

BRIEF COMMUNICATION

ADDITIONS TO THE INSECT FAUNA ASSOCIATED WITH TREE SPICES¹

S. DEVASAHAYAM & K. M. ABULLA KOYA

National Research Centre for Spices, Marikkunnu, Calicut, Kerala, India 673 012

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Brief notes on six species of insects recorded for the first time on cinnamon, clove and nutmeg plants in the nursery in Kerala, India are given.

(Key words : Cinnamon, clove, nutmeg, new records of insect pests)

The tree spices, cinnamon (*Cinnamomum verum* Bercht & Presl.), clove (*Eugenia caryophyllus* (Sprengel) Bullock & Harrison) and nutmeg (*Myristica fragrans* van Houtton) are mainly cultivated in certain regions of Kerala, Tamil Nadu and Karnataka. These crops are generally free of any major insect pests in the field; however, they are susceptible to a few pests in the nursery. Regular monitoring of these crops in the field and in the nursery at the farm of the National Research Centre for Spices at Peruvannamuzhi (Kozhikode District, Kerala) brought out six new records of insect pests in the nursery. Brief notes on their morphology and the damage caused by them are reported here.

CINNAMON

1. *Conopomorpha (Acrocercops) civica* Meyr. (Lepidoptera : Gracillariidae)

Larvae infested tender leaves of seedlings. They fed on the tissues in between the upper and lower epidermis leading to drying up of infested portions. Adults had a wing span of 5.0 mm; wings were silvery grey with

faint white marks on forewing. During September 1989, 20.2 per cent of the seedlings were infested in a sample of 840 plants. An undetermined species of *Conopomorpha (Acrocercops)* has been recorded earlier on cinnamon (Singh *et al.* 1978).

2. *Lopharcha* sp. nr. *halidora* Meyr. (Lepidoptera : Tortricidae)

Larvae infested tender leaves of seedlings. Nature of damage was almost similar to that of *A. civica*; however, the mined areas were larger in size. Pupation occurred within the mined areas. Adults had a wing span of 12.5 mm; wings were blackish brown with faint white marks on the forewings. The infestation in the nursery was negligible.

CLOVE

1. *Kilifia accuminata* (Sign.) (Homoptera : Coccidae)

Occurred along with *Aspidiotus destructor* with a similar pattern of infestation. The general appearance of mature scales was also similar to that of *A. destructor*, but were smaller (diameter: 1.0 mm). The infestation in the nursery was negligible.

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2. *Aspidiotus destructor* Sign. (Homoptera: Diaspididae)

Observed on one year old seedlings. The scales were distributed on the lower surface of tender leaves. Mature scales were creamy yellow with a semi-transparent circular, slightly convex covering and measured 1.5 mm in diameter. During September 1989, 9.7 per cent of the seedlings were infested in a sample of 300 plants.

NUTMEG

1. *Protopulvinaria mangiferae* (Green) (Homoptera : Coccidae)

Observed on one year old seedlings and grafts. The scales were distributed on the lower and upper surface of tender and mature leaves and also on tender stems. Mature scales were creamy brown, oval and hemispherical and measured 3.0×1.75 mm. *P. mangiferae* has been recorded earlier on nutmeg in Malaysia (HILL, 1983). During November 1988, 14.2 per cent of the seedlings/grafts were infested in a sample of 250 plants.

2. *Pseudaulacaspis cockerelli* (Cooley) (Homoptera : Diaspididae)

Observed on one year old seedlings and grafts. The scales were distributed uniformly

on the lower surface of tender and mature leaves. Mature scales were white, flat and shaped like a fish scale and measured 2.25×1.5 mm. The pest infestation was also observed on *M. beddomei*, a related species of nutmeg. During November 1988, 12.4 per cent of the seedlings were infested in a sample of 250 plants.

The infestation of scales on clove and nutmeg resulted in yellow streaks and spots on the affected portions of the leaves. When control measures were not undertaken, severely infested leaves wilted and the plants presented sickly appearance.

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