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SHORT COMMUNICATION

**A New rust on *Albizia lebbbeck***

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During the exploration of the rust flora, leaves of *Albizia lebbbeck* infected with the rust fungi were collected and specimen was deposited at division of Plant Pathology, IARI, New Delhi (HCIO no. 46661). On the basis of spore morphology, the pathogen identified as *Sphaerophragmium acaciae* (Cooke) Magnus of the family Sphaerophragmiaceae. This is the first report of *Sphaerophragmium acaciae* in central India on *Albizia lebbbeck*.

**Key words:** *Albizia lebbbeck*, *Sphaerophragmium*, *Acacia*

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The taxonomic history of *Albizia lebbbeck* is somewhat convoluted. It was originally described by Carl Linnaeus as *Mimosa lebbbeck*. George Bentham placed the species in its present genus, but other authors believed that the plant described by Linnaeus was the related *Albizia kalkora* as described by Prain (based on the *Mimosa kalkora* of William Roxburgh), and erroneously referred to this species as *Albizia lebbbeck*. It is widely cultivated and naturalized in other tropical and subtropical regions. Its uses include environmental management, forage, medicine and wood. In India and Pakistan, the tree is used to produce timber. *Lebbbeck* is an astringent, also used by some cultures to treat the eye, flu, gingivitis, lung problems, pectoral problems, is used as a tonic, and is used to treat abdominal tumors. The bark is used medicinally to treat inflammation.

Annually, these plants suffer attacks of fungi that cause rust. The rust fungi (Urediniomycetes), being obligate plant parasites, constitute one of the most economically important groups of fungi. They belong to the order Uredinales, constitute one of the largest groups in Basidiomycetes. About 5000-6000 species have been recognized, and about

300 generic names have been proposed (Laundon, 1965). The majority of species in temperate regions have been well catalogued, but many new genera and species are still expected to be found in tropical and subtropical regions. There are close relationships between rusts and their host plants.

During the exploration of the rust flora of Jagdalpur and adjacent areas, leaves of *Albizia* infected with the rust fungi were collected from forest area of Jagdalpur, Chhattisgarh and specimen was deposited at division of Plant Pathology, IARI, New Delhi (HCIO no. 46661). For the identification of the pathogen these infected leaves brought into the laboratory for microscopic examination.

Pathogen identified as *Sphaerophragmium acaciae* (Cooke) Magnus on the basis of spore morphology of the family Sphaerophragmiaceae. *Sphaerophragmium* is a genus of sixteen species of which 13 on Leguminosae and 3 on Anacardiaceae, all native of Asia and Africa, except the *S. silveirae* (Jamaluddin *et al.* 2003)

The genus *Sphaerophragmium* is characterized by multicellular teliospores that are pedicellate and both vertically and horizontally septate (muriform). The teliospore walls are sculptured with simple or often furcate spines or projections. Spermogonia, aecia and uredinia not seen. Telia abundant on

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Fig. 1 : Leaves of *Albizzia* infected with rust

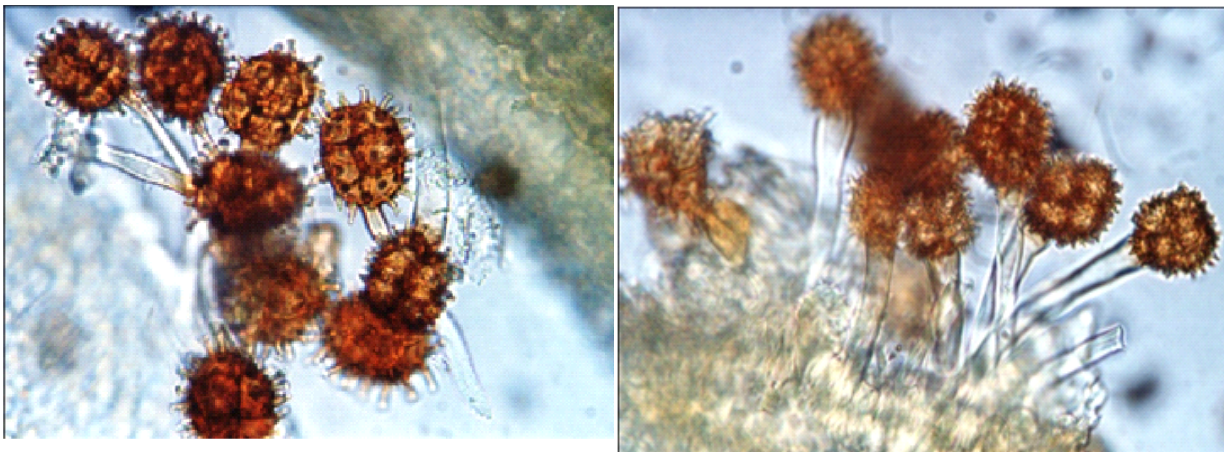


Fig. 2 : Teliospores of *Sphaerophragmium acaciae*

leaflet, hypophyllous, dull reddish-brown, subepidermal, erumpent, small, 0.2 to 1 mm diameter, scattered or aggregated in small groups, blackish- brown (Fig. 1). Teliospores borne singly on pedicels, reddish-brown, globose or subglobose, 4-6 celled but mostly four celled by vertical and horizontal septa, often arranged in a ball shaped head, 27.19-41.2 x 24.72-33.78  $\mu\text{m}$ , the wall covered by 16-24 appendages scattered over the spore surface, germ pores not observed (Fig. 2). Appendages pinhead like, at times bifurcated at apex. They are 4.12-8.12  $\mu\text{m}$  long, 1.64

4.12  $\mu\text{m}$  wide. Pedicel of teliospores hyaline, smooth, non-septate, 65.92-123.6  $\mu\text{m}$  long, slightly swollen in the upper half, 7.42-14.42  $\mu\text{m}$  wide at upper portion (just below the head region), slightly narrower at lower portion 4.94-9.48  $\mu\text{m}$  wide (Fig. 2).

## REFERENCES

- Jamaluddin, M. G. Goswami, and B. M., Ojha. 2003. *Fungi of India*. 1989-2001. List and References, Scientific Publishers. Jodhpur. pp. 326.