



<http://dx.doi.org/10.11646/zootaxa.3802.1.5>

<http://zoobank.org/urn:lsid:zoobank.org:pub:CCBD3336-2BA1-4A95-BDD7-C2DA9F43ABFB>

To systematics of the genus *Saetheria* Jackson (Diptera, Chironomidae) from the Russian Far East

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Abstract

The genus *Saetheria* Jackson from the Russian Far East is reviewed. The males of *S. reissi* Jackson, 1977, *S. tamanipparai* (Sasa, 1983) and *S. tylus* (Townes, 1945) are redescribed and figured. The pupa of *S. reissi* is redescribed and illustrated. The larva of *S. reissi* Jackson is described for the first time. Comments on the systematics and distribution of each species are provided. *Paracladopelma kisopediformis* Sasa, Kondo, 1993 is designated a new junior synonym of *S. reissi* Jackson, 1977. Keys to the males, pupae and larvae of the Russian *Saetheria* are given.

Key words: Chironomidae, Chironomini, *Saetheria*, key, Russian Far East

Introduction

The genus was erected by Jackson in 1977 for *Harnischia* (*Cladopelma*) *tylus* Townes, 1945. Species of this genus are the middle size non-biting midges with immature stages inhabit sandy substrata of standing and flowing waters. The genus *Saetheria* includes 1 widespread Holarctic species, *S. tylus* (Townes, 1945), 1 Nearctic species, *S. hirta* Sæther, 1983, and 5 Palaearctic species, *S. reissi* Jackson, 1977, *S. tamanipparai* (Sasa, 1983), *S. digitata* Yan *et al.*, 2011, *S. glabra* Yan *et al.*, 2011, and *S. separata* Yan *et al.*, 2011. In addition, descriptions of the five larvae with 6-segmented antenna, allocatable to *Saetheria*, are present in North America (*Saetheria* sp.1), Japan (*S. tylus*, *Saetheria* sp. SE, *Saetheria* sp. SG) and Russia (Chironominae genuinae № 9 Lipina) (Jackson 1977; Kobayashi 2007; Pankratova 1983). Up to present time two species, *S. reissi* and *S. tylus* have been recorded from Russia (Sæther & Spies 2004). During studies of the chironomid fauna in the Russian Far East, the males, pupae and larvae of *S. reissi* was found, and herein is presented. Additionally, the males of *S. tamanipparai* and *S. tylus* are redescribed and figured. *Paracladopelma kisopediformis* Sasa, Kondo, 1993 is designated a new junior synonym of *S. reissi* Jackson, 1977. The keys to males, pupae and larvae of Russian *Saetheria* are given.

Material and methods

Material was fixed in 70% ethanol and mounted in Fora-Berlese solution. Morphological terminology and abbreviations follow of Sæther (1980). Male: TL/WL—total length of male over wing length; AR—length of apical flagellomere 13 to length flagellomeres 1–12; VR—length of Cu to length of M; P_{1–3}—legs; LR—length of tarsomere 1 to length tibia; SV—length femur plus tibia to tarsomere 1; BV—length of femur, tibia and tarsomere 2–5; BR—longest seta of tarsomere 1 divided by minimum width of tarsomere 1; HR—length of gonocoxite to length of gonostylus. Pupa: ALR—length of anal lobe to its width. Larva: AR—length of basal antennal segment to combined length of remaining segments; R—distance from ring organ to base of basal segment of antenna; ROR—length of basal segment of antenna to distance between base of basal segment and ring organ; VmPR—width ventromental plate to its high; VmPSR—mean width of the two ventromental plates to distance between ventromental plates. The following additional abbreviations are used: PL-male=associated larva, pupa, and

TABLE 4. Morphological characteristics of adult males of *S. tylus* (Townes) by various authors.

Morphological characters	Literature data					Out data
	Townes 1945	Jackson 1977	Sasa 1989	Sasa & Tanaka 2001	Kobayashi 2007	
TL	–	3.0–3.2	2.72	3.02–3.18	2.3–2.8	3.0
WL	1.5	1.4–1.5	1.29	1.30–1.52	1.34–1.60	1.7
AR	2.1	1.5–1.7	–	1.82–2.13	1.71–2.00	1.74
LR	1.85	1.7–1.9	2.0	–	2.10–2.19	1.84
Anteprepronotals	–	2	2	2	2–3	2
Acrostichals	–	4–6	8	8–10	7–11	4
Dorsocentrals	–	8–9	7	7–8	8–9	8–9
Prealars	–	3	3	3–4	2–3	3
Scutellars	–	5–8	6	10–12	5–10	6
Squama	“without a fringe of hairs”	3	2–3	2–3	2–3	4

Distribution. *Saetheria tylus* (Townes) is distributed in the Holarctic Region (Sæther & Spies 2004). This species is known from Japan (Kobayashi 2007). In Russian Far East it is recorded from Primorye Territory only.

Key to the Russian Far East species of the genus *Saetheria* Jackson

Males

1. Anal point drop-shaped; gonostylus widest in proximal third and gradually narrowed toward apex (Fig. 14) *S. tamanipparai* (Sasa)
- Anal point spoon-shaped; gonostylus other form 2
2. Superior volsella roughly triangular form, the ventral seta is arranged in middle (Fig. 2); gonostylus narrowed in middle (Fig. 1); TL 3.2–3.8 mm *S. reissi* Jackson
- Superior volsella an elongated foot-shaped, the ventral seta is arranged in the apical third (Fig. 17); gonostylus narrowed in the proximal third (Fig. 16); TL 2.3–3.2 mm *S. tylus* (Townes)

Pupae

1. Segment I with 1 L seta (Fig. 5); sternite IV with median shagreen *S. reissi* Jackson
- Segment I without L seta, sternite IV without shagreen (according to Jackson 1977: 1353, fig. 30; Sæther 1983: 400, figs 2–4; Pinder & Reiss 1986: 435, fig. 10.70 A–D) *S. tylus* (Townes)

Larvae

1. Premandibular brush well developed; the blade of antenna reaches the apex of the segment 5 (Figs 8, 9) *S. reissi* Jackson
- Premandibular brush absent; the blade of antenna reaches of middle of the segment 5 (according to Jackson 1977: 1353, fig. 31) *S. tylus* (Townes)

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