

SHORT SCIENTIFIC NOTES

A New Leaf Spot Disease of *Ipomoea carnea* Jacq.

A leaf spot disease of *Ipomoea carnea* Jacq. was observed during the summer season around Madanapalle. The disease is characterised by large irregular dark brown necrotic areas, often lightly flecked with dark conidia. In later stages the central portions fall off giving a 'shot-hole'-like appearance.

The fungus was isolated and pathogenicity proved by spraying the spore suspension on detached twigs. The spores (conidia) were pale brown, muriform, obclavate with long beaks. These conidia with cross (2-7), longitudinal (1-8) and oblique (1-4) septa measure 36 to 75 μ (with beak) in length and 6 to 12 μ in diameter. The length of the beak varies from 6 to 45 μ . The confirmation of the causal organism as *Alternaria tenuissima* (Kunze ex Pers.) Wiltshire by Dr. Ellis of CMI, Ferry Lane, Kew, England (IMI 184577) is gratefully acknowledged.

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Foot Rot of Wheat Caused by *Fusarium graminearum* Schwabe.

The nature of foot rot and seedling blight of wheat is not fully known in India. Eleven fungi have been reported to cause root rot and foot rot^{1,3}. Wheat plants grown at the farm, College of Agriculture, Palampur (H.P.), showed necrosis of culm at soil level. The culm gets blackened and the plants are stunted in growth. Some of the plants are broken from that portion and are lodged whereas the other (in which blackening is less) stand normally. All such plants have smaller ears compared to healthy plants. *Fusarium graminearum* was isolated from such plants from culm portion. The pathogenicity of the fungus was proved by adding the culture to the soil. The seeds were sown afterwards. Only 38% seedlings survived and produced healthy ears. 20% plants died at seedling stage and 42% at maturity time. These plants showed typical foot rot symptoms. This study revealed that *Fusarium graminearum* Schwabe causes foot rot of wheat. *F. graminearum*, though not reported from India, has been known to be a

serious pathogen causing foot and crown rot of wheat in other countries².

The author is thankful to Director, C.M.I., Kew, Surrey, England, for the identification of the fungus.

Department of Plant Pathology, V. K. GUPTA,
Himachal Pradesh University,
Palampur (H.P.), November 15, 1974.

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Evidence of Polyploidy in *Stephensoniella brevipedunculata* Kash.

S. brevipedunculata has been cytologically investigated by Mehra³, who has reported eight mitotic chromosomes from gametophytic tissue. He did not come across any meiotic abnormality. The present author has also confirmed eight small (1.5 μ -2 μ long) chromosomes in the androgonial cells, but the findings of meiotic configurations clearly rule out the possibility of this species from Naini Tal to be at the monoploid level.

The thalli of *S. brevipedunculata* grow luxuriantly in different places of Kumaon and the material for the present study was collected from Naini Tal. Young antheridia and sporogonia were collected and fixed in July and August 1973. The method adopted for fixing, etc., was as in the previous case².

On examination of thirty-three dividing spore mother cells, the following groupings of the sixteen chromosomes were observed.

A. In 25% cells, chromosomes were arranged in four groups; each one being a tetravalent.

B. In 60% cells, six groups were observed consisting of two tetravalents and four bivalents.

C. In 9% cells, eight groups were seen, out of which one was tetravalent, five bivalents and two univalents.

D. In 6% cells eight groups of bivalents were observed.

These findings clearly indicate that *S. brevipedunculata* from Naini Tal is at the diploid level with $2n = 8$ and it might have evolved from some haploid member of the Hepaticae with $n = 4$. This view is in concurrence with the opinion of Berrie¹ and Proskauer⁴, according to whom all the ancestors

of Hepaticae had evolved from *Takak u* ($n = 4$) through doubling of chromosomes.

Mehra's failure to observe evidence of diploidy in species growing in these areas (W. H. and Punjab plains) may have been due to 100% incomplete chromosomal association at pachytene (6% in present findings). He has however reported diploidy in *Asterella reticulata*, *A. blumcana* and *Athalmia pinguish*.

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Kumaon University,
Naini Tal, U.P., November 19, 1974.

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***Polistes hebraeus* (Fabricius) Preying upon *Rhipiphorothrips cruentatus* Hood (Thripidae:Thysanoptera)**

Rhipiphorothrips cruentatus Hood is a polyphagous species and has been reported to feed upon *Vitis* spp., *Lagerstroemia indica*; *Punica granatum* Linn.; *Syzygium jambolana* (Linn.); *Careya arborea* Roxb.; *Anacardium occidentale* Linn.; *Terminalia catappa*, *Mangifera indica* and *Rosa* sp.¹⁻³. During survey on pests of ornamental trees and shrubs at Ludhiana in the months of August–November, 1974, rose plants were found to be attracting large number of the workers of the yellow wasp, *Polistes hebraeus* (Fabricius). Observations were, therefore, made on the status of this wasp in the rose ecosystem.

On close observation, the adult wasps were found feeding on the nymphs of the thrips. The workers started their activity at 09 hr and continued till 17 hr daily. On an average, a single shoot of the rose infested by the thrip was visited 14 times per hour and 3–5 minutes were spent per shoot by the nymph searching wasp which located its prey in the young tender shoots with the help of to and fro movements of its antennae. The starved wasps when put in glass jars (10 × 15 cm) along with the rose shoots each having twenty nymphs in each jar, it devoured 12–16 nymphs in an hour which further confirmed its predatory role.

Ananthakrishnan^{1,2} mentioned several insect-enemies of thrips but it seems to be a first record of *Polistes hebraeus* (Fabricius) being predaceous on *Rhipiphorothrips cruentatus* Hood feeding on roses.

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College of Agriculture, J. S. DHALIWAL.
Punjab Agricultural University,
Ludhiana, December 17, 1974.

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***Sophora tomentosa* Linn.—A New Host for *Macrosiphum (Acyrtosiphon) gossypii* Mordv. (Homoptera: Aphididae)**

The aphid, *Macrosiphum (Acyrtosiphon) gossypii* Mordv. has been recorded on cotton and described its pest¹. Two subspecies of this insect, *paczoskii* and *turanicum* were observed on stems of *Lepidium perfoliatum*¹ and cotton² respectively.

During March 1974, *Sophora tomentosa* Linn. a leguminous evergreen shrub cultivated in gardens around bungalows was found very severely infested with *M. (A.) gossypii* Mordv. in the nursery at Haryana Agricultural University, Hissar, India. Due to damage done by this aphid the growth of the plant was very much retarded. So far cotton and *Lepidium perfoliatum* are the only recorded hosts of this aphid. Hence, *S. tomentosa* Linn. is a new host for *M. (A.) gossypii* Mordv.

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Haryana Agricultural University,
Hissar (Haryana), March 20, 1975.

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