

## ***Agrilus butantan* n. sp. and *Agrilus ciliaris* n. sp. two jewel beetles from Brazil (Coleoptera Buprestidae)**

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**ABSTRACT** Two new species of the genus *Agrilus* Curtis, 1825 (Coleoptera Buprestidae) found in Brazil are described: *Agrilus butantan* n. sp. e *Agrilus ciliaris* n. sp. A morphological description, differential diagnosis, and biological notes are provided.

**KEY WORDS** Mata Atlantica; Mata Ciliar; Neotropical; Mato Grosso state; Riparian Forest; São Paulo state; taxonomy; xylophagous insects.

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### **INTRODUCTION**

During a recent study trip by one of the authors (G.C.), in collaboration with the second author (L.M.) of the Museu de Zoologia da Universidade de São Paulo (Brazil), two taxa belonging to the genus *Agrilus* Curtis, 1825 (Coleoptera Buprestidae), were identified, which can be attributed to two unpublished species. Although represented by a single female specimen, the two taxa were unmistakable in their shape and beauty, leading to the decision to describe them. Interestingly, one species (*A. butantan* n. sp.) was collected in the city park of the Butantan Institute, in the heart of São Paulo city, while the second (*A. ciliaris* n. sp.) was collected in a riparian environment, not a common habitat for species of the genus *Agrilus*.

This contribution follows previous ones concerning the Agrilofauna of Brazil, partly summarized in Curletti et al. (2024), to which more recent ones should be added (Curletti & Migliore, 2024; Migliore & Curletti, 2025), with the aim of con-

tributing to the neotropical taxonomic knowledge of this vast animal genus.

### **MATERIAL AND METHODS**

Both specimens, originally preserved in 70% alcohol, were dry-prepared for study and description. Photographs were taken with a Canon EOS Rebel T3i camera, equipped with a Canon MP-E 65 mm macro lens, attached to a StackShot macro-rail. Multi-focal images were processed with Zerene Stacker version 1.04 and edited in Adobe Photoshop CS6.

### **RESULTS**

#### *Systematics*

*Agrilus (Ekseksele) butantan* n. sp.

<https://zoobank.org/F6C2BB7A-2612-480D-8737-609D3BE910A7>

**MATERIAL EXAMINED.** Holotype. BRAZIL • 1 spm female (Figs. 1–3, 7); SP, Butantan Park Institute; -23,565 -46,721; 25 Nov. 2025; on *Allophylus edulis*; legit Serena Migliore; Museu de Zoologia da Universidade de São Paulo.

**DESCRIPTION OF THE HOLOTYPE.** Female. Length 12 mm. Body elongated, caudiform. Head and pronotum shiny black, elytra ochreous at the base, fading to dull black/brown from two-thirds (Fig. 7). Vertex half as wide as the anterior margin of the pronotum. Frons smooth, concave, characterized by four symmetrically placed ridges on the upper and middle parts. White pubescence present at the base above the clypeus, which is raised above the frontal line. Antennae thick, serrate from the fourth antennomere.

Pronotum wider than long, width/length ratio 1.70. Lateral margins roughly rounded, maximum

width in the posterior half, briefly narrowing before the basal angles, which are acute. Anterior margin straight. Disc strongly depressed on the sides and in the central part. Irregular sculpture, composed of oblique grooves in the mid/anterior part, others, thicker on the sides, and additional horseshoe-shaped grooves in the posterior median depression. Prehumeral carinulae absent, replaced by a thickened swelling. White, pruinose pubescence at the anterior angles and at the base of the prehumeral thickenings. Marginal carinae thick and parallel. Gular lobe straight, slightly curved, slightly sinuated in the median part. Prosternal plate slightly trapezoidal, with diverging edges.

Scutellum large, with a thin, barely visible transverse carina. Elytra elongated, surpassing the abdomen. Caudiform apices, diverging, thick, concave, each forming two points, the inner one obtuse, while the outer one is more acuminate and



Figures 1–3. *Agrilus butantan* n. sp., holotypus female from Brazil, Butantan Park Institute.

Fig. 1: dorsal view. Fig. 2: lateral view. Fig. 3: ventral view.

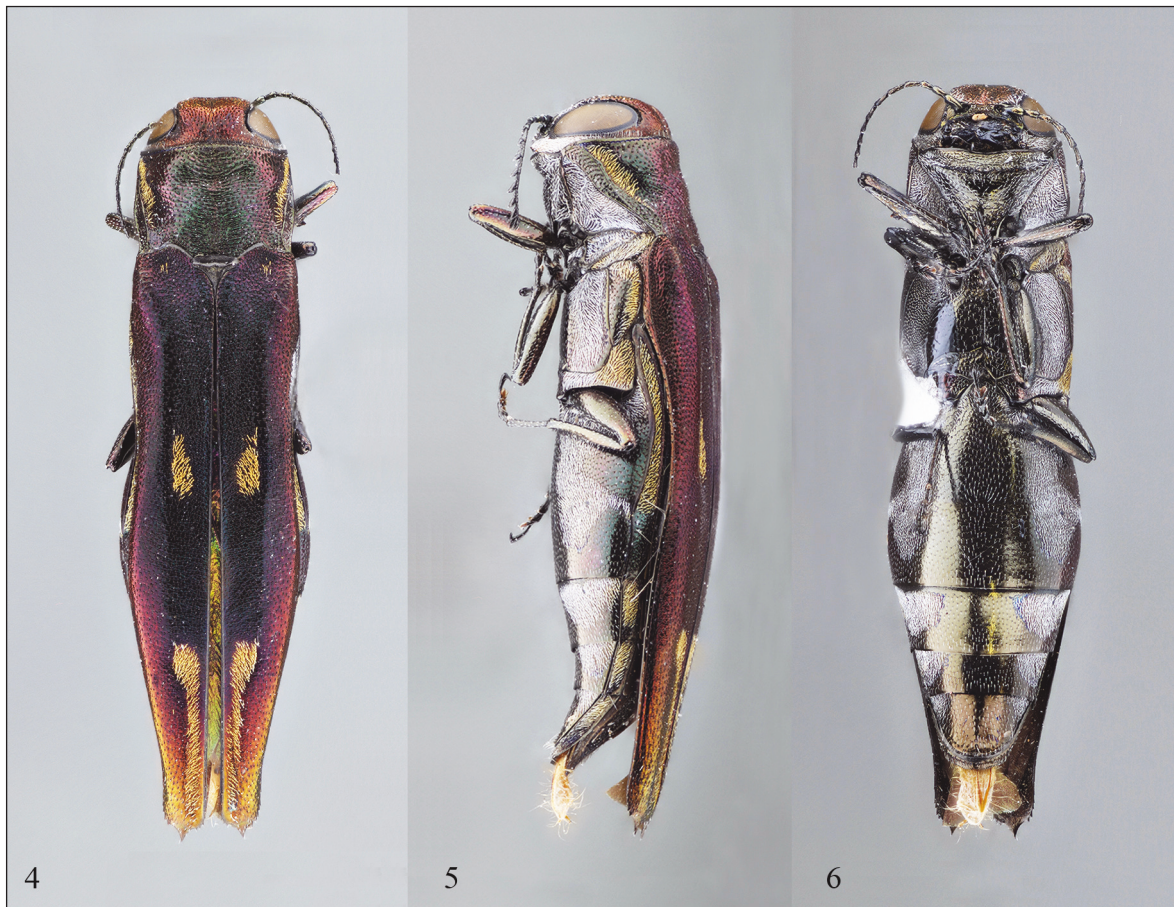
elongated. Disc with bicolored pubescence: golden-yellow in the humeral depressions and in the anterior part of the lateral margins, white in the median and posterior part. The median pubescence forms two overlapping stripes in the shape of an inverted V, interrupted in the first, with two additional spots at four-fifths. The apical one is uniform at the tips, but rises on the sides to about half the length. Ventral side with mesosternum and part of the basal ventrite metallic copper, covered on the sides with long golden pubescence. Remaining part of the basal ventrite and ventrites 2–4 are shiny black, the latter with spots of white pubescence on the sides. Tip of the apical ventrite rounded. Legs metallic black. Metafemur covered with the same pubescence as the mesosternum. Metatibia as long as the metafemur. Basal metatarsomere slightly longer than the sum of the following three. All claws are bifid.

**ETYMOLOGY.** From the name of the Institute in whose park the specimen was found. Noun in apposition.

**HOST PLANT.** The species is most likely a host of chal-chal *Allophylus edulis* (A. St.Hil.) Radlk. (Sapindaceae), on whose leaves the specimen was found and on which it fed during its captivity, which lasted several days (Fig. 9).

**REMARKS.** The specimen was found on basal suckers of chal-chal. Despite repeated subsequent searches, this is the only known specimen to date. It has a slight teratology on the right elytron and the left elytron with a missing apex, likely reasons for its difficulty in flight and the ease with which this species, with its undoubtedly acrocentric habits, was found.

Its shape, pattern of the elytral pubescence, color, and distribution of the ventral and



Figures 4–6. *Agrilus ciliaris* n. sp., holotypus female from Brazil, Mato Grosso, Parque Nacional Chapada dos Guimarães, Cachoeira Vêu da Noiva, Mata Ciliar. Fig. 4: dorsal view. Fig. 5: lateral view. Fig. 6: ventral view.



Figure 7. *Agrilus butantan* n. sp., holotypus female, frons view. Figure 8. *Agrilus butantan* n. sp., holotypus female, in captivity while feeding on chal-chal leaves (photo by Serena Migliore). Figure 9. *Agrilus ciliaris* n. sp., holotypus female, frons view.

metafemoral pubescence make it unmistakable and unmatched in global fauna.

*Agrilus butantan* n. sp. has been attributed to the subgenus *Ekseksel* Curletti, 2018, primarily due to the enlargements on the pronotum that replace the prehumeral carinulae and the shape of the marginal carinae.

***Agrilus (Agrilus) ciliaris* n. sp.**

<https://zoobank.org/C57DBD4B-AIDE-4905-B56F-60D8B4D5CAF4>

**MATERIAL EXAMINED.** Holotype. BRAZIL • 1 spm female (Figs. 4–6, 9); Mato Grosso, Parque Nacional Chapada dos Guimarães, Cachoeira Vêu da Noiva, Mata Ciliar; -15°24'33" -55°44'54"; 9 Aug./20 Sep. 2012; legit Lamas, Nihei et al.; Museu de Zoologia da Universidade de São Paulo.

**DESCRIPTION OF THE HOLOTYPE.** Female. Length 8.3 mm. Head rounded, red, barely visibly furrowed, with non-prominent eyes (Fig. 9). Vertex approximately half the width of the anterior margin of the pronotum. Frons hairless above, with thicker white

pubescence on the sides along the eyes. Clypeus carinate, olive-green in color. Eyes large and parallel.

Pronotum wider than long, width/length ratio 1.47, wider at the basal two-thirds, with slightly arcuate lateral margins and almost right basal angles. Dark red on the sides and olive-green in the middle, particularly visible under high magnification. Anterior margin straight. Disc regular, slightly convex. Sculpture regular, transverse. Yellow pubescence on the sides, inside the entire prehumeral carinules. Marginal carinae joined at the base. Gular lobe slightly sinuate. Prosternal plate parallel.

Scutellum carinate. Elytra extending beyond the abdomen, dark red anteriorly, gradually fading to a purplish-red hue posteriorly, turning yellow at the tips. Apices bearing a strong median tooth. Dorsal pubescence yellow, barely visible on the humeri, with two elongated spots in the median part and at the basal two-thirds. The latter form two stripes that reach the apex. Laterotergites with yellow spots. Ventral side black, contrasting with dense white pubescence on the sides, uninterrupted on the thorax and in the form of spots on the abdomen. On the

mesometepisternum and metecoxae, the pubescence turns yellow. Legs with basal metatarsomere as long as the sum of the following ones. All claws mucronate.

ETYMOLOGY. Latinization of “*ciliar*”, a Brazilian term indicating the habitat where the species was found.

REMARKS. *Agrilus ciliaris* n. sp. is characterized by elytra with pubescent spots and an apical mucro (group 02 in Curletti & Brûlé, 2011). Two species are related to *A. ciliaris* n. sp.: *A. lacrimans* Curletti et Brûlé, 2013 from French Guiana (Curletti & Brûlé, 2013) and *A. barrosi* Curletti et Pineda, 2018 from Brazil (Curletti & Pineda, 2018).

*Agrilus ciliaris* n. sp. differs in its less slender shape, the different distribution of dorsal spots, and the coloration of the pronotum and elytra, which end in a red/golden hue. This type of apical hue can be observed in another Brazilian species: *A. anceps* (Curletti & Migliore, 2014), but this species, in addition to lacking elytral spots, also lacks apical spines, replaced by strong, regular denticulation.

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