

Proutista moesta (Westwood) and Other Additions to Insect Fauna on Coconut Palm

Close examination of 500 coconut seedlings (three to five years) was carried out once a month during 1983 in the farm of the Regional Station of the Central Plantation Crops Research Institute, Kayangulam with a view to catalogue the insects associated with coconut root (wilt) disease-affected palms and to identify the potential vector candidates for experimental transmission in the context of the report by Solomon, Govindankutty and Neinhuis (1983) of mycoplasma like organisms (MLOs) being associated with the disease. The observation brought out a total of 34 insects belonging to 23 families under eight orders, of which the undermentioned species do not find a place in the updated compilation of insects and mites recorded on coconut in different countries of the world (Kurian et al., 1979) or the subsequent lists of Auchenorrhyncha of coconut (Howard and Mead, 1980; Eskfi, 1982).

The bugs newly recorded on coconut are: *Nezara antennata* Scott. (Pentatomidae); *Exitianus indicus* (Distant) and *Idiocerus atkinsoni* Lethierry (Cicadellidae); *Proutista moesta* (Westwood) (Derbidae); *Sogatella frucifera* (Horvath) (Delphacidae) and *Pyrilla perpusilla* (Walker) (Laphophidae). Besides these species of Hemiptera, *Orthacris ruficornis* Bolivar (Acridiidae: Orthoptera) and *Aulacophora foveicollis* (Leucas) (Chrysomelidae: Coleoptera) were also recorded.

The mango leafhopper (*Idiocerus atkinsoni*), the paddy hopper (*Sogatella*

frucifera) and the sugarcane plant hopper (*Pyrilla perpusilla*) are perhaps migrants as they have been observed only occasionally in very low numbers. But the plant hopper *Proutista moesta* was present throughout the year on coconut in good numbers. They enjoy a very wide distribution in Kerala (India). In a rapid survey conducted by randomly selecting coconut palms, the insect was recorded from all places representing (i) all the districts of a contiguously disease-affected area of about 2,50,000 ha, (ii) southern, northern and eastern borders between the disease-prevalent and disease-free tracts, (iii) coconut gardens with different types of soil and (iv) isolated pockets of coconut root (wilt) disease incidence in the otherwise disease-free zone.

Proutista moesta feeds on coconut leaflets. Unlike *Sophonia greeni* (Distant) (Cicadellidae), the recently recorded leaf hopper confined to the tender fronds of coconut (Rajan and Mathen, 1984). *P. moesta* occurs on the leaflets of leaves belonging to the middle or outer whorls. It laid eggs in captivity on coconut leaflet, but they did not hatch and were eventually dried. Immature stages of the insect were never observed on coconut leaf. Fletcher (1914), citing it as a minor pest of sugarcane and jowar, mentioned that immature stages were completed in rotten wood. This insect has been observed in large numbers on paddy

and maize at Mannuthy, Trichur, Kerala, (Ramadas Menon, Personal communication). Nair and Menon (1963) recorded it as a minor pest on the leaves of arecanut palms.

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REFERENCES

- ESKFI, F. M. 1982. Leaf hoppers and plant hoppers feeding on coconut palm in Jamaica. *Trop. Agric. (Trinidad)* 59: 289-292.
- FLETCHER, T. B. 1914. *Some South Indian Insects*. Govt. Press, Madras. pp. 563.
- HOWARD, F. W. and MEAD, F. W. 1980. A survey of Auchenorrhyncha (Insecta: Homoptera) associated with palms in southern Florida. *Trop. Agric. (Trinidad)* 57: 145-153.
- KURIAN, C., SATHIAMMA, B., PILLAI, G. B. and PONNAMMA, K. N. 1979. Insects and mites associated with the coconut palm (*Cocos nucifera* Linn.) In *Technical Bulletin 2-Nematodes, fungi, insects and mites associated with the coconut palm*. Central Plantation Crops Research Institute, Kasaragod pp. 236.
- NAIR, R. B. and MENON, R. 1963. Major and minor pests of arecanut crop, *Areca catechu* Linn. *Arecanut J.* 14: 139-147.
- RAJAN, P. and MATHEN, K. 1984. *Sophonia greeni* (Distant) (Nirvanidae: Jassoidea), on leaves of coconut palm *Cocos nucifera* L. *J. Plant. Crops.* 12: 178-179.
- SOLOMON, J. J., GOVINDANKUTTY, M. P. and NEINHAUS, F. 1983. Association of mycoplasma like organisms with the coconut root (wilt) disease in India. *Z. Pflanzenkr. Pflanzenschutz.* 90: 295-297.

Heritability of Seedling Vigour in Coconut Palm

In coconut cultivation, selection of planting material from one year old seedling nursery is of considerable importance. Presently, this is done based on the vigour of the seedling as determined by girth at collar, height and number of leaves (Liyanage, 1953). In the present paper, the study of heritability of seedling vigour are discussed.

Forty adult West Coast Tall (WCT) palms growing in the research farm of Central Plantation Crops Research Institute, Kasaragod under scientific management were selected for the study. These palms included low, medium and high yielders in the yield range, 40-100 nuts annually. Seednuts collected during the months of January to March were used to raise the progeny nursery.

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