Geocoris ochropterus Fieber

In India, *Geocoris ochropterus* Fieber is a common species occurring in sunflower, cotton, lucerne, maize and tea ecosystems feeding on several insect pests. It is a general predator and feeds on thrips, whitefly, aphids, lepidopteran eggs, neonate larvae etc. A protocol has been developed for continuous rearing of *G. ochropterus*. It can be reared on *Sitotroga cerealella* and *Corcyra cephalonica* eggs. It was found effective against *Frankliniella schultzei* Trybom, spider mite and *Helicoverpa armigera* eggs. A significant behaviour of this bug is the non preference of parasitized eggs. Thus, this predator could be used along with egg parasitoid against lepidopteran eggs. It has been observed that fecundity of this bug increased when pollen is provided.

Egg

Nymph

Adult

Geocoris superbus Montandon

Geocoris superbus is a very good predator of soft bodied insects and found feeding on mealybugs. This predatory bug inhabits the leaf-margin roll galls produced by psyllid, on the leaves of Indian banyan tree. Nymphs of this bug remain sheltered inside these roll galls, along with mealybug, *Phenacoccus parvus* Morrison, thrips, aphids, predatory mirid *Chimairacoris lakshimiae* Yasunaga, Schuh, and Cassis and an undescribed species of the genus *Anthocoris* Fallén (Anthocoridae). In jamun also it is found inside the leaf roll and associated with mealybugs and aphids. This geocorid bug can be successfully reared on *S. cerealella* eggs and *Phenacoccus solenopsis*.

Egg Nymph Adult

Dortus primarius Distant

Dortus primarius Distant (Hemiptera: Miridae) belongs to subfamily Deraeocorinae with two species known so far in the genus *viz.*, *D. primarius* Distant and *D. chinai* Miyamoto. Members of tribe Deraeocorini are reported to feed on eggs, larvae (Lepidoptera and Coleoptera), thrips and mites. *Dortus primarius* was found associated with thrips and other soft bodied insects on cauliflower, okra, brinjal, bitter gourd and maize. This predatory bug is amenable to rearing. It has been evaluated against *F. schultzei* and *Tuta absoluta* eggs/larvae both in lab and greenhouse and found effective in managing these insect pests along with other interventions.

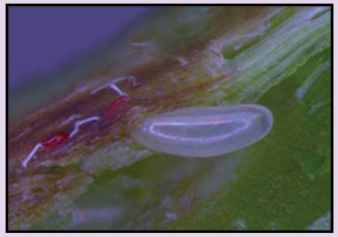
Egg

Nymph

Adult

Termatophylum orientale Poppius

From India, so far two species of *Termatophylum* Reuter and one species of *Termatophylina* Carvalho have been reported in the tribe Termatophylini of the subfamily Dereaocorinae (Miridae). *Termatophylum orientale* Poppius was collected from mango. papaya and flowers of copper pod tree (*Peltophorum pterocarpum*) wherein it was found associated with thrips, mango leaf webber eggs and other predators. Earlier it was reported from Taiwan and later from Japan by Nakatani. This predatory mirid is a new record to India and can be successfully reared in the laboratory on UV treated *Corcyra cephalonica* eggs.



Egg

Nymph

Adult

***Blaptostethus pallescens* Poppius**

The species inhabits corn (*Zea* sp.), *Terminalis bellarica*, *Tithonia diversifolia* and castor bean plant (*Ricinus communis*) and is found associated with the aphid *Rhopalosiphum maidis* (Fitch), thrips and the two-spotted spider mite *Tetranychus urticae* Koch. This predator has also been evaluated as a biocontrol agent and potential predator of the maize stem borer, *Chilo partellus* (Swinhoe), *Tetranychus urticae*, mealybugs *Phenacoccus solenopsis, Paracoccus marginatus, Frankliniella schultzei* and *Tuta absoluta*. This anthocorid is amenable to rearing. Currently it is being used to manage thrips and mite pests in polyhouse.

Nymph

Adult

***Cardiastethus exiguus* Poppius and**

***Cardiastethus affinis* Poppius**

These both species were reported as potential predators of eggs and neonates of coconut black headed caterpillar *Opisina arenosella* Walker. Both the species are amenable to rearing. Recently, *C. affinis* was evaluated against *Frankliniella schultzei*. *Cardiastethus exiguus* was also recorded as a predator of cassava mealybug in People's Republic of Congo.

C. exiguus

C. affinis

***Xylocoris* (*Arrostelus*) *flavipes* (Reuter, 1875)**

The genus *Xylocoris* is represented by five species in India. In India *X. flavipes* is found mainly in stored grains like wheat and rice and feeds on several storage pests including *Tribolium castaneum* and bruchids. The species has been reported to predate on 13 species of insects belonging to three orders. In India, besides being recorded in storage bins and warehouses, it was also recorded on *Butea monosperma*, *Ficus* sp. and maize. Evaluation trials taken up in different parts of India have indicated that it is a potential bio-control agent for targeting both *Corcyra cephalonica* (rice moth) and *Sitotroga cerealella* (Angoumois grain moth).

Nymph

Adult

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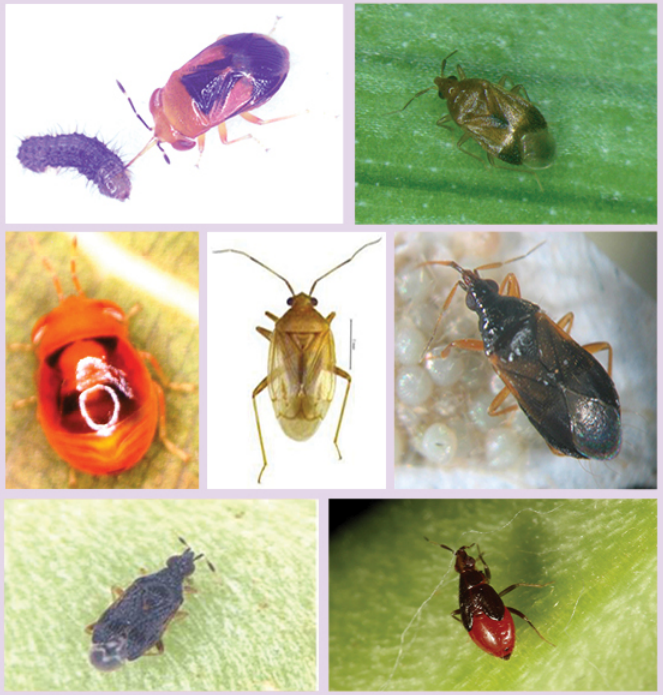
Potential Indian Predatory bugs at the ICAR-NBAIR Live Insect Repository



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