
***Phragmidium fragariae-vestitae* sp. nov. on *Fragaria vestita* from India**

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A new leaf rust disease caused by *Phragmidium fragariae-vestitae* of *Fragaria vestita* Andr. was recorded and described for the first time from India.

Key words : *Phragmidium fragariae-vestitae*, *Fragaria vestita*, leaf rust disease

INTRODUCTION

A new leaf rust infection occurring on the host *Fragaria vestita* Andr. (Fam. Rosaceae) was observed during collections of fungi from Kumaon Hills, UP. in 1987. Microscopic observation revealed a species of *Phragmidium* having larger size of pedicel (50-160 µm) and orange to chestnut brown teleutospores. Hence the epithet "*fragariae-vestitae*".

***Phragmidium fragariae-vestitae* Agarwal. sp. nov.**

Urediniosporae nullae. Teleutosori minuti, hypophylli, dispersivel pervi, aggregati, atrobrowni vel nigri. 3 - 3.5 µm in diam, Telia hypophylla, dispersa, perva, usque 2.00 mm, scape coalescenta, pulverulenta, nigra. Teleutosporeae 36.00 - 80.00 × 22.00 - 28.00 µm, obovoidae, late cylindricae, 2-5 cellulis, plerumque 3-5 cellulis, leniter constrictatae, Oransio-breneae vel castarea-bruneae, leviae, 2-3 germpori ex ellulis. Pedicela hyalina, persistanta, usque 50-60 µm longa.

Habitat In foliis, vivis *Fragariae vestitae*, (Fam. Andr. Kedernath, Kumuon Hills, UP leg. D. K. Agarwal, October 1987, types HC10 43671; In folii

vivis *Fragariae vescae* L., (= *Fragaria* sp.) Mashora, Shimala Hills, HP. Leg., D. P. Misra Det. R. L. Munjal, typus HC.10, 20276.

Urediniospores no observed. Teleutosori minute, hypophyllous, scattered or in small clusters, forming dark brown to black spots on the abaxial leaf surface, 3-3.5 µm in diameter.

Telia hypophyllous, scattered, small, 2.0 mm in size, often coalescent, pulverulent, black. Teleutospores 36.0-80.0 × 22.0 - 28.0 µm in size, obovoid, broadly cylindrical, 2-5 celled mostly 3-5 celled, slightly constricted at the septa, ochraceous, orange brown to chestnut brown, smooth, with (2-) 3 germpores per cell. Pedicels hyaline, persistant, upto 50-160 µm long.

The present specimen was found to differ from *P. fragariastris* (Saccardo, 1891) Schroet in having 50-160 µm long, hyaline pedicel, as compared to 35 µm long. Butler and Bisby (1960) reported *Phragmidium fragariae* (Anon, 1999) (= *Puccinia fragariae*; Barkclay, 1890 a; 1890 b) on *Fragaria* sp. (Fam. Rosaceae), which incidentally also has smaller size of pedicel and mostly 3-5 cells per teleutospore.

Scanning of the literature (Bilgrami *et al.* 1976; Bilgrami and Jamaluddin, 1982; Sarbhoy *et al.*, 1982; 1986; 1996) revealed that the present fungus

constitutes a new report for the science.

Specimen examined : On living leaves of *Fragaria vestita* Andr., Kedarnath, Kumaon Hills, U. P., Leg., D. K. Agarwal, October 1987, HClO 43671 (Type); on leaves of *Fragaria vesca* L., (= *Fragaria* sp.), Mashobra, Shimla Hills, H.P., 28.5.1953, Leg., D. P. Mishra, Det. R. L. Munjal, HClO., 20,276.

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(Accepted for publication June 10, 2001).