

## A new species of *Metallactus* Suffrian, 1866 (Coleoptera: Chrysomelidae: Cryptocephalinae) from Brazil

## Новый вид *Metallactus* Suffrian, 1866 (Coleoptera: Chrysomelidae: Cryptocephalinae) из Бразилии

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КЛЮЧЕВЫЕ СЛОВА: Chrysomelidae, Pachybrachini, новый вид, Сан-Паулу, Бразилия.

ABSTRACT. A new species of *Metallactus* Suffrian, 1866 from São Paulo, Brazil is described. The male and female genitalia, and kotpress are illustrated for the first time for a species of *Metallactus* and compared with *Pachybrachis* Chevrolat, 1837.

РЕЗЮМЕ. Описывается новый вид *Metallactus* Suffrian, 1866 из Сан-Паулу, Бразилия. Впервые приводятся рисунки гениталий самцов и самок, а также формовочный аппарат для *Metallactus* и их сравнения с родом *Pachybrachis* Chevrolat, 1837.

### Introduction

The genus *Metallactus* Suffrian, 1866 is distributed with 81 species in the Neotropical region [Blackwelder, 1946]. The last revision dates back to Suffrian [1866]. The aim of this study is 1. to provide a name for a species whose biology was studied in detail and 2. to describe and illustrate male and female genitalia, and kotpress for the first time for a species of *Metallactus*.

### Materials and methods

For study of genitalia and kotpress, dried adults were dissected, the abdomen was separated in water, the contents were soaked in cold dilute KOH for several hours and then washed in water.

The specimens studied were deposited in the following collections designated in the text by the following letter codens: DEES — Departamento de Entomologia, Fitopatologia e Zoologia Agrícola, Escola Superior; gricultura, Luiz de Queitoz da Universidade de São Paulo, Piracicaba, Brazil; DSPC — Davide Sassi personal collection, Castelmarte, Italy; MESC — Matthias Schöller personal collection, Berlin, Germany; MNHB — Museum für Naturkunde der Humboldt-Universität, Berlin, Germany; MZSP — Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil; SNGC — Senckenbergische Naturforschende Gesellschaft, Frankfurt am Main, Germany; ZSMC — Zoologische Staatssammlung München, Germany.

Abbreviations: f — female, m — male.

### *Metallactus mosei* sp.n.

Figs 1–7.

LOCUS TYPICUS. Brazil, São Paulo, Boa Esperanca do Sul

TYPE SPECIMENS. Holotype (♂, MNHB): Brazil, Boa Esperanca do Sul, IV.2001 [white label, printed]/ Host plant *Eucalyptus urophylla*[white] / *Metallactus mosei*n. sp. HOLOTYPE Schöller des., 2002 [red, printed] /. 43 Paratypes. 3 ♀♀ (2 MESC, 1 DEES): Brazil, Boa Esperanca do Sul, IV.2001, [white]/ Host plant *Eucalyptus urophylla*[white] /; 3 ♂♂, 17 ♀♀ (1 ♀ DSPC, 1 ♀ SNGC, 1 ♀ ZSMC, 3 ♀ MNHB, 1 ♂ 4 ♀♀ DEES, 4 ♀♀ MZSP, 2 ♂♂ 3 ♀♀ MESC), 23 larvae (19 MESC, 4 ZSMC): Piracicaba-SP, February 2002, Lab rearing [white]/ Host plant *Eucalyptus urophylla*[white] /; *Metallactus mosei* n. sp. PARATYPE Schöller des., 2002 [red, printed] /.

DIAGNOSIS. An elongate cylindrical species with lateral margins of pronotum narrow, elytra and pronotum yellow/orange with black spots, differing from *Metallactus minax* Suffrian, 1866 by the shape of the lateral pronotal and elytral margins and coloration.

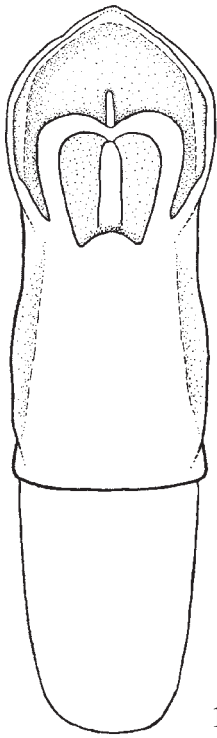
DESCRIPTION of holotype. Habitus: cylindrical, elongate. Head black, close to inner margin of eyes setose and densely punctured, puncturation of remaining head coarse and sparse; length of eye 1.125 mm, minimum distance between eyes i. e. interocular distance 0.675; labrum light reddish-brown; segments 2–5 of antennae brown, segment 1 and segments 6–11 black, segments 6–11 dilated. Pronotum yellow with black marking not reaching the pronotal margins (Fig. 7), lateral margins narrow, surface with coarse and sparse puncturation on sides, disk with few fine punctures only. Scutellum black, trapezoidal and with white setae.

Elytra yellow, each elytron with a small humeral spot, a large central spot and suture black; puncturation coarse and deeply impressed, sparse and feeble at apical third, irregular except for two rows laterally parallel to the epipleuron.

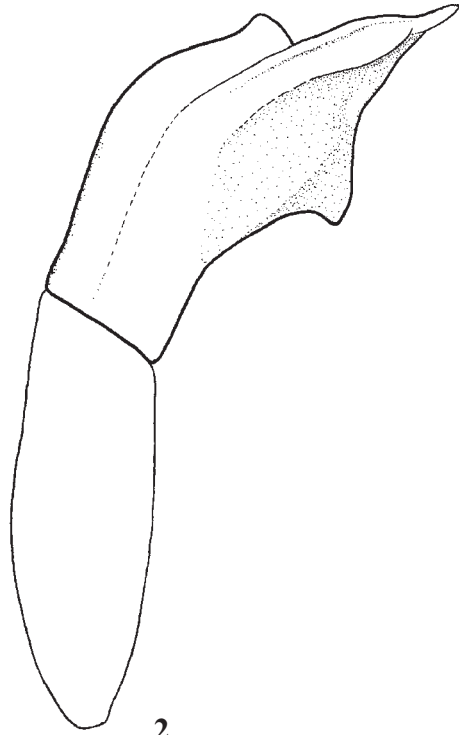
Legs normally shaped, black, with white setae, forefemora swollen, one third wider than hindfemora, anterior first tarsal segment not considerably padded.

Ventrites and pygidium black, except for yellow basal margin of first sternite. Fifth abdominal segment at centre shiny, glabrous, depressed and with a V-shaped emargination.

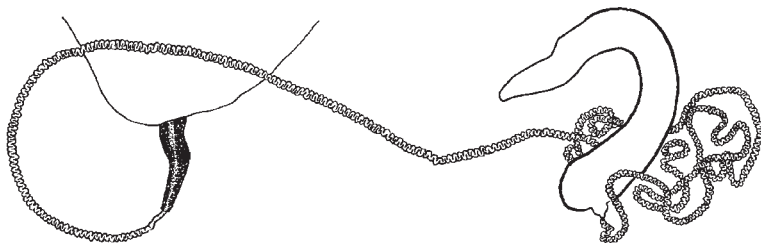
Aedeagus. Apex with tip, rounded, orificium oval (Fig. 1), part of guiding sclerite of endophallus visible over basal margin of orificium, ventrally with a strong angularity (Fig. 2).



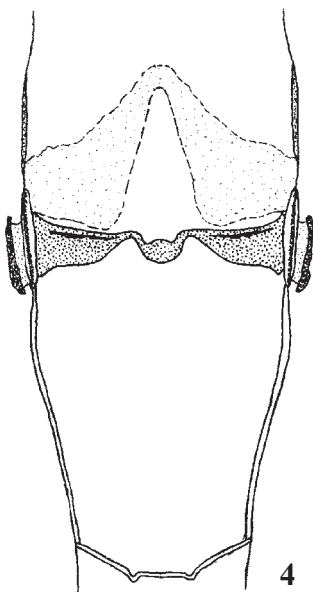
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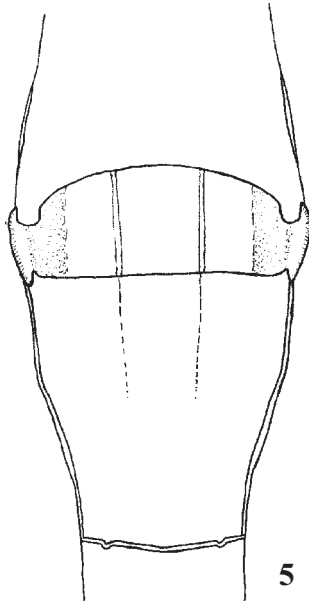
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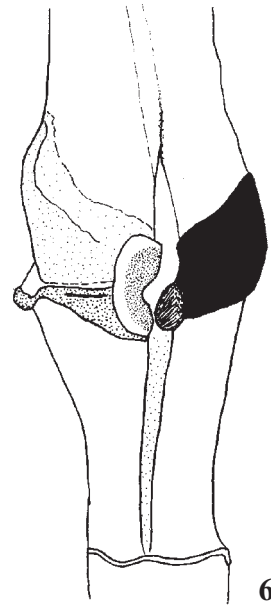
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6

*Metallactus mosei* sp.n. can be distinguished from the similar *M. minax* by the characters given in Table 1. For comparison, the syntype series of *M. minax* in the Museum für Naturkunde in Berlin (MNHU) was studied.

Female. Spermathecal capsule faintly swollen on its basal part, aperture of the spermathecal duct enlarged, dark brown pigmented and sclerotized (Fig. 3). Fovea on the fifth abdominal sternite large and impressed, basal margin straight. Kot-

Table 1. Character states in *Metallactus mosei* sp.n. and *Metallactus minax* Suffrian, 1866.  
Таблица 1. Признаки *Metallactus mosei* sp.n. и *Metallactus minax* Suffrian, 1866.

	<i>Metallactus mosei</i> sp.n.	<i>Metallactus minax</i>
Pronotum	yellow to orange with black spots	black
Elytra	shallowly wrinkled	strongly wrinkled
Lateral margin of elytra	not attaining humerus	attaining humerus
Black stripe on elytral suture	narrow	expanded
Black spot of elytron	not attaining suture	attaining suture
Lateral pronotal margins	border bended upwards narrow, puncturation sparse	border bended upwards expanded and punctured

press. Dorsal sclerites joined (Fig. 4), apodemes of dorsal sclerites large and basal part sclerotised only (Fig. 6), the ventral sclerite is a sclerotised crosswise band wider than the rectum ending in two apodemes, which are bended inwards, there is a weakly sclerotised area directed to the dorsal fold of the intestine (Fig. 5), and anal stickyform sclerites are very narrow.

VARIATION. Black marking of pronotum sometimes split into several spots, sometimes reaching anterior margin. Elytra yellow or orange-red. Size [mm] (mean (max., min., n)): length of male 6.02 (6.10, 5.95, 4), female 6.86 (7.5, 6.15, 13), width of elytra at humeri in male 3.08 (3.20, 3.00), female 3.65 (4.00, 3.50), length of pronotum in male 1.93 (2.00, 1.75), width 2.96 (3.00, 2.90) length of pronotum in female 2.01 (2.15, 1.85) and width 3.35 (3.75, 3.00).

DERIVATIO NOMINIS. The species is dedicated to Moises, Piracicaba, who collected the species and studied its biology.

DISTRIBUTION. Brazil, only known from type locality.

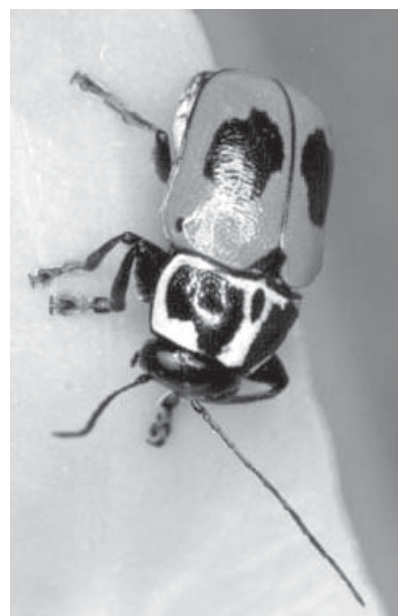
BIOLOGY. Collected from *Eucalyptus urophylla*, reared in the laboratory on *Eucalyptus urophylla* and *Psidium guajava*.

## Discussion

The genus *Metallactus* is occurring in the Americas only, with few exceptions exclusively in the Neotropical region. *Eucalyptus urophylla* is native to the eastern islands of Indonesia. Consequently, *Eucalyptus* spp. are not the natural host of *Metallactus mosei* sp.n. In the laboratory, *M. mosei* sp.n. has been shown to be polyphagous, it has been reared on guava leaves, *Psidium guajava* (Myrtaceae) native to Brazil. When reared on guava the insect presented a shorter egg to adult period and the adults were bigger than those from *E. urophylla* (Evôneo Berti Filho, personal communication). The natural host range still has to be determined.

This study confirms the position of *Metallactus* within the Pachybrachini. The structure of the kotpress

is very similar to the situation found in the genus *Pachybrachis* Chevrolat, 1837. The only obvious difference to all Holarctic and Neotropical species of *Pachybrachis* studied so far [Erber, 1968; Schöller unpublished data] is the steric position of the apodemes of the ventral sclerites, bended inwards in *Metallactus* and almost horizontal in *Pachybrachis*. Minor differences are: 1) the apodemes of the dorsal sclerites are large and only partly sclerotised in *Metallactus* but small and strongly sclerotised in *Pachybrachis* and 2) the ventral sclerite is more uniformly sclerotised com-



Figs 7. *Metallactus mosei* sp.n., general view of beetle.  
Рис. 7. *Metallactus mosei* sp.n., общий вид жука.

Figs 1–6. *Metallactus mosei* sp.n.: 1, 2 — aedeagus dorsal and lateral; 3 — spermatheca and ductus; 4–6 — kotpress, dorsal (4), ventral (5), lateral (6).

Рис. 1–6. *Metallactus mosei* sp.n.: 1, 2 — эдеагус сверху и сбоку; 3 — сперматека и дуктус; 4–6 — формовочный аппарат, сверху (4), снизу (5), сбоку (6).

pared to *Pachybrachis*. Several species of *Metallactus* were described in *Pachybrachis* (Schöller, unpublished data), they can be identified with the help of these characters. In *Metallactus*, the ventral sclerite seems to be composed of three parts, a central plate and two lateral sclerites. I hypothesise that this ventral central plate was reduced in the *Acolastus* Gerstäcker (*Pachybrachini*) and the *Clytrinae*. The part joining the dorsal sclerites, which is already weakly connected in *Metallactus*, could be expanded in *Acolastus* and the *Clytrinae* resulting in the dorsal central plate (see Schöller, 2000) and the dorsal sclerites reduced to the apodemes. Structures of kotpress and genitalia should be considered in a future study comparing the similar genera *Metallactus* and *Griburius* Haldeman, too.

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