

## A New Record of *Entomophthora* sp. (Zygomycotina : Entomophthorales) on Sugarcane Leaf Hopper, *Pyrilla perpusilla* (Homoptera : Lophopidae) from Uttar Pradesh

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Of all the pests infesting sugarcane in India, the maximum economic loss is undoubtedly inflicted by *Pyrilla perpusilla* (Walker). Hence, build up of this fulgorid in sugarcane agroecosystem is regularly monitored by the Indian Institute of Sugar cane Research, Lucknow.

During one such survey on the IISR farm in October 1985, dead *P. perpusilla* adults were observed attached to the dorsal side of sugarcane foliage. Microscopic examination of the cadavers revealed fungal infection. Externally shot out conidia characteristic of *Entomophthora* were detected and internally hyphal bodies, profusely innervating the viscera, tracheae, tracheoles, etc., were observed (Fig. 1).

The progress of entomophthorasis in the host insect was studied. In the earlier stages of infection, the host exhibited white conidia which formed a halo that stood out conspicuously against the green foliage. In the advanced stages of infection, the host's body became brittle, hollow and translucent. Parts of the body not anchored to the foliage (head, abdominal extremity, Wing tips, etc.) tended to get detached and scattered by wind (Fig. 2).

*Entomophthora* infection in *Pyrilla* steadily progressed assuming a semiepizootic form by January 1986, when the adult mortality ranged from 3 to 35% ( $\bar{X}$  25%) in different sugarcane fields of the farm.

Another fungus *Hirsutella citrifomis*, (IMI Herbarium No. 238626) (Fig. 3), which has been recorded in the farm almost regularly

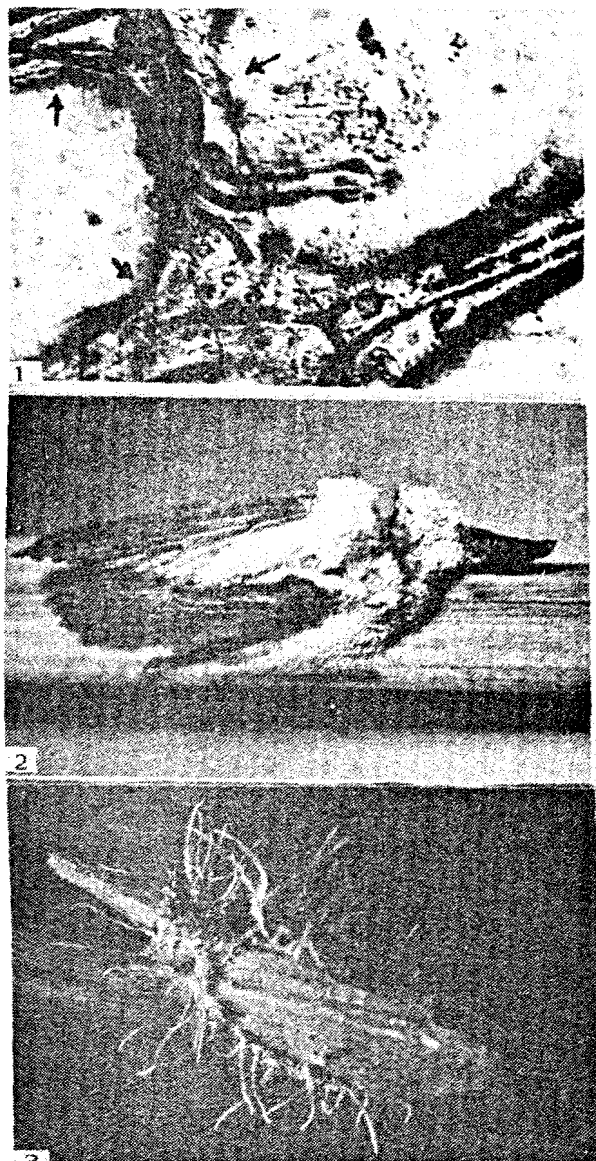


Fig 1-3. 1. Hyphal bodies of *Entomophthora* sp., inside wing tracheoles of *P. perpusilla* ; 2. Adult *P. perpusilla* showing typical infection with *Entomophthora* sp.; 3. Adult *P. perpusilla* infected with *H. citrifomis*, exhibiting emerging synnemata.

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since 1972 only when pyrilla population was moderate to high, was also present in an enzootic form, and caused a lower mortality of nymphs, from 5 to 8% ( $\bar{X}$  3.37%).

The occurrence of *Entomophthora* sp. on *P. perpusilla* is reported for the first time on pyrilla from India, while that of *H. citriformis* on the sugarcane leaf hopper is the first record from Uttar Pradesh. The latter entomopathogen has been reported from pyrilla from Bihar (Prasad, 1961) and Kerala (Anon, 1987).

As sizeable mortality of pyrilla by *Entomophthora* sp. was recorded, laboratory trials for its exploitation as a bio-control agent of this pest have been initiated.

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Key Words : *Pyrilla perpusilla*, sugarcane, *Entomophthora* sp., *Hirsutella citriformis*

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