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A new species of *Colosmittia* Andersen et Sæther from Costa Rica (Chironomidae: Orthocladiinae)

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ANDERSEN, T., MENDES, H.F., HAGENLUND, L.K. **A new species of *Colosmittia* Andersen et Sæther from Costa Rica (Chironomidae: Orthocladiinae).** Biota Neotrop. 11(3): http://www.biotaneotropica.org.br/v11n3/en/abstract?article+bn03711032011

Abstract: *Colosmittia anamariae* sp. n. from Costa Rica is described and figured as male imago. The genus *Colosmittia* Andersen et Sæther, 1994 was described based on a single species, *C. clavata* Andersen et Sæther, 1994 from the West Usambara Mountains in Tanzania, East Africa. A second species, *C. brasileira* Mendes et Andersen, 2009 was recently described from Brazil. The discovery of a third species in Costa Rica indicates that the genus might be widespread in the Neotropical region.
Keywords: *Chironomidae, Orthocladiinae, Colosmittia, new species, Costa Rica.*

ANDERSEN, T., MENDES, H.F., HAGENLUND, L.K. **Uma nova espécie de *Colosmittia* Andersen et Sæther da Costa Rica (Chironomidae: Orthocladiinae).** Biota Neotrop. 11(3): http://www.biotaneotropica.org.br/v11n3/pt/abstract?article+bn03711032011

Resumo: A espécie *Colosmittia anamariae* sp. n., da Costa Rica, é descrita e ilustrada com base no macho adulto. O gênero *Colosmittia* Andersen et Sæther, 1994 foi descrito para uma única espécie, *C. clavata* Andersen et Sæther, 1994, de "West Usambara Mountains" na Tanzânia, leste da África e recentemente registrado para o Brasil, com a descrição de *C. brasileira* Mendes et Andersen, 2009. A descoberta desta espécie nova indica que o gênero *Colosmittia* pode estar amplamente distribuído na região Neotropical.
Palavras-chave: *Chironomidae, Orthocladiinae, Colosmittia, espécie nova, Costa Rica.*

Introducion

The genus *Colosmittia* Andersen et Sæther was erected for *C. clavata* Andersen et Sæther, from the West Usambara Mountains in Tanzania, East Africa by Andersen & Sæther (1994). Recently, Mendes & Andersen (2009) described *C. brasileira* Mendes et Andersen from southeastern Brazil. The genus differs from other known orthoclads by the combination of a strongly reduced 4-segmented palp, absence of setae on squama and lack of anal point. The genus does not resemble any other described orthoclad genus and was tentatively placed in the *Pseudosmittia* group of genera by Andersen & Sæther (1994).

The chironomid fauna of Central America was recently treated by Spies et al. (2009) giving a key to the genera recorded or expected in the area. However, *Colosmittia* was not included and will key to *Pseudosmittia* Edwards, 1932. The two genera can easily be separated based on the reduced palp with only 4 segments and the lack of a true anal point in *Colosmittia.* Below, we describe a new species of this genus, the first known record from Central America.

Material and Methods

The specimen was mounted on a slide in Canada balsam following the procedures outlined by Sæther (1969). The terminology follows Sæther (1980).

The holotype is deposited in The Natural History Collections, Bergen Museum, University of Bergen, Bergen, Norway (ZMBN).

***Colosmittia* Andersen et Sæther**

Colosmittia Andersen et Sæther, 1994: 439.

Type species: Colosmittia clavata Andersen et Sæther, 1994: 442, by original designation.

Other included species: Colosmittia brasileira Mendes et Andersen, 2009; *Colosmittia anamariae* sp. n.

Description as in Andersen & Sæther (1994) with the following emendations: antennae with 12 or 13 flagellomeres; Cu_1 curved or weakly sinuate; virga variable. *Colosmittia clavata* has a short, spatulate virga, while the virga in *C. brasileira* is very short and weak; the new species has a distinct needle-shaped virga.

***Colosmittia anamariae* sp. n.** (Figures 1a-e)

Type material: Holotype male: **Costa Rica,** Alajuela Province, Alfaro Ruiz Cantón, near Zarcero, 15.viii.2010, net, T. Andersen, H.F. Mendes & L.K. Hagenlund *leg*. (ZMBN).

Diagnostic characters: The species groups with *C. clavata* as the antennae have 12 flagellomeres. The presence of a needle-shaped virga and the long second palpomere will separate it from the two previously described species.

Etymology: Named after Ana Maria Serrano Rodriguez for her hospitality during our field-work in Costa Rica.

Description: Male (n = 1). Total length 1.51 mm. Wing length 985 µm. Total length/wing length 1.53. Wing length/length of profemur 3.06. Coloration dark brown with paler brown legs and antennae.

Head. Antenna with 12 flagellomeres; 12th and 13th flagellomere fused; AR 0.34; ultimate flagellomere 133 µm long. Temporal setae 3, including 1 inner vertical and 2 postorbitals. Clypeus with 5 setae. Tentorium 91 µm long, 14 µm wide at sieve pore. Stipes not measurable. Palp segment lengths/widths (in µm): 11/7; 29/11; 25/11; 20/7. Third palpomere with 1 sensilla subapically, 13 µm long, (Figure 1a).

Thorax. Antepronotum apparently bare. Dorsocentrals 3; acrostichals 2 very weak in mid scutum; prealar 1. Scutellum with 2 setae.

Wing (Figure 1b). VR 1.54. Costal extension 52 µm long, false vein extending to 159 µm. Cu_1 sinuate. Brachiolum with 1 seta; R with 1 strong seta, remaining veins and cells bare. Squama bare.

Legs. Spur of foretibia 23 µm long; spurs of midtibia 18 and 14 µm long; hind leg lost. Width at apex of foretibia 20 µm, of midtibia 20 µm. Lengths (in µm) and proportions of legs as in Table 1.

Hypopygium (Figures 1c-e). Tergite IX with 4 weak setae; laterosternite IX with 2 strong setae. Phallapodeme 56 µm long; transverse sternapodeme 69 µm long. Virga composed of a needle-like spine, 12 µm long. Gonocoxite 107 µm long; inferior volsella rounded, 20 µm long, reaching 0.66 of gonocoxite length. Gonostylus 62 µm long; megaseta 4 µm long. HR 1.71, HV 2.43.

1. Habitat

The species was collected with a hand net at about 1500 m altitude in a mountainous area with steep hillsides. The mountains are covered with secondary cloud forest and farmland and a few trickles and seeps are found near the collecting site. The area is very humid, the trees are covered with mosses and epiphytes, and many bromeliad species were growing on the ground, some native, some introduced. Most days during the field work in early to mid August the sun was shining during early morning and orthoclads would swarm above the vegetation. At about 10:00 am it started to get foggy and within an hour it would rain, the temperature dropped and the chironomids stopped swarming.

Discussion

As pointed out by Mendes & Andersen (2009), *Colosmittia* might be the first Ortholadiinae genus to demonstrate an Afro-Brazilian vicariance pattern. *Colosmittia clavata* Andersen et Sæther, 1994 was described from the West Usambara Mountains in Tanzania, East Africa, while *C. brasileira* Mendes et Andersen, 2009 was recently described from Brazil. The discovery of a third species in Costa Rica indicates that the genus might be widespread in the Neotropical region.

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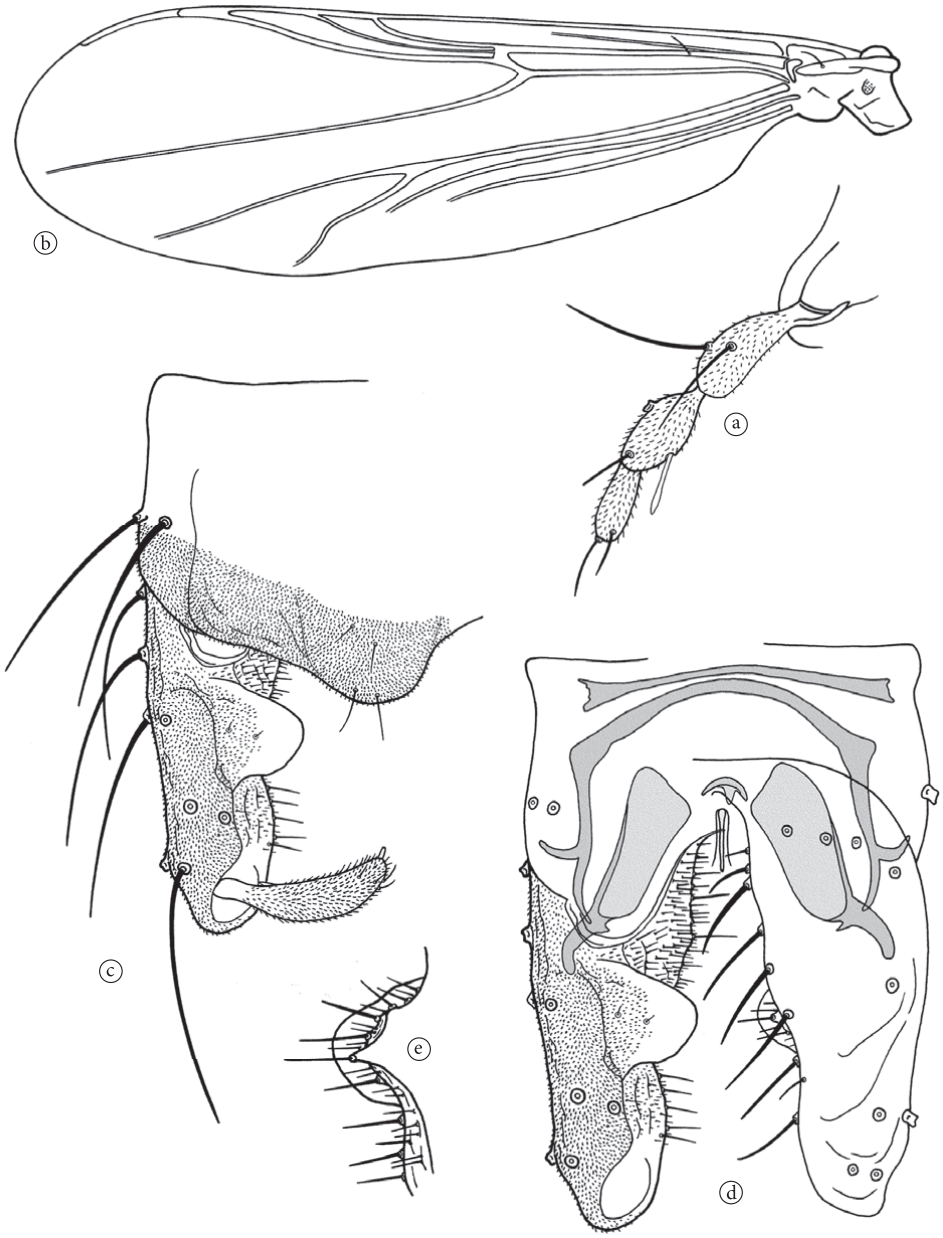
Table 1. Lengths (in µm) and proportions of legs of *Colosmittia anamariae* n. sp., male (n = 1).

	fe	ti	ta_1	ta_2	ta_3	ta_4	ta_5	LR	BV	SV	BR
p_1	328	367	119	61	45	28	20	0.32	5.26	5.85	3.0
p_2	223	259	83	38	29	19	17	0.32	5.41	5.83	2.9
p_3	-	-	-	-	-	-	-	-	-	-	-



Figures 1. *Colosmittia anamariae* sp. n., male. a) palp; b) wing; c) hypopygium, dorsal view; d) hypopygium with tergite IX removed, left dorsal aspect, right ventral aspect; e) inferior volsella, ventral view.

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