

successive whorls, and then differentiate into three traces (D, V, D') (Figs. 4-6). Two of the latter are the dorsal carpel traces (D, D') which traverses into the style and extend upto the base of the stigma. The third trace (V) is eventually used up in supplying the pendulous ovule (Fig. 7).

Bechtel¹ reported three traced perianth in Moraceae and corresponds it to the palmate venation of the foliage leaf. He considers it a sign of primitiveness. Contrary to this, the perianth of *Broussonetia* is single traced though node is trilacunar three traced in this species.

The presence of two dorsal bundles in the gynoecium of *Broussonetia* suggests the presence

of two carpels of which one is suppressed while the other is fertile and bears a single ovule. The trace which supplies the ovule (V) seems to be the fusion product of the ventral bundles of both fertile and suppressed carpels.

The presence of pistillode in staminate flower indicates that unisexual condition in this species is derived from bisexual one.

School of Plant Morphology,
Meerut College,
Meerut, May 6, 1974.

V. SINGH.
P. K. DUBLISH.

1. Bechtel, A. F., *Am. J. Bot.*, 1921, 8, 386.
2. Dublish, P. K. and Singh, V., *Curr. Sci.*, 1972, 41, 752.

SHORT SCIENTIFIC NOTES

Aspergillus flavus Link., A Fungal Parasite on the Leaf-Eating Caterpillar, *Lymantria obfuscata* Walk.

Aspergillus flavus Link. is a saprophytic air-borne mould which grows on a variety of substrates such as grains, dairy products, vegetables, fruits, leather, and textile materials. The fungus is also known to infect a wide range of insects¹⁻⁵. This pathogenic action is attributed to the toxic action of the fungus³.

During a survey of the pests of cacao occurring in India which has been undertaken by the Central Plantation Crops Research Institute, Regional Station, Vittal, a brownish hairy caterpillar was found to be damaging severely the tender foliage of cacao. This pest has been identified as *Lymantria obfuscata* Walker (Lep., Lymantriidae) by the Commonwealth Institute of Entomology, London⁶. It occurs throughout the year, but its population increases considerably after the rainy season. During the rainy season, a few of the caterpillars collected from the field were found to be infected by the fungus *Aspergillus flavus* Link. (Ex. Fr. CMI 175413). The affected caterpillars first developed yellowish-white patches on the body, later they became sluggish and stopped feeding. In advanced stages of infection, whitish and greenish-olive coloured conidiophores of the fungus covered the entire body of the caterpillar which progressively become shrunken and mummified. A pure culture of the fungus was obtained from the infected insect in Czapek's agar and it sporulated within four days.

The pathogenicity of the fungus was tested by dusting its conidia on the different development stages of *Lymantria obfuscata*, viz., egg, caterpillar, pupa and adult, and incubating them at 30-32° C. Healthy caterpillars were also fed with cacao leaves sprayed with spore suspension of the fungus. More than three-fourth of these caterpillars under both the treatments developed the symptoms given above and died within 3-4 days. The re-isolated fungus from infected caterpillars was found to be similar to the original culture.

This is the first record of "the fungus on *Lymantria obfuscata* Walk.

The authors are grateful to the Director, Commonwealth Institute of Entomology, London, for identifying the pest, and the Director, Commonwealth Mycological Institute, London, for identifying the fungus.

Central Plantation Crops R. RADHAKRISHNAN NAIR.
Research Institute, T. PREMKUMAR.
Regional Station,
Vittal 574 243, S.K. Dt.,
Karnataka, September 22, 1973.

1. Amonkar, S. V. and Nair, K. K., *J. Invert. Path.*, 1965, 7, 513.
2. David, H., *Curr. Sci.*, 1964, 33, 349.
3. Krishnamurthy, C. and Sankar Naidu, M., *Ibid.*, 1971, 40, 666.
4. Misra, A. P., *Ibid.*, 1952, 21, 225.
5. Peethambaran, C. K., Wilson, K. I. and Panicker, K. G. K., *Ibid.*, 1972, 41, 821.
6. Premkumar, T., *Ibid.*, 1974 (In press).