NEW RECORDS

Melampsoropsis himalense: A new record from India

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Revisory studies of the genus Melampsora resulted in the redesignation of Chrysomyxa himalense Barcl. to M. himalense (Barcl.) Arth. The occurrence of uredinial state is reported for the first time from India. The description of the teleutospores has been amended based on earlier reports.

Melampsoropsis himalense (Barcl.) Arth. (II, III.), in Res. Sci. Bot. Congr. Vienne, pp 331-348, 1895. (Fig. 1).

Uredia hypophyllous, on petioles and mid ribs of leaves, orange yellow coloured pustules, subepidermal, erumpent, 1 mm to 2 cm wide. Urediniospores chamois colour (Ridgway, Plate XXX, b-1), with verrucose ornamentation, round to oval in shape, 26.5-43.5 x 12.5-31.0 μm in size, epispore thin, 0.5-1.0 μm thick, hyaline.

Telia hypophyllous, mostly on petioles and mid ribs forming small to elongated sori in a linear row, subepidermal, erumpent. Severe infection results in covering entire leaf area. Teleutospores born singly, catenulate, grouped together to form loosely held long chains, 93.0-127.0 μm in length. In a single chain, teleutospore number vary from 3-5 and a single teleutospore measures 25.0-29.5 x 6.0-9.5 μm, jasper red in colour (Ridgway, Plate XIII, middle-1), epispore thin, 1-1.5 μm thick.

Pycnial and aecial stages are not known. The uredial stage of the fungus has not been reported so far. This constitutes, the first report of its occurrence from India for the science. The teleutospore size 13.0 x 25.0 μm of a single teleutospore does not tally as reported by Saccardo (1895). Sydow (1915) has given the size of catenulate telia as 90.0 -120.0 μm in length and 22.0 –28.0 x 10.0-13.0 μm of a single teleutospore.


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A new host record of *Oidium phyllanthi* from India

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During December to March of every year, the plants of *Phyllanthus amarus* were affected by an obligate fungus *Oidium phyllanthi* which causes powdery mildew disease on the leaves. However, occurrence of *O. phyllanthi*, on the leaves of *Phyllanthus niruri* has been known.

*Oidium phyllanthi* showed septate conidiophores, which ramifies over the surface of the host forming white dense coating. The conidia are 12.5 –25 μm long, 7.5-12.5 μm thick and produced in basipetal succession at the apices of the conidiophore. The specimen is deposited in Herbarium Cryptogamae Indiae Orientalis (HCIO No. 44, 263), I.A.R.I., New Delhi.

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New host record for *Puccinia oxalidis*

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*Puccinia oxalidis* Diet. & Ell. was collected on *Oxalis dehtradunensis* Raizada from the Uttarakhal region during late August. The fungus constitutes a new host record for India. Specimens are deposited in D.S.B. Campus, Kumaun University, KUA. (No. 308 & 309, at IARI, HCIO. 44265) Coll. U.T. Palni & Y.P.S. Pangtey).

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Fusarium pallidoroseum – A New Host for *Parthenium hysterophorus*

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*Parthenium hysterophorus* L. is an obnoxious weed introduced to India as contaminant of wheat received from, Mexico. Floral parts of *P. hysterophorus* showed blight and die back symptoms. Isolation of the fungal organism revealed presence of *Fusarium pallidoroseum*. Pathogenicity of the fungus was established by Koch’s postulates and the culture has been deposited in ITCC No. 4533, IARI, New Delhi. Since the floral part is unaffected by the predator *Zygogramma bicolorata* Pallister the use of *F. pallidoroseum* seems bright in the biocontrol of this obnoxious weed. *F. pallidoroseum* can be integrated along with *Zygogramma* beetle for effectively managing the weed.

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A new report of *Sclerotinia sclerotiorum* on bottle gourd

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*Sclerotinia sclerotiorum* (Lib.) de Bary causing white rot disease of bottle gourd (*Lagenaria siceraria* (Mol.) Standl. was for the first time observed in Varanasi region of India on bottle gourd. This is a new host of this pathogen and first report in the world. Symptoms were observed on flowers, fruits, leaves and vines. Initial symptoms were observed as soft, watery, white rot of fruits clearly visible on infected portion. A perusal of
New records of rust fungi from India

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Five rust fungi encountered during the collection of fungal flora are listed and reported from India for the first time.


Occurrence of yellow leaf syndrome of sugarcane in India

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The occurrence of yellow leaf syndrome (YLS) in sugarcane was noticed recently in sugarcane. The suspected syndrome was noticed in the cultivated varieties as well as in some sugarcane germplasm collections maintained in the institute. The symptoms appeared initially on matured leaves, in maturing plant or ratoon crop five to six months after planting. The characteristic symptoms of the syndrome were yellowing of mid ribs and yellowish discolouration of laminar region adjoining to the midribs. In many of the susceptible varieties such as Co 7915, CoC 671, CoH 11 and CoS 8407 typical yellowing of mid ribs and laminar region were noticed on upper surface of the leaf followed by necrosis of discoloured laminar region. In certain severely infected fields shortening of internodes, bunching of leaves at the top and drying of infected clumps were recorded. Clear symptoms of YLS were observed on Co 86010, Co 86032, Co 97009, CoC 671, CoC 92061 and other varieties grown in different factory areas in Tamil Nadu. At world germplasm collection centre, Cannanore two *Saccharum robustum* clones IS 76 119 and MOL 4503 showed characteristic symptoms of YLS symptoms. However, these clones had normal growth and no deformities were noticed in the growth of the canes. Distribution of YLS in the field varied among the varieties.

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Similarly variation in the intensity of disease was noticed in different varieties. Under field conditions, the intensity of the syndrome varied from 0 to 85.0% in different varieties. DAS-ELISA studies showed that antigen extracts from YLS suspected clones reacted positively with sugarcane yellow leaf virus (SCYLV) antiserum (supplied by B.E.L. Lockhart, University of Minnesota, St. Paul, USA). Most of the suspected sugarcane clones with apparent symptoms of YLS showed positive reaction to SCYLV, indicating the association of the virus with the syndrome.

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Necrosis disease on cowpea, mungbean and tomato is caused by *Groundnut bud necrosis virus*

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Natural infection of Tospovirus on mungbean (*Vigna radiata*) and cowpea (*V. unguiculata*) and tomato (*Lycopersicon esculentum*), characterized by severe necrosis of leaves, stem, growing point, buds, pods, and fruits was recorded at experimental farms of Indian Agricultural Research Institute, New Delhi and Kerala Agricultural University, Vellayani respectively. Tospovirus isolates were identified by serological and nucleocapsid protein (N) gene sequence studies. Symptomatic leaf samples of cowpea, mungbean and tomato reacted positively with polyclonal antiserum against nucleocapsid protein of *Groundnut bud necrosis virus* (GBNV) (gift from Dr. D. V. R. Reddy, ICRISAT, Hyderabad) in direct antigen-coated enzyme-linked immunosorbant assay. The N gene originating from cowpea, mungbean and tomato Tospovirus isolates was amplified by reverse transcription and polymerase chain reaction (RT-PCR), cloned and sequenced (GenBank accession numbers AF515819, AF515818 and AF515817). The sequenced N gene from cowpea, mungbean and tomato isolates contained a single open reading frame of 831 nucleotides that could potentially code for a protein of 276 amino acids in all the three cases. Comparative sequence analyses showed that the sequences were highly identical to the N gene sequence of GBNV and shared 99% identity at amino acid levels. Serological and sequence studies thus suggest that cowpea, mungbean, and tomato necrosis diseases are caused by *Groundnut bud necrosis virus*.

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