

**DISTRIBUTION AND HOSTS OF *EUTROMBIDIUM TRIGONUM*  
(HERMANN, 1804) (ACARI: PROSTIGMATA: EUTROMBIDIIDAE)  
IN POLAND**

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**ABSTRACT.** New hosts: *Chorthippus (Glyptobotchrus) biguttulus* (L.), *C. (G.) mollis* (Charp.), *C. (G.) brunneus* (Thunb.), *C. (G.) ?apricarius* (L.), *Omocestus viridulus* (L.) and new localities for *Eutrombidium trigonum* (Hermann) from Poland are presented.

**Key words:** Acari, Acrididae, Eutrombidiidae, *Eutrombidium trigonum*, new hosts, new records, Orthoptera, Poland.

INTRODUCTION

*Eutrombidium trigonum* is a common species in Europe. It was noted in France, Italy, Germany, the Czech Republic, Holland, Norway, United Kingdom (Jersey), Switzerland, Austria and Poland. In Europe larvae of this species were collected from *Gryllus* sp. (Gryllidae), *Tettigonia* sp., *Chorthippus (Glyptobotchrus) biguttulus* (L.), *C. (G.) brunneus* (Thunb.), *C. (G.) paralellus*, *C. (G.) brachyptera*, *Gomphocerus rufus*, *Oedipoda caerulescens* (Acrididae), *Tetrix subulata* (Tetrigidae), *Pholidoptera griseoptera* and *Ephippigerida biterrensis* Marq. (Tettigonidae) (Bruyant 1909, Verdun 1909, Oudemans 1912, Thor and Willmann 1947, Schweizer 1951, Schweizer and Bader 1963, Welbourn 1983, Wohltmann and al. 1996). Rizvi and Aziz (1974), Kamal and al. (1976) and Rizvi (1978) mentioned *Hieroglyphus nigrorepletus* Bolivar, *Patanga succincta* (L.) and *Teratodes monticollis* (Gray) as the hosts of *E. trigonum* from India. The presence of this species in India is doubtful. In Poland *E. trigonum* was known only from a few localities in Roztocze (voi. Lublin) (only nymphs, female, and male) (Gabryś and Małkol 1994) and no hosts were known. In this paper further localities in Poland (based only on larvae) and hosts of *E. trigonum* are given.

MATERIAL AND METHODS

124 larvae of *Eutrombidium trigonum* were collected from Orthoptera, during 1999-2003, in various localities in Poland. Larvae were preserved in ethanol and



mounted later in Berlese's medium. Measurements are expressed in micrometers ( $\mu\text{m}$ ). Abbreviations used in the text are explained in Southcott (1993).

## RESULTS

25 larvae (l.) all from *Chorthippus (Glyptobotchrus) biguttulus* (L.), 24 VIII 1999, Chęciny; 1 l. from *C. (G.) biguttulus*, 25 VIII 1999, Korzecko n. Chęciny; 4 l. all from *C. (G.) mollis* (Charp.), 24 VIII 1999, Oblęgorek n. Kielce (voi. Kielce); 4 l. from undetermined Orthoptera, 26 VIII 1999, Podlesice n. Kroczyce (voi. Katowice); 7 l. from undetermined Orthoptera, 12 VIII 2003, Nowa Grobla n. Lubaczów (voi. Rzeszów); 2 l. from *C. (G.) mollis*, 14 VIII 2002, Nowogród n. Łomża; 5 l. from *C. (G.) biguttulus*, 16 VIII 2002, 7 l. from *C. (G.) mollis*, 16 VIII 2002, 5 l. from *C. (G.) brunneus* (Thunb.), 16 VIII 2002, all from Gontarze n. Łomża; 4 l. from *C. (G.) ?biguttulus*, 18 VIII 2002, 28 l. from *C. (G.) ?biguttulus*, 24 VIII 2002, 8 l. from *C. (G.) mollis*, 21 VIII 2002, all from Biała Woda n. Suwałki, 12 l. from *C. (G.) biguttulus*, 24 VIII 2002, Smolniki n. Wizajny (voi. Białystok); 1 l. from *C. (G.) biguttulus*, 2 VIII 2002, Nieborów n. Łowicz (voi. Łódź); 5 l. from undetermined Orthoptera, 21 VIII 2003, Krzemień n. Jabłonna Lacka (voi. Warszawa); 2 l. from *C. (G.) biguttulus*, 6 VIII 2002, Górzno n. Brodnica (voi. Bydgoszcz); 1 l. from *C. (G.) ?apricarius* (L.), 12 VII 2000, 3 l. from *Omocestus viridulus* (L.), 12 VII 2000, all from Kłodnica n. Toporów (voi. Zielona Góra). All hosts belong to the family Acrididae.

## DISCUSSION

The knowledge of the hosts of *E. trigonum* in Europe is poor. Only one host, *Ephippigerida biterrensis* Marq. which was found in south-west France, was mentioned by Bruyant (1909), 9 species from Austria (Wohltmann and al. 1996) and two hosts determined only to the genera (Welbourn 1983). To be sure Paoli (1937) mentioned more host species but for *E. ?locustarum* (this species is unknown from Europe) and may be they are the hosts for *E. trigonum*: *Dociostaurus maroccana*, *D. genei*, *Oedipoda miniata*, *O. coerulescens*, *Oedaleus decorus*, *Prinotropis hystrix appula*, *Calliptamus barbarus*, *Metrioptera stricta*, *Platycleis* sp., *Decticus albifrons* and *Steropleurus cavanna*.

There were three new hosts stated in Poland: *C. (G.) mollis*, *C. (G.) ?apricarius* and *O. viridulus* (Acrididae); only part of the studied hosts was determined. The most larvae of *E. trigonum* were collected from *Chorthippus (Glyptobotchrus) biguttulus* (69 larvae) and from *C. (G.) mollis* (21 larvae). All these larvae were obtained (also from *C. (G.) ?brunneus*) from hosts collected in east and central Poland (voivodeships: Białystok, Kielce, Bydgoszcz, Łódź, Warszawa, Lublin, Rzeszów, Katowice). In west Poland (voi. Zielona Góra) only 4 larvae were col-



lected. Probably *E. trigonum* occurs in all of Poland but is more numerous in east part of the country. The most infected hosts in Austria were *C. pullus* and *G. rufus* (Wohltmann and al. 1996); probably in Austria *E. trigonum* is also very numerous on *C. brunneus*, *C. biguttulus* and *C. paralellus* but the number of examined specimens of these hosts was too little to draw final conclusions. Some metric data for larvae of *E. trigonum* from United Kingdom and France (Southcott 1993) as well as specimens studied by Robaux (1974), are distinctly different. Robaux (1974) studied 11 larvae from Oudemans and André collections. He stated that these larvae, despite of distinct metrical differences, belong to the same species. The specimens from Poland also differ in metrical data from specimens studied by Robaux (1974) and are similar to the specimens studied by Oudemans (1912) and Southcott (1993). Metric data of 15 specimens from Poland are given in Table 1.

Table 1. Metric data for larvae of *Eutrombidium trigonum* (Hermann) from Poland (n=15)

IL	736-1955	GL	82-88
IW	406-1180	LPS	68-78
L	124-136	O*	32-36
W	120-136	3a	32-40
AW	96-114	TaI(L)	66-74
PW	112-128	TaI(H)	14-18
LN	20-34	TiI	34-38
MA	44-54	GeI	24-28
SB	82-92	FeI	44-52
ASB	100-112	TrI	26-34
PSB	22-24	CxI	52-62
AP	44-50	TaII(L)	56-64
SA	30-34	TaII(H)	16-20
SP	18-24	TiII	30-32
AM	38-46	GeII	16-20
AL	40-48	FeII	44-50
PL	26-34	TrII	24-32
AA	72-84	CxII	52-66
S	72-84	TaIII(L)	42-50
PLN	14-18	TaIII(H)	16-20
HS	64-72	iIII	32-38
LSS	124-140	GeIII	15-18
SS	38-62	FeIII	48-52
SL	34-42	TrIII	26-36
DS	28-48	CxIII	48-58

O\* eye

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