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Xalpirta mauryi sp. nov. (Coleoptera: Erotylidae: Tritomini) from Southeast Brazil

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Abstract

Xalpirta mauryi **sp. nov.** (Erotylidae: Tritomini) is described from Parque Nacional do Itatiaia (in the state of Rio de Janeiro) and Campos do Jordão (in the state of São Paulo), Southeast Brazil. *Xalpirta mauryi* differs from other described *Xalpirta* in the uniformly green dorsal coloration, with a metallic sheen, and pronotum without spots or black marks. The pore on the posterior 1/3 of each pronotal edge (present in the other *Xalpirta*) is apparently absent in *X. mauryi*. We provide a detailed description of adults, including morphology of mouthparts, and male and female terminalia. Additionally, we discuss the morphological affinities of *X. mauryi* with other species in the genus and with species of other closely related genera within Tritomini, and provide a new geographical record for *X. maderi* in Southeast Brazil.

Key words: pleasing fungus beetles, Erotylinae, Cucujoidea, Neotropical region, taxonomy, morphology

Introduction

The Neotropical genus *Xalpirta* Skelley & Cekalovic (Erotylidae: Tritomini) includes eight species, as follows: *Xalpirta arnetti* Skelley & Cekalovic; *Xalpirta azureipennis* (Guérin); *Xalpirta elsa* Skelley & Cekalovic; *Xalpirta guerini* Skelley & Cekalovic; *Xalpirta maderi* (Delkeskamp); *Xalpirta peckorum* Skelley & Cekalovic; *Xalpirta stellaris* Skelley & Cekalovic and *Xalpirta valdiviana* (Philippi & Philippi). These species are distributed in southern South America and there are many records in altitudes over 1000 meters (Skelley & Cekalovic 2001). The only described Brazilian *Xalpirta* is *X. maderi* recorded from Nova Teutônia (in the state of Santa Catarina), Nova Friburgo and Petrópolis (Rio de Janeiro) and Monte Verde (Minas Gerais). *Xalpirta peckorum* occurs in the Province of Salta (Argentina) and the remaining species are restricted to Chile, except for *X. valdiviana*, which extends its distribution to the frontier between Chile and Argentina.

The described species of *Xalpirta* share the following features: an elongate parallel-sided body, lack of "umbilicate" pores at pronotal angles (present in *Triplax* Herbst), pore of each lateral pronotal edge at posterior 1/4 to 1/3 (sometimes minute), lack of brush on terminal maxillary palpomere (present in *Triplax*), small antennomere VIII and antennal club distinctly 3-segmented (Skelley & Cekalovic 2001). Aside from that, members of *Xalpirta* have the head black to orange, prothorax yellow to orange (with or without black spots on pronotum), elytra usually with metallic sheen (purple, blue or green) and mentum plate pentagonal to triangular (Skelley & Cekalovic 2001). The phylogenetic relationships of *Xalpirta* with *Triplax*, *Mycotretus* Lacordaire and other Tritomini genera is unknown (Skelley & Cekalovic 2001). There is no available description of male and female genitalia for species currently placed in the genus. Biological information is scarce, with a few records on gilled mushrooms (Agaricales). Larvae are unknown (Skelley & Cekalovic 2001).

Here we describe *Xalpirta mauryi* **sp. nov.** from Southeast Brazil, provide descriptions of its mouthparts, met-

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endosternite, male and female terminalia and other structures. The morphological affinities of *X. mauryi* **sp. nov.** with other species in the genus as well with other Tritomini are discussed. Additionally, we provide a new geographical record for *X. maderi* in Southeast Brazil.

Material and methods

The specimens studied here belong to the following institutions:

CELC Coleção Entomológica do Laboratório de Sistemática e Biologia de Coleoptera (Viçosa, MG, Brazil)
DZUP Coleção Entomológica Padre Jesus Santiago Moure, Universidade Federal do Paraná (Curitiba, PR, Brazil)
MNRJ Museu Nacional (Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brazil)

Dissection, photography, measurement of specimens and transcription of labels followed the methods provided by Pecci-Maddalena & Lopes-Andrade (2017, 2018a,b). In order to facilitate morphological examination, structures shown in Figures 6–10 and 24–32 were decolorized with hydrogen peroxide (H_2O_2). The distribution map was created using latitude and longitude coordinates estimated by tracking localities in the online database GeoNames (Wick 2012) and plotted on a map using the freeware QGIS 2.12.2. Geographical data of non-Chilean *Xalpirta* (extracted from Skelley & Cekalovic 2001) is also included in the map. Terms for external morphology follow Lawrence *et al*. (2011) and McHugh *et al*. (1997). Descriptions of mouthparts and abdominal terminalia were based on Węgrzynowicz (2002). The term "flagellum" refers to a male genitalic structure with two interconnected elements: "head" and "virga". The following abbreviations are used: BW—anterior width of the scutellar shield; CL—length of the antennal club (measured from base of the eighth to apex of the eleventh antennomere); EL—elytral length (at midline, from base of scutellar shield to elytral apex); EW—greatest elytral width (across both elytra); FL—length of the antennal funicle; GD—greatest depth of the body (from elytra to metaventrite); GW—greatest diameter of the eye; PL—pronotal length along midline; PW—greatest pronotal width; TL—total length (= EL+PL; head not included). The ratio GD/EW was recorded as an indication of degree of convexity; TL/EW—indicates degree of body elongation.

Taxonomy

Xalpirta mauryi sp. nov.

Figs. 1–25, 33

Type locality. Parque Nacional do Itatiaia, 1200 m, in the state of Rio de Janeiro, Southeast Brazil (Figs. 4 and 33). Estimated coordinates: 22° 29' 45'' S, 44° 33' 46'' W.

Etymology. The new species is named in honor of Prof. Maury Pinto de Oliveira (1914–2004). He was a major Brazilian malacologist of the last century, building a large collection of mollusks and shells from Brazil and the world. His collection is housed in the Museum of Malacology "Prof. Maury Pinto de Oliveira" at the "Universidade Federal de Juiz de Fora (UFJF)", Southeast Brazil. In 2002, Professor Maury (88 years old) first introduced the senior author (then 12 years old) to the study of Coleoptera. Interestingly, beetles were the first interest of Prof. Maury, who lost that focus when his entomological collection was seriously damaged due to the use of non-entomological pins. Nevertheless, throughout his life he built an important library, including many books on Coleoptera, entomology, and natural history.

Diagnosis. *Xalpirta mauryi* differs from other described *Xalpirta* in the uniformly green dorsal coloration, with a metallic sheen, and pronotum without spots or black marks (Fig. 1). The pore on the posterior 1/3 of each pronotal edge is apparently absent in *X. mauryi* (Figs. 24–25; compared to that of *X. maderi* in Fig. 28, with small arrow showing the corresponding glandular duct).

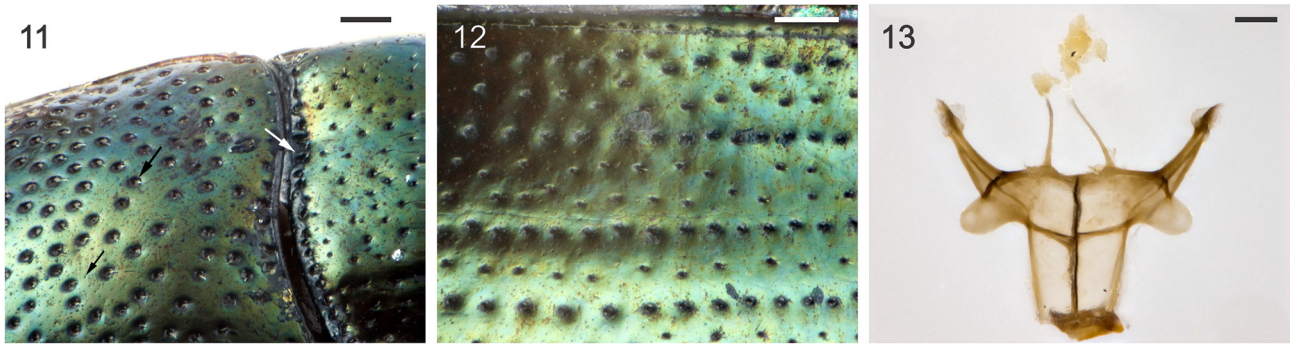
Description. Length (in mm) = 2.48–3.6 (3.14 ± 0.44, n = 5). Body elongate (Figs. 1–3), parallel-sided, TL/EW = 2.01–2.16 (2.11 ± 0.05), GD/EW = 0.67–0.75 (0.72 ± 0.03), glabrous and glossy, dorsal coloration homogeneous-

ly green, with green metallic sheen. Ventral coloration as dorsal, except for abdominal ventrites, legs, maxillary and labial palps, and antennomeres 1–8 yellowish-brown, and antennomeres 9–11 reddish-brown.

FIGURES 1–10. *Xalpirta mauryi* **sp. nov.**: **1–5** holotype from Parque Nacional do Itatiaia (Rio de Janeiro, Brazil). **1–3** habitus; (**4**) labels; (**5**) mouthparts, arrow showing the mentum. **6–10** male paratype of *X. mauryi* **sp. nov.**, from Parque Nacional do Itatiaia. (**6**) mouthparts, arrow showing the mentum; (**7**) frontal view of head, right mandible (m), white arrow showing frontoclypeal suture, black arrow showing labrum; (**8**) left mandible, arrow showing tuft of setae on prostheca; (**9**) maxilla; (**10**) apical maxillary palpomere, arrow showing pubescence. Scale bars: 1–3 = 1 mm; 5 = 0.5 mm; 6–10 = 0.1 mm.

Head. Glabrous; punctation coarse (Fig. 7), somewhat dense compared to other Tritomini (for instance, *Mycotretus*); ocular striae fine, nearly reaching lateral angle of epistome; frontoclypeal suture present, short and interrupted at middle (Fig. 7, white arrow). Clypeus arcuately emarginate (Fig. 7). Left antenna measured in one individual: FL 0.6 mm, CL 0.37 mm, CL/FL 0.61; length of antennomeres 1–11 (in mm): 0.16, 0.09, 0.17, 0.11, 0.10, 0.07, 0.07, 0.06, 0.10, 0.09, 0.14; antennal club loose, 3-segmented, abrupt. Eyes glabrous (GW 0.26 mm), finely granulate. Mouthparts (Figs. 5–10) with free, sclerotized, pubescent labrum, slightly emarginate at middle and with two very thin tufts of slender bristles on each side (Fig. 7, black arrow). Mandibles short and broad; apex with two teeth (Fig. 7, m, Fig. 8); mandibular base emarginate; mola well-developed, naked and distinctly transversely costate; prostheca distal to mola, soft with additional tuft of setae (Fig. 8, arrow). Maxillae (Fig. 9) with cardo subtrian-

gular and stipes elongate; galea shorter but wider than lacinia, somewhat widened towards densely pubescent apex; lacinia much longer and narrower than galea, densely pubescent at apex, with highly sclerotized but barely visible hook; four maxillary palpomeres on each palp, palpomere 1 almost as long as palpomeres 2–3 combined; apical palpomere semicircular, approximately 3× wider than long, pubescent (Fig. 10, arrow) but lacking distinct terminal brush (present in *Triplax*, Fig. 30, arrow). Three labial palpomeres on each palp, palpomere 3 club-shaped (asymmetrical). Mentum (Figs. 5–6, arrow) an elongate, delineated plate, pentagonal with angulate contours, strongly sclerotized and bearing setae at middle.

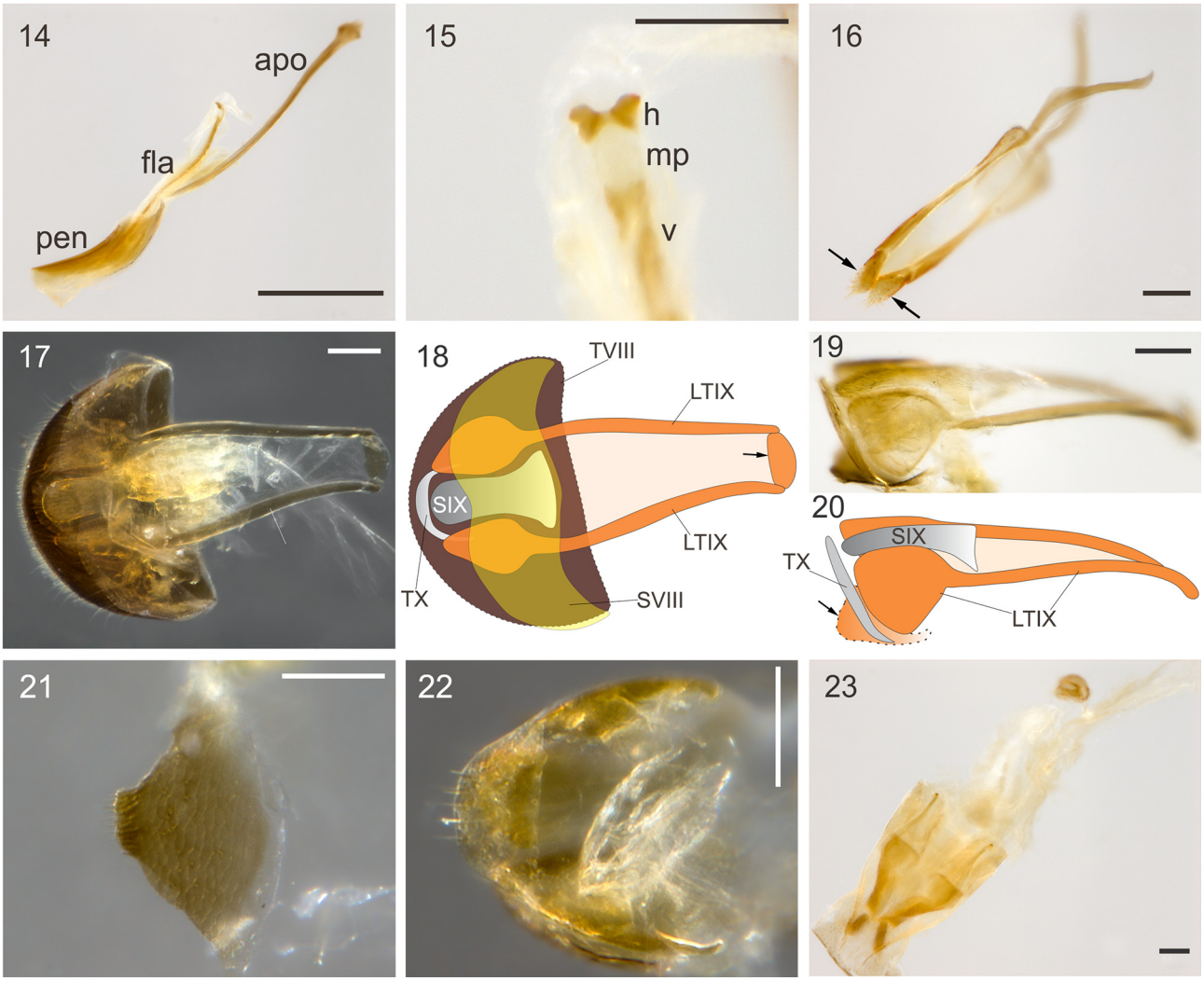


FIGURES 11–13. *Xalpirta mauryi* **sp. nov.**, thorax: (**11**) pronotum and anterior elytral edge, small black arrow showing a small puncture, big black arrow showing a large puncture, white arrow showing anterior elytral edge, strongly margined and coarsely punctate (**12**) elytra with longitudinal rows of coarse punctures; (**13**) metendosternite. Scale bars: 11–13 = 0.1 mm.

Thorax. Pronotum transverse, parallel-sided, weakly converging anteriorly; PL/PW = 0.55–0.62 (0.58 ± 0.02); shiny, punctation coarse, with coarse and fine punctation (Fig. 11, black arrows); coarse punctures separated by distance of about 0.77–2.58 puncture-widths at disc, each puncture bearing one short, minute seta (barely visible even at a magnification of 150×); lateral edge with one glandular pore on the anterior angle and one on the posterior angle (Fig. 24, arrows, Fig. 25, arrows showing glandular ducts), weakly angulate around pores (Figs. 24–25) as in *X. maderi* (Figs. 27–28); pore at posterior 1/3 of lateral edges apparently absent (Figs. 24–25) (present in *X. maderi*, Fig. 28, arrow). Scutellar shield (BW 0.25 mm) subpentagonal, glabrous, bearing few punctures. Elytra with strong anterior marginal bead; EL/EW = 1.49–1.64 (1.58 ± 0.06), EL/PL = 2.82–3.2 (2.97 ± 0.18); coarsely punctate (Fig. 11, white arrow); striae with rows of coarse punctures, intervals with fine punctures (Fig. 12); coarse punctures separated by about 1.25× puncture-widths. Hind wings developed, apparently functional. Prosternum lacking keel (present in *Mycotretus*), convex and coarsely punctate; anterior edge pubescent; notosternal sutures conspicuous and entire; procoxal cavities subcircular; prosternal process abruptly expanded apically, shallowly emarginate at apex; procoxal lines not extending in front of procoxae. Mesoventrite small, coarsely punctate; mesocoxal lines barely discernible; posterior edge slightly emarginate; mesocoxal cavities suboval. Metaventrite convex, glabrous, coarsely punctate; anterior edge sinuate, strongly margined medially; metacoxal lines apparently absent; discrimen approximately 0.6× as long as metaventrite. Metendosternite (Fig. 13) well-developed, sclerotized, similar to that of other examined Tritomini (e.g. *Mycotretus*, *Triplax*, *Tritomapara* Alvarenga); laminae present, plate-like; anterior tendons thin, moderately separated. Procoxae suboval, mesocoxae almost globular and metacoxae transverse, cylindrical. Femora elongate, smooth, without spines or other outgrowths. Tibiae long, somewhat widened apically; apex with fringe of wide flat spinules. Tarsi densely pubescent beneath.

Abdomen. Elongate; punctation coarse; interspaces of punctures granulate; vestiture of sparse, slender setae. Coxal lines feeble. Length of ventrites 1–5 (in mm, from base to apex of each ventrite at the longitudinal midline): 0.39, 0.25, 0.23, 0.23, 0.32. **Male terminalia** (Figs. 14–22). Penis (Fig. 14, pen) slightly elongate and curved; basal portion with short sclerotized projection linked to apophyses; internal sac with well-developed and slightly elongate flagellum (Fig. 14, fla) that is 1.18× as long as penis, slightly sinuous, with membranous portion between virga and head of flagellum (Fig. 15, mp); head of flagellum (Fig. 15, head) sclerotized, short, with two small lobes (resembling those of *Xalpirta maderi*). Apophyses (Fig. 14, apo) 1.61× as long as penis. Tegmen sclerotized (Fig. 16); parameres reduced and sclerotized, with densely pubescent outgrowths, slightly dilated (Fig. 16, arrows). Tergite VIII (Figs. 17–18, TVIII) sclerotized, with sparsely distributed bristles. Sternite VIII (Figs. 17–18, SVIII) slightly sclerotized. Sclerite at posterior edge of tergite IX (Figs. 19–20, arrow, Fig. 21) sclerotized, narrowed and with bristles. Laterotergite IX (Figs. 17–20, LTIX) sclerotized, posteriorly elongate and pubescent; outer contours

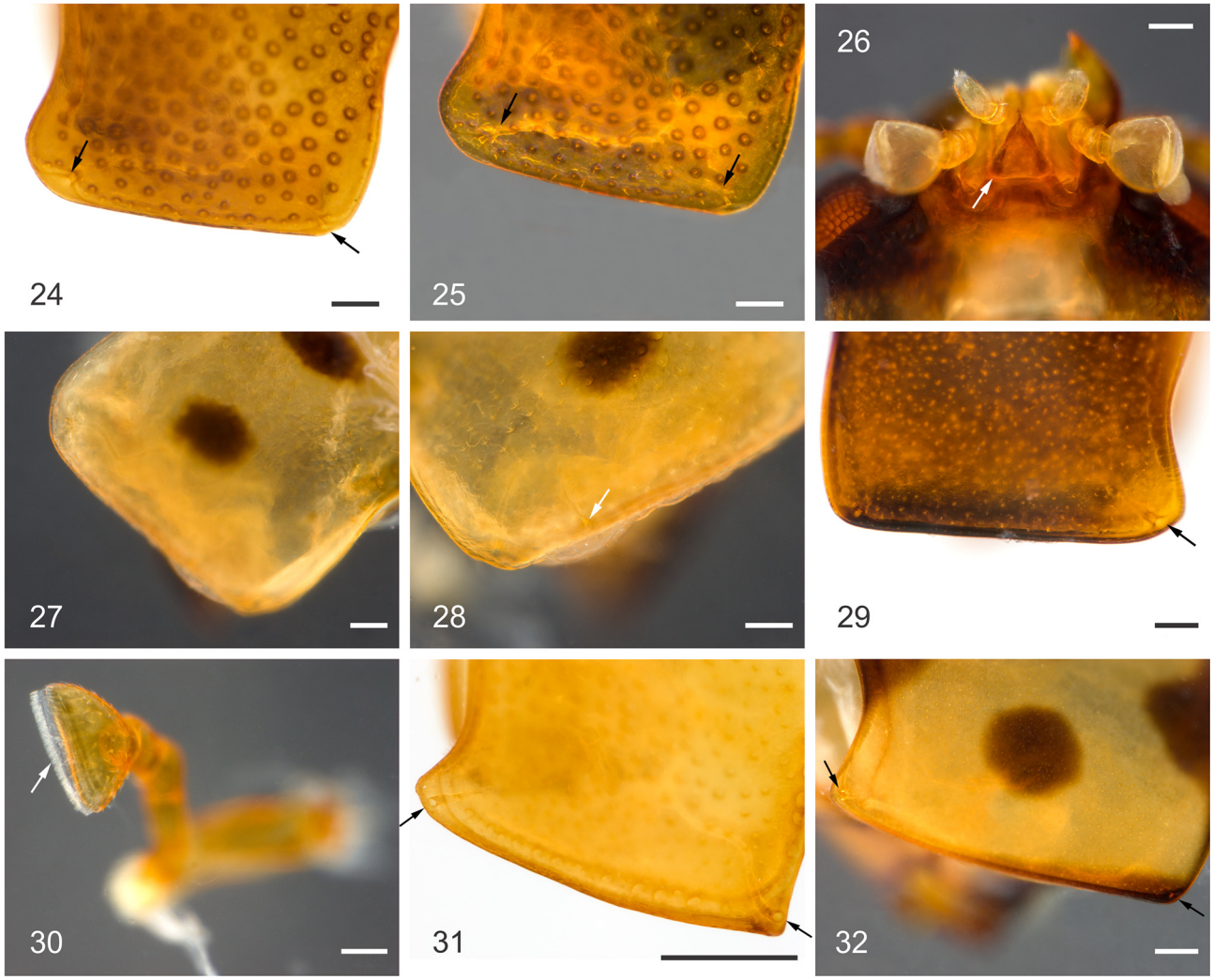
angulate; anteroventral edge with paired and subparallel lateral struts, connected at their anterior tips by small transverse, slightly sclerotized sclerite (Figs. 17–18, arrow). Posterior edge of sternite IX sclerotized; outer contour rounded (Figs. 17–20, SIX); anteriorly membranous. Tergite X (Figs. 17–20, TX, Fig. 22) sclerotized; posterior edge with sparsely distributed bristles. **Female terminalia**. Genitalia (Fig. 23) with gonostyli and gonocoxites strongly sclerotized; baculi of paraprocts sclerotized and slightly arcuate; spermatheca oval and sclerotized. Tergite VIII sclerotized, with sparsely distributed bristles. Sternite VIII with conspicuous median strut.



FIGURES 14–23. *Xalpirta mauryi* **sp. nov.**, male and female terminalia: **14–22** male paratype *X. mauryi* **sp. nov.**, from Parque Nacional do Itatiaia. (**14**) apophyses (apo), flagellum (fla), penis (pen); (**15**) dorsal view of anterior portion of flagellum, head of penile flagellum (h), membranous portion between virga and head segments (mp), virga of penile flagellum (v); (**16**) tegmen, arrows showing parameres. **17–22** sternite VIII, tergite VIII and genital capsule. **17–20** laterotergite IX (LTIX), sternite VIII (SVIII), sternite IX (SIX), tergite VIII (TVIII), tergite X (TX); arrow in Figure 18 showing the sclerite at the anteroventral edge of segment IX and arrow in Figure 20 showing sclerite at the posterior edge of tergite IX; (**21**) sclerite at the posterior edge of tergite IX; (**22**) tergite X. (**23**) female genitalia of a paratype from Campos do Jordão. Scale bars: 14 = 0.5 mm; 15–17, 19, 21–23 = 0.1 mm.

Type material. *Xalpirta mauryi* holotype (DZUP), (Figs. 1–5) "Coleção M. Alvarenga [printed] \ P. N. ITATIAIA 1200 m, E. Rio Janeiro Brasil [printed], 17. VII. 1962 [handwritten], H. Schubart [printed] \ DZUP 125338 [printed] \ HOLOTYPUS *Xalpirta mauryi* Pecci-Maddalena, Lopes-Andrade & Skelley [printed, red paper]". Paratypes: 1 male (DZUP, dissected) "Coleção M. Alvarenga [printed] \ P. N. ITATIAIA 1200 m, E. Rio Janeiro Brasil [printed], 17. VII. 1962 [handwritten], H. Schubart [printed] \ DZUP 125337 [printed] \ PARATYPUS *Xalpirta mauryi* Pecci-Maddalena, Lopes-Andrade & Skelley [printed, yellow paper]"; 1 female (DZUP, dissected) "Coleção M. Alvarenga [printed] \ Campos do Jordão, S. Paulo Brasil, I–1969, W. Bokermann [printed] \ DZUP 125339 [printed] \ PARATYPUS *Xalpirta mauryi* Pecci-Maddalena, Lopes-Andrade & Skelley [printed, yellow paper]"; 1

female (DZUP, dissected) “Coleção M. Alvarenga [printed] \ Campos do Jordão, S. Paulo Brasil, V, II [handwritten]-1957 [printed], K. Lenko leg. [printed] \ 2064-C [handwritten] \ Haematoch. 006 [handwritten] \ DZUP 125343 [printed] \ PARATYPUS *Xalpirta mauryi* Pecci-Maddalena, Lopes-Andrade & Skelley [printed, yellow paper]”; 1 specimen sex undetermined (DZUP) “Coleção M. Alvarenga [printed] \ Campos do Jordão, S. Paulo Brasil, V, II [handwritten]-1957 [printed], K. Lenko leg. [printed] \ DZUP 125340 [printed] \ PARATYPUS *Xalpirta mauryi* Pecci-Maddalena, Lopes-Andrade & Skelley [printed, yellow paper]”; 1 female (DZUP, dissected) “Coleção M. Alvarenga [printed] \ Campos do Jordão, S. Paulo Brasil, V, II [handwritten]-1957 [printed], K. Lenko leg. [printed] \ 2064-B [handwritten] \ Haematoch. 006 [handwritten] \ DZUP 125344 [printed] \ PARATYPUS *Xalpirta mauryi* Pecci-Maddalena, Lopes-Andrade & Skelley [printed, yellow paper]”.



FIGURES 24–32. Morphological details of *Xalpirta mauryi* **sp. nov.**, *Xalpirta maderi* (Delkeskamp), *Mycotretus* Lacordaire, *Triplax* Herbst and *Tritomapara* Alvarenga. **24–25** *X. mauryi* **sp. nov.**, paratype from Parque Nacional do Itatiaia, pronotum; arrows in Figure 24 showing pores of pronotal angles and arrows in Figure 25 showing glandular ducts. **26–28** *Xalpirta maderi*, specimen from Nova Teutônia (MNRJ, see Other materials examined), (**26**) mouthparts, arrow showing the mentum; (**27**) pronotum; (**28**) pronotum, arrow showing the glandular duct of the pore at posterior 1/4 of pronotal edge. (**29**) *Tritomapara brasiliensis* (Guérin) (CELC, see Other materials examined), pronotum; arrow showing pore of anterior pronotal angle. **30–31** *Triplax russica* Herbst (MNRJ, see Other materials examined), (**30**) apical maxillary palpomere, arrow showing the “brush”; (**31**) pronotum, arrows showing pores of pronotal angles. (**32**) *Mycotretus ornatus* (Duponchel) (MNRJ, see Other materials examined), pronotum; arrows showing pores of pronotal angles. Scale bars: 24–30 = 0.1 mm; 31 = 0.5 mm; 32 = 0.2 mm.

Other materials examined. For *Xalpirta maderi*: 1 male (DZUP, dissected) “IX [handwritten] 195[printed]7[handwritten], Brasilien, Nova Teutonia, 27º 11’B . 52º23ºL, Fritz Plaumann, 300–500 m [printed] \ DZUP 135130 [printed]” \ *Xalpirta maderi* (Delkeskamp, 1957) det. Pecci-Maddalena, I.S.C. 2019”; 1 specimen (DZUP) “Coleção M. Alvarenga [printed] \ Teodoro Sampaio, S. Paulo Brasil [printed], VIII. 1973 [handwritten], F.M. Oliveira [print-

ed] \ DZUP 125688 [printed]" \ *Xalpirta maderi* (Delkeskamp, 1957) det. Pecci-Maddalena, I.S.C. 2019" [**new geographical record**].

For *Tritomapara brasiliensis* (Guérin): 1 male (CELC, dissected) "Brasil: MG, Juiz de Fora "Campus UFJF; Entre FAEFID e ICB, ciclovia e caminhada"; 07.xii.2014, leg. Pecci-Maddalena, Í.S.C. & Maddalena [printed]" \ *Tritomapara brasiliensis* Guérin, 1946 det. Pecci-Maddalena, I.S.C. 2019".

For *Triplax russica* Herbst: 1 male (MNRJ, dissected) "Coleção M. Alvarenga [printed] \ Tisvilde [?] 23.5.1948 [handwritten] \ A. Sørensen, Nat. Mus. Aarh [printed]".

For *Mycotretus ornatus* (Duponchel): 1 male (MNRJ, dissected) "Coleção M. Alvarenga [printed] \ Brasil Rio de Janeiro, D.F. Corcovado [printed] 21.XI. 1957 [handwritten] Alvarenga e Seabra [printed] \ 2310 [printed] \ M. ornatus [handwritten]".

Distribution. *Xalpirta mauryi* is known from the type locality, Parque Nacional do Itatiaia (state of Rio de Janeiro, Southeast Brazil), and Campos do Jordão (state of São Paulo, Southeast Brazil) (Fig. 33).

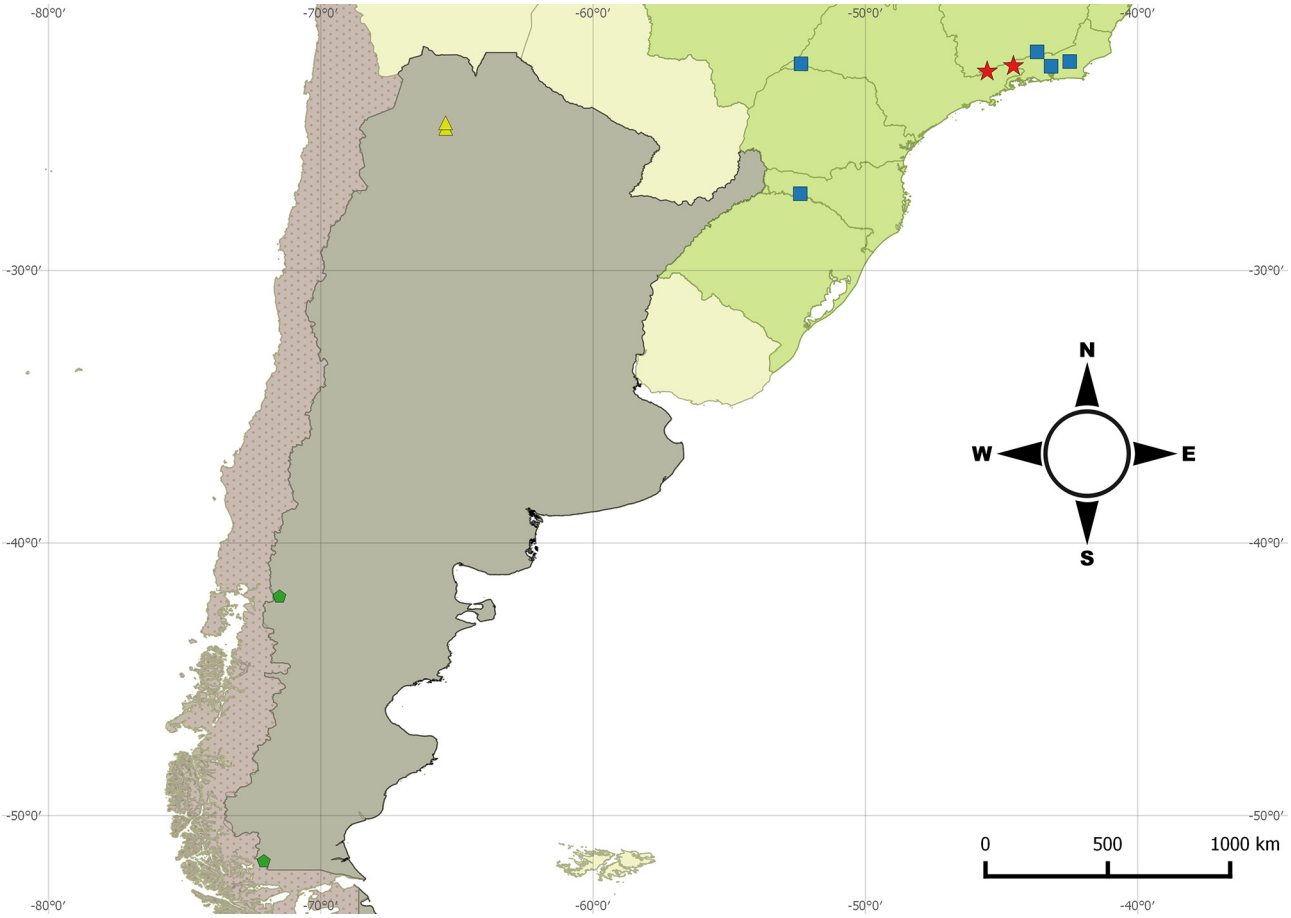


FIGURE 33. Distribution map for *Xalpirta mauryi* **sp. nov.** (star), *Xalpirta maderi* (Delkeskamp) (square), *Xalpirta peckorum* Skelley & Cekalovic (triangle) and *Xalpirta valdiviana* (Philippi & Philippi) (pentagon). Remaining species of *Xalpirta* occur only in Chile (dotted fill).

Discussion

Only two species of *Xalpirta* are recorded from Southeast Brazil: *X. mauryi* and *X. maderi* (Fig. 33) and, as is true for other species of the genus, *X. mauryi* occurs only in areas of high altitudes (1200 m.a.s.l.). *Xalpirta mauryi* has homogeneously green dorsal coloration, a pentagonal mentum plate, a semicircular apical maxillary palpomere and the apical labial palpomere club-shaped, and yellowish-brown legs, while in *X. maderi* the pronotum is yellowish-brown with six sub-circular black spots, the mentum plate is acutely triangular (Fig. 26, arrow), the apical maxillary and labial palpomeres are subtriangular and subcylindrical, respectively (Fig. 26), and the legs are black. However, the morphology of male genitalia, even of the penile flagellum, are very similar in *X. mauryi* and *X. maderi*. The

non-Chilean *Xalpirta* (*X. maderi* and *X. peckorum*) are similar in their body shape (with posterior portion of pronotum enlarged, and lateral edges arcuate and converging anteriorly), color pattern (pronotum yellowish-brown with free black spots, elytra black and lacking metallic luster) and mentum shape (acutely triangular), whereas *X. mauryi* most resembles the Chilean *Xalpirta* (e.g. *X. azureipennis*, *X. elsa*) in the more elongate body, conspicuous metallic elytral sheen and pentagonal mentum plate. The fully green dorsal coloration and lack of pore at posterior 1/3 of pronotal edges are diagnostic features of *X. mauryi*, not observed in other members of *Xalpirta*.

The presence of a metendosternal laminae in *X. mauryi* (Fig. 13) and *X. maderi* is similar to that observed in species of *Triplax*, *Mycotretus* (Pecci-Maddalena & Lopes-Andrade 2017) and *Tritomapara*, but it does not occur in species of *Tritoma* Fabricius (pers. obs. ISCP-M). *Mycotretus*, *Tritomapara* and some members of *Xalpirta* share a pentagonal mentum plate, but *X. maderi* and *X. peckorum*, and even other Tritomini, such as species of *Ischyrus* (Skelley 1998), have a triangular mentum. *Xalpirta* also differs from *Triplax*, *Mycotretus* and *Tritomapara* in the strongly coarse punctation, lateral pronotal edges weakly angulate around pores and angle pores "funnel-shaped", which seem to be formed by a "retraction" of the pronotum edge (Fig. 24). The latter feature was also observed in *Tritomapara* (Fig. 29, arrow) and is conspicuously different from what is observed in *Triplax* (Fig. 31, arrows) and *Mycotretus* (Fig. 32, arrows), in which pronotal angle pores are usually located on the pronotal edge.

It is necessary to perform phylogenetic studies to solve internal relationships of *Xalpirta*, and also to understand the evolution of characters of mouthparts and other structures. A comprehensive phylogenetic study of Tritomini is also required to shed light on the relationships of *Xalpirta* and other genera in the tribe. Tritomini is the most speciose tribe within Erotylidae (Leschen *et al*. 2010) and the available phylogenetic studies of the family (Węgrzynowicz 2002; Leschen 2003; Robertson *et al*. 2004) suggest that the tribe is not monophyletic.

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