

**NOTE: Tachinid Parasitoids of *Ancyrosoma leucogrammes*
and Notes on Parasitization Rates of *Clytiomya dupuisi***

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The study deals with the tachinid parasitoids of *Ancyrosoma leucogrammes* (Gmelin) (Heteroptera: Pentatomidae): *Clytiomya dupuisi* Kugler, *Clytiomya sola* (Rondani) and *Gymnosoma clavatum* (Rohdendorf) (Diptera: Tachinidae). All species are recorded for the first time as parasitoids of *A. leucogrammes*, and *C. dupuisi* was reared for the first time from a host. The parasitization rates of *C. dupuisi* on adults of *A. leucogrammes* varied from 7% to 9% between 1994 and 1999. *C. sola* and *G. clavatum* were reared in only small numbers. **KEY WORDS:** Parasitoid; Tachinidae; *Ancyrosoma leucogrammes*; *Clytiomya dupuisi*; *Clytiomya sola*; *Gymnosoma clavatum*; Turkey.

The Tachinidae are one of the largest families of Diptera and one of the most important groups of entomophagous parasitoids. The larvae of all tachinid species are endoparasitoids, mainly of insects. Most species use lepidopterous larvae as hosts, but the larvae, nymphs and adults of other groups, such as Heteroptera and Coleoptera, may also serve as hosts (4). *Clytiomya* usually attack adults, and glue their eggs to the body wall of the hosts externally. There are few studies of hosts of Turkish Tachinidae (Kara, K. and Tschorsnig, H.-P., unpublished data), and no published records of Tachinidae reared from the bug *Ancyrosoma leucogrammes* (Gmelin). This study records the first known tachinid parasitoids of *A. leucogrammes*.

The adults of *A. leucogrammes* were collected on *Daucus* sp. in the provinces of Aydın, İzmir and Manisa, Turkey, during September and October and were brought to the laboratory for rearing. They were placed into transparent cages (5 cm diam, 6.5 cm height) and fed anise, dill, carrot, celery and parsley seeds. Distilled water was provided. The bugs were reared at

a temperature of $25 \pm 1^\circ\text{C}$, relative humidity of $55 \pm 5\%$, and illumination of 3500 lux for 16 h per day.

The last instar tachinid larvae left the host and were transformed into puparia. Then they were transferred to transparent polyethylene cylindrical boxes (7 cm diam, 10 cm height). The imagoes hatched from the puparia. One specimen of parasitoid emerged from one host. During the rearing of *A. leucogrammes* in the laboratory, from the beginning of the 3rd week to the end of the 7th week, puparia of Tachinidae, namely, *Clytiomya dupuisi* Kugler, *C. sola* (Rondani), and *Gymnosoma clavatum* (Rohdendorf), all belonging to the subfamily Phasinae, were obtained from adults of *A. leucogrammes*. Data given in the text are of host collection; the numbers in parentheses indicate parasitoid individuals reared from the respective host. Tachinid identifications were made by Dr. Benno Herting, and the first author identified the host species.

Clytiomya dupuisi Kugler, 1971

Reared material: Aydın (Kuşadası-Dilek Peninsula National Park), 29.IX.1994 (1♂, 2♀) /

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5.X.1995 (3♂, 6♀) / 14.X.1996 (3♂, 2♀) / 18.IX.1997 (2♂) / 23.IX.1998 (1♂, 3♀) / 30.IX.1999 (1♂, 2♀); Izmir (Bornova), 29.IX.1994 (3♂, 4♀) / 14.X.1996 (2♂, 2♀), Izmir (Menderes), 18.IX.1997 (1♂) / 7.X.1998 (1♂) / 30.IX.1999 (1♂), Izmir (Selçuk), 5.X.1995 (2♂, 1♀) / 18.IX.1997 (1♂, 1♀) / 30.IX.1999 (1♂, 1♀).
 Distribution: Albania; Israel (3).
 Hosts: *A. leucogrammes* is a new host record.
Clytiomya sola (Rondani, 1861)
 Reared material: Izmir (Çeşme), 28.IX.1995, (3♂, 1♀); Manisa (Central province, Muradiye), 6.X.1995 (4♂, 1♀).
 Distribution: Mediterranean region, north to France and east to Transcaucasus and Israel (6).

Hosts: *Graphosoma* and *Trigonosoma* spp. (2, as *Clytiophasia dalmatica* Villeneuve). In Turkey, *Carpocoris* sp. (1), *Graphosoma lineatum* (Linnaeus) (3). *A. leucogrammes* (as recorded herein).

Gymnosoma clavatum (Rohdendorf, 1947)

Material: Izmir (Bornova), 29.IX.1994 (2♀).
 Distribution: North to Scandinavia; east to Transcaucasus, Soviet Middle Asia, West Siberia and Israel (6).

Hosts: Various Pentatomidae (5,7). In Turkey, *Carpocoris* sp. (2) and *A. leucogrammes* (as recorded herein).

The parasitization rates are shown in Table 1.

TABLE 1. Percentage of *Clytiomya dupuisi* parasitizing *A. leucogrammes*

Year	<i>A. leucogrammes</i> (specimens)	<i>C. dupuisi</i> (specimens)	Parasitization (%)
1994	111	10	9.0
1995	136	12	8.8
1996	103	9	8.7
1997	56	5	8.9
1998	71	5	7.0
1999	70	6	8.1

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