SCIENTIFIC NOTE

Unusual Oviposition on the Body of Conspecifics by Phytophagous Heteropterans

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Oviposição Incomum no Corpo de Indivíduos Coespecíficos por Heterópteros Fitófagos

RESUMO - Durante os meses de março de 2000 e fevereiro-março de 2001, observou-se o comportamento de oviposição sobre o corpo de indivíduos da mesma espécie pelo pentatomídeo *Euschistus heros* (F.) e pelo alidídeo *Neomegalotomus parvus* (West.). Esse comportamento, incomum para as espécies, foi observado durante a manutenção de colônias dos percevejos em laboratório. Aparentemente, trata-se do primeiro registro de oviposição sobre indivíduos da mesma espécie por essas duas espécies de percevejos em laboratório.

PALAVRAS-CHAVE: Insecta, Heteroptera, Pentatomidae, comportamento de oviposição, co-específicos.

ABSTRACT - During March 2000 and February-March 2001, the oviposition behavior on the body of conspecifics by the pentatomid *Euschistus heros* (F.) and by the alydid *Neomegalotomus parvus* (West.) was studied. This behavior, uncommon for the species, was observed while maintaining rearing colonies in the laboratory. Apparently, this is the first record of oviposition on conspecifics by these two species of bugs in the laboratory.

KEY WORDS: Insecta, Heteroptera, Pentatomidae, oviposition behavior, conspecifics.

Oviposition on the body of individuals of the same species (conspecifics) is a relatively rare event among Heteroptera. In spite of many records for carnivorous heteropterans, such as some giant waterbugs (Belostomatidae), whose females lay eggs on the back of the males (e.g., Zeh & Smith 1985, Ichikawa 1989, Smith 1997), little has been reported regarding this behavior for phytophagous heteropterans. To our knowledge, the only two species where eggs are laid on conspecifics by phytophagous heteropterans are: *Phyllomorpha laciniata* Vill. (Coreidae), a European species (Bolivar 1894), and *Plunentis porosus* Stål (Coreidae), a South American species (Costa Lima 1940). In the first case, females oviposit on the dorsal surface of both males and females, gluing a variable number of eggs (1-15) (Kaitala 1996). In the second case, females lay their eggs on the ventral side of the abdomen of males (Costa Lima 1940).

During March 2000 and February-March 2001, while maintaining a colony of the neotropical brown stink bug *Euschistus heros* (F.) and the alydid *Neomegalotomus parvus* (West.) in the laboratory, we observed oviposition by both species on conspecifics. For *E. heros* (Fig. 1), this unusual oviposition behavior was observed on eight occasions (Table 1). The number of eggs laid on the back of conspecifics varied from one to nine. In 100% of the cases, the eggs were laid on the back of females. In only one case did nymphs emerge from eggs still glued onto the back of the female; eggs laid on remaining females detached on the oviposition day or one to three days later.

N. parvus oviposition on conspecifics (Fig. 2) was observed on seven occasions. Females laid eggs singly, one egg on each individual, in all cases on females. The place of oviposition was variable, including head, thorax, abdomen, and leg (Table 1). Three times the nymphs emerged from eggs still glued to the bugs. In the remaining cases, the eggs detached from the insect bodies one to two days after oviposition.

This behavior of ovipositing on conspecifics by *E. heros* and *N. parvus* was never observed in the field, and may be an artifact due to crowded population of bugs in rearing cages in the laboratory. Whereas such egg laying is usual in *P. laciniata*, it is not yet been shown to be usual in *P. porosus*, although it may be, and it is not usual in *E. heros* and *N. parvus*. Nevertheless, it is a curious behavior, and may reveal a tendency of these two species to behave like the two coreid species referred to above.The fact that in all cases females laid eggs on conspecific females and never on males, deserves further investigation.

Figure 1. Eggs of *E. heros* laid on the back of a conspecific female.

Figure 2. Egg of *N. parvus* laid singly on the back of a conspecific female.

Table 1. Oviposition of phytophagous heteropterans on the body of conspecifics, observed during colony rearing in the laboratory.

Species	Event number	Date	Egg allocation	Number of eggs	Nymphs hatched	Time (days) eggs remained on the insect body
E. heros	1	24/03/00	Abdomen	9	0	3
	2	25/03/00	Thorax	1	0	1
	3	25/03/00	Thorax	1	0	1
	4	26/01/01	Abdomen	4	3	5
	5	29/01/01	Thorax	2	0	2
	6	02/02/01	Abdomen	3	0	<1
	7	02/02/01	Abdomen	3	0	1
	8	05/02/01	Abdomen	1	0	2
N. parvus	1	23/03/00	Head	1	0	2
	2	26/03/00	Thorax	1	0	1
	3	26/03/00	Abdomen	1	0	1
	4	29/01/01	Thorax	1	1	5
	5	01/02/01	Abdomen	1	1	5
	6	01/02/01	Leg	1	0	5
	7	01/02/01	Thorax	1	1	5

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