New and rare chironomids of the tribe Tanytarsini in Poland
(Diptera: Chironomidae)

WOJCIECH GIŁKA

Department of Invertebrate Zoology, University of Gdańsk Piłsudskiego 46, 81–378 Gdynia, Poland, e-mails: scorpio@ocean.univ.gda.pl or w.gilka@wp.pl

ABSTRACT. New data on distribution and biology of rare tanytarsine chironomids in Poland are presented. Tanytarsus recurvatus BRUNDIN, 1947 and Parapsectra mendli REISS, 1983 are recorded in Poland for the first time and Stempellina almi BRUNDIN, 1947, so far known for doubtful record, is confirmed. New records from Bosnia and Herzegovina, Norway, Sweden and Ukraine are also provided.

KEY WORDS: Diptera, Chironomidae, Tanytarsini, new records, biology, Poland, Europe.

INTRODUCTION

The Tanytarsini is one of the largest tribes of the family Chironomidae, including nearly 200 species known from Europe and 103 species recorded in Poland so far (SÆTHER & SPIES 2004, GIŁKA 2006, GIŁKA & DOMNIAK 2007, GIŁKA & JAŻDZIEWSKA, in press; GIŁKA, unpubl.). The Tanytarsini reproduce in almost all types of freshwater habitats, and the high number of species as well as their varying ecological tolerance make the Tanytarsini good indicators in environmental assessment of aquatic habitats.

The present paper comprises data on geographic distribution and biology of several rare tanytarsine chironomids, including two species not recorded in Poland so far. Parapsectra mendli REISS, 1983 is an inhabitant of springs, up to now recorded from two sites in Bavaria, and herein reported from the Tuchola Landscape Park in Pomerania. Tanytarsus recurvatus BRUNDIN, 1947, a northern/alpine species associated with oligotrophic lakes, is presently recorded in the Kashubian Lakeland. A total number of 105 species demonstrates that the Polish fauna of the tribe is one of the most species-rich in Europe.
MATERIAL AND METHODS

Specimens examined were collected with a sweep net, at light or were reared from immatures using methods given by Siciński (1982). The material studied is available in the Department of Invertebrate Zoology, University of Gdańsk, Poland. Legators: Patrycja Domiak (PD), Elżbieta Kaczorowska (EK), Wiesław Krzeminski (WK), Łukasz Mauricz (LM), Stefan Niesioloński (SN), Jacek Siciński (JS), Jarosław Rewers (JR), Marcelina Sadowska (MS), Ryszard Szadziewski (RSz), author (WG).

Acknowledgements

I wish to thank the legators for supplying me with specimens used in this study.

RESULTS

Cladotanytarsus cyrylae Gіłka, 2001

Material examined


Geographical distribution, biology

Cladotanytarsus cyrylae was so far reported from a little clay pit in Masuria (Gіłka 2001). The present records confirm the species’ habitat preferences. Swarming adult males were recently observed in abundance at one of the largest working gravel mines in northern Poland (Fig. 2). The species was also recorded at a small secluded gravel pit (area c. 0.5 ha, depth c. 1m) in the Kashubian Lakeland. Although immatures of C. cyrylae are not described, it may be presumed that the species prefers to colonize fertile water bodies, increasing in minerals, silt and organic matter (Titmus 1979). C. cyrylae is known also from Finland (Paasivirta 2009) and presently recorded for the first time in Ukraine.

Cladotanytarsus gedanicus Gіłka, 2001

Material examined

NORWAY. Melsegård nr. Karasjok, netting, 03.08.2003, 48 males, WG. SWEDEN. Flåsjön lake nr. Lövberga, netting, 20.07.2003, 1 male, WG.

Geographical distribution, biology

*Cladotanytarsus gedanicus* is a polivoltine species in Poland. Data on seasonal variability in the species’ distribution indicate that *C. gedanicus* starts its season in spring as adult and produces at least three generations per year (GIŁKA 2001, 2002). *C. gedanicus* is known from three sites in Poland, several sites in Finland (PAASIVIRTA 2009; GIŁKA, unpubl.) and from the Russian Far East (MAKARCHENKO et al. 2005). At present recorded in Norway and Sweden for the first time.

*Parapsectra mendli* REISS, 1983

Material examined


Geographical distribution, biology

*Parapsectra mendli* (Figs 4, 5) is a cold-adapted stenothermic inhabitant of springs, recorded from two sites in Germany so far (REISS 1983, EKREM et al. 2007). Presently, *P. mendli* is reported from two other sites in northern Poland. The specimens were collected at spring pools and were observed in abundance at a small limnocrene (area c. 0.1 ha) in the Tuchola Landscape Park (Fig. 1). Metric analysis indicates that adult males recorded in April and July belonged to two generations at least (GIŁKA & JAZDZIEWSKA, in press).

*Parapsectra mendli* was included in the Red List of Bavaria (SCHNAPPAUF & MÜLLER 2005). This rare species undoubtedly requires protection and should be included in the Red List of Threatened Animals in Poland.

*Paratanytarsus natvigi* (GOETGHEBUER, 1933)

Material examined

Cedzyna, netting: 19.05.1977, 1 male, JS, 16.06.1977, 1 male, SN, 14.10.1977, 7 males, SN; ex cult.: 15.04.1978, 1 male, 24.06.1978, 1 male, JS (GILKA 2002).

**Geographical distribution, biology**

*Paratanytarsus natvigi* has so far been recorded in British Isles, Scandinavian Peninsula, Spain, Italy, Ukraine, north Russia, China and the Nearctic Region including Greenland. The species is known also from a single site in Poland (GILKA 2002). Five generations per year were suggested for *P. natvigi* - the species, which prefers to inhabit lotic habitats in temperate climate (TOKESHI 1995). Data from Poland indicate that adults of *P. natvigi* start their season in early spring and produce at least three generations per year.

*Stempellina almi* BRUNDIN, 1947

**Material examined**

POLAND. Borowiec nr. Gdańsk, gravel mine, netting, 15-17.07.2009, 4 males, WG.

**Geographical distribution, biology**

*Stempellina almi* is a widely distributed species, recorded in Europe, north Africa, east Palaearctic and the Nearctic region, however, known only for a doubtful record in Poland so far (KOWNACKI 1991). Larvae are known as inhabitants of freshwater reservoirs and brackish marine habitats. Presently examined adult males (Figs 6, 7) have been collected together with *Cladotanytarsus cyrylae* and *Tanytarsus volgensis* MISEIKO, 1967 at the gravel mine in Borowiec (Fig. 2).

*Tanytarsus dibranchius* KIEFFER, 1926

**Material examined**

Geographical distribution, biology

In Europe *Tanytarsus dibranchius* was so far recorded in the Czech Republic, Germany, Sweden, Finland and Poland (SÆTHER & SPIES 2004, GIŁKA 2002). Immatures of this recently redescribed species inhabit lakes and small standing water bodies; in Germany the species was recorded between May and October (SPIES 1998). Sampling dates in Poland may suggest that *T. dibranchius* produces at least three generations per year. The specimens examined have been collected in a close vicinity of lakes and artificial fish ponds.

*Tanytarsus lactescens* EDWARDS, 1929

Material examined


Geographical distribution, biology

*Tanytarsus lactescens* was so far recorded from Austria, Belgium, Britain, Greece (Crete), Denmark, Finland, France, Germany, Italy, Romania, Sweden (SÆTHER & SPIES 2004), as well as from a single site in Poland (GIŁKA 2002). The species’ distribution pattern is presently completed with the first record from the West Balkan peninsula. Immatures of *T. lactescens* inhabit lakes, ponds and fertile artificial water bodies.

*Tanytarsus recurvatus* BRUNDIN, 1947

Material examined

POLAND. Ostrowickie lake nr. Niesiłowice, netting, 15.09.2009, 1 male, WG. NORWAY. Bjerkvik nr. Narvik, 08.07.2006, netting at small lake, 9 males, WG. Heia (viewpoint) nr. Nordkjosbotn, 08.07.2006, netting at small lake, 40 males, WG.

Geographical distribution, biology

In Europe *Tanytarsus recurvatus* was so far reported from Sweden, Finland, British Isles, France, Germany, Italy and Ukraine (SÆTHER & SPIES 2004). The species’ distribution is presently completed with first records from Poland and Norway. *T. recurvatus* is one of the most frequent and abundant tanytarsine chironomid in eastern Fennoscandia (PAASIVIRTA 2009, GIŁKA, unpublished) and its immatures inhabit northern and montane
lakes (LANGTON & VISSER 2003). At present, a single specimen (Fig. 8) has been collected at the oligotrophic Lake Ostrowickie in the Kashubian Lakeland (Fig. 3).

Figs 1-3. Sampling sites of new and rare species in Poland. 1 – spring pool in Czarna Tama at Spierewnik Lake near Tuchola, 2 – gravel mine in Borowiec near Gdańsk, 3 – Ostrowickie Lake near Niesiołowiec in the Kashubian Lakeland.
Figs 4-8. Diagnostic structures in adult males of new and rare species in Poland. 4,5 – *Parapsectra mendli*, 6,7 – *Stempellina almi*, 8 – *Tanytarsus recurvatus*. 4,6,8 – hypopygium dorsally; 5,7 – hypopygial volsellae ventrally.
REFERENCES


Received: December 01, 2009
Accepted: December 12, 2009