

## SYSTEMATICS, MORPHOLOGY AND PHYSIOLOGY

Male Imago Description of *Americabaetis longetron* Lugo-Ortiz & McCafferty (Ephemeroptera: Baetidae), and First Key to Adults of the Genus

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Descrição da Imago Macho de *Americabaetis longetron* Lugo-Ortiz & McCafferty (Ephemeroptera: Baetidae) e Primeira Chave para Adultos do Gênero

RESUMO - A imago macho de *Americabaetis longetron* Lugo-Ortiz & McCafferty é descrita a partir de ninfas criadas em campo no município de Alfredo Chaves, ES. A espécie pode ser diferenciada das outras imagos machos do gênero pela seguinte combinação de características: 1) olhos turbinados uniformemente separados, superfície dorsal elipsoidal; 2) tergitos com linha longitudinal mediana castanho-clara amarelada; 3) primeiro artigo do fôrcaps com uma constrição medioapical distinta; 4) comprimento do corpo relativamente longo (6,3 mm). É proposta a primeira chave para identificação das imagos machos do gênero.

PALAVRAS-CHAVE: Taxonomia, chave de identificação, Espírito Santo, Neotrópico

ABSTRACT - The male imago of *Americabaetis longetron* Lugo-Ortiz & McCafferty is described based on nymphs reared on field in the municipality Alfredo Chaves, Espírito Santo state, Brazil. The species can be distinguished from the others male imagos of the genus by the following combination of characters: 1) turbinate eyes uniformly separated from each other, upper surface ellipsoidal; 2) terga with a light yellowish brown band along midline; 3) genitalia with first segment distinctly constricted medioapically; 4) length of body relatively long (6.3 mm). The first key to the male imagos of the genus is also proposed.

KEY WORDS: Taxonomy, identification key, Espírito Santo, Neotropics

*Americabaetis* Kluge is a widespread Pan-American genus of Baetidae (Ephemeroptera) distributed from Argentina to USA (south Texas) (Dominguez *et al.* 2006, Wiersema & McCafferty 1999), including also the Antilles (Kluge 1992, Hofmann *et al.* 1999). Eleven valid species are known from South America, four from the Antilles, two exclusively from Central America and one from Central and North America. Of these 18 species, *A. bridarolli* (Navás), *A. jorgenseni* (Esben-Petersen), *A. oldendorffi* (Weyenbergh), *A. peterseni* (Hubbard), and *A. weiseri* (Navás) are known exclusively from adults; *A. boriquirensis* (Lugo-Ortiz & McCafferty), *A. intermedius* (Lugo-Ortiz & McCafferty), *A. labiosus* Lugo-Ortiz & McCafferty, *A. longetron* Lugo-Ortiz & McCafferty, and *A. maxifolium* Lugo-Ortiz & McCafferty are known exclusively from nymphs; *A. alphas* Lugo-Ortiz & McCafferty, *A. humilis* Hoffman & Thomas, *A. naranjoi* (Kluge), *A. pleturus* (Lugo-Ortiz & McCafferty), *A. robacki* (Lugo-Ortiz & McCafferty), and *A. spinosus* Hoffman & Thomas are known from nymphs, male and female imagos; whereas *A. lugo* Waltz & McCafferty, a parthenogenetic species, and *A. tithion* are known from nymphs and female imagos (Waltz & McCafferty 1999, Wiersema & McCafferty

1999, Lugo-Ortiz & McCafferty 1996, Kluge 1992, Hofmann *et al.* 1999, Salles *et al.* 2004, Dominguez *et al.* 2006).

A key to the nymphs of *Americabaetis* described so far was provided by Waltz & McCafferty (1999), and Dominguez *et al.* (2006) presented a key to the nymphs of South America. However, for the identification of the imagos no key was available until now. The aim of this paper is to present the description of the male imago of *A. longetron* and to propose the first key to the male imagos of the genus.

### Material and Methods

Nymphs of *A. longetron* were caught on the marginal vegetation of the river, and the adults were obtained by rearing these nymphs in the field. Terms used in descriptions of thorax are from Kluge (1994). The material is deposited in the Entomological Collection of the Universidade Federal do Espírito Santo.

The five species known exclusively from adults (*A. bridarolli*, *A. jorgenseni*, *A. oldendorffi*, *A. peterseni*, *A. weiseri*) are not treated in the key once they were tentatively

placed in *Americabaetis* by Lugo-Ortiz & McCafferty (1999). Their original descriptions are old, inadequate and, as pointed out by Domínguez *et al.* (2006), they cannot be reliably distinguished based on the known characters. *A. pleturus* and *A. naranjoi* are keyed together once they cannot be distinguished from each other based on the characters given in the literature. However, *A. naranjoi* is highly unlikely to be found outside of the Antilles (Wiersema & McCafferty 1999).

***Americabaetis longetron* Lugo-Ortiz & McCafferty, 1996 (Figs. 1-4)**

*Americabaetis longetron* Lugo-Ortiz & McCafferty, 1996: 165, Domínguez *et al.*, 2006: 70.

**Male Imago**

**Diagnoses.** The male imago of *A. longetron* can be distinguished from others species of the genus by the following combination of characteristics: 1) turbinate eyes uniformly separated from each other, upper surface ellipsoidal (Fig. 1); 2) terga with a light yellowish brown band along midline (Fig. 3); 3) genitalia (Fig. 4) with first segment distinctly constricted medioapically; 4) body relatively long (6.3 mm).

**Description.** Body length: 6.3 mm. Forewings: 5.1-5.8 mm. General coloration reddish brown.

Head (Fig. 1). Light yellowish brown with V shaped brown mark; ocelli surrounded with brown. Antennae whitish, scape and flagellum slightly washed with brown. Turbinate eyes uniformly separated from each other, upper surface ellipsoidal, orangish; basal half of stalk brown, paler toward apex, apical half light yellowish brown.

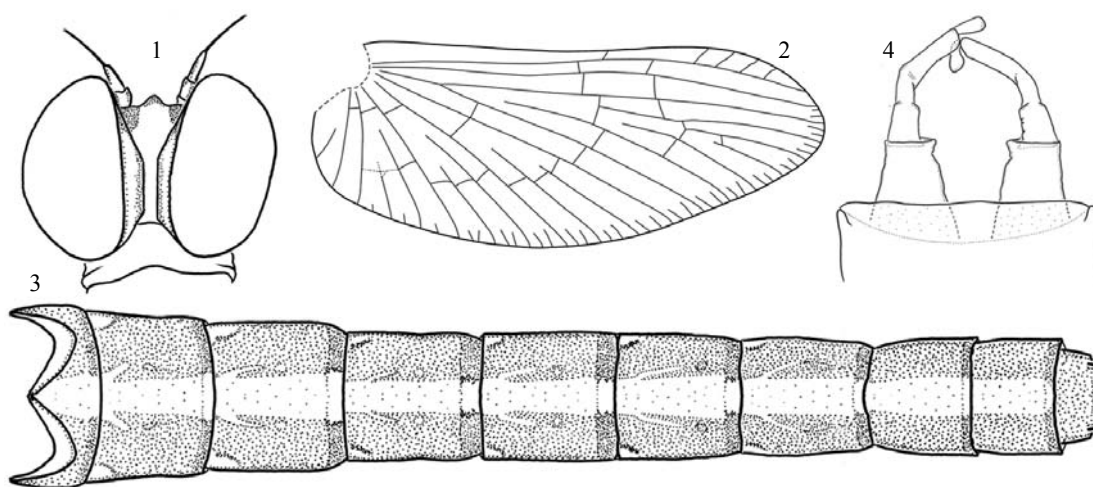
Thorax. Pro and metanota brown; mesonotum brown with light yellowish brown mark on anterotal transverse impression, light yellowish brown along lateroparapsidal suture, posterior scutal protuberance dark brown. Legs whitish. Leg I: tibia 1.5 times the length of femur, tarsi subequal in length to the femur and with four segments decreasing in length apically. Legs II and III: tibia subequal in length to the femur, tarsi 0.35 times the length of femur. Wings with small stain of yellowish brown (Fig. 2); membrane hyaline except for costal and subcostal area translucent; longitudinal veins light brown, transversal veins whitish.

Abdomen (Fig. 3). Terga brown, light yellowish brown band along midline; segments 2 to 7 with anterolateral light yellowish brown marks as in Fig. 3; posterior margin of segments 1 to 7 dark brown. Sterna light brown, lateral margins brown. Genitalia (Fig. 4) light brown, third segment whitish; first segment distinctly constricted medioapically. Cerci whitish, segments apically surrounded with brown.

**Material examined.** Three male imagos (reared): Brazil, Espírito Santo, Alfredo Chaves, Nova Mantova, S 20°39'22", W 40°50'13", 13.x.2007, R. Boldrini col.; 1 male imago (reared): same locality, 04.xi.2007, same collector.

**Key to the Male Imagos of *Americabaetis***

1. Upper surface of turbinate eyes circular; marginal intercalary veins often single.....  
.....*A. humilis* (West Indies: Guadalupe)
- 1'. Upper surface of turbinate eyes ellipsoidal; marginal intercalary veins often double.....2
- 2(1'). First segment of forceps distinctly constricted medioapically.....3
- 2'. First segment of forceps not constricted medioapically..4



Figs. 1-4. *Americabaetis longetron*, male imago. 1, Dorsal view of head; 2, fore wing; 3, abdomen, dorsal view; 4, genitalia, ventral view.

3(2). Turbinate eyes uniformly separated from each other; terga with a light yellowish brown band along midline.....*A. longetron* (South America: Brazil, Paraguay and Uruguay)  
3'. Turbinate eyes anteriorly divergent; terga not as above.....*A. pleturus* (Central and North America: Costa Rica, Nicaragua, Belize, Honduras, Mexico and USA) / *A. naranjoi* (Cuba)  
4(2'). Base of second segment of forceps dark, remainder of genitalia pale.....*A. spinosus* (Guadalupe, West Indies)  
4'. Genitalia not as above; distributed in South America...5  
5(4'). Turbinate eyes uniformly and widely separated from each other.....  
*A. alphus* (Argentina, Bolivia, Brazil, Chile and Paraguay)  
5'. Turbinate eyes closely separated from each other, anteriorly divergent.....*A. robacki* (Peru and Uruguay)

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