

Note

J Indian Bot Soc 68 (1989)

Identity of Powdery Mildews on Two Members of Rosaceae from India

Y.S. Paul & J.N. Kapoor

Division of Mycology & Plant pathology, IARI, New Delhi-110012

(Accepted February 1988)

Occurrence of more than one powdery mildews on the same host is well - known (Blumer, 1967; Boesewinkel, 1977). In the absence of ascocarps, assigning of this group of fungi has led to their wrong identification. In this report, powdery mildews of two members of Rosaceae, *Rosa* and *Spiraea* sp. were studied for correct identification.

Rose powdery mildew was caused by two species of *Sphaerotheca*, *pannosa* and *S. macularis*. The latter has not yet been reported from India and is described as a new record. Its salient features are:

Mycelium well developed; mature conidia borne in chains; fibrosin bodies present; Conidia ellipsoid to barrel shaped measuring 17-28 x 11-15 μm , ascocarp globose, 76-98 μm in diameter with small wall cells; appendages mycelioid crooked, of varying lengths usually less than the diameter of the ascocarp. Sometimes 6-7 times as long, hyaline to subhyaline; ascus 72-79 x 55-76 μm containing 8 ascospores which measure 17-25 x 11-17 μm .

S. macularis can easily be distinguished from *S. pannosa* by the absence of pannose mycelium. But *S. pannosa* has a restricted distribution being

Continued

confined only to temperate Himalayan region, while *S. macularis* is most common and widely distributed being found everywhere where rose is grown.

Specimens examined: *Rosa moschata* 24.8. 1908 Kashmir (HCIO 996); *Rosa* sp. D. Coventry, 1.11.1915, Simla (HCIO 2872); leg. Y. S. Paul, 15. 3. 1980, Solan (HCIO 33259); P. A. Pundit, 25. 1. 1908, Bombay (HCIO 2865); K.R. Kirtikar, Jan., 1908, Nagpur (HCIO 2867); K. P. Srivastava, 21. 3. 1918, Nagpur (HCIO 2873).

The powdery mildew of *Spiraea* sp. is characterised by persistent mycelium mainly on the upper surface of leaves, bearing conidia and conidiophores. Conidia borne in chains, cylindrical ellipsoid measuring 21-30 x 12-15 μ m. Conidiophores perpendicular to the mycelium, septate and measure 54-135 x 9-12 μ m. Fibrosin bodies distinctly present. Perithecia absent.

From India powdery mildew on this host was reported to be caused by *Phyllactinia corylea*

(pers.) Karst, (Gill, 1968). In the absence of ascocarp this genus could be easily diagnosed by its conidial state i. e. *Ovulariopsis*. The present specimen differs from this in having *Oidium* as its conidial state. Another mildew on this host has been reported by Blumer (1967) as *Podosphaera trydactyla* Wall ex de Bary. This fungus has *Oidium* as its conidial state containing distinct fibrosin bodies and matches the present specimen. The present mildew has been attributed to *Oidium* state of *Podosphaera trydactyla*, and comprises a new record to India.

Specimen examined: *Spiraea* sp., leg. Y. S. Paul, 14.6.1986. Kasauli (MHH 501).

REFERENCES

- BLUMER S 1967 Echte Mahltaupilze (Erysiphaceae) Ein Bestimmungsbuch für die in Europa vorkommenden Arten Veb Fischer, Jena, 436 pp.
- BOESEWINKEL, H J 1977 Identification of Erysiphaceae by conidial characteristics, *Revue Mycol* 41 493-507.
- GILL H. S. 1968 Studies on powdery mildews from India-III, *Mycopath Mycol Appl* 35 215-216.