

A new *Aegognathus* Leuthner, 1883 (Coleoptera, Lucanidae) from Brazil

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With 13 figures

Abstract

A new species of the genus *Aegognathus* Leuthner, *A. caledoniaensis*, is described based on some males and females from Mount Caledônia, Nova Friburgo, Rio de Janeiro State, Brazil. This new species is easily distinguished by others by its mandibles and the shape of ocular canthus.

Resumo

Uma nova espécie de *Aegognathus* Leuthner, *A. caledoniaensis* é descrita baseada em alguns machos e fêmeas do Pico do Caledônia, Município de Nova Friburgo, Estado do Rio de Janeiro, Brasil. Esta nova espécie se diferencia das outras pela forma de suas mandíbulas e pelo canthus ocular.

Key words: Neoprosopocoilini, *Aegognathus*, stag beetle, Lucanidae, Scarabaeoidea, Pectinicornia.

Introduction

The genus *Aegognathus* Leuthner, 1883 includes five described species. The last review of this genus has been made by Weinreich (1963).

A few years ago the author collected in Mount Caledônia, Nova Friburgo municipality (Rio de Janeiro State, Brazil) a small male of this genus, that couldn't be identified. Latter, having collected more specimens it was possible to conclude that the taxon was different from any other Brazilian *Aegognathus* (*A. spitzi* Ohaus, 1929 and *A. iridicolor* Luederwaldt, 1935). Other species in Brazil live in Alto da Serra, in São Paulo State, another orographic formation, and have different mandibular characters.

Aegognathus caledoniaensis sp. n.

Figs 1–13

Holotype male: Brasil: RJ [Rio de Janeiro], Nova Friburgo, Pico do Caledônia 2219m, I – 2001, E. & P. Grossi leg.

Allotype female: Same data as holotype

Paratypes (25 males and 28 females) bearing same data as holotype (3 males and one female), same data except I – 1998 (2 males and 3 females), II – 1998 (1 male and 1 female), III – 1998 (1 male and one female), I – 1999 (2 males and two females), II – 1999 (5 males and 2 females), III – 1999 (2 males and 3 females), I – 2000 (2 males and 4 females), II – 2000 (2 males and 1 female), III – 2000 (1 male and 2 females), I – 2001 (3 males and one female), II – 2001 (2 males and 1 female), III – 2001 (1 male and 4 females), II – 2002 (1 male and 3 females).

Holotype and Allotype *ex col.* E. & P. Grossi, deposited at Coleção Adolph Hempel, Instituto Biológico, São Paulo.

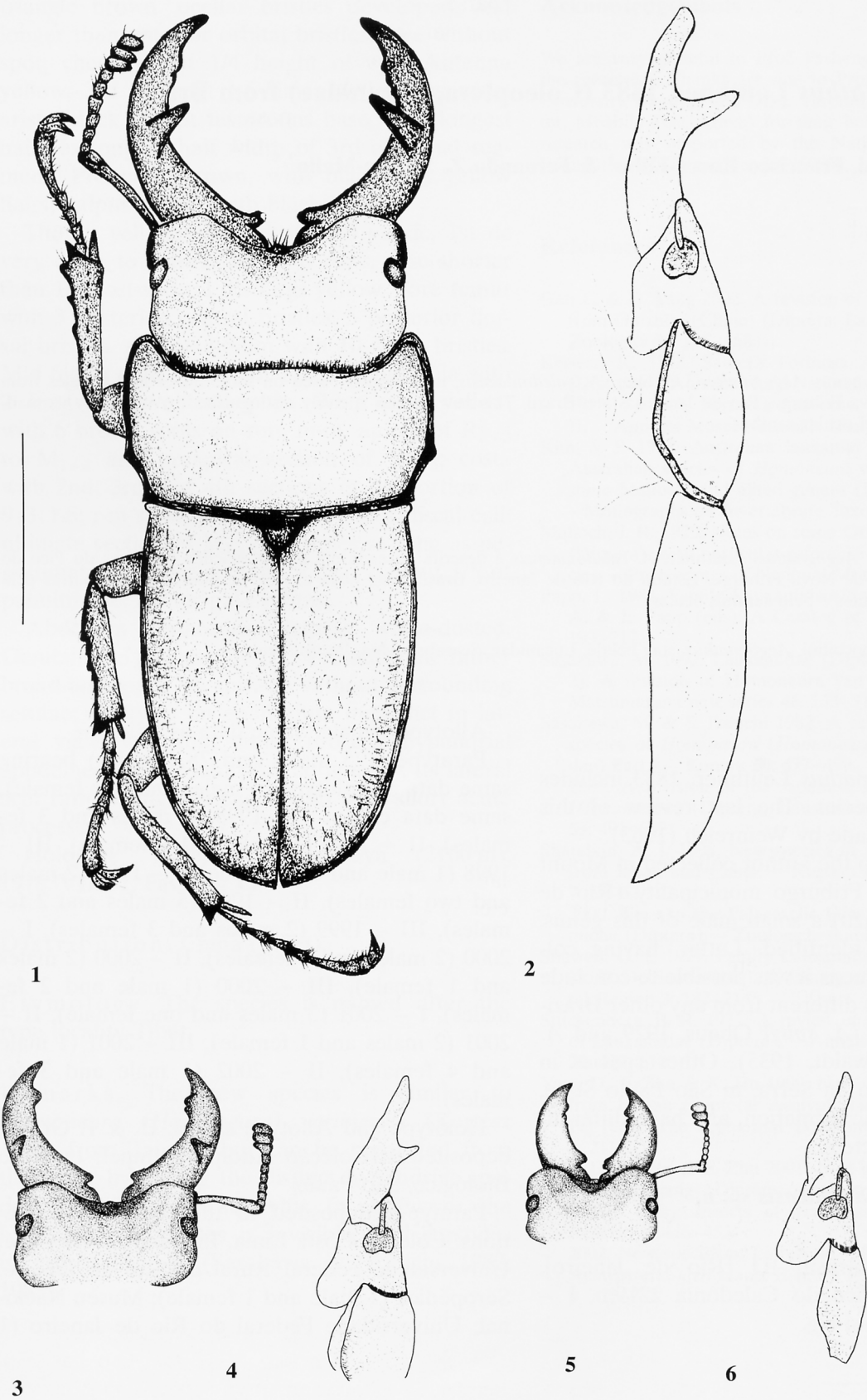
Paratypes deposited in the following collections: Coleção Costa Lima, Instituto de Biologia, Universidade Federal Rural do Rio de Janeiro, Seropédica (1 male and 1 female); Museu Nacional, Universidade Federal do Rio de Janeiro (1

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Figs 1–6. *Aegognathus caledoniaensis*, males. **1**, large male, dorsal view; **2**, *idem*, lateral view; **3**, medium male, dorsal view of head; **4**, *idem*, lateral view of head and pronotum; **5**, small male, dorsal view of head; **6**, *idem*, lateral view of head and pronotum. scale = 5 mm.

male and 1 female), Museu de Zoologia, Universidade de São Paulo (1 male and 1 female), remaining paratypes in the first author's collection, Nova Friburgo.

Species close to *A. spitzzi* but distinguished from that one, in large males, by less curved mandibles, two small apical teeth in each mandible, median teeth thinner and more vertical and the basal teeth with a different form. Genitalia of male and female also different. Small males are distinguished by basal teeth of mandible and the anterior depression of head and females by canthus, teeth on median tibiae and by bifurcate external calcars on median and posterior tibiae.

Males (Figs 1–6, 9–12): 17–23 mm length, 6–7 mm wide; body slim, colour black dorsally and ventrally, head glabrous, shorter than wide, mandibles curved inside in bigger specimens, with one to three irregular small and apical teeth, one big median tooth more vertical than horizontal and feebly curved inwards, and one basal tooth. Mandible completely microgranulated with small and irregularly distributed punctures. Mandibles ventrally minutely granulated with irregular punctures separated by three to six diameters. Mentum minutely granulated with larger irregular punctures denser centrally, separated by two to five diameters, with dense yellow setae especially anteriorly. Pre-mentum minutely granulated with short setae on each irregular puncture. Gula smooth, shining, head ventrally microgranulated, especially anteriorly and laterally, posteriorly with elyptical large punctures separated by half to five diameters.

Pronotum smooth, bordered all around except in the middle fourth of anterior margin. Disc anteriorly covered by yellow setae, laterally and posteriorly with few and irregular yellow setae. Posterior angle of pronotum strong and obtuse. Borders with very small punctures, larger in anterior margin. Scutellum microgranulated and covered by dense yellow setae. Elytra with dispersed punctures anteriorly, posteriorly with very small and irregular punctures, dense yellow setae all over especially posteriorly. Epipleuron nicely microgranulated with few setae posteriorly.

Proepisternum minutely granulated with sparse extended setose punctures, setae small. Prosternum minutely granulated, punctured, punctures larger laterally. Anterior coxae minutely granulated with a central depression and some sparse punctures anteriorly and posteriorly, with a dense group of setose punctures in the middle. Femora nicely microgranulated with

sparse small setose punctures. Tibiae with five external teeth, the bigger apically hooked and others decreasing in size.

Mesepisternum minutely granulated and strongly punctured posteriorly, metaepisternum minutely granulated and strongly punctured, even stronger anteriorly, with coalescent punctures. Metasternum microgranulated and punctured laterally. Metasternal disc minutely granulated and *discrimen* with a posterior triangular punctured region, the point anterior, about a half before meso-metasternal suture. Meso-metasternal suture minutely granulated with a fovea and very small few setae.

Middle coxae minutely granulated and strongly punctured posteriorly, with some semi-circular setose punctures in the middle. Median tibiae with four external tubercles and one tooth between the apical ones. Posterior coxae posteriorly with strongly coalescent punctures and anteriorly microgranulated with a line of small setose punctures. Posterior tibiae with one little tooth in the end of 3/5 of tibia. Middle and hind femora like the fore ones.

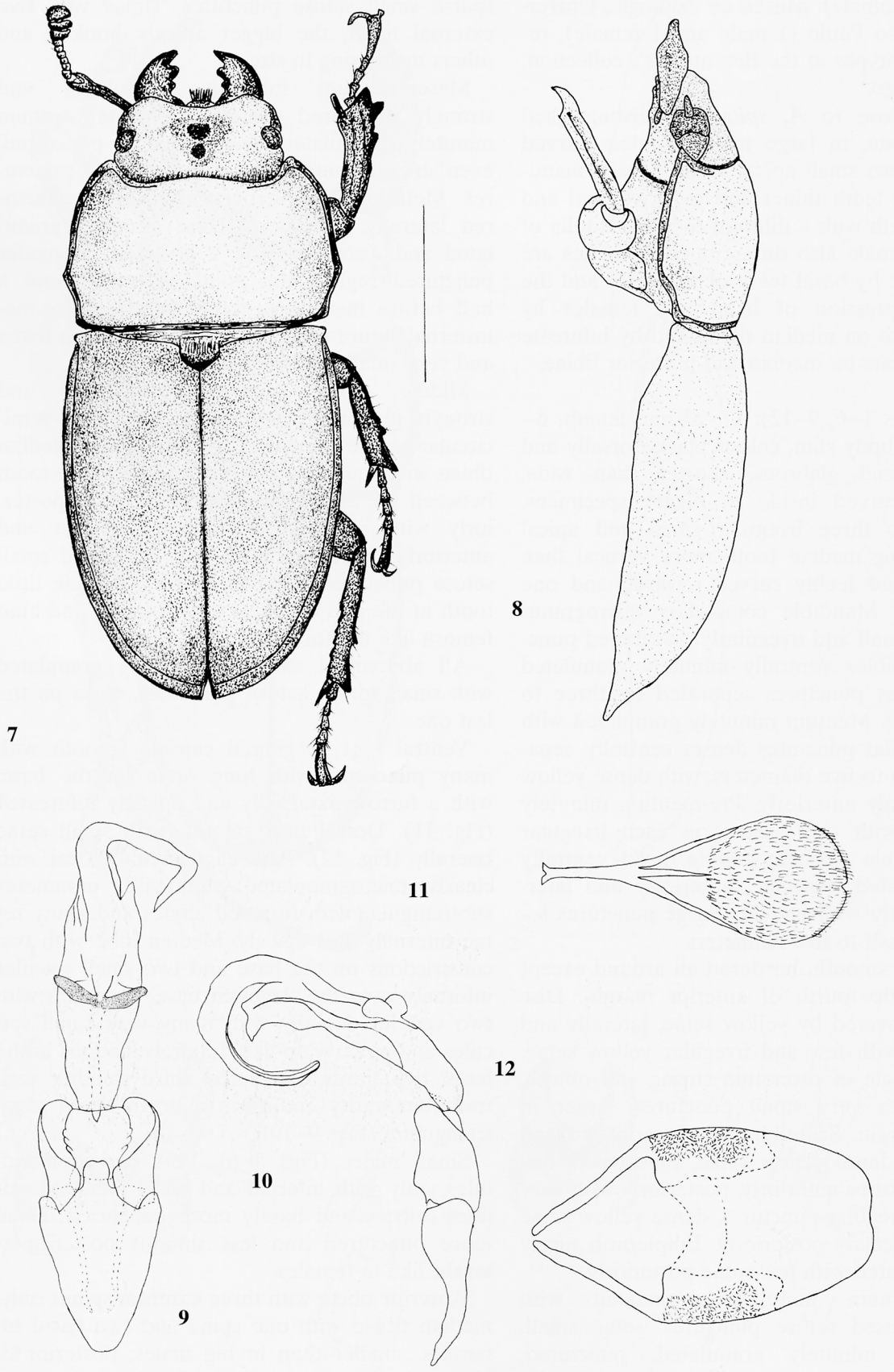
All abdominal sternites minutely granulated with small sparse setose punctures, more on the last one.

Ventral part of genital capsule smooth with many punctures with long setae on the base; with a furrow externally and apically bifurcated (Fig. 11). Dorsal part smooth with small setae laterally (Fig. 12). Aedoeagus symmetrical with clearly microgranulated phalobase, parameres subtriangular with rounded angles and many setae internally and apically. Median lobe with two constrictions on the base and two small spicules internally over the flagelum base. Flagelum with two vesicles dorsally with many very small spicules and apice whip-like. Laterally sinuous in the basal two thirds, the apical third slender; ventrally sinuosity ending in a down sharp semi-triangulum (Figs 9–10).

Small males (Figs 5–6): Less curved mandibles, only with internal and basal teeth. Mandibles dorsally and basally more punctured. Head more punctured and less sinuous posterior-laterally, like in females.

Anterior tibiae with three external spines only; median tibiae with one spine and two basal tubercles, smaller than in big males; posterior tibiae with a small tubercle only.

Female (Figs 7–8, 13): 16–18 mm length, 6–7 mm wide; body dorsally and ventrally black, completely glabrous. Head glabrous with irregular



Figs 7–12. *Aegognathus caledoniaensis*. **7**, female, dorsal view; **8**, *idem*, lateral view; **9**, male, aedoeagus, dorsal view; **10**, *idem*, lateral (right) view; **11**, *idem*, male genital capsule, ventral piece; **12**, *idem*, male genital capsule, dorsal piece. scale lines = 5 mm.

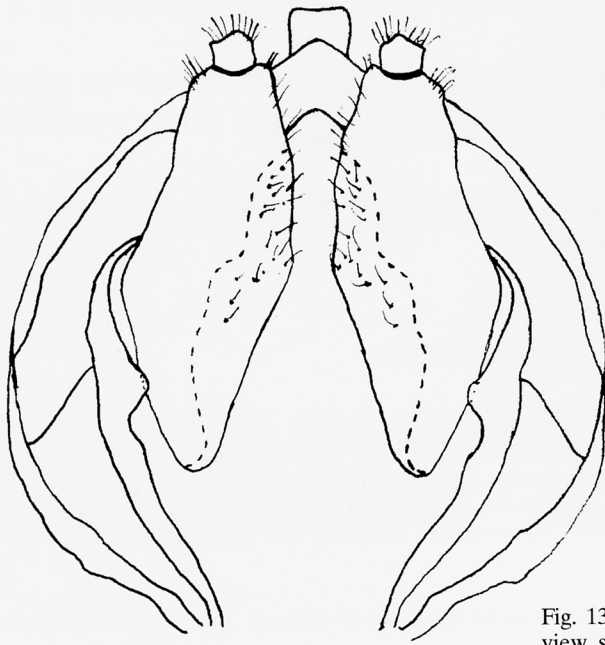


Fig. 13. *Aegognathus caledoniaensis*, female genitalia, ventral view. scale = 1 mm.

punctures separated by one diameter and a triangular depression centrally. Canthus expanded externally in some specimens. Head ventrally and laterally minutely granulated with irregular punctures. Mandibles short with two teeth, and strongly punctured internally, ventrally microgranulated with irregular punctures. Mentum strongly punctured with some setae laterally and anteriorly. Prementum minutely granulated with sparse large setose punctures. Gula smooth with no setae or punctures.

Pronotum microgranulated, glabrous, completely bordered except anterior median fourth, with small irregular punctured, larger laterally. Anterior angles with yellow setae over posterior area of head like in male. Prosternum microgranulated and strongly punctured laterally, more finely centrally, with small setose punctures. Proepisternum minutely granulated, finely punctured with small setae, proepimerum microgranulated with larger setose punctures. Scutellum with some setose punctures and completely covered by yellow long setae.

Fore coxae minutely granulated, strongly punctured posteriorly with smaller setose punctures anteriorly. Femora minutely granulated with sparse small punctures with few little setae, denser ventrally and posteriorly. Tibiae with four external teeth and two lines of punctures with setae on the side.

Elytra glabrous, nicely microgranulated to smooth, with little dispersed small punctures, larger posteriorly. Epipleuron smooth with small

dispersed punctures and small groups of setae posteriorly. Meso-metasternal suture microgranulated, glabrous, with no punctures.

Mesosternum heavily punctured with setose and coalescent punctures laterally. Mesepisternum minutely granulated, strongly and irregularly punctured with setae.

Metasternum small minutely granulated with sparse few punctures, less anteriorly than laterally and no punctures posteriorly and the discrimen lanciform. Metasternum anteriorly with a fovea at middle, fovea variable in size. Metaepisternum microgranulated with both strongly coalescent and free punctures.

Middle coxae microgranulated with sparse punctures anteriorly. Median tibiae with lines of setae and four small external teeth, the apical bigger than others. Hind coxae minutely granulated, punctured posteriorly with some setose punctures anteriorly. Tibiae with one external tooth sometimes with a basal tubercle, and lines of setae. Calcars of middle and hind tibiae with two teeth, the lateral external one, bifurcated. All tarsomeres with many brush of setae like in males.

Each abdominal sternite minutely granulated with very small and irregular setose punctures, the last one posteriorly margined, microgranulated, with horseshoe punctures, bearing a little seta in each one, setae larger posteriorly.

Genitalia symmetric. Dorsal plate smooth with some small punctures and setae, denser apically; bearing an apical apophysis, rectangular in form.

Ventral plates symmetrical, with many setae, denser apically, and an unisegmented apical stylus with external setae (Fig. 13).

Etymology

The epithet is a reference to the place where the first author collected all specimens and many other Lucanids, Mount Caledônia in Nova Friburgo at 2219 m.

Discussion

Specimens of the new species were caught flying or trapped with fruit.

The new species can be easily distinguished from other *Aegognathus* species by male mand-

ibles, body vestiture, and male and female genitalia. The closest species seems to be *A. spitzzi*.

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