

# A new species of *Saetherocryptus* Andersen & Mendes, 2007 (Diptera, Chironomidae, Orthoclaadiinae) from the Amazon rainforest, Brazil

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The orthoclad *Saetherocryptus amazonicus* n. sp. is described based on a male collected in a light trap in the Amazon rainforest. The species is easily separated from its two congeners as it lacks a dorsomedian, triangular lobe on the gonocoxite and has a large, crescent gonostylus. A key to the species is given.

Key words: Chironomidae, Orthoclaadiinae, *Saetherocryptus*, new species, key, the Amazon, Brazil, Neotropical.

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## Introduction

The genus *Saetherocryptus* was described by Andersen & Mendes (2007) from Brazil's Atlantic rainforest, Mata Atlântica, based on *S. clavatus* Andersen & Mendes collected in São Paulo and Santa Catarina States. Later, Andersen *et al.* (2011) added *S. temimino* Andersen, Mendes & Pinho from the São Paulo State. Both species were collected in light traps and only males are known. The combination of bare eyes, wing membrane and squama; a comparatively short, five-segmented palp; strongly extended costa; strongly sinuous  $Cu_1$ ; and an unique subquadangular to rounded, dorsal projection of tergite IX covering the anal point separates the males of the genus from all other Orthoclaadiinae males.

Below we describe a third species, *Saetherocryptus amazonicus* n. sp., based on a male collected in the Amazon rainforest. It shares

all diagnostic characters of the genus, but a few emendations in the generic description of the hypopygium are proposed.

## Material and Methods

The specimen was mounted in Canada Balsam following the procedure outlined by Sæther (1969). The general morphology follows Sæther (1980).

The holotype is deposited in Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil (MZSP).

## *Saetherocryptus* Andersen & Mendes, 2007

*Saetherocryptus* Andersen & Mendes, 2007: 33.

**Type species:** *Saetherocryptus clavatus* Andersen & Mendes, 2007: 35. **Other included species:** *Saetherocryptus temimino* Andersen,

Mendes & Pinho, 2011: 49; *S. amazonicus* n. sp.

*Saetherocryptus amazonicus* n. sp. shares with *S. clavatus* and *S. temimino* all the diagnostic characters proposed in the original description. The shape of the gonocoxite and gonostylus of the new species differs considerably from the two previously described species, but the unique tergite IX with the anal point placed on the ventral side clearly places the new species in *Saetherocryptus*, see Table 1.

The genus *Saetherocryptus* was described in detail by Andersen & Mendes (2007); a few emendations were given by Andersen *et al.* (2011). With the inclusion of the new species the description is as in Andersen & Mendes (2007) with the following emendations: posterior margin of tergite IX subrectangular to rounded; transverse sternapodeme narrow to wide, oral projections absent to strong; gonocoxite with or without dorsomedian, triangular projection partly covering gonostylus; gonostylus club-shaped, triangular or crescent; megaseta normal, large and club-shaped or strongly curved and pointed.

### *Saetherocryptus amazonicus* n. sp.

(Figures 1–8)

**Type material:** Holotype male: BRAZIL, Amazonas State, Manaus, Reserva Adolpho Ducke, Igarapé Barro Branco, 02°55'47''S 59°58'22''W, 5–8 February 2010, light trap, leg. L.C. Pinho & H.F. Mendes (MZSP).

**Etymology:** Named after the Amazon region, where the type specimen was collected.

**Diagnostic characters:** See key.

#### **Description.**

**Male** (n = 1). Total length 1.44 mm. Wing length 735 µm. Total length / wing length 1.96.

Wing length / length of fore femur 2.31.

**Coloration.** Light brown without dark markings; legs and antennae slightly lighter than body; wings translucent.

**Head** (Figure 1). AR 0.46. Terminal flagellomere 146 µm long. Temporal setae 5, consisting of 2 inner verticals, 2 outer verticals and 1 postorbital. Clypeus with 8 setae. Tentorium, stipes and cibarial pump as in Figure 2. Tentorium 83 µm long; 14 µm wide. Stipes about 50 µm long, 10 µm wide. Palp segment lengths / widths (in µm): 12/10, 18/13, 34/15, 36/12, 37/10. Third palpomere with 2 sensilla clavata, longest 14 µm long.

**Thorax** (Figure 3). Anteprepronotum without setae. Acrostichals apparently few, very weak, in mid scutum, dorsocentrals 7, prealars 3. Scutellum with 4 setae.

**Wing** (Figure 4). VR 1.42. C extension 92 µm long. Brachiolum with 1 seta, other veins and membrane bare. Squama bare.

**Legs.** Spur of fore tibia 28 µm long; spurs of mid tibia 15 µm and 13 µm long; of hind tibia 39 µm and 19 µm long. Width at apex of fore tibia 21 µm; of mid tibia 22 µm; of hind tibia 28 µm. Hind tibial comb with 9 setae, longest 39 µm long, shortest 25 µm long. Lengths (in µm) and proportions of legs as in Table 2.

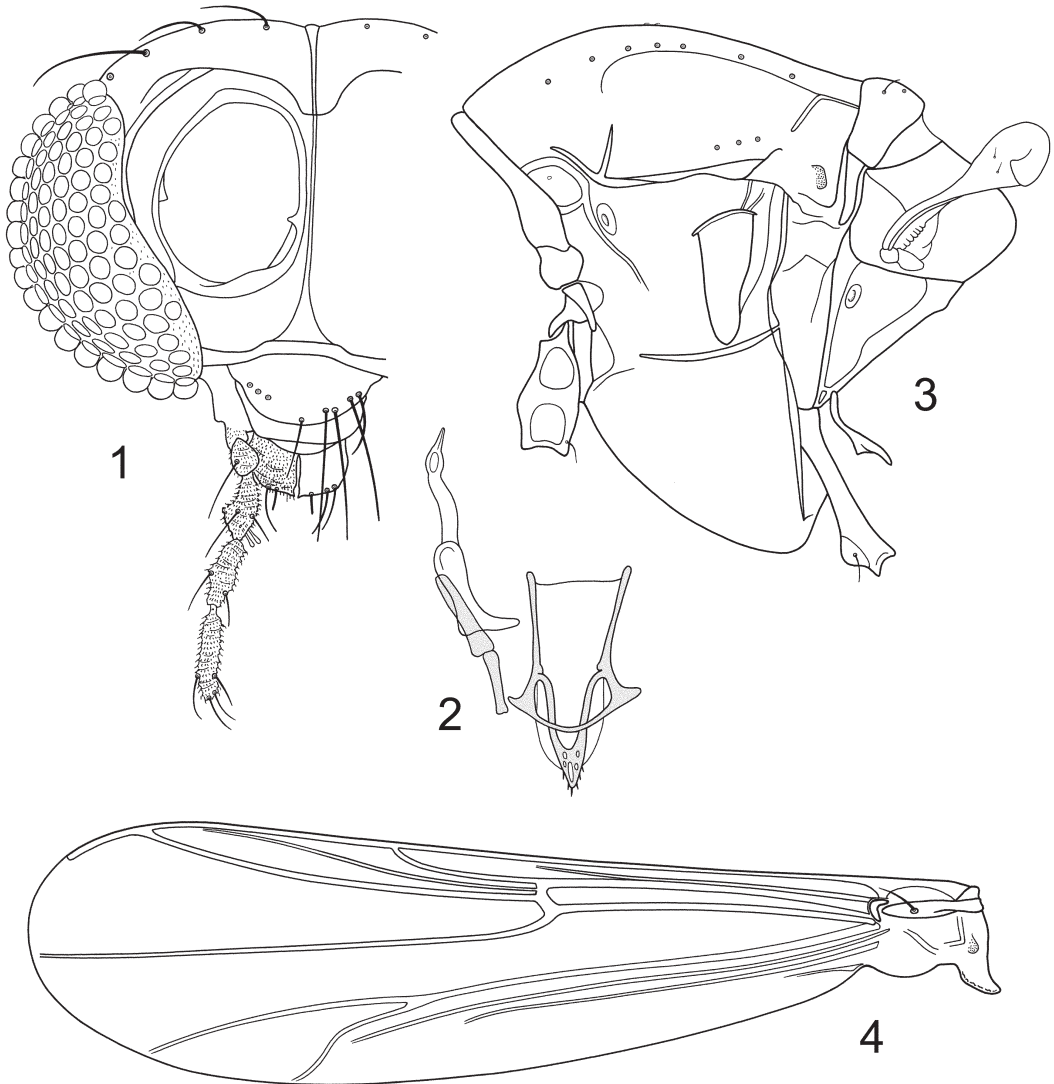
**Hypopygium** (Figures 5–8). Posterior part of tergite IX subquadrangular with rounded posterior corners, 73 µm wide; dorsal surface with microtrichia but no setae; ventral surface with microtrichia and 3 weak setae. Anal point on ventral side, 5 µm long, 19 µm wide, with long curved microtrichia. Laterosternite IX with 2 setae. Phallapodeme 54 µm long. Transverse sternapodeme apparently deeply split, arched,

TABLE 1. Key to the males of *Saetherocryptus* Andersen & Mendes, 2007

1.	Gonocoxite with dorsomedian, triangular projection partly covering gonostylus, gonostylus club-shaped or triangular .....	2
-	Gonocoxite without dorsomedian, triangular projection, gonostylus crescent. Amazonas State .....	<i>S. amazonicus</i> n. sp.
2.	Posterior margin of tergite IX straight; gonostylus club-shaped with large club-shaped megaseta. São Paulo and Santa Catarina States .....	<i>S. clavatus</i> Andersen & Mendes, 2007
-	Posterior margin of tergite IX rounded; gonostylus triangular with large, curved megaseta. São Paulo State .....	<i>S. temimino</i> Andersen, Mendes & Pinho, 2011

TABLE 2. Lengths (in  $\mu\text{m}$ ) and proportions of legs of *Saetherocryptus amazonicus* n. sp., male ( $n = 1$ ).

	fe	ti	ta <sub>1</sub>	ta <sub>2</sub>	ta <sub>3</sub>	ta <sub>4</sub>	ta <sub>5</sub>	LR	BV	SV	BR
p <sub>1</sub>	312	352	176	136	84	48	32	0.50	2.80	3.77	2.63
p <sub>2</sub>	304	312	128	76	52	32	28	0.41	3.96	4.81	2.67
p <sub>3</sub>	308	348	172	100	92	40	30	0.49	3.16	3.81	2.70



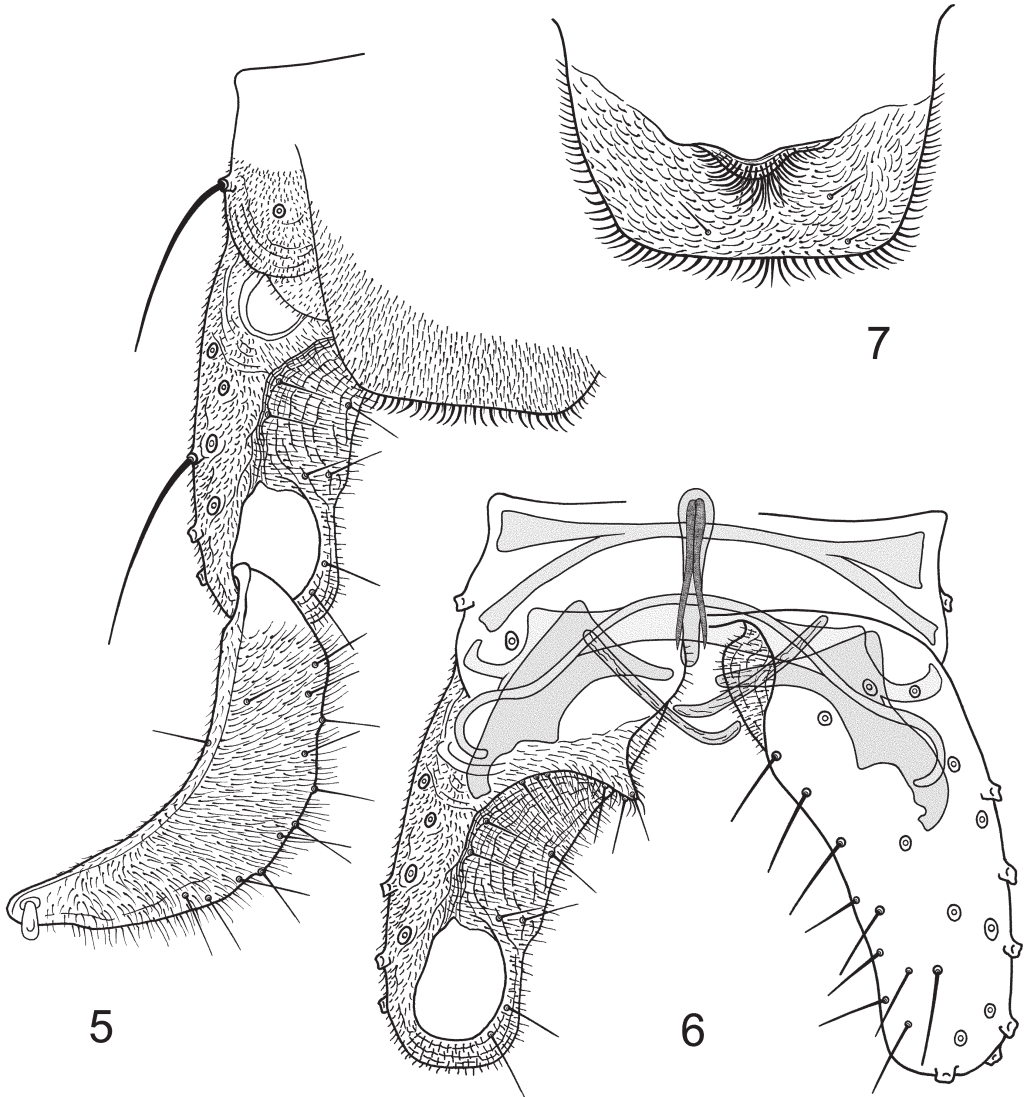
FIGURES 1–4. *Saetherocryptus amazonicus* n. sp., male. 1. Head. 2. Tentorium, stipes and cibarial pump. 3. Thorax. 4. Wing.

with strong oral projections, about 92  $\mu\text{m}$  long. Virga with 2 median spines, 46  $\mu\text{m}$  long, and lateral lamellae. Gonocoxite 141  $\mu\text{m}$  long; with bluntly triangular inferior volsella, 18  $\mu\text{m}$  long, 19  $\mu\text{m}$  wide, ending 80  $\mu\text{m}$  from apex of gonocoxite. Gonostylus large, crescent, 121  $\mu\text{m}$  long, 35  $\mu\text{m}$  wide at its widest point, covered with long, medially directed microtrichia and a few weak

setae; megaseta normal, 10  $\mu\text{m}$  long. HR 1.15. HV 1.19.

**Female and immatures.** Unknown.

**Distribution and ecology.** The species is only known from the type locality, Reserva Adolpho Ducke, a 10,000 ha reserve in the outskirts of Manaus in the Amazonas State, Brazil. The single male was collected in a light trap situated close to



**FIGURES 5–7.** *Saetherocryptus amazonicus* n. sp., male. **5.** Hypopygium, dorsal aspect. **6.** Hypopygium with anal point and tergite IX removed, dorsal aspect to the left and ventral aspect to the right. **7.** Anal point and ventral view of posterior part of tergite IX.



**FIGURE 8.** *Saetherocryptus amazonicus* n. sp., male. Hypopygium, dorsal view (Photo: Linn K. Hagenlund)

a stream and several temporary pools. The area is covered with primary forest and is relatively flat. During the rainy season numerous small pools are formed scattered on the forest floor.

Reserva Adolpho Ducke is also the type locality for *Dicrotendipes fitkai* Epler, *Beardius curticaudatus* Pinho, Mendes & Andersen, and *Litocladius neusae* Mendes, Andersen & Hagenlund (Epler 1988; Pinho *et al.* 2013; Mendes *et al.* 2011).

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