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ON THE IDENTITY OF A LYMANTRIID DEFOLIATOR OF CASHEW AND COCOA IN SOUTH INDIA

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AMONG several species of the genus *Lymantria* Hubner occurring in India, *Lymantria obfuscata* Walker, defoliating alder, apple, apricot, false acacia, oak, pear, peach, plum, poplar, walnut, willow and other fruit trees in Jammu and Kashmir, and in Himachal Pradesh, is considered as a highly destructive pest comparable with *Lymantria dispar* L. in Europe and America. Several parasites of it are known in India[1–7]. Records of its occurrence on cashew and cocoa[3–5] in Tamil Nadu and Karnataka interested the authors while looking for a multivoltine brood of this species for studies on inter-specific competition of parasites of *L. obfuscata* available in Kashmir and Himachal Pradesh. An intensive survey for *L. obfuscata* in Tamil Nadu and Karnataka was made in 1985–86.

Large numbers of a destructive lymantriid larvae were collected on cashew in the plantations of Narimanam, Samakottai and Vriddhachalam (Tamil Nadu), cashew and cocoa in plantations around Vittal (Karnataka) and reared in the laboratory. Both male and female moths and the parasites obtained were referred to the CIE for determination. The moths were identified as *Lymantria ampla* Walker. The other lymantriid pests on cocoa recorded by Premkumar and Radhakrishnan Nair[5] were *Euproctis subnotata* Wlk., *E. guttata* Wlk. and *Dasychira mendosa* HB. Figures of a larva, a gravid female and a male moth of *L. obfuscata* were provided by them. These figures agree with *L. ampla* which is also reported as a pest of cocoa from Sri Lanka[2].

Neonatal larvae of *L. obfuscata* from Kashmir failed to develop on cashew leaves in the laboratory. The male and female genitalia of *L. obfuscata* and of the moth from cashew in the south differ significantly. The braconids *Aleiodes* sp., *Apanteles obliquae* Wilkinson, *Apanteles* sp. (*glomeratus* group), a eulophid *Euplectrus* sp., a chalcid *Brachymeria porthetrialis* Joseph, Narendran & Joy and the tachinids *Blepharipa* sp., *Carcelia* sp., *Exorista* sp. and *Palexorista* sp. were reared from *L. ampla* collected on cashew in Tamil Nadu. The parasite complex of *L. obfuscata* is different with the exception of *A. obliquae*. Around Bangalore, braconids *Apanteles* sp., *Apanteles* sp. (Gr.A) and *Meteorus* sp., tachinids *Blepharella lateralis* Macq., *Blepheripoda zebina* Walker, *Carcelia* sp.,? *buitenzorgiensis* Baranov, *Carelia* sp.,? *C. buitenzorgiensis* Baranov, *Drino* (*Prosturmia*) sp., *D* (*P.*) *lucagus* Walker, *Exorista japonica* Townsend, *E.* sp.,? *larvarum* L. and the ichneumonids *Barichneumon* sp., *Enicospilus* sp., *Pimpla poesia* Cameron, the chalcids *Brachymeria banksi* (Ashmead), *B. deesensis* Cameron, *B. euploeae* Westwood and a eulophid *Trichospilus* sp. parasitised *L. ampla* on *Ficus religiosa* and *Casuarina equisetifolia*. In the light of these observations the record of *L. obfuscata* on cashew and cocoa in the south is obviously erroneous. The damage potential of *L. ampla* to cashew and cocoa warrants consideration of biological control.

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RECORD OF MEALYBUG SPECIES ON GRAPEVINE IN KARNATAKA*

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In recent years, the mealybugs have caused severe damage to the grapevine *Vitis vinifera* in certain parts of India[1,2]. They are found on the leaves, shoots, nodes, bunches, under loose bark of grapevine etc. A survey was carried out in the major grape-growing areas of Karnataka to determine the species of mealybugs infesting grapevine during January–March in 1984-1986.

The present investigation revealed the presence of four species of mealybugs.

1. *Planococcus citri* (Risso): It was found to cause more than 75% damage to the bunches of the variety Black Champa at Hessaraghatta. In the nursery, severely affected vines died due to this mealybug attack. This is the first record on grapes in India though reports about this as a major pest of grapevine in more than ten countries are available.

2. *Maconellicoccus hirsutus* (Green): It was commonly occurring on grape bunches in all the major grape-growing areas of Karnataka causing 80% damage. This species was reported to occur on grapevine in Andhra Pradesh[1], Karnataka[2] and New Delhi[3].

3. *Nipaecoccus viridis* (Newstead): It was observed in two vineyards around Bangalore. A maximum of 5% damage due to this mealybug was observed. This mealybug species has been reported earlier in New Delhi[4].

4. *Dysmicoccus brevipes* (Ckll.): It was of minor importance around Bangalore. However it has not been reported earlier as a pest of grapevine elsewhere.

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RECORDS OF *BLEPHARELLA LATERALIS* MACQUART AND *CARCELIA* SP. — TWO INDIGENOUS PARASITOIDS OF *SPILOSOMA (=DIACRISIA) OBLIQUA* WALKER FROM BIHAR (INDIA)

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Bihar hairy caterpillar, *Spilosoma* (=*Diacrisia*) *obliqua* Walker is a polyphagous pest which is known to cause serious damages to a variety of economically important crops in India. With a view to exploring the possibility of its biocontrol, preliminary investigations were initiated to record its naturally occurring parasitoids. Pest larvae of different age-groups were collected from the field at weekly intervals and reared in the laboratory on the natural foods.

Of the two tachinid parasitoids, viz, *Carcelia* sp. and *Blepharella lateralis* Macquart, the former was recorded as larval parasitoid while the latter as larval-pupal one. Both these parasitoids were found active from mid-August to end-November, with the combined rate of natural parasitization varying from 3 to 6% only. Usually one and occasionally two fully grown maggots of *Carcelia* sp. came out from the body of one parasitized pest larva of pre-pupal stage through its lateral region and underwent pupation within 6–12 hr. On the other hand, the pest larvae parasitized by *B. lateralis* pupated normally but usually 1 or 2 days earlier than the healthy ones. But the pupae of parasitized caterpillars later became blackish and the parasitoid fly emerged usually one from one such pupa. Occurrence of *Carcelia* sp. as the larval parasitoid of *S. obliqua* was earlier reported from Punjab[1] and Jabalpur[2] while *B. lateralis* was recorded for the first time from India.

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