

**A NEW SPECIES OF PHASMATODEA OF THE GENUS
Echetlus STÅL.**

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ABSTRACT

A new species of Phasmatodea, *Echetlus evoneobertii* Zompro & Adis n. sp., is described from Southern Brazil, where it is likely to have been introduced. This species is destructive to *Eucalyptus urophylla* S. T. Blake (Myrtaceae) which was imported from Australia. *Ernodes sumatranus* Redtenbacher, 1908, is designated as type-species for *Ernodes* Redtenbacher, 1908, which is restituted as valid genus. *Bacunculus tener* Brunner v. W., 1907, is a new synonym of the type-species *Echetlus peristhenes* (Westwood, 1859). With that *Echetlus* includes the following species: *Parasipyloidea cercata* Redtenbacher, 1908, *Bacillus peridromes* Westwood, 1859, *Anophelepis periphanes* Westwood, 1859, *Bacillus peristhenes* Westwood, 1859.

Key words: Phasmatodea, *Echetlus* Stål, *Ernodes* Redtenbacher, *Echetlus evoneobertii* n. sp., *Eucalyptus* spp., Australia, Brazil

RESUMO

**NOVAS ESPÉCIES DE PHASMATODEA DE GÊNERO
Echetlus STÅL.**

O trabalho descreve uma nova espécie de Phasmatodea, *Echetlus*

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evoneobertii Zompro & Adis n. sp., encontrada no Sul do Brasil onde, mais provavelmente, tenha sido introduzida. Trata-se de uma espécie que destrói *Eucalyptus urophylla* ST Blake (Myrtaceae), importada da Austrália. *Ernodes sumatranus* Redtenbacher, 1908, é designada como uma espécie-tipo para o gênero *Ernodes* Redtenbacher, 1908, assim restituído como um gênero válido. *Bacunculus tener* Brunner v. W., 1907, passa a ser considerado um novo sinônimo para a espécie-tipo *Echetlus peristhenes* (Westwood, 1859). Desta forma, o gênero *Echetlus* passa a incluir as seguintes espécies: *Parasipyloidea cercata* Redtenbacher, 1908, *Bacillus peridromes* Westwood, 1859, *Anophelepis periphanes* Westwood, 1859, e *Bacillus peristhenes* Westwood, 1859.

Palavras-chave: Phasmatodea, *Echetlus* Stål, *Ernodes* Redtenbacher, *Echetlus evoneobertii* n. sp., *Eucalyptus* spp., Australia, Brasil.

INTRODUCTION

An unidentified species of Phasmatodea became destructive to *Eucalyptus urophylla* S. T. Blake (Myrtaceae) in Southern Brazil. The trees were imported from Australia. It also feeds on the native plant *Psidium guajava* L. (Myrtaceae) (Dr. Berti-Filho, personal communication). Difficulty has been experienced in identifying the phasmid, as there are no obvious relatives in South America. Because of this and the possibility of an introduction with the *Eucalyptus* trees a close examination of Australian genera has been made, resulting in the conclusion that this insect is an undescribed species of *Echetlus* Stål, 1875, here described as *Echetlus evoneobertii* n. sp.

Echetlus Stål, 1875: 6 includes the following species:

Parasipyloidea cercata Redtenbacher, 1908: 479;

Echetlus evoneobertii Zompro & Adis n. sp.

Bacillus peridromes Westwood, 1859: 13, pl. 8: 2b, c;

Anophelepis periphanes Westwood, 1859: 70: pl. 8: 2a;

Bacillus peristhenes Westwood, 1859: 13: pl. 7: 1, 1a

= *Bacunculus tener* Brunner v. W., 1907: 337, pl. 14: 5a, b, n. syn.

The female holotype of *Bacunculus tener* Brunner v. W., 1907, was examined in the collection of the Zoologisches Museum der Humboldt Universität, Berlin, Germany. It is labelled: Type; 3207; Adelaide; *Apolosoma tenerum* Br.* Type; recte! *Bacunculus tener* Br. ?Adelaide? (N. America); 26 3207. Adelaide. Westwood.; "Ich vermute eine Verwechslung des Fundortes. Die Species hat einen unverkennbarlich Charakter. Ergebnst Brunner Wien, am 29 Apr. 1901."

Apolosoma is an unpublished manuscript name and therefore not valid.

Echetlus Stål, 1875

Type-species: *Bacillus peristhenes* Westwood, 1859, by subsequent designation of Kirby, 1904: 339.

Ernodes Redtenbacher, 1908: 373.

Type-species: *Ernodes sumatranus* Redtenbacher, 1908: 374, by present designation.

Karny (1923: 238) synonymized *Ernodes* with *Echetlus* in error. No type-species had been designated by Redtenbacher nor by Karny. As Redtenbacher (1906: 2) stated, he has not examined Westwood's material. The species of *Ernodes* he described from his own material show significant differences to the type-species of *Echetlus*.

Ernodes is a member of Platycraninae and distributed in Sumatra, while the Australian *Echetlus* has a doubtful systematic position, which can only be clarified by a closer research on Australian phasmids. Species of *Echetlus* are characterized by their slender and simple cerci, which project beyond the tip of abdomen at least by the length of the last two abdominal segments combined, while the cerci of *Ernodes*-species are flat and broadened.

Key to females of *Echetlus* Stål.

1. Femora with with tubercles or short spines
- Femora not armed, smooth
2. Femora with several small, black tubercles

E. peristhenes

(Westw.)

- Meso and meta femora with several small spines in the anterior half
E. periphanes (Westw.)

Abdomen

- 3. Abdomen with several fine carinae *E. cercatus* (Redt.)
- Abdomen with lateral and sublateral carinae or smooth, at best with double lateral margin
- 4. Abdomen with lateral and sublateral carinae *E. peridromes* (Westw.)
- Abdomen smooth, only with double lateral margin
E. evoneobertii Zompro & Adis

Echetlus evoneobertii n. sp.

Material examined: Holotype: Female, Brazil, Boa Esperança do Sul, Cerignoni, J. A. 18.II.1998. [Museu de Zoologia, Universidade de Sao Paulo, Brazil (MZUSP)]

Paratypes: 5 females, 15 eggs. 2 females, 10 eggs: Brazil, Piracicaba-Esalq/USP, Bernardi, E. B., IX.2000, criado em laboratório em folhas de *Eucalyptus* sp. [MZUSP]; 2 females: Brazil, Boa Esperança do Sul, Cerignoni, J. A. 18.II.1998 [Coll. O. Zompro 457-1, 3]; 5 eggs: Brazil, Piracicaba-Esalq/USP, Bernardi, E. B., IX.2000, criado em laboratório em folhas de *Eucalyptus* sp. [Coll. O. Zompro 457-7]. Collection Oliver Zompro affiliated with Zoologisches Museum der Universität Kiel, Germany (ZMUK); 1 female, 1 egg: Brazil, Piracicaba-Esalq/USP, Bernardi, E. B., IX.2000, criado em laboratório em folhas de *Eucalyptus* sp. [Australian National Insect Collection (ANIC)].

Diagnosis: Differing from the other species of *Echetlus* Stål, 1875, in the body being not carinate (*E. peristhenes* (Westwood, 1859) = *Bacunculus tener* Brunner v. W., 1907, n. syn., *E. peridromes* (Westwood, 1859), *E. cercatus* (Redtenbacher, 1908) n. comb, (*Parasipylloidea cercata* Redtenbaer, 1908), or the meso- and metafemora being not spinose (*E. periphanes* (Westwood, 1859)); *Anophelepis telesphorus* Westwood, 1859, was included by Redtenbacher also, but definitely belongs to another genus.

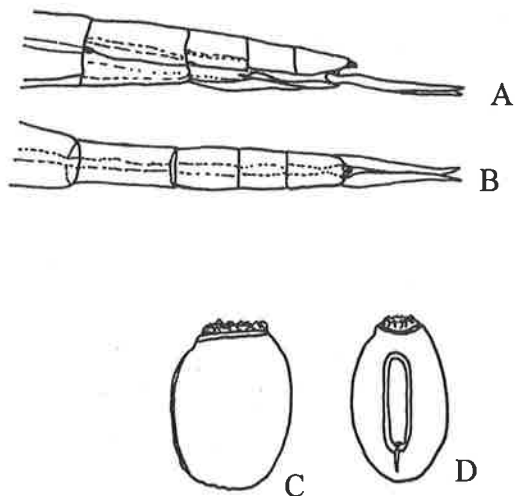


Figura 1. Legenda

- A. Terminal abdominal segments, lateral view. Scale: 1 mm.
 B. Terminal abdominal segments, dorsal view. Scale: 1 mm.
 C. Egg, lateral view. Scale: 1 mm.
 D. Egg, dorsal view. Scale: 1 mm.

Description: Female. General colour green or different shades of brown, often with many small, white spots. Body smooth, limbs not armed. Lateral “carinae” and median line only visible as difference in colour, not as real carina.

Head: Rounded rectangular, with indistinct median line and a flat furrow above genae. Eyes projecting less than hemispherically, genae about four times as long. Scapus flat rectangular, anteriorly thickened, pedicellus almost as wide but half as long, cylindrical. Antennae bristled, in middle indistinctly segmented, terminal segments short, projecting beyond middle of abdominal segment IV.

Prothorax subrectangular, shorter and narrower than head, anterior margin slightly concave, anterolateral margin prominent, lateral margins in anterior half concave. Indistinct median line and mediotransversal furrow present. Prothorax straight posteriorly, not marginated.

Mesothorax strongly elongate, as wide as head, about 4.5 times as long as prothorax. Metathorax less than three times as long as mesothorax. of same width.

Profemora curved basally, triangular in cross-section, with prominent dorsal- and interior and less prominent ventral carina. Protibiae subquadrate in cross-section, of same length, slightly carinated. Probasitarsus more than twice as long as following segments combined, second tarsite twice as long as third, fourth half as long as third. Terminal segment as long as previous three tarsites combined. Meso- and metafemora slightly rectangular in cross-section, tibiae quadrate. Tarsi as protarsi.

Median segment slightly longer than half-length of metathorax, measuring three quarters of abdominal segment II, segments I to V increasingly longer, V widest segment, VI to VII increasingly shorter and narrower. Segments VIII to X of subequal width, VIII longer than IX, X longer than VIII, posterior margin indistinctly w-shaped, supraanal plate small, triangular with median carina. Cerci elongate, basally compressed, almost as long as VIII to X combined, slightly curved. Supraanal plate flat, simple, elongate triangular, projecting slightly beyond posterior margin of IX.

Measurements (mm) holotype: Body: 64.7; head: 4.3; prothorax: 2.8; mesothorax: 11.7; metathorax: 6.8; mediansegment: 3.1; profemora: 17.5; protibiae: 17.0; mesofemora: 11.0; mesotibiae: 11.1; metafemora: 14.0; metatibiae: 15.5.

Measurements (mm) paratypes: Body: 65.0; head: 4.4; prothorax: 3.7; mesothorax: 16.8; metathorax: 5.9; mediansegment: 3.0; profemora: 17.0; protibiae: 17.0; mesofemora: 11.0; mesotibiae: 11.0; metafemora: 14.0; metatibiae: 15.5.

Egg: Capsule brown, suboval, laterally depress, slightly irregular posteriorly. Micropylar plate two thirds as long as capsule, marginated, with short median line. Operculum orange, with a ring of irregular, risen structures.

Measurements (mm): Total length: 2.40; length: 2.30; width: 1.60; height: 1.10.

Etymology: Dedicated to Prof. Dr. Evôneo Berti-Filho, Senior Scientist at the Department of Entomology, Escola Superior de Agricultura Luiz de Queiroz (USP), Piracicaba, Brazil, who discovered this species.

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