

SCIENTIFIC NOTE

RECENT RECORD FOR PARASITOID SPECIES OF CERTAIN COTTON PESTS IN UGANDA

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A large complex of insect and spider mite species is found in cotton agro-ecosystems wherever the crop is grown. Of this large number, comparatively few are pests of economical significance. Many are beneficial species, either arthropod parasitoids or predators. EL-Heneidy *et al.* (1996) reported that available literature showed that no studies have been done in Uganda on the natural enemies of cotton pests, since the surveys of Coaker (1959), Greathead (1966) and Nyiira (1970).

Intensive samples were collected from the most economic insect pests of cotton mainly, the aphid, *Aphis gossypii* Glov., the bollworms, American (ABW), *Helicoverpa armigera* Hb., the spiny (SBW), *Earias insulana* Boisid. and *E. pibлага* Wlk., and the pink bollworm (PBW), *Pectinophora gossypiella* Saunds. Immature stages were reared under laboratory conditions for parasitoid emergence. Recovered parasitoid species were identified by the British Museum of Natural History (BMNH) in London, Institute of Entomology, Czech Academy of Science, Czech Republic, and Universita' Degli Studi Di Napoli in Italy.

The parasitoid species listed below were recorded from the considered following hosts:

A. gossypii:

- 1- Braconidae: *Aphidius colemani** Vier.,
- 2- Encyrtidae: *Syrphophagous* (= *Aphidencyrtus*) *africanus* * (Gahan),
- 3- Pteromalidae: *Pachyneuron* sp.*, and
- 4- Ceraphroidae: unidentified sp.

ABW:

- 1- Braconidae: Agathidinae*, *Apanteles* sp., *Cardiochiles variegatus* Szepilgeti (Cardiochilinae), *Dolichogenideu aethiopica** Wilkinson (Migrogasterinae), and *Meteorus laphygmarum* Brues. (Euphorinae),
- 2- Eulophidae: *Pediobius near foveolatus** (Crawford).
- 3- Ichneumonidae: *Charops ater* Szepilgeti, *Diplazon laetatorius** F., and *Netelia* sp.* (Tryphoninae),
- 4- Tachinidae: *Palexorista laxa** Curran.

SBW:

- 1- Braconidae: *Agathis bruesi* Shenefelt, *Aleiodes* spp. (Rogadinae), *Apanteles* spp., *Dolichogenideu aethiopica** Wilkinson, Euphrinae, and *Protomicroplitis fasciipennis** Gahan (Microgasterinae),
- 2- Fitigidae: *Anacharoides** sp.,
- 3- Ichneumonidae: *Diplazon laetatorius** F., and *Netelia** sp. (Tryphoninae),
- 4- Tachinidae: *Peribaea** sp., and *Linnaomya agilis** Curran.

PBW:

- 1- Braconidae: *Bracon* sp. (Braconinae), and *Bracon kirkpatricki* Wilkinson,
- 2- Elasmidae: *Elasmus ? johnstoni* Ferriere, and
- 3- Eupelmidae: *Eupelmus** sp.

Besides, some parasitoid species were also recorded on the larvae and /or pupae of the common predators found associated with cotton pests: *Oomyzus near sempronius** (Erdos) (Chalcididae) ex. pupae of the lacewing, *Chrysoperla carnea* Steph., *Homalorylus eytelweini** (Ratzebug) (Encyrtidae) ex. larvae of the coccinellid, *Cheilomenes lunata*, *H. ? flaminius** (Dalman) ex. larvae of the coccinellid, *Seymnus* sp., and *Diplazon laetatorius** F. (Ichneumonidae) ex. pupae of the hover fly, *Syrphus* sp.

* Species were recorded for the first time in East African region during this survey.

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REFERENCES

- Coaker, T. H. 1959. Investigations on *Heliothis armigera* (Hb.) in Uganda. Bull. Ent. Res. 50: 484 - 905.
- EL-Heneidy, A. H.; M.B. Sekamatte; N. Mwambu and C. Nyamutale. 1996. Integrated Pest Management Approach in Cotton Agro-ecosystem in Uganda. 1- Basic Field Data. African Crop Science Journal. (In press).
- Greathead, D. T. 1966. Memorandum of the parasites and possibilities of Biological Control of East Africa Cotton Boll Worms. Commonwealth Institute of Biological Control, East African Station, Kawanda, Uganda.
- Nyiira, Z. M. 1970. A note on the natural enemies of lepidopterous larvae in cotton bolls in Uganda. Ann. Entomol. Soc. America, 63, 1461 -1462.