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28. FIRST RECORDS OF PREDATORS OF COTTON PESTS IN THE PUNJAB

During surveys of the cotton crop from 1980-82 in the main cotton belt of the state (Ferozepur, Faridkot and Bhatinda districts) and in Ludhiana, adults of a number of predators were observed feeding on the insect pests of cotton for the first time. *Paedrus fuscipes* Curtis (Staphylinidae; Coleoptera), *Geocoris ochropterus* Slater (Lygaeidae; Hemiptera), *Coranus aegypticus* Fabricius (Reduviidae; Hemiptera), *Coranus* sp., *Zelus* sp. (Reduviidae; Hemiptera) and *Cerceris* sp. (Sphecidae; Hymenoptera) were feeding on the nymphs of cotton jassid, *Amrasca biguttula biguttula* (Ishida). All of these except *P. fuscipes* sucked the body fluid of the pest. Out of these *G. ochropterus*, *Coranus* spp. and *Zelus* sp. predated upon the young larvae of pink bollworm, *Pectinophora gossypiella* (Saunders), *Earias insulana* Boisduval and *E. vittella* Fabricius larvae. *Micraspis cardoni* (Weise) mainly predated upon the *Aphis gossypii* Glover. High population of *P. fuscipes*

is usually found in Egyptian clover, winter and fodder maize crops from where it migrates to cotton during June. Population of the remaining predators appear on the crop mainly during August and September which is the peak period of boll formation and bollworm attack. However, their population at farmer's fields remained quite low perhaps because of insecticidal applications which needs further investigations. *P. fuscipes* was earlier reported from India attacking rice leaf hoppers in Madhya Pradesh (Upadhyay and Diwaker 1983, Shukla *et al.* 1983).

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