

## A new species of *Agrilus* Curtis, 1825 from Brazil (Coleoptera Buprestidae)

Gianfranco Curletti<sup>1</sup> & Letizia Migliore<sup>2</sup>

<sup>1</sup>C/o Museo Civico di Storia Naturale, Parco Cascina Vigna, 10022 Carmagnola, Torino, Italy

<sup>2</sup>Laboratório de Ecologia Evolutiva de Insetos de Dossel, Departamento de Biodiversidade, Evolução e Meio Ambiente, ICEB, Universidade Federal de Ouro Preto, Campus Morro do Cruzeiro, Ouro Preto, MG, Brasil.

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### ABSTRACT

A research of Museu de Entomologia da FEIS/UNESP, campus de Ilha Solteira, São Paulo (SP) region, Brazil (MEFEIS) in order to monitoring the secondary xylophagous species, showed the presence of a new species of *Agrilus* Curtis, 1825 (Coleoptera Buprestidae) that is here described: *Agrilus (Agrilus) flechtmani* n. sp.

### KEY WORDS

Brazil; Coleoptera; Buprestidae; *Agrilus*, new species.

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### INTRODUCTION

A staff of the department of Entomology of FEIS/UNESP (Universidade Estadual Paulista, Campus de Ilha Solteira, Brazil), made a research for studying the biology of secondary xylophagous insects.

Some species of Neotropical Coleoptera Cerambycidae (Serville, 1835), mainly belonging to the genus *Oncideres* Serville, 1835 (Lamiinae) attack tree species girdling the branches with the aims of interrupting the lymphatic vessels and killing the apical part where the larva will live (Fig. 1). Some wood-boring secondary species develop in those branches, taking advantage of the particular habitat. Particularly favoured are obviously small species that are able to colonize the restant space made available by the primary host.

*Oncideres* species burrow large galleries in the wood, leaving intact the bark only, and the species specialized to colonize the remainder of the branch are generally small and mainly sub-corticulous. Particularly favoured are some monovoltine species

of the genus *Agrilus* Curtis, 1825. The girdled branches are weak and liable to breakage so they are often found at the base of the trees, where they were collected and placed in breeding containers, waiting for the adults to emerge.

In the course of this research we obtained some specimens of a new species of *Agrilus* (Curtis, 1825) that is described here.

### MATERIAL AND METHODS

The study area is in Brazil, São Paulo (SP) region (Fig. 2). The specimens were provisionally stored in formaldehyde, followed by dry preparation and glued on a card for the study and description and conservation.

The genitalia were placed on the same card.

The pictures were made with a Coolpix P6000 connected with a stereomicroscope Leica MZ6, elaborated with Adobe Photoshop CS5 Extended vers. 12.0 and stacked with Combine Z4 program.



Figure 1. Branch girdled by *Oncideres* sp. (Coleoptera Cerambycidae), French Guyana (photo S. Brûlé).



Figure 2. Study area: Brazil, São Paulo (SP) region, locality of the new species of *Agrilus*.

ABBREVIATIONS. MEFEIS = Museu de Entomologia da FEIS/UNESP, campus de Ilha Solteira; São Paulo (SP), Brazil. MCCI = Museo Civico di Storia Naturale di Carmagnola, Torino, Italy.

*Agrilus (Agrilus) flechtmanni* n. sp.

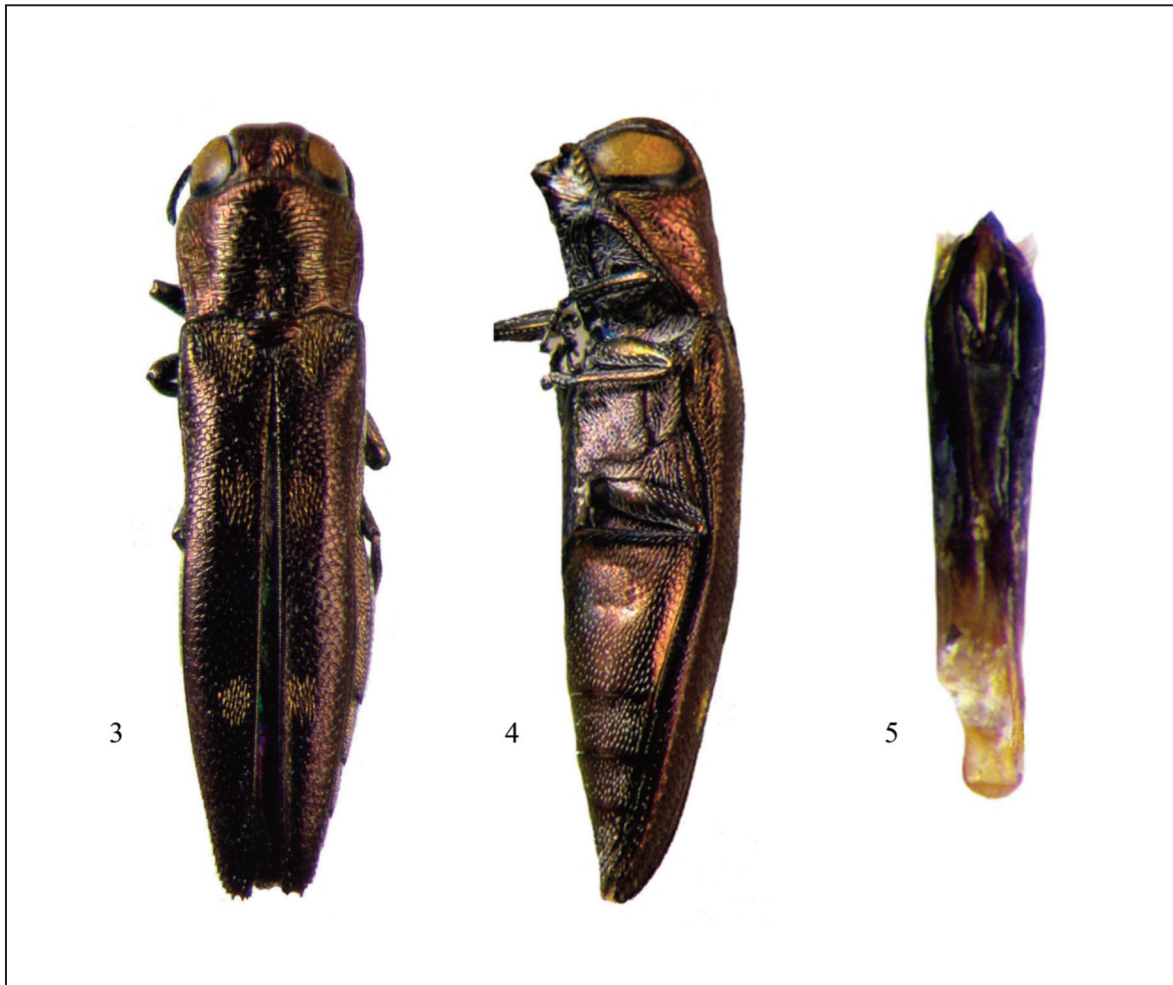
EXAMINED MATERIAL (Figs. 3–5). Holotypus male: BR[azil], SP, Ilha Solteira, UNESP campus, 20°25'11.65"S - 51°20'28.19"W, ex broken *Anadenanthera falcata* [now *macrocarpa*, Fabaceae family], 3.III.2011, Flechtmann C.A.H. legit (MEFEIS). Paratypes: 1 male and 3 females, idem, respectively 18.III.2011, 26.II.2011, 19.III.2011, 10.IV.2011; 3 males and 5 females, Brazil, SP, Três Lagoas reforested degraded area, 20°44'55"S - 51°39'36"W, V, Nascimento leg., ex Cerambycidae-girdled *Anadenanthera macrocarpa* branch on the ground, 15.VII.2013 (MEFEIS and MCCI)

DESCRIPTION OF HOLOTYPE. Length 4.4 mm. Lengthened form; uniformly bronze-brown, less brilliant, with yellow pale pubescence on elytra forming three couples of pubescent spots. Vertex slightly depressed,  $\frac{1}{4}$  width of anterior margin of pronotum. Frons flat, green, glabrous, brilliant, with sericeous sculpture. Clypeus without trans-

versal carina. Antennae short, green, serrate from antennomere 4. Pronotum with lateral margins anteriorly arcuate and posterior angles less acute. Premarginal carinula entire. Marginal carinae subparallel, separated from base. Disc with a slight depression before the scutellum. Sculpture transverse and thickened. Anterior prosternal lobe cut in the middle. Prosternal plate parallel-sided, bordered. Scutellum carinate. Elytra with apices rounded and denticulate. The first pair of elytral spot is on the humeral callus, the second and third along the suture before the middle and at the apical three-quarters respectively; few thin hairs join the first and second spots. Ventral side darker than the dorsum, uniformly covered by short thin pubescence. Last visible ventrite rounded at the apex. Legs with green reflections. Metatarsus shorter than metatibia, basal metatarsomere shorter than the sum of the following two ( $1 < 2+3$ ). All claws bifid. Aedeagus is shown in figure 5.

VARIABILITY. Length from 4.4 to 5.5 mm. In some specimens the first and second couple of elytral pubescence appear clearly separate without the thin pubescence among them that characterize the holotype. The females have frons copper and all claws bifid as the males.

ETIMOLOGY. After the name of the holotype collector.



Figures 3, 4. *Agrilus (Agrilus) flechtmanni* n. sp., paratype female, length 5.5 mm. Figure 5. *A. flechtmanni* n. sp., aedeagus, 1.4 mm.

REMARKS. For the shape, dorsal color and the elytral spots, *A. flechtmanni* n. sp. is similar and may be confused with *A. aegrotus* (Curlletti et Migliore, in press).

*A. aegrotus* differs for having the frons smooth and not sericeous, the prosternal plate bordered and enlarged at the top, sterna minus pubescent and metatarsomeres more lengthened, with tarsal formula 1=2+3+4.

#### ACKNOWLEDGMENTS

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the picture of branch girdled by *Oncideres* sp. and obviously Carlos Flechtmann (FEIS/UNESP, Universidade Estadual Paulista, Campus de Ilha Solteira, Brazil) for the confidence in sending the studied material.

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