

New records of chironomids (Chironomidae: Diptera) from Slovakia

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Abstract: Five chironomid species: *Thienemannimyia vitellina* (Kieffer, 1916), *Orthocladius* (*Pogonocladius*) *consobrinus* (Holmgren, 1869), *Parachironomus danicus*, Lehmann 1970, *Tanytarsus norvegicus* (Kieffer 1924) and *Tanytarsus smolandicus*, Brundin 1947 were recorded in Slovakia for the first time. The pupal exuviae were collected in 2012-2013 from 9 water reservoirs. Details on finding with the notes on distribution and ecology are presented.

Key words: pupal exuviae, water reservoirs, first records, Slovakia

Introduction

In 2012 – 2013 twenty three water reservoirs in Slovakia were surveyed for chironomids to obtain sufficient data for the forthcoming system for assessing the ecological potential of heavily modified water bodies according to the Directive 2000/60/EC of the European Parliament and of the Council. During this survey, further species have been recorded in Slovakia for the first time.

Material and Methods

Sampling of pupal exuviae followed the Chironomid Pupal Exuviae Technique (CPET, Wilson & Ruse 2005). Floating material was sampled at the leeward shores by skimming the water surface with a hand net with telescopic handle (mesh size 250 µm, frame diameter 25 cm). Even in the field there were removed coarse particles of debris from the sample by spilling through a set of sieves (mesh size 4 mm and 250 µm). The collected fine material containing exuviae was placed into a labelled plastic bottle, preserved with 75% ethanol and transported to the laboratory. Sorted exuviae were mounted to microscopic slides and identified using the keys Langton (1991), Langton & Visser (2003) and Ekrem (2004). Nomenclature and distribution follow Saether & Spies (2013).

All specimens were collected by the first author, and indentified by both authors.

The material is deposited in the first author's collection at the Department of Hydrobiology, Microbiology and Ecotoxicology, Water Research Institute in Bratislava.

Survey of species

SUBFAMILY TANYPODINAE

Thienemannimyia vitellina (Kieffer, 1916)

A rather rare Western Palaearctic species, known from a small number Western European countries and Poland (Saether & Spies 2013). It occurs in lakes and streams (Langton 1991).

Material examined: Sĺňava water reservoir, N 48° 32' 38.7384", E 17° 49' 16.4028", altitude 158 m a.s.l., 28. vi. 2013, 1 pupal exuvia.

SUBFAMILY ORTHOCLADIINAE

Orthocladius (*Pogonocladius*) *consobrinus* (Holmgren, 1869)

Common Palaearctic species, found in many European countries, including some neighboring to Slovakia (Austria, Poland, Saether & Spies 2013). Larvae live in the littoral

and sublittoral zone of lakes (Shilova 1976, Saether 1979, Reiff 1994), and in Iceland also in the profundal zone (Lindegård & Jónasson 1979). Some records are also from streams and rivers (e.g. Shilova 1976, Orendt 2002) and from fen peat lakes (Moller Pillot 2013).

Material examined: Palcmanská Maša water reservoir, N 48° 51' 23.382", E 20° 23' 16.35132", altitude 786,5 m a.s.l., 31. vii. 2013, 1 pupal exuvia.

SUBFAMILY CHIRONOMINAE, TRIBUS CHIRONOMINI

Parachironomus danicus Lehmann 1970

A Holarctic species, known from small number of European countries: the British Isles, Denmark, Germany and Poland (Saether & Spies 2013). Larvae live in natural and artificial ponds (Langton 1991) however exuviae have been collected in a brook in Bavaria (Orendt 2002).

Material examined: Ľuboreč water reservoir, N 48° 17' 19.482", E 19° 31' 13.9008", altitude 232 m a.s.l., 25. vi. 2013, 1 pupal exuvia; Orava water reservoir, N 49° 22' 34.356", E 19° 33' 29.9556", 603 m a.s.l., 12. viii. 2013, 2 pupal exuviae.

SUBFAMILY CHIRONOMINAE, TRIBUS TANYTARSINI

Tanytarsus norvegicus (Kieffer 1924)

A Holarctic species, recorded so far only in the Western and Northern European countries (Saether & Spies 2013). It prefers nutrient poor lakes in Scandinavia (Brodersen *et al.* 2001) and in the Alps, and it can occur in brackish water in the north (Langton 1991). Our findings in cold mountain reservoirs are consistent with published data.

Material examined: Turček water reservoir, N 48° 45' 47.808", E 18° 56' 12.0588", 775 m a.s.l., 24. vi. 2013; 1 pupal exuvia, Palcmanská Maša water reservoir, 1.vii. 2013, 3 pupal exuviae.

Tanytarsus smolandicus Brundin 1947

A Palaearctic species, known from several European countries including Austria and Poland (Saether & Spies 2013). Pupal exuviae very similar to *smolandicus* were found in two mountain lakes on the German side of the Bohemian Forest (Bitušík & Svitok 2006).

Species inhabits northern and mountain standing and flowing waters (Langton 1991, Gilka & Paasivirta 2007) and temporary wetlands (Lundström *et al.* 2010).

Material examined: Nitrianske Rudno water reservoir, N 48° 48' 15.9768", E 18° 29' 18.0528", 322 m a.s.l., 8. viii. 2012, 1 pupal exuvia; Ružiná water reservoir, N 48° 26' 14.3124", E 19° 34' 16.0716", 255 m a.s.l., 14. viii. 2013, 23 pupal exuviae; Málinec water reservoir, N 48° 31' 21.79769", E 19° 40' 19.8444", 346 m a.s.l., 6. viii. 2012, 10 pupal exuviae, 30. vii. 2013, 116 pupal exuviae; Palcmanská Maša water reservoir, 31. vii. 2013, 2 pupal exuviae; Ľuboreč water reservoir, 14. viii. 2013, 4 pupal exuviae.

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Nové nálezy pakomárov (Chironomidae: Diptera) zo Slovenska

V rokoch 2012 – 2013 bola študovaná fauna pakomárov v 23 vodných nádržiach Slovenska s cieľom získať dostatok údajov pre systém hodnotenia ekologického potenciálu výrazne zmenených útvarov povrchových vôd podľa požiadaviek Rámcovej smernice o vodách. Materiál exúvií kúriel bol získavaný z hladiny metódou CPET. Päť druhov: *Thienemannimyia vitellina* (Kieffer, 1916), *Orthocladus* (*Pogonocladus*) *consobrinus* (Holmgren, 1869), *Parachironomus danicus*, Lehmann 1970, *Tanytarsus norvegicus* (Kieffer 1924) and *Tanytarus smolandicus*, Brundin 1947 bolo zaznamenaných na území Slovenska po prvýkrát.

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