Short Communication

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SOME NEW AND INTERESTING RUST FUNGI FROM ANDHRA PRADESH

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A Systematic account of Rust Fungi (Uredinales) of Andhra Pradesh is made. Three species belonging to the genera *Kuehneola* Magnus, *Melampsora* Cast., *Uromyces* Unger are recorded in this paper. *Uromyces cleistanthedis* is described as a new rust taxon. The reports of *Kuehneola butleri* Syd. and *Melampsora medusae* Thuem., forms the first record of their occurrence from India.

Key Words: Systematics-Rust Fungi (Uredinales). Andhra Pradesh

The Rust fungi reported in this paper were collected by Ramesh and Bagyanarayana. The infected specimens were deposited in the Mycological Herbarium, O.U and the Holotype material is deposited in the Herbarium Cryptogamiae Indiae orientalis (HCIO), IARI, New Delhi.

Uromyces cleistanthedis sp. nov. (Fig. 1)

Spermagoniis and aeciis ignotis. Urediniis hypophylliis, densus, 0.2-04 mm diam., cinnamomeo brunnea, subcpidermalibus, erumpentis, pulverulentis; urediniosporiis 15.6-23.4x11.7-15.6 µm, membrana 1.6 µm crassa, apicalis 3.12 µm incrassatis, echinulatis, poris germinativis 3, equatorialibus.

Teliis hypophylliis, densus, 02.-05 mm diam., cinnamomeo brunnea, subepidermalibus, erumpenntis, pulverulentis, teliosporiis 23.4-37.2x15.6 19.5 µm, membrana 1.6 µm crassa, apicalis 4.8-8 µm incrassatis,pedicillatis.

Holoytpus: In follis vivis *Cleistanthus patulus* HK. f. ex. Planch (Euphorbiaceae), Thalakona forest, Chittoor Dist., A.P. 13th Feb., 1993, P. Ramesh, O.U. Myc. Herb. Ured. No. 235. HCIO.

Spermagonnia and aecia not known.

Uredinia hypophyllous, dense, 0.2-0.4 mm diam., cinnamon brown, subepidermal, erumpent, pulverulent; urediniospores 15.6-23.4x11.7-15.6 µm, wall 1.6 µm thick laterally. 3.2 µm thick apically, echinulate, germpores 3, equatorial.

Telia hypophyllous, dense, 0.2-0.5 mm diam., cinnamon brown, subepidermal, erumpent, pulverulent, teliospores 23.4-37.2x15.6-19.5 µm, wall smooth, 11.6 µm thick laterally, 4.8-8 µm thick apically, pedicillate.

Uromyces cleistanthedis is a distinct species. Although several *Uromyces* species viz., *U. euphorbiae, U. proeminens, U. hausakanthii,* etc., have been reported on the members of Euphorbiaceae family, *U. cleistanthedis* differ from them in having characteristic echinulate urediniospores with 3 equatorial germpores and an apically thickened wall. The teliospores are smooth walled and show an apical thickness of upto 8 µm. In addition so far no rust fungus has been reported on the host genus *Cleistanthus.*

Kuehneola butleri Syd. Sydow's Monographia Uredinearum III: 322. 1915. (Fig.2).

= *Chrysomyxa butleri* Syd. Annal. Mycol. X: 267. 1912.

= *Uredo lanneae* V. Hoehn. in Sitzengsber Kais Akad. Wissenschwein. math. Naturw. Klaussee Bd. C XXXI Ab 1: 339.1912.

Spermagonia and aecia not known.

Uredinia hypophyllous, scattered 0.5-0.8 mm diam., subepidermal,erumpent, pulverulent; urediniospores 23.4-27.3x11.7-19.5 µm, ovoid to obovoid, yellow in colour, wall 1.6 µm, thick, echinulate, aparaphysate, germpores not present.

Telia hypophyllous, scattered, minute, 0.3-0.5 mm diam., cream coloured, subepidermal, erumpent, pulverulent, teliospore chains born on short pedicels, each chain with 3-8 spores separated by horizontal septa; each teliospore 15.6x19.5-11.7-15.6 µm, apical cell pear shaped, white in colour, teliospore chain pedicillate, pedicel short, delicate.

On the living leaves of *Lannea coromandalica*

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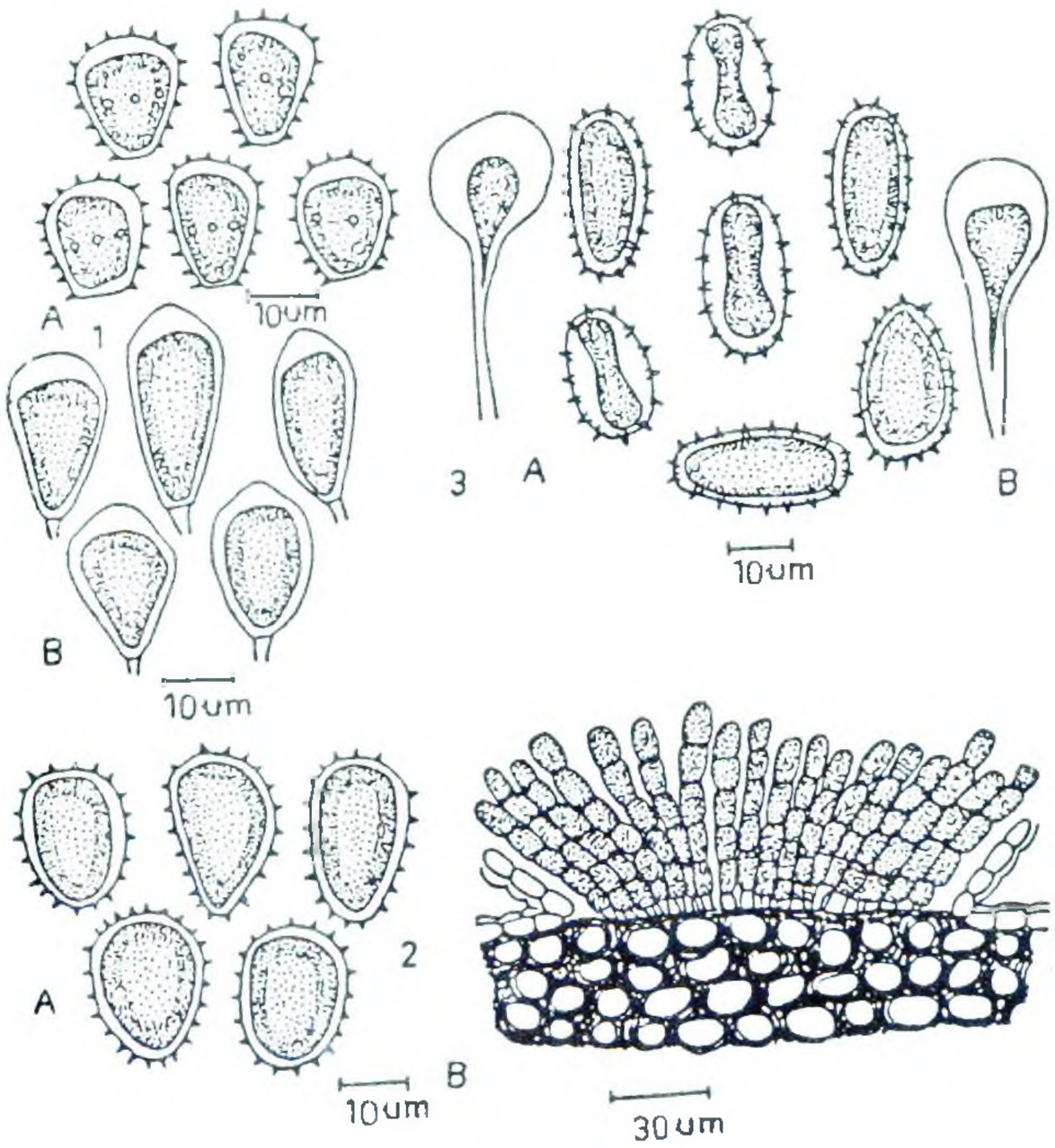

Figure 1. *Uromyces cleistanthedis* sp. nov.
(A) Urediniospores (B) Teliospores.
Figure 2. *Kuehneola butleri*. Syd.
(A) Urediniospores (B) Vertical Section of the telium
Figure 3. *Melampsora medusae*. Thuem
(A) Urediniospores (B) Paraphyses.

(Houtt) Merr., (Anacardiaceae). Sri Tirumala Hills, Chittoor Dist., (A.P.) 13th Feb. 1993. P. Ramesh O.U Myc. Herb. Ured. No.250.

A perusal of literature (Butler & Bisby rev. by Vasudeva, 1960; Rangaswamy *et al.*, 1970; Mukerji & Jayanthi Bhasin, 1986; Bilgrami *et al.*, 1979, 1981, 1991) revealed that so far *K. butleri* is not recorded from India. Therefore for the first time this rust is being reported from India.

Melampsora medusae Thuem. Bull. Torrey. Bot. Club VI: 216. 1878. (Fig.3)

Spermagonia and aecia not seen.

Uredinia hyupophyllous, dense, closely aggregated, pale orange brown, subepidermal, erumpent, pulverulent. 0.3-0.5 mm in diam., urediniospores 19.5-39x11.7-19.5 µm, ovate-ellipsoid, wall 1.6-3 µm thick, laterally thickened up to 5 µm, echinulate; paraphysate, paraphyses 42.9-58.5x11.7-19.5 µm, clavate to capitate.

Telia not present

On the living leaves of *Populus deltoides* Bartr. (Salicaceae), Sri Tirumala Hills, Chittoor Dist., A.P., 21st Jan 1995, P. Ramesh, O.U., Myc. Herb. Ured. No. 236.

So far there is no record of the occurrence of this rust fungus from India. *Melampsora medusae* is characteristic in the possession of echinulate urediniospores with bilaterally thickened walls.

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