

CARNUS HEMAPTERUS (DIPTERA, CARNIDAE) AND ITS OCCURENCE IN SLOVAKIA

Viera JÁNOŠKOVÁ¹, Ján JAMRIŠKA², Zlatica ORSZÁGHOVÁ³

Department of Zoology, Comenius University, Mlynská dolina B-1, 842 15 Bratislava, Slovakia;
e-mail: ¹janoskovav@fns.uniba.sk, ²protocalliphora@yahoo.com, ³orszaghova@fns.uniba.sk

JÁNOŠKOVÁ V., JAMRIŠKA J., ORSZÁGHOVÁ Z., 2005: *Carnus hemapterus* (Diptera, Calliphoridae) and its occurrence in Slovakia. *Entomofauna carpathica*, 17: 84-85

Abstract: The paper deals with an occurrence and identification of the fly *Carnus hemapterus* (Diptera, Carnidae), recorded in nests of *Sturnus vulgaris*. The adults were collected from two sites situated in western Slovakia. Males were identified according to the ratio between width and length of the surstylus and paramere, females according to the shape of the sixth abdominal sternum.

Key words: *Carnus hemapterus*, Carnidae, Diptera, Slovakia

INTRODUCTION

The species *Carnus hemapterus* Nitzsch, 1818 belongs to the family Carnidae, Diptera, which has not been considerably studied in detail yet. Generally, 58 species of 4 genera have been described worldwide, other species are expected to be described in the future. *Carnus hemapterus* was recorded in Palaearctic and Nearctic regions (PAPP 1984, SABROSKY 1965). It occurs in cavernicolous bird nests as well as at birds nesting arborically and arbustically. It has not been recorded in nests on ground or water. The life cycle has not been studied completely. In contact with its suitable host the adult parasite looses its wings and stays in a nest. It is assumed that the adults probably feed on blood or skin products of nestlings. Larvae are scavengers (PAPP 1978).

MATERIALS AND METHODS

All the observed specimens were imagoes collected from nestlings of *Sturnus vulgaris*. The material was sampled in the period from hatching to forming the first fluff. Adults were concentrated in the area of cloaca of nestlings, soon after defecation they dispersed. The flies were obtained by an exhaustor or manually (by finger covered by saliva). The captured imagoes were stored in 75 % ethylalcohol, and later determined according to the papers by PAPP (1978) and GRIMALDI (1997). The material consists of 24 individuals.

RESULTS AND DISCUSSION

List of records:

- 1) June 8, 1998 3 ♀ and 2 ♂: Botanical Garden in Bratislava; leg. Országhová, Strapoňová, Blázniková
- 2) May 19, 2005 4 ♀; Botanical Garden in Bratislava; leg. Országhová, Jamriška
- 3) June 25, 2005 4 ♀; Bernolákovo; leg. Országhová
- 4) July 3, 2005 3 ♀ and 8 ♂; Bernolákovo; leg. Országhová. 1 ♂ winged

In Slovakia, the records of this species have been known from Gbelce (8177 grid reference number of the Databank of Slovak fauna) (GREGOR 1986) and Nature Reserve Beckovské Skalce (7273) (STRAKA, pers. comm.). At present, there is only one species of the genus *Carnus* described in Europe (PAPP 1978). However, GRIMALDI (1997) recorded the occurrence of other three species in North America. *Carnus hemapterus* may be distinguished from the other genera of the family Carni-

dae by distinct frontal triangle, slender setae occipitales and lack of setae postverticales. Sclerites of abdomen are different at each sex. Females have slender and hardly distinguished sternites 1-5, however sternite 6 is secondarily enlarged. Males have small and gently sclerotized tergites 6-8. Tergite 9 (epandrium) is short, broad and compressed (PAPP 1978). Onto epandrium surstyli follow being connected by condyles (Fig. 1).

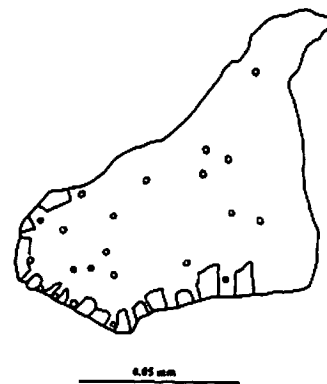


Fig. 1. Surstylus of *Carnus hemapterus* (♂, July 3, 2005; Bernolákovo)

They cover a compound reproduction system. Each species has a different ratio between the apical width and total length of surstylus. According to GRIMALDI (1997) this ratio is estimated as 0.40 for *Carnus hemapterus*. The ratio recorded by us was 0.42.

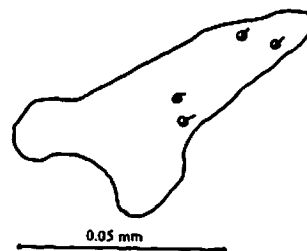


Fig. 2. Paramere of *Carnus hemapterus* (♂, July 3, 2005; Bernolákovo)

Aedeagus is enclosed from the both sides by triangular parameres (Fig. 2), which is another specific

determination character. According to GRIMALDI (1997), as well as to our measurements, the ratio between the total width and total length of paramere is 0.55.

ACKNOWLEDGMENTS

We would like to thank to Prof. I. Országh, Dr. V. Jánky and Dr. V. Straka for their help with obtaining information on the family Carnidae.

The study was supported by Scientific Grant Agency VEGA, Project No. 1/2369/05.

REFERENCES

- GREGOR, F., 1986: Čel'ad': Carnidae. In: ČEPELÁK, J. (Ed.): *Diptera Slovenska II*. Veda, Bratislava, p. 183-184
- GRIMALDI, D., 1997: The Bird Flies. Genus *Carnus*: Species Revision, Generic Relationships, and a Fossil *Meoneura* in Amber (Diptera: Carnidae). *Amer. Mus. Novitates*, 3190: 1-30
- PAPP, L., 1978. 72a. család: Carnidae. In: DELY-DRASKOVITS, A., PAPP, L. (Eds.): *Odiniidae-Chloropidae*. *Fauna Hungariae* 15(9), p. 32-50
- PAPP, L., 1984: Family Carnidae. In: SOÓS, Á., PAPP, L. (Eds.): *Catalogue of Palearctic Diptera*, Vol. 10. Akadémiai kiadó, Budapest, p. 118-124
- SABROSKY, C.W., 1965: Family Milichiidae (Phyllomyzidae, Carnidae). In: STONE, A., SABROSKY, C.W., WIRTH, W.W., FOOTE, R.H., COULSON, J.R. (Eds.): *A Catalog of the Diptera of America North of Mexico*. US Department of Agriculture, Washington, p. 728-733

Prišlo 10.9.2005, akceptované 10.12.2005