SCIENTIFIC NOTE

Pentatomofauna Associated with Sunflower in Northern Paraná State, Brazil

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RESUMO - Realizou-se um levantamento das espécies de pentatomídeos associadas ao girassol (*Helianthus annuus* L.) na região de Londrina, norte do Paraná durante abril-maio de 1997. Seis espécies foram capturadas: *Euschistus heros* (F.), *Piezodorus guildinii* (West.), *Acrosternum armigera* (Stal), *Nezara viridula* (L.), *Thyanta perditor* (F.) e *Thyanta* sp. Observou-se ninfas de quatro espécies, exceção de *P. guildinii* e *Thyanta* sp. Foram coletadas posturas apenas de *A. armigera*.

PALAVRAS-CHAVE: Insecta, Hemiptera, Heteroptera, *Helianthus annuus*, percevejos.

Several species of stink bugs (Pentatomidae) have been reported on sunflower (*Helianthus annuus* L.) in many parts of the world, including Nigeria (Misari 1990), India (Nath & Sen 1977, Arya *et al*. 1995), Australia (Broadley 1978), South Africa (Annecke & Moran 1982), and USA (Lynch & Garner 1980, Hilgendorf & Goeden 1981), among others.

Sunflower is a relatively new crop in the Northern area of Paraná state, in Brazil. It has been introduced and cultivated in several areas of Brazil with potential to become an important crop (Castro *et al*. 1996). Not much has been done regarding to the insect fauna associated to this crop in Paraná state, except for the surveys conducted in the early-mid 80's (Villas Bôas *et al*. 1983, Villas Bôas & Moscardi 1985). Recently, we have observed several species of pentatomids on sunflowers plants in the Londrina area, northern Paraná state (latitude 23° 11' S, longitude 51°, 11' W). Because of that a survey on the species of stink bugs colonizing sunflower in this area was conducted.

During April-May 1997, 10 nearly weekly samples of eggs, nymphs, and adults of pentatomids were taken on sunflowers plants. Each sample consisted of examining 40 plants selected at random from the R5 stage of development (full bloom - Schneiter & Miller 1981) up to physiological maturity (R9). The number of eggs, nymphs and adults of each species found were recorded in the field and the adults taken to the laboratory where they were killed, pinned, and kept in the insect

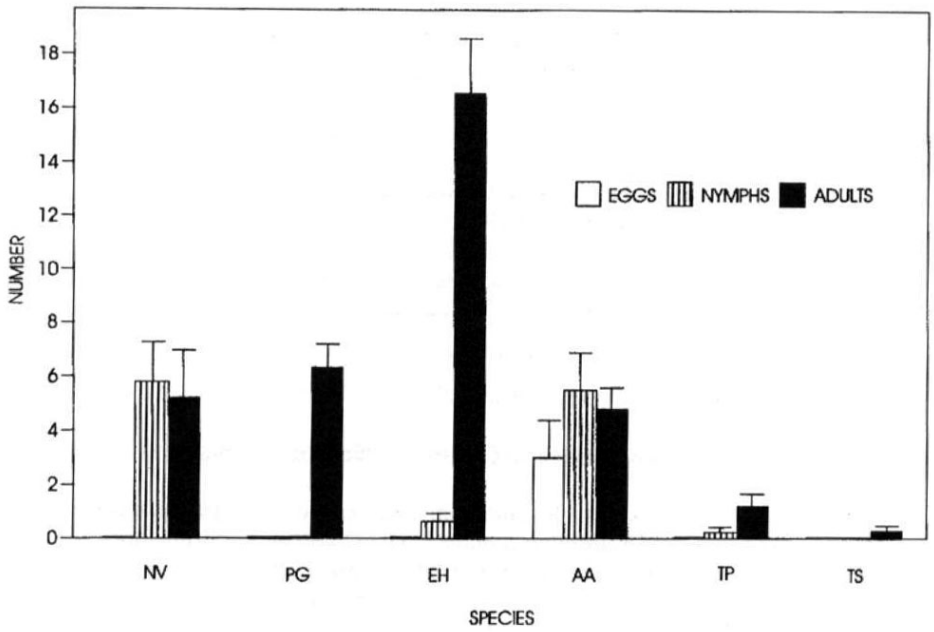

Fig. 1. Mean (± SEM) number of eggs, nymphs and adults of pentatomids captured on sunflower plants in Londrina, PR. NV = *Nezara viridula*; PG = *Piezodorus guildinii*; EH = *Euschistus heros*; AA = *Acrosternum armigera*; TP = *Thyanta perditor*; TS = *Thyanta* sp.

collection of Embrapa Soja. The mean (± SEM) number of each species captured was calculated.

Six species of pentatomids were recorded on sunflower plants. Among them, the most abundant was the Neotropical brown stink bug, *Euschistus heros* (F.), followed by three other species, which were captured on similar numbers: the small green stink bug, *Piezodorus guildinii* (West.), *Acrosternum armigera* (Stal), and the southern green stink bug *Nezara viridula* (L.). *Thyanta perditor* (F.), and *Thyanta* sp. were observed in smaller numbers (Fig. 1). Nymphs of four species were recorded, excluding *P. guildinii* and *Thyanta* sp.; eggs masses were collected only from *A. armigera*, although egg masses of *E. heros* and of *N. viridula* have been observed on sunflower leaves on other occasions. It is worth noting that the pentatomid *Edessa meditabunda* (F.), which was found on sunflower on previous years in this area (Panizzi & Machado-Neto 1992), was not intercepted this time.

These results suggest that these pentatomids, most of them pests of soybean [*Glycine max* (L.) Merr.] in northern Paraná state, are in a process of gradual adaptation to sunflower. Their movement from soybean and other host plants to sunflower, particularly after soybean harvest in March, when no other crops are available in the field, indicates that sunflower plants are serving as a temporary host providing an extra source of nutrients, before the bugs decline their feeding and reproductive activities during the win-

ter months that follow this period.

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Literature Cited

Annecke, D.P. & V.C. Moran. 1982. Insects and mites of cultivated plants in South Africa. Durban/Pretoria, Butterworths, p. 305-306.

Arya, D.R., P.R. Yadav & H.V. Singh. 1995. Insect pest complex of sunflower in relation to crop phenology. Indian J. Entomol. 57: 141-145.

Broadley, R.H. 1978. Insect pests of sunflower. Queensland Agric. J. 104: 307-314.

Castro, C., V.B.R. Castiglioni, A. Balla, R.M.V.B.C. Leite, D. Karam, H.C. Mello, L.C.A. Guedes & J.R.B. Farias. 1996. A cultura do girassol. EMBRAPA-CNPSo. Londrina, PR. Circ. Téc. 13, 38p.

Hilgendorf, J.H. & R.D. Goeden. 1981. Phytophagous insects reported from cultivated and weedy varieties of the sunflower, *Helianthus annuus* L., in North America. Bull. Entomol. Soc. Am. 27: 102-108.

Lynch, R.E. & J.W. Garner. 1980. Insects associated with sunflower in South Georgia. J. Ga. Entomol. Soc. 15: 182-189.

Misari, S.M. 1990. Pest complex of sunflower (*Helianthus annuus* L.) in parts of Nigerian savanna. Savanna 11: 1-11.

Nath, D.K. & B. Sen. 1977. Insect pests occurring on sunflower (*Helianthus annuus* L.) in West Bengal. Science and Culture 43: 180-181.

Panizzi, A.R. & E. Machado-Neto. 1992. Development of nymphs and feeding habits of nymphal and adult *Edessa meditabunda* (Heteroptera: Pentatomidae) on soybean and sunflower. Ann. Entomol. Soc. Am. 85: 477-481.

Schneiter, A.A. & J.F. Miller. 1981. Description of sunflower growth stages. Crop Science 21: 901-903.

Villas Bôas, G.L. & F. Moscardi. 1985. Levantamento dos insetos-pragas do girassol e seus inimigos naturais. EMBRAPA-CNPSo. Res. Pesq. Girassol 16: 9-12.

Villas Bôas, G.L., F. Moscardi & N.Y. Koga. 1983. Levantamento de insetos-pragas do girassol e seus inimigos naturais. EMBRAPA-CNPSo. Res. Pesq. Girassol p.16-17.

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