

The Genus *Valsaria* in India

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With 2 figures

The genus *Valsaria* was originally erected by Cesati & de Notaris (1863) with *V. insitiva* as the type species. However, it remained unrepresented in the Indian flora until Mundkur and S. Ahmad (1946) reported two species i. e. *V. salvadorina* Mundkur and S. Ahmad on *Salvadora oleoides* Dene. and *V. tamaricis* Mundkur and S. Ahmad on *Tamarix articulate* Vahl. Recently Kapoor and Gill (1961) reported *Valsaria bambusae* Kapoor and Gill on *Bambusa* sp.

The genus is characterised by the black valsoid or pulvinate stroma in which perithecia are clustered, asci cylindrical, 8-spored, ascospores brown to almost black, 1-septate, uniseriate to biseriate.

During the investigation of different genera of ascomycetes from India the authors collected dried stems of *Acacia melanoxylon* Br. and *Bambusa* sp., heavily infected with some black fungus. A careful study revealed that these belong to the genus *Valsaria* Ces. & De Not. The fungus on *Bambusa* sp. was found to be *Valsaria bambusae* Kapoor & Gill. and is also compared with the type material. The fungus on *Acacia melanoxylon* Br., however, has been described as a new species on the basis of comparative morphology, besides being reported on a hitherto unreported host.

1. *Valsaria indica* sp. nov.

Stroma nigrum, valsoideum, disco obscure griseo vel nigrescente, ostioliis minute papillato erumpens, 675—1200 × 1350 μ; perithecia densiuscule stipata, in ostiola cylindracea, intus dense periphysata paulatim attenuata, 180—375 × 180—225 μ; asci cylindracei, breviter stipitati, 88—96 × 8—8.8 μ, paraphysibus filiformibus superati; sporae monostichae, ellipsoideae, medio septatae et valde constrictae, brunneae vel obscure brunneae, 13.6—15.2 × 5.6—7.2 μ.

Stroma black, valsoid, erumpent by a dark grey or black disc on which the clusters of ostioles appear as minute papillae, measuring from 675—1200 × 1350 μ, perithecia black-shaped with long necks, black, measuring from 180—375 × 180—225 μ, in small groups clustered within a valsoid black stroma, with a thin limiting layer; asci cylindrical, short-stalked, measuring from 88—96 × 8—8.8 μ, 8-spored, paraphysate,

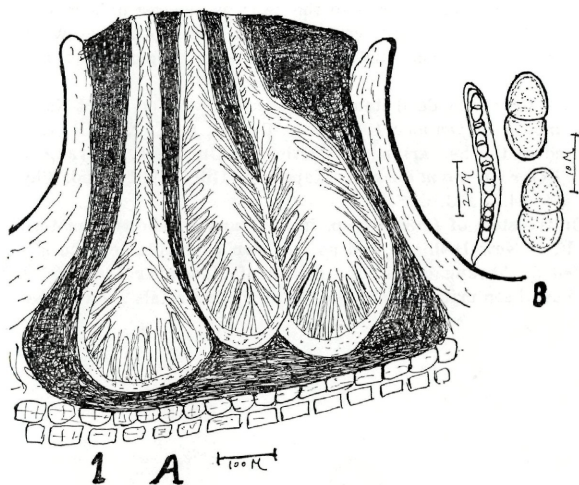


Fig. 1: *Valsaria indica* sp. nov. A. Section through the ascocarp. — B. Ascus and ascospores

Comparative table of the Indian species of *Valsaria*

| Species | Perithecia | Asci | Ascospores | Remarks |
|--|---------------|---------------------------|-------------------------------------|--|
| 1. <i>V. indica</i> sp. nov. on <i>Acacia melanoxylon</i> Br. | 180—375 μ | 88—96 \times | 13.6—15.2 \times 5.6—7.6 μ | No longitudinal striations, broadly elliptical |
| 2. <i>V. bambusae</i> K. & G. on <i>Bambusa</i> sp. | — | 119—144 \times 14 μ | 22—22 \times 10—11 μ | Longitudinal striations present, smoky brown |
| 3. <i>V. salvadorina</i> Mundkur & S. Ahmad on <i>Salvadore oleoides</i> Dene. | 350—450 μ | 140 μ | 16.5—24.5 \times 9—11 μ | Biseriate to irregularly biseriata |
| 4. <i>V. tamaricis</i> Mundkur & S. Ahmad on <i>Tamarix articulata</i> Vahl. | — | 87.5 \times 9.5 μ | 12.5—14.5 \times 6—7 μ | Not deeply constricted, uniseriate |

paraphysis filiform, longer than the asci; ascospores uniseriate, broadly elliptical, 2-celled, strongly constricted at the septum, brown to dark brown, measuring from $13.6-15.2 \times 5.6-7.2 \mu$; perishyses present in the neck.

Collected on the dead stem of *Acacia melanoxylon* Br. at Kadai Kanal in the month of October 1964. Leg. Tilak S. T. & S. B. Kale and deposited in the herbarium of Marthwada University, Aurangabad.

2. *Valsaria bambusae* Kapoor & Gill. (1961). Ind. Phytopath. 14: 149—153.

On the stem of *Bambusa* sp. from Dharwar. The type material from I. A. R. I. New Delhi as well as our own collections on the same host collected at Aurangabad in the month of November 1964 and January 1968, have been critically studied. Both the materials showed the typical

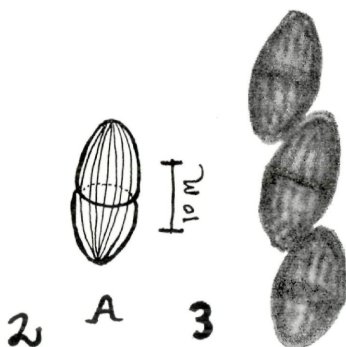


Fig. 2: *Valsaria bambusae* Kapoor & Gill. — Ascospore, showing the longitudinal striations

ascospores which are brown to dark brown but with longitudinal striations on the wall and this character has not been mentioned earlier.

3. *Valsaria salvadorina* Mundkur & S. Ahmad (1946). Mycol.

Pap. Imp. Mycol. Inst. 18: 1—11.

on *Salvadora oleoides* Dcne.

4. *Valsaria tamaricis* Mundkur & S. Ahmad (1946). Mycol.

Pap. Imp. Mycol. Inst. 18: 1—11.

On *Tamarix articulata* Vahl.

Key to the Indian species of *Valsaria*.

A. Stroma pulvinate wide spread initially innate, but later on superficial, black to grey.

1. Ascospores with longitudinal striations

V. bambusae.

2. Ascospores without longitudinal striations.

i) Ascospores uniseriate

V. tamaricis.

ii) Ascospores biseriate to irregularly biseriate

V. salvadorina.

B. Stroma innate-erumpent by a black to grey disc by rupturing the bark valloid. Ascospores broadly elliptical, strongly constricted in the middle

V. indica.

The type materials have been deposited in the herbarium of Marathwada University, Aurangabad and Cryptogamie Indiae Orientalis, New Delhi (India).

A c k n o w l e d g e m e n t s

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