatii** sp. nov. Chiddarwar.

Infection spots hypophyllous, scattered; mycelium hyaline, ectophytic with globular haustoria in epidermal cells, evanescent; conidia in short chains, oval to barrel shaped, hyaline,  $23.8-34.0 \Rightarrow 8.5-11.9 \mu$ ; perithecia profuse, scattered, globular with broad concave cells, dark brown,  $85.8-114.4 \mu$ . Appendages acicular, bristle-like, simple, generally 1 septate, constricted, slightly swollen at base, never bulbous, light brown with a sub-hyaline apex, numerous, closely arranged,  $42.5-156 \Rightarrow 5.1-6.8 \mu$ . Asci many, usually 8-10, obclavate, pedicellate, immature on living host,  $34.0-45.9 \Rightarrow 17.0-20.4 \mu$ . Ascospores immature, hyaline, ovoid, 1 celled, probably 8 in number.

Hab. On leaves of *Acalypha ciliata* Forsk. Poona. September, 1956. Leg. P. P. Chiddarwar.

Latin version: Maculae hypophyllae, dispersae; mycelium hyalinum, superficiale, haustoriis globulosis in epidermidis cellulas penetrans, mox plus minusve evanescens; conidia catenulata, ovoidea vel doliiformia, hyalina,  $23.8-34 \Rightarrow 8.5-11.9 \mu$ ; perithecia dispersa, globosa  $85.8-114.4 \mu$ ; pariete pseudoparenchymatico, brunneo; appendices numerosae, aciculares vel setiformes, simplices, plerumque 1-septatae, ad septum constrictae, basin versus parum intumescens, nec bulbosae, pallide brunneae, in apice subhyalinae, numerosae  $42.5-156 \Rightarrow 5.1-6.8 \mu$ ; asci 8-10, obclavati, pedicellati, adhuc immaturi in foliis vivis, probabiliter 8-spori  $34.0-45.9 \Rightarrow 17.0-20.4 \mu$ ; sporae immaturae, hyalinae, ovoideae, continuae.

The genus, *Salmonomyces*, is thus a new member of the subfamily *Erysipheae* with its typical ectophytic habit and epidermal haustoria, oidial type of conidia, and perithecia with stiff acicular appendages and containing many asci.

The species is described after Prof. M. N. Kamat in recognition of his keen interest and contributions to Indian Phytopathology in general and powdery mildew fungi in particular.

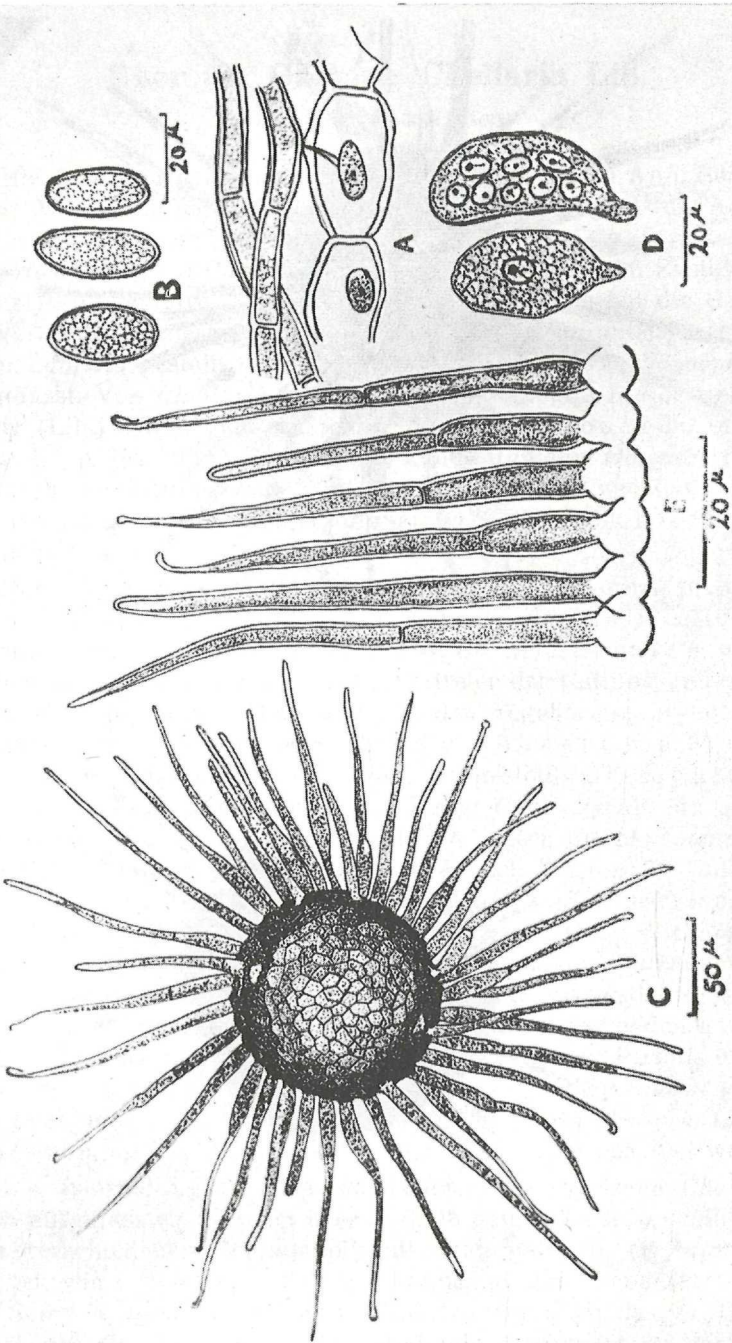
The type material has been deposited in Herb. Crypt. Ind. Orient, New Delhi and Herb. C. M. I., Kew, England.

The writer is grateful to Prof. M. N. Kamat for his keen interest and help in preparation of the manuscript, to Dr. S. P. Agharkar, Director of the Laboratory for facilities offered and to Dr. F. Petrak for Latin diagnosis.

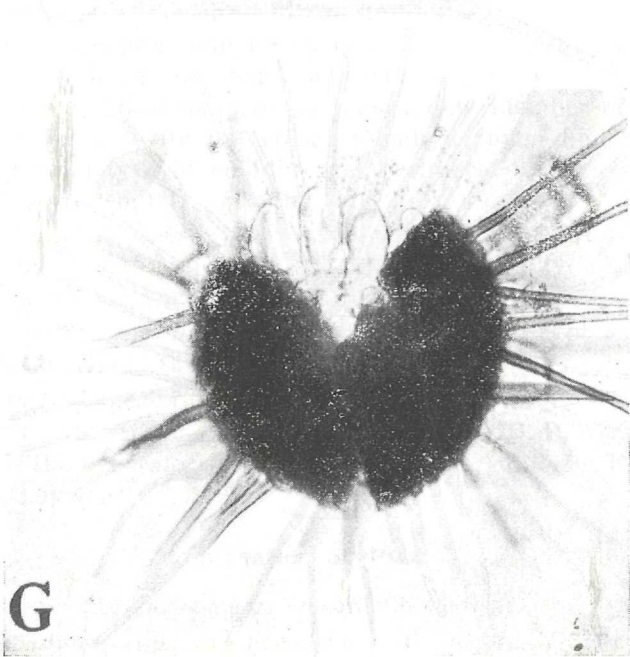
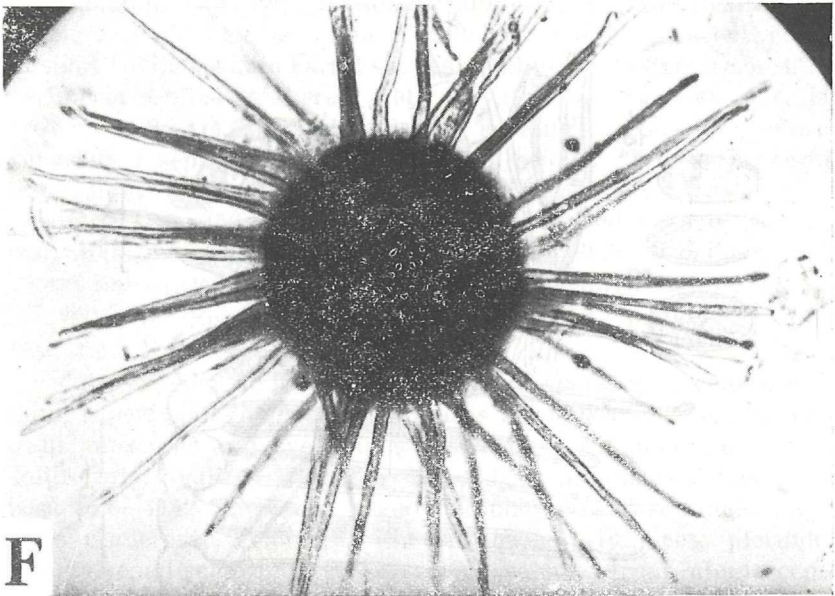
**Explanation of Plates.**

*Salmonomyces kamatii* Chiddarwar.

- I. A. Ectophytic mycelium and haustoria. — B. Conidia. — C. Perithecium.  
D. Immature asci. — E. Appendages magnified.  
II. F. Perithecium  $\times 400$ . (Microphotograph). — G. Perithecium letting out asci  $\times 400$ . (Microphotograph).







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