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1 **Taxonomic revision of the genus *Monastria* Saussure, 1864 (Blattodea: Blaberidae, Blaberinae)**
2 **from the South American Atlantic forest, with the descriptions of five new species**

3

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10

11 **Abstract**

12

13 The genus *Monastria* Saussure, 1864 includes medium to large sized (40–55 mm) dark brown or black
14 cockroaches found in the understory of the Neotropical Atlantic Forest from the Northeast of Brazil to
15 Paraguay and Argentina. The genus shows evident sexual dimorphism: males are elongated with fully
16 developed wings extending beyond the apex of cerci and females are oval and brachypterous. This
17 study is a revision of the genus with redescription of the three already known species, *Monastria*
18 *biguttata* (Thunberg, 1826), *Monastria similis* (Serville, 1838) and *Monastria angulata* Saussure,
19 1864, and description of five new ones, *Monastria itubera* **sp. n.** and *Monastria itabuna* **sp. n.** from
20 state of Bahia, *Monastria cabocla* **sp. n.** from state of Sergipe, *Monastria kaingangue* **sp. n.** from state
21 of São Paulo and *Monastria sagittata* **sp. n.** from state of Minas Gerais. The morphology of the genus
22 and all species is described in details, including male genitalia. Based on this revision, we proposed a
23 new combination for *Hiereoblatta papillosa* (Thunberg, 1826) **comb. n.**, excluding it from the genus
24 *Monastria*. For the first time, the juvenile stages of *Monastria* are characterized and compared to other
25 genera of Blaberinae of the Atlantic forest. Three determination keys are provided. The two first are
26 aimed at identifying the adults and juvenile stages of the five genera of the Blaberinae radiation
27 endemic to the Atlantic forest, respectively. The third concerns the identification of the species of the
28 genus *Monastria*. A map indicating the localities where species were sampled is also provided.

29

30 **Key Words:** Neotropical Atlantic Forest,, endemic cockroach, male genitalia, juvenile stages,
31 distribution range, review.

32

33 **Resumo**

34

35 O gênero *Monastria* Saussure, 1864a inclui baratas de tamanho médio a grande (40 – 55 mm), marrom
36 escura ou negra, encontradas no sub-bosque da floresta Atlântica neotropical do Nordeste do Brasil até
37 o Paraguai e Argentina. O gênero apresenta evidente dimorfismo sexual: os machos são alongados

38 com asas longas completamente desenvolvidas se estendendo além do ápice dos cercos e as fêmeas
39 são braquípteras e ovais. Este estudo é uma revisão do gênero com re-descrição das três espécies
40 conhecidas, *Monastria biguttata* (Thunberg, 1826), *Monastria similis* (Serville, 1838) e *Monastria*
41 *angulata* Saussure, 1864a e descrição de cinco novas espécies: *Monastria itubera* **sp. n.** e *Monastria*
42 *itabuna* **sp. n.** do estado da Bahia, *Monastria cabocla* **sp. n.** do estado de Sergipe, *Monastria*
43 *kaingangue* **sp. n.** do estado de São Paulo e *Monastria sagittata* **sp. n.** do estado de Minas Gerais. A
44 morfologia do gênero e de todas as espécies é descrita em detalhes, inclusive a genitália do macho.
45 Com base nesta revisão, nós propusemos uma nova combinação para *Hiereoblatta papillosa*
46 (Thunberg, 1826) **comb. n.**, excluindo-a do gênero *Monastria*. Pela primeira vez o estágio juvenil
47 deste gênero é caracterizado e comparado com os de outros gêneros de Blaberinae da Mata Atlântica.
48 Três chaves de determinação são fornecidas. As duas primeiras são destinadas a identificar os adultos
49 e juvenis dos cinco gêneros da radiação de Blaberinae endêmica da Mata Atlântica, respectivamente.
50 A terceira concerne a identificação das espécies do gênero *Monastria*. Um mapa indicando as
51 localidades onde as espécies foram coletadas também é fornecido.

53 **Introduction**

54
55 Cockroaches have evolved with diverse continental radiations. One of the most conspicuous
56 corresponds to the subfamilies Zetoborinae (Grandcolas, 1993a; Grandcolas & Pellens, 2002;
57 Brugerolle et al. 2003; Pellens et al. 2002; 2007a) and Blaberinae distributed in the Neotropical region
58 (Grandcolas 1993b, c, 1998; Pellens & Grandcolas, 2007; Pellens *et al.* 2007b; Grandcolas & Pellens,
59 2012; Legendre *et al.*, 2015). Blaberinae, an early-recognized group (McKittrick, 1964; Roth, 1970a,
60 2003), has been the subject of several behavioral and ecological studies (Grandcolas, 1998). Despite
61 this early recognition, some of its components have been poorly studied, such as the genera endemic
62 from the Atlantic forest in Brazil, namely *Monastria* Saussure, 1864a, *Monachoda* Burmeister, 1838,
63 *Petasodes* Saussure, 1864, *Hiereoblatta* Rehn, 1937, and *Minablatta* Rehn, 1940 (Grandcolas 1993b,c,
64 1998; Pellens *et al.* 2007b; Grandcolas & Pellens, 2012). The genus *Monastria* Saussure, 1864a is
65 certainly the best known amongst them (Pellens & Grandcolas, 2003, 2007). Nevertheless, its
66 taxonomy needs a complete revision.

67 The genus *Monastria* was erected by Saussure (1864a), two previously known species *Blatta biguttata*
68 Thunberg, 1826 and *Blabera similis* Serville, 1838 were transferred to *Monastria* and described two
69 new taxa *Monastria angulata* and *Monastria semialata*. Walker (1868) included the known species of
70 *Monastria* in his catalogue. He also described a new species and new genus *Tarraga guttiventris* and a
71 new species *Blabera nigripennis* of cockroaches that were subsequently brought back into *Monastria*.
72 Kirby (1904) recognized that *Monastria semialata* (Saussure, 1864a) was a synonym of *Monastria*
73 *cassidea* (Eschscholtz, 1822), *Blabera nigripennis* (Walker, 1868) was a synonym of *M. biguttata*, and
74 *Monachoda granosa* Brunner von Wattenwyl, 1865 was a synonym of *Monastria papillosa*. He also

75 incorrectly synonymized *Tarraga gutiventris* with *Blaberus giganteus* (Linnaeus, 1758). Shelford
76 (1907–1908) in his study on the species published by Thunberg incorrectly synonymized *Monastria*
77 *semialata* (Saussure, 1864a), *Monachoda granosa* Brunner von Wattenwyl, 1865 and *Phoraspis*
78 *cassidea* (Dalman, 1823) with *Monastria papillosa* (Thunberg, 1826). In the same study *Blabera*
79 *monstrosa* Stål, 1855 was considered a synonym of *Monastria biguttata* (Thunberg, 1826). Kirby
80 (1910) published a correction in which *Blatta papillosa* Thunberg, 1826 was synonymized with
81 *Monastria cassidea* (Eschscholtz, 1822). Rehn (1937) described the genus *Hiereoblatta* and accepted
82 *Monastria semialata* (Saussure, 1864a) as the only synonym of *Hiereoblatta cassidea* (Eschscholtz,
83 1822). Princis (1946) described *Monastria flavomarginata*, but in 1951 he stated that it was a
84 synonym of *Monastria similis* (Serville, 1838). Princis (1949) maintained *Blatta papillosa* Thunberg,
85 1826 as a synonym of *Monastria papillosa* (Thunberg, 1826). In 1958, Princis synonymized *Tarraga*
86 *gutiventris* Walker, 1868 with *M. biguttata* (Thunberg, 1826). In the catalogue published in 1963,
87 Princis included four valid species to the genus: *Monastria angulata* Saussure, 1864a; *Monastria*
88 *biguttata* (Thunberg, 1826); *Monastria papillosa* (Thunberg, 1826); *Monastria similis* (Serville, 1838).
89 In the present study, we revised the genus *Monastria*.

90

91 **Material and Methods**

92

93 Specimens were measured with a digital caliper and stereoscopic microscope Leica MZ12 equipped
94 with an eyepiece micrometer scale. Measurements of interocular and interantennal distance and
95 genitalia were taken. After dissection of a re-hydrated specimen, its genitalia was treated in cold 10%
96 KOH to remove remains of soft tissue and rinsed with water. Finally, it was kept in glass vial with
97 glycerin and pinned under the specimen. Nomenclature of male genitalia sclerites follow Grandcolas
98 (1996), modified from Grandcolas (1991, 1993c). Abbreviations: L1, L2d, R2, R3d, N, R3v, Lb
99 (Lateral Branch), Cs (Crown of spines), Notch (Subapical incision) and Clf (Cleft).

100 Digital images of habitus, pronotum, head, supra-anal plate and juvenile stages were taken with a
101 camera Cannon 6D. Genital sclerites were photographed with a stereomicroscope Nikon attached to a
102 camera Cannon 6D. Images of external morphology and genitalia were combined with the Helicon
103 Focus 6.7.1 software and edited in Adobe Photoshop Elements 11. The cuticle of juvenile stages of
104 five specimens were critical point dried, coated with gold–palladium and digitally photographed using
105 a HITACHI SU3500 scanning electron microscope.

106 The material examined are part of the collections of the following institutions: Muséum National
107 d’Histoire Naturelle in Paris (MNHN), Muséum d’Histoire Naturelle de la Ville de Genève (MHNG),
108 Natural History Museum London (NHM), Museu de Zoologia Universidade de São Paulo (MZUSP),
109 Museu Nacional do Rio de Janeiro (MNRJ) and Uppsala University Museum of Evolution, Uppsala in
110 Sweden (UUZM).

111

112 **Results**

113

114 **Key to the genera of the subfamily Blaberinae endemic from the Neotropical Atlantic forest**

115

116 **Adults**

117 1 Pronotum with lateral margin rounded, without notch or spine ... 2

118 - Pronotum with lateral margin inclined, most often with a notch or a spine ... 3

119 2 Pronotal cuticle smooth; dark brown with two orange spots; male brachypterous (Fig. 1C) ...

120 ***Minablatta* Rehn**

121 - Pronotum strongly gibbous; yellow darker in the middle; male brachypterous (Fig. 1D) ...

122 ***Hiereoblatta* Rehn, 1937**

123 3 Pronotum unicolored (tawny beige); fore margin very abruptly curved upward. The head ventrally
124 inserted strongly protruded (Fig.1B) ... ***Petasodes***

125 - Pronotum with a more complex coloration; roughly triangular; lateral margin inclined most often
126 with a notch or a spine ... 4

127 4 Pronotum smooth, with a very light prominence above the head and a black complex spot in the
128 postero-central area and reaching the posterior margin (Fig. 1E) ... ***Monachoda* Burmeister**

129 - Pronotum gibbose, with a complex dark and brightly-colored pattern in the middle (Fig. 1A) ...

130 ***Monastria* Saussure**

131

132 **Juvenile stages**

133 1 Pronotum hind margin nearly straight ... 2

134 - Pronotum hind margin not straight ... 3

135 2 Dorsal surface totally covered by very abundant long thorn-like spines (including pronotum) with a
136 row of larger spines at hind margins; supra anal plate bilobed with a deep incision; each lobe forming
137 straight angles; hind region wider (Figs. 2E, 3E) ... ***Monachoda* Burmeister**

138 - Dorsal surface covered by microsculptures formed by triangular spines, except pronotum; supra-anal
139 plate bilobed with a very small median incision, fore region wider (Figs. 2C, 3C)... ***Minablatta* Rehn**

140 3 Ratio between total body length and width $\approx 2:1$; pronotum strongly gibbous; yellow, darker in the
141 middle; dorsal microsculptures very short ending with a seta (Figs. 2D, 3D). ***Hiereoblatta* Rehn**

142 - Ratio between total body length and width $\approx 1,7:1$; pronotum hind margin forming 120° angle... 4

143 4 Very flat, smooth, specially dorsally, with dark spots very visible in the dorsal surface from the
144 pronotum to the fore region of the supra-anal plate, dorsal microsculptures very slender, making like a
145 row of columns along the hind margins of pronotum and tergites (Figs. 2B, 3B)... ***Petasodes* Saussure**

146 - Not very flat, dorsal surface of pronotum and tergites very rough covered by thorn-like cuticular
147 microsculptures much more abundant near the hind margins (Figs. 2A, 3A)... ***Monastria* Saussure**

148

149 ***Monastria* Saussure, 1864**

150 *Monastria* Saussure, 1864a: 255, 1864b: 348; Kirby, 1904: 161; Princis, 1958: 75, Princis, 1963: 141.
151 *Tarraga* Walker, 1868: 16; Princis, 1963: 141 (as syn. of *M. biguttata*).

152

153 **Type Species.** *Monastria biguttata* (Thunberg, 1826) = *Blatta biguttata* Thunberg, 1826 (Fig. 4).

154

155 **Diagnosis.** Dark brown to black or shiny black cockroaches with pronotum having orange or ochre
156 spots in the middle. Evident sexual dimorphism, males elongated with wings extending beyond the
157 apex of cerci, and females brachypterous. Male pronotum with a characteristic pentagonal transverse
158 shape, lateral margins with sharp angles and a conspicuous small notch. Female pronotum
159 subtriangular with a depression near the margins, and lateral margins with conspicuous small notch or
160 spine. Coxae covered by setae in males, antero-ventral femora margins with spines of equal size.
161 Apical and genicular spines absent. First meta tarsomere of hind leg short and without spines, claws
162 symmetrical and simple, small arolia. L1 present as a single sclerite, its posterior margin almost
163 entirely covered by a crown of small spines, closely packed.

164

165 **Generic description. Male** (Fig. 5). Medium size (40–55 mm). Head subtriangular; eyes extending
166 antero-laterally beyond the antennal socket (Fig. 5C); interocular space narrow at its closest distance
167 and smaller than the one between the antennal sockets (0.8–1.8 mm). Antennae not surpassing the
168 apex of the tegmina, filiform and setose from the eighth flagellar segment. First flagellar segment
169 larger than the pedicel. Maxillary palps with the fifth segment more dilated and very tomentose.
170 Pronotum pentagonal with fore margin strongly arcuate, hind margin nearly very weakly arcuate, and
171 a specific black coloration pattern in the central region (Fig. 5B). Tegmina developed, extending
172 beyond the apex of cerci; marginal field short and slightly concave; scapular field tapering toward
173 apex; mid-field discoidal, extended apically, slightly angular along veins; subcostal vein with a carina
174 on its ventral surface, anal veins reaching the posterior border (Fig. 5A). Wing marginal field narrow,
175 subcostal vein reaching basal third of scapular field; cubital vein with numerous complete and few
176 incomplete veins; apical triangle absent. Setae in the dorsal region of the three thoracic segments and
177 in the first abdominal segment. Fore-femora ventro-anterior margins with 16 spines of the same size
178 arranged side by side, the last one near the apex directed outward, ventro-posterior margins with 3
179 spines distributed in uniform spaces along the fore-femora and the last one near the apex. Middle legs
180 ventro-anterior margins of with 3 or 4 spines, the last one close to the apex. Tarsomeres 1-4 with
181 pulvilli, the pulvillus of the first metatarsomere very long, covering more than half of the length of
182 metatarsomere; tarsal claws simple and symmetrical; small arolium present. First abdominal tergite
183 unspecialized. Supra-anal plate quadrangular, posterior border bilobated with a strong median incision.
184 Cerci short, cylindrical, with different coloration in the last segments. Subgenital plate slightly
185 asymmetric. Internally, attached to this plate, a membranous pouch with genital sclerites L1 (Figs. 5G,

186 H), L2d (Figs. 5F, I) and R (right phallomere) (Figs. 5D, E). Sclerite L1 long and thin with the apical
187 part distinct, quite sclerotized and the left branch tooth-shaped; central portion with a small posterior
188 projection and a branch on the right side directed upwards; apical region with a crown of sclerotized
189 spines. Sclerite L2d hook-shaped, like in most species of Ectobiidae and Blaberidae. Distal area
190 elongated with subapical notch. Sclerite R (right phallomere) formed by sclerotized regions R2, R3d,
191 R3v and N (Figs. 5D). Sclerite R2 (“cleft”) curved, deep and directed upward. Sclerite R3d wide and
192 elongated longitudinally with a dorsal part reduced and a large ventral one in the distal region. Sclerite
193 R3v with a flattened and inverted v shape in ventral view; rounded anterior lateral apex, and short
194 caudal branch (Fig. 5E).

195

196 **Female** (Figs. 4, 6A–D). Species of medium size (30–45 mm). Head rounded, with wide interocular
197 space measuring 1/2 the distance between the antennal sockets (2.0–3.1 mm). Eyes reniform with
198 straight interocular margin. Antennae reaching the apex of the tegmina, filiform and setose from the
199 eighth flagellar segment. Ocelli developed and deflected. Front broad and frontal suture with a
200 cuticular invagination (Fig. 6D). Pronotum subtriangular with anterior region rounded and slightly
201 concave near the margins, dorsal region rough with striae, lateral angles rounded ending in a corner,
202 posterior margin slightly curved in the median region (Fig. 6B). Brachypterous. Tegmina truncated
203 with a marked curvature towards the interior and not extending further than the second abdominal
204 tergite; wings much shorter and undeveloped (Fig. 6A). Legs short and robust. Fore femora ventro-
205 anterior margins with 13 spines of the same size, the last one close to the apex; ventro-posterior
206 margins with 4 spines, the last one close to the apex. Middle legs ventro-anterior margins with 4
207 spines, the last one close to the apex. Supra-anal plate bilobed with a small median incision, each lobe
208 with slightly rounded lateral and straight posterior margin (Fig. 6C). Tergites with slightly rounded
209 lateral angles (Fig. 6A).

210

211 **Juvenile stages.** Juveniles of both sexes are oval, almost rectangular with a body length and width
212 ratio $\approx 1,7:1$. Beige to light brown, uniformly colored, the dorsal surface of pronotum and tergites is
213 very rough (Fig. 7), covered by thorn-like cuticular microsculptures, often more abundant at their hind
214 margins. (Fig. 3A). Head, eyes, antennae, legs, supra-anal and subgenital plate very similar to those in
215 adults (Fig. 7E).

216

217 **Habitat and Behavior.** Specimens of *Monastria* were observed in a large array of forest ecosystems,
218 ranging from semi-deciduous forests at the Northeast to the humid montane forests in the central
219 region and the *Araucaria* forests in the South. All specimens were observed and collected in the forest
220 understory on the underside of dead trunks of various sizes, as it was described in details for *M.*
221 *biguttata* (Pellens & Grandcolas, 2003). Very often found grasping on the underside of the bark or the
222 wood of dead trunks, immediately freezing when disturbed. The body of the juveniles are covered by

223 fine particles of the substrate where they are found, which are attached to the tegument structures (Fig.
224 7). Adult males have never been seen flying, even if they look able to do so with their large and
225 mobile wings. As any blaberid species, they are ovoviviparous, the females retract the large oothecae
226 in the brood sac. Juvenile stages are often observed in groups that remain near each other until
227 adulthood.

228

229 **Key to the species of the genus *Monastria***

230

231 1 Female pronotum with acute lateral angles; absence of notch or spines (Fig. 9A, B) ... ***M. angulata***

232 **Saussure**

233 - Male and Female pronotum with sharp or rounded lateral angles; with notch or spines ... 2

234 2 Female tegmina long, reaching the fifth abdominal tergite; hind margins curved and rounded. Male

235 with L1 sclerite with lateral branch curved, rounded and with some small spines3

236 - Female tegmina short, not extending further than the fourth abdominal tergite; hind margin truncated

237 or with a curvature. Male with L1 sclerite with lateral branch slightly curved forward, with the aspect

238 of a big sharp tooth4

239 3 L1 sclerite with lateral branch curved, rounded and smooth with some small spines; R3d sclerite

240 with a clear prominence like a tooth in ventral view (Fig. 14)....***M. kaingangue sp. n.***

241 - L1 sclerite with lateral branch curved and rounded with large spines directed downwards (Fig. 8); R2

242 sclerite shorter and forming a right angle***M. similis (Serville)***

243 4 Male L1 sclerite with a big lateral dilatation and an edge in the posterior median region (Fig. 10).

244 Female supra-anal plate with straight posterolateral angles...***M. cabocla sp. n.***

245 - Male L1 sclerite without a big lateral dilatation and an edge in the median region. Female, supra-anal

246 plate posterolateral angles rounded...5

247 5 L1 sclerite slightly concave region with irregular distal margins with grooves (Fig. 11). Female frons

248 with a prominence***M. itubera sp. n.***

249 - L1 sclerite without slightly concave region and irregular distal margins with grooves. Female frons

250 flat. ..6

251 6 L1 sclerite with lateral branch slightly curved with some spines reaching the crown of spines at the

252 posterior region (Fig. 13)***M. itabuna sp. n.***

253 - L1 sclerite without lateral branch with some spines reaching the crown of spines in the posterior

254 region ..7

255 7 L1 sclerite with a sharp dorsal protuberance and with a projection in the right side turned forward;

256 L2d sclerite, hook with internal ventral margin concave (Fig. 5).... ***M. biguttata (Thunberg)***

257 - L1 sclerite with a roughly triangular spear-shaped apical region, hind margin with a large non-

258 sclerotized projection. L2d sclerite, hook with internal ventral margin strongly convex (Fig. 16)... ***M.***

259 ***sagittata sp.n***

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Species

***Monastria biguttata* (Thunberg, 1826)**

Male – Figure 5.

Female – Figures 4; 6A–D.

Blatta biguttata Thunberg, 1826: 276; Scudder, 1868: 13.

Blaberus biguttata Serville, 1831.

Monachoda biguttata Burmeister, 1838: 514; Brunner v. W, 1865: 365; Saussure, 1870: 120; Finot, 1897: 207

Blabera biguttata Serville, 1839: 80.

Monastria biguttata Saussure, 1864a: 256; Saussure, 1864b: 348; Walker, 1868: 11; Kirby, 1904: 161; Shelford, 1907–1908: 469; Rehn, 1911: 248, Rehn, 1913: 282, Rehn, 1915: 275, Rehn, 1920: 217; Hebard, 1921: 246; Princis, 1949: 66; Princis, 1958: 75, Princis, 1963: 141.

Blabera nigripennis Walker, 1868: 6; Finot, 1897: 210; Princis, 1963: 142 (as syn. of *M. biguttata*).

Tarraga guttiventris Walker, 1868: 16; Finot, 1897: 213; Princis, 1963: 142 (as syn. of *M. biguttata*).

Blabera monstrosa Stål, 1855: 351; Kirby, 1904: 165; Princis, 1963: 142 (as syn. of *M. biguttata*).

Blabera mostruosa Sjostedt, 1933: 10; Princis, 1963: 142 (as syn. of *M. biguttata*, lapsus calami).

Examined material. Brazil – Rio de Janeiro: 7m# 3f# Niterói. “Parque da Cidade”, 225m, 22°55’42”S, 43°05’10”W, 500m de la plage du saco de São Francisco, Forêt semp. humide, 21 IX 2009, R. Pellens & P. Grandcolas rec. (MNHN). 1m# Angra dos Reis, Ilha Grande, “Sentier Abraão/Enseada das Palmas”, 50m, 23°08’34”S, 44°08’91”W, 21km E Angra Dos Reis, Forêt semp. humide, 07 VIII 2007, R. Pellens & P. Grandcolas rec. (MNHN). 1m#, 1f# Visconde de Mauá, “Apa da Serrinha do Alambari”, 528m, 22°23’16.4”S, 44°29’58.1”W, 26 XI 2010, R. Pellens & P. Grandcolas rec. (MNHN). 1m# Montagnes des Orgues, Prov. de Rio de Janeiro, Environs de la Tijuca, E. R. Wagner – 1902 (MNHN). 1m# Floresta da Tijuca, V 1966, M. Alvarenga col. (MZUSP). 1f# “Tejuca”, I 1857, coll. H. Clark (NHM). Espirito Santo: 2m#, 3f# Res de Linhares, “CVRD”, 19°09’10.2”S, 40°11’07.8”W, 19 X 1999, 40km NNE Linhares, Forêt semi-décidue, “Mata Alta”, R. Pellens & P. Grandcolas rec. (MNHN). 1m# Linhares, Fragment “Sitio São Pedro”, 19°09’14.2”S, 40°11’34.3”W, 11 VII 2005, 40km NNE Linhares, Forêt semi-décidue, R. Pellens & P. Grandcolas rec. (MNHN). Santa Teresa, Est. Biol. Santa Lucia, 810m, 19°58’18.5”S, 40°32’07.6”W, 6 – 9 IV 2001, Malaise, ponto 3 trilha, C. O. Azevedo & equipe col. (MZUSP). **Without locality**: 3f# (America Meridionale) (MHNG). 2m#, 6f# (NHM).

296 **Diagnosis.** This species is characterized by the presence of two additional cuticular depressions in the
297 frons near the clypeus. L1 sclerite with lateral branch slightly curved forward, with the aspect of a big
298 sharp tooth, and with spines in the ventral region near the crown of spines; a pointy medial region with
299 a projection in the right side turned forward. R2 sclerite cleft very sclerotized, rounded at the side of N
300 sclerite. N sclerite tiny in the dorsal region, and large and globular in the ventral one. R3d slightly
301 curved dorsally and wider and straight in ventral view. R3v sclerite with a wide and rounded latero-
302 distal region and a short and slightly narrow caudal branch.

303

304 **Redescription. Male.** Head subtriangular, with interocular space measuring approximately 1/5 of the
305 distance between the antennal sockets. Ocelli developed and slightly deflected. Frontal suture with a
306 cuticular invagination. Two additional cuticular depressions in the frons near the clypeus (Fig. 5C).
307 Pronotum transverse, pentagonal, dorsal surface rough with striae, fore margin rounded, lateral
308 margins with sharp angles and round ends, hind margin nearly straight (Fig. 5B). Legs short and
309 robust. Fore-femora ventro-anterior margins with 16 spines of the same size; ventro-posterior margins
310 with 3 spines. Middle-legs ventro-anterior margins with 3 or 4 spines. Supra-anal plate quadrangular
311 with setae on the surface, hind margin straight and slightly rounded laterally, bilobed with a strong
312 invagination in the median portion. Subgenital plate asymmetrical with long styles, funneled in the
313 apical region.

314 L1. With the left side of the apical region with a lateral branch (Lb) slightly curved forward, with the
315 aspect of a big sharp tooth with spines near the crown of spines. The right side of the apical region
316 with a pointy medial protuberance and a projection turned forward (Fig. 5G, H). L2d sclerite hook
317 with a soft subconical and slightly narrow anterior region, a short apical sclerotized region, and a wide
318 space connecting them. Apex internal cavity concave, short lateral-external margin and with a typical
319 sub-apical notch (Fig. 5F, I). R2 sclerite cleft very sclerotized, rounded and curved inward with the
320 apex directed upward (Fig. 5D). Sclerite N tiny in the dorsal region, and large and globular in the
321 ventral one. R3d slightly curved dorsally and wider and straight in ventral view. Sclerite R3v with a
322 flattened and inverted v shape in ventral view; rounded anterior lateral apex, and short caudal branch.
323 (Fig. 5D, E).

324

325 **Female.** Head rounded, with wide interocular space measuring 1/2 the distance between the antennal
326 sockets. Eyes with slightly inclined interocular margins. Ocelli developed and deflected. Front broad
327 and frontal suture with a cuticular invagination (Fig. 6D). Pronotum subtriangular with anterior region
328 rounded and slightly concave near the margins, dorsal region rough with striae, lateral angles rounded
329 ending in a corner, hind margin slightly curved in the median region (Fig. 6B). Tegmina with anterior
330 margin slightly triangular; hind margin truncated with a marked curvature inside; very short and not
331 extending further than the second abdominal tergite (Fig. 6A). Legs short and robust. Fore femora
332 ventro-anterior margins with 13 spines of the same size, ventro-posterior margin with 4 spines. Middle

333 legs ventro-anterior margins with 4 spines. Supra-anal plate bilobed with a small median incision, each
334 lobe with a slightly rounded lateral margin and a straight posterior margin (Fig. 6C). Tergites with
335 straight lateral angles (Fig. 6A).

336

337 **Measurements (mm).** m#: Body length 51.70; pronotum length 12.36 × 17.35 maximum width;
338 tegmen length 42.55 × 15.90 width; interocular width 1.0; interantennal width between sockets 5.5
339 f#: Body length 38.50 ; pronotum length 11.20 × 17.55 maximum width ; tegmen length 10.00 × 11.25
340 width; interocular width 2.3; interantennal width between sockets 5.0.

341

342 **Coloration.** m#: General coloration brown (Fig. 5A). Pronotum dark brown with anterior margin buff
343 brown; central disk pale brown with scattered black marks (Fig. 5B). Head dark brown-black; clypeus
344 and labrum amber. Antennae with basal segments brown pigmented and apical segments pale brown.
345 Ocelli pale brown (Fig. 5C). Legs and spines dark brown; tarsal claws, pulvilli and arolia amber.
346 Tegmina and abdomen following general coloration of body (Fig. 5A) but with dark brown tergites
347 and sternites hind margins.

348

349 **Distribution.** Brazil (Rio de Janeiro, Espirito Santo). See Fig. 17 for details.

350

351 ***Monastria similis* (Serville, 1838)**

352 Male – Figure 8.

353 Female – Figure 6E–H.

354

355 *Blabera similis* Serville, 1839: 81.

356 *Monastria similis* Saussure, 1864a: 256; Walker, 1868: 11; Scudder, 1868: 54; Kirby, 1904: 161;

357 Princis, 1958: 75, Princis, 1963: 142.

358 *Monachoda similis* Brunner v. W, 1865: 367; Saussure, 1870: 120; Finot, 1897: 207.

359 *Monastria flavomarginata* Princis, 1946: 162, Princis, 1963: 142 (as syn. of *M. similis*).

360

361 **Examined material. Brazil** – Paraná: 1f# Aurora do Iguaçu, “Fazenda Dona Iolanda”, 260m,
362 25°23’047”S, 54°07’048”W, 20km NE São Miguel do Iguaçu, Fragment=60ha, Forêt semp. Humide,
363 18 XI 2008, Jour, coll. R. Pellens & P. Grandcolas (MNHN). 2m#, 1f# Foz do Iguaçu, “Fazenda John
364 Keller”, 220 m, 25°34’9.14”S, 54°26’7.41”W, 1km Parc National do Iguaçu, Forêt semp. humide, 20
365 XI 2008, R. Pellens & P. Grandcolas rec. (MNHN). Santa Catarina: 1m# Blumenau, VI 1919, coll.
366 Luderm? (MZUSP). 3m#, 2f# Campo Alegre, “Ilha, Fazenda Sr. Egon”, 830m, 26°10’29”S,
367 49°16’22”W, 1km Campo Alegre, 14 VIII 2007, Forêt d’*Araucaria*, R. Pellens & P. Grandcolas rec.
368 (MNHN). 1f# Campo Alegre, “Fazenda Sr. Gilson”, 853m, 26°12’6.61”S, 49°18’4.58”W, 5km W
369 Campo Alegre, Forêt d’*Araucaria*, 15 VIII 2007, R. Pellens & P. Grandcolas rec. (MNHN). 1f#

370 Florianopolis, “Chemin Mirante. route Lagoa da Conceição”, 295m, 27°35'5.05”S, 48°28'6.08”W,
371 Forêt semp. humide, 01 XII 2008, R. Pellens & P. Grandcolas rec. (MNHN). 2f# Joinville, “Alto da
372 Serra Dona Francisca”, 755m, 26°11'882” S, 49°03'144” W, 35km NW Joinville, Forêt semp.
373 humide, III 2007, R. Pellens & P. Grandcolas rec. (MNHN). 1m# 4f# Lages, Brunner d. w. (MHNG).
374 1m# 1f# Rio Capivary, 1888, H. Fruhstorfer (MHNG). Rio Grande do Sul: 2m# Lhering, (MNHG).
375 São Paulo: 1m# Poa, 13 IV 1963, Rabello col. (MZUSP). 1m# Salesópolis, “Estação biológica de
376 Boracéia, Trilha do poço verde”, 23°38'56.9”S, 45°52'50”W, Malaise, pt1, 17 – 28 IV 2003, coll. A.P.
377 Aguiar & F.M. Rodrigues (MZUSP). 1m# Salesópolis, “Est. biológica de Boracéia”, 850m, (MZUSP).
378 **Paraguay**: 1f# Asunción, sept.1922–apl.1923, E.G.Kent, B.M. 1925 – 262 (NHM). 1m#, Carlos
379 Pfanni (MHNG) **Without locality**: 1m# Brésilien, H. Fruhstorfer, 1903 – 321(NHM). 2f# (NHM).
380 1m# (America Meridionale/Colombie?), D. Ruhl (MHNG). 1m# coll. Pantel, co-type (MNHN).

381

382 **Diagnosis.** Male - The apical left side of L1 with a short rounded lateral branch turned downwards
383 with strong spines near the crown of spines and a wide region slightly concave with a slight curvature
384 ending in a small projection towards the front on the right side. L2d sclerite hook with internal cavity
385 strongly concave, external lateral margin very near the very narrow sub-apical notch. R2 sclerite
386 shorter and forming a right angle. Sclerite N reduced in the dorsal region and a wide and globular
387 ventral surface. R3d slightly curved dorsally and wider and straight in ventral view. R3v small,
388 triangular, with a short and slightly quadrangular latero-distal region; caudal branch short with a finger
389 shaped apex.

390

391 **Redescription. Male.** Head subtriangular, with interocular space measuring nearly 1/3 of the distance
392 between the antennal sockets. Ocelli developed and slightly deflected. Frontal suture with a slight
393 cuticular invagination (Fig. 8C). Pronotum transverse, pentagonal, dorsal surface rough with deep
394 striae, anterior margin rounded, lateral margins with sharp angles and round ends, hind margin nearly
395 straight (Fig. 8B). Tegmina with orange lateral margins in the first half of its length (Fig. 8A). Legs
396 short and robust. Fore-femora ventro-anterior margins with 21 or 22 spines decreasing in size from
397 basal to apical; ventro-posterior margins with 3 long and 2 slightly smaller spines. Middle legs ventro-
398 anterior margins with 10 spines. Supra-anal plate quadrangular with setae on the surface, hind margin
399 straight and slightly rounded laterally, bilobed with an invagination in the median portion. Subgenital
400 plate asymmetrical with long styles, funneled in the apical region. L1 sclerite with apical region with
401 two distinct parts: a short, rounded lateral branch turned downwards, with strong spines near the
402 crown of spines of the posterior region; a wide region slightly concave with a slight curvature ending
403 in a small projection towards the front on the right (Fig. 8H, I). L2d sclerite hook with anterior region
404 subconical and slightly wide and a short apical region; internal cavity strongly concave, external
405 lateral margin very near the very narrow sub-apical notch (Fig. 8F, G). R2 sclerite cleft curved inwards
406 with the apex very sclerotized and directed upwards; shorter and forming a right angle (Fig. 8D).

407 Sclerite N dorsal region reduced, ventral surface wide and globular. R3d slightly curved dorsally and
408 wider and straight in ventral view. R3v small, triangular, with a short and slightly quadrangular latero-
409 distal region; caudal branch short with a finger shaped apex (Fig. 8D, E).

410

411 **Female.** Head rounded, with wide interocular space measuring 1/2 of the distance between the
412 antennal sockets. Eyes with straight interocular margin. Ocelli small and located on the area slightly
413 deflected above the antennal socket. Frons broad and flattened, frontal suture with a small cuticular
414 depression. Clypeus distal half larger and yellow transparent (Fig. 6H). Pronotum subtriangular with
415 anterior region rounded and slightly concave near the margins, dorsal region rough with deep striae,
416 lateral angles rounded ending in a corner, hind margin slightly curved in the median region (Fig. 6F).
417 Tegmina with a rounded anterior margin, orange lateral margin, and rounded and curved hind margin.
418 Long, reaching the fifth abdominal tergite (Fig. 6E). Legs short and robust. Fore-femora ventro-
419 anterior margins with 21 or 19 long spines of the same size, ventro-posterior margins with 5 spines.
420 Middle legs ventro-anterior margins with 5 spines. Supra-anal plate bilobed with a small median
421 notch, each lobe with a slightly rounded lateral and a straight hind margin (Fig. 6G). Tergites with
422 rounded lateral angles (Fig. 6E).

423

424 **Measurements (mm).** m#: Body length 49.35; pronotum length 10.95 × 16.80 maximum width;
425 tegmen length 39.75 × 15.45 width; interocular width 1.6; interantennal width between sockets 4.6.
426 f#: Body length 36.65; pronotum length 11.35 × 16.90 maximum width ; tegmen length 16.50 × 11.00
427 width; interocular width 2.6; interantennal width between sockets 5.6.

428

429 **Coloration.** m#: General coloration brown (Fig. 8A). Pronotum dark brown with anterior margin buff
430 brown; central disk orange with large dark brown mark (Fig. 8B). Head dark burnt umber; clypeus
431 amber and labrum orange. Antennae with basal segments brown pigmented and apical segments pale
432 brown. Ocelli white (Fig. 8C). Legs brown and spines with brown base and dark brown apex; pulvilli
433 yellowish white; tarsal claws and arolia amber. Tegmina with orange lateral margins (Fig. 8A).
434 Abdomen following general coloration of body but with brown tergites and sternites hind margins.

435

436 **Distribution.** Brazil (São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Paraguay (Asunción).
437 See Fig. 17 for details.

438

439 ***Monastria angulata* Saussure, 1864a**

440 Figure 9A–D.

441

442 *Monastria angulata* Saussure, 1864a: 257; Walker, 1868: 11; Kirby, 1904: 161; Princis, 1963: 142.

443 *Monachoda angulata* Saussure, 1870: 120; Finot, 1897: 207.

444

445 **Examined material.** Syntype f#. Brazil, Bahia. (MHNG)

446

447 **Diagnosis.** Pronotum triangular, with rounded anterior region slightly concave near the margins,
448 inconspicuous dorsal roughness and striae. Lateral angles pointy, without corners, hind margin slightly
449 curved in the median region. Tegmina anterior angle nearly square, hind margin truncated with a
450 marked curvature towards the medial margin. CuP vein ending at the half of the hind margin. Supra-
451 anal plate bilobed, lateral margins of each lobe very rounded.

452

453 **Redescription. Female.** Head subtriangular, with wide interocular space measuring 1/2 of the
454 distance between the antennal sockets. Eyes with straight interocular margin. Ocelli developed and
455 deflected. Front broad and frontal suture with a small cuticular invagination (Fig. 9D). Pronotum
456 triangular, with anterior region rounded and slightly concave near the margins; dorsal roughness and
457 striae inconspicuous. Lateral angles pointy, without corners, hind margin slightly curved in the median
458 region (Fig. 9B). Tegmina very short and not extending further than the second abdominal tergite;
459 anterior angle nearly square, hind margin truncated with a marked curvature towards the medial
460 region. CuP vein ending at the half of the hind margin (Fig. 9A). Legs short and robust. Fore-femora
461 ventro-anterior margins with 16 or 17 spines of the same size, ventro-posterior margins with 4 spines.
462 Middle legs ventro-anterior margins with 4 spines. Supra-anal plate bilobed with a small median
463 notch, each lobe with a very rounded lateral margin and a slightly straight hind margin (Fig. 9C).
464 Tergites with quadrangular lateral angles (Fig. 9A).

465

466 **Male.** Unknown

467

468 **Measurements (mm).** Syntype #f: Body length 30.70; pronotum length 10.00 × 17.57 maximum
469 width ; tegmen length 9.80 × 12.20 width; interocular width 2.6; interantennal width between sockets
470 5.6.

471

472 **Coloration.** Syntype #f: General coloration burnt umber (Fig. 9A). Pronotum burnt umber with a
473 anterior margin ochre; central disk yellowish brown with scattered dark brown marks (Fig. 9B). Head
474 burnt umber and clypeus and labrum dark brown (Fig. 9D). Antennae with segments yellowish brown.
475 Ocelli ochre. Legs and spines dark brown; tarsal claws, pulvilli and arolia yellowish brown. Tegmina
476 with anal field burnt umber and marginal field brown; abdomen following general coloration of body
477 but with tergites and sternites hind margins dark brown (Fig. 9A). Supra-anal plate burnt umber (Fig.
478 9C).

479

480 **Distribution.** Brazil (Bahia).

481

482 ***Monastria cabocla* Tarli, Grandcolas & Pellens sp. n.**

483 Male – Figure 10.

484 Female – Figure 9E–H.

485

486 Type material. Holotype #m, Brazil, Sergipe, Santo Amaro das Brotas, “Gravata” 13 I 1979 (MZUSP).

487 Allotype #f and Paratypes 1#m, 2#f, same data as holotype (MZUSP). 1#f Sergipe, Santo Amaro das

488 Brotas, “871”, 10°46'51.2"S, 37°03'22.8"W (coordinates assigned à posteriori) (MNRJ).

489

490 **Diagnosis.** Frons depressed below the antennal sockets and prominent above the ocelli. Ocelli
491 positioned laterally. Pronotum dorsal surface slightly rough and striated, with two quite evident lobes
492 with plain surface, and a wider central lobe covering the head. Short lateral margins with sharp angle
493 and a conspicuous small spine. Legs longer and less robust. L1 sclerite with a lateral branch little
494 sclerotized slightly curved downwards, smooth and with only a small spine and a region with a big
495 lateral dilatation and an edge in the posterior median region with a lateral projection turned forward.
496 Crown with a smaller number of sclerotized spines in the posterior region. L2d sclerite, hook with
497 subconical and very wide anterior region. Sclerite N triangular on the dorsal region. R3d with a slight
498 depression in the dorsal median region.

499

500 **Description. Male.** Head subtriangular, with interocular space measuring 1/4 of the distance between
501 the antennal sockets. Frons with a depression below the antennal sockets and prominent above the
502 ocelli. Frontal suture localized in a deep cuticular invagination, ocelli developed and positioned
503 laterally (Fig. 10C). Pronotum transverse, pentagonal, dorsal surface slightly rough and striated, with
504 two quite evident lobes with plain surface and a wider central lobe covering the head, anterior margin
505 rounded, short lateral margins with sharp angle and a conspicuous small spine, hind margin nearly
506 straight (Fig. 10B). Legs longer than in other species and less robust. Fore-femora ventro-anterior
507 margins with 24 or 22 spines slightly decreasing in size from basal to apical; ventro-posterior margins
508 with 5 spines. Middle legs ventro-anterior margins with 5 spines. Supra-anal plate quadrangular with
509 setae on the surface, hind margin straight and slightly rounded laterally, bilobed, lobes very narrow
510 and with a strong invagination in the median portion. Subgenital plate asymmetrical with long styles,
511 funneled in the apical region. L1 sclerite apical region with two distinct parts: a lateral branch little
512 sclerotized slightly curved downwards, smooth and with only a small spine, and a region with a big
513 lateral dilatation and an edge in the posterior median region with a lateral projection turned forward.
514 Crown with a smaller number of sclerotized spines. (Fig. 10G, H). L2d sclerite hook with subconical
515 and very wide anterior region, a median apical region, and a narrow space connecting them. Apex
516 internal cavity concave with short lateral external margin and narrow subapical notch (Fig. 10F, I). R2
517 sclerite cleft sclerotized, curved inward with a conic opening at its base and an apex directed upwards.

518 Sclerite N triangular on the dorsal region (Fig. 10D) and with a small surface in the ventral one. R3d
519 with a slight depression in the dorsal median region and narrow in ventral view (Fig. 10D, E). R3v
520 sclerite with a long, rectangular and slightly wide latero-distal region, and quadrangular caudal branch
521 very near R3d (Fig. 10E).

522

523 **Female (Allotype).** Head rounded, with wide interocular space measuring 1/2 of the distance between
524 the antennal sockets. Eyes with curved interocular margin. Ocelli developed and deflected. Frons
525 broad, frontal suture with a large cuticular invagination (Fig. 9H). Pronotum subtriangular, dorsal
526 surface slightly rough and striated, with two quite evident lobes with plain surface, and a wider central
527 lobe covering the head; anterior margin rounded, lateral margins short with sharp angle and a
528 conspicuous small spine, hind margin nearly straight (Fig. 9F). Tegmina latero-anterior angle nearly
529 straight; lateral margin wider, and hind margin with a strong curvature near the radial vein; extends
530 further than the third abdominal tergite. CuP vein very marked (Fig. 9E). Legs short and robust. Fore-
531 femora ventro-anterior margins with 19 small spines of the same size, ventro-posterior margins with 4
532 spines. Middle legs ventro-anterior margins with 9 spines. Supra-anal plate bilobed with a median
533 incision, and each lobe with straight posterolateral angles (Fig. 9G).

534

535 **Measurements (mm).** Holotype #m: Body length 42.95; pronotum length 9.85 × 15.70 maximum
536 width; tegmen length 35.25 × 13.45 width; interocular width 0.9; interantennal width between sockets
537 3.6. Paratypes #m: Body length 41.54; pronotum length 09.94 × 15.20 maximum width; tegmen length
538 31.36 × 13.19 width; interocular width 0.5; interantennal width between sockets 1.8.

539 Allotype #f: Body length 41.60 ; pronotum length 13.20 × 20.15 maximum width ; tegmen length

540 16.05 × 14.50 width; interocular width 2.9; interantennal width between sockets 6.0. Paratype #f :

541 Body length 40.82 – 41.96; pronotum length 12.15 – 12.86 × 20.12 – 19.91 maximum width; tegmen
542 length 14.53 – 15.06 × 12.48 – 13.76 width; interocular width 1.3 – 1.4 ; interantennal width between
543 sockets 2.4 – 2.5.

544

545

546 **Coloration.** Holotype #m: General coloration sienna brown (Fig. 10A). Pronotum sienna brown with a
547 brown anterior margin; central disk seal brown with scattered dark marks (Fig. 10B). Head reddish
548 brown; clypeus and labrum amber. Antennae with basal segments dark brown pigmented and apical
549 segments brown. Ocelli pale brown (Fig. 10C). Legs and spines dark brown; tarsal claws, pulvilli and
550 arolia whitish brown. Tegmina sienna brown with marginal and scapular field with a buff brown part
551 (Fig. 10A). Abdomen following general coloration of body.

552

553 **Etymology.** A term from the Tupi meaning taken out of the forest. Here it refers to the habitat and the
554 color patterns of this species.

555

556 **Distribution.** Brazil (Sergipe). See Fig. 17 for details.

557

558 ***Monastria itubera* Tarli, Grandcolas & Pellens sp. n.**

559 Male – Figure 11.

560 Female – Figure 12A–D.

561

562 **Type material.** Holotype #m, Brazil, Bahia, Itubera, “Reserva ecológica Michelin”, 92 – 383m,
563 13°48'4.62''S, 39°10'23.2''W. 100km N Itabuna, Forêt semi-décidue, 28 VIII 2007, R. Pellens & P.
564 Grandcolas rec. (MZUSP). Allotype #f, and Paratype 1 #m, same data as holotype (MNHN).

565

566 **Diagnosis.** This species is characterized by having triangular head. L1 sclerite lateral branch slightly
567 curved with some spines turned downwards and a slightly concave region with irregular distal margins
568 with grooves ending in a long projection towards the front; L2d sclerite hook with subconical slightly
569 narrow anterior region, short apical region, and a large space connecting them. Apex internal cavity
570 concave with small lateral external margin and narrow subapical notch with pointy margin; R2 sclerite
571 cleft curved inward with a conic opening at its base and with a sclerotized apex directed upwards.
572 Sclerite N wider on the dorsal region, narrow and small in ventral surface. R3d narrow in the right and
573 rectangular in the left when in dorsal view. R3v sclerite small, subtriangular, with rounded latero-
574 distal end.

575

576 **Description. Male.** Head triangular, with narrow interocular space measuring approximately 1/6 of
577 the distance between the antennal sockets. Ocelli developed and slightly deflected; frontal suture with
578 a strong cuticular invagination (Fig. 11C). Pronotum transverse, pentagonal, dorsal surface rough with
579 deep striae; anterior margin rounded; lateral margins with sharp angles, round ends and a conspicuous
580 small protuberance; hind margin nearly straight (Fig. 11B). Legs short and robust. Fore-femora ventro-
581 anterior margins with 20 or 18 spines of the same size; ventro-posterior margins with 4 small spines.
582 Middle-legs ventro-anterior margins with 5 or 4 large spines. Supra-anal plate quadrangular with setae
583 on the surface, hind margin straight and slightly rounded laterally, bilobed with a slight invagination in
584 the median portion. Subgenital plate asymmetrical with long styli, left funneled in the apical region,
585 right with same caliper all along. L1 sclerite apical region with two distinct parts, a lateral branch
586 slightly curved with some spines turned downwards and the right branch slightly concave region with
587 irregular distal margins with grooves ending in a long projection towards the front. Crown with less
588 robust spines in the posterior region (Fig. 11H, I). L2d sclerite, hook with subconical slightly narrow
589 anterior region and short apical region, with a large space connecting them. Apex internal cavity
590 concave with small lateral external margin and narrow subapical notch with pointy margin (Fig. 11F,
591 G). R2 sclerite cleft curved inward with a conic opening at its base and with a sclerotized apex

592 directed upwards (Fig. 11D). Sclerite N wider and near of R2 on the dorsal region, and a narrow and
593 small ventral surface. R3d narrow in the proximity of R2, and wider and rectangular in the distal
594 region when in ventral view (Fig. 11D, E). R3v sclerite small, subtriangular, with rounded latero-distal
595 end (Fig. 11E).

596

597 **Female (Allotype).** Head rounded, with interocular space measuring approximately 1/3 of the distance
598 between the antennal sockets. Eyes reniform with rounded interocular margin. Ocelli developed and
599 deflected. Concavity between eyes and ocelli reaching the frontal suture. Frons with a prominence
600 (Fig. 12D). Pronotum subtriangular, anterior region rounded with a depression near the margins;
601 dorsal surface rough with deep striae, presence of small spine at the end of lateral region, hind margin
602 nearly straight (Fig. 12B). Tegmina with rounded lateral anterior angle, hind margin truncated with a
603 slight curvature in the region of radial vein and merging to the CuP vein at the end, not extending
604 further than the second abdominal tergite (Fig. 12A). Legs short and robust. Fore-femora ventro-
605 anterior margins with 21 or 20 spines of the same size, ventro-posterior margins with 4 spines.
606 Middle-legs ventro-anterior margin with 8 spines, plus one near the apex. Supra-anal plate bilobed
607 with a median incision and each lobe slightly rounded (Fig. 12C).

608

609 **Measurements (mm).** Holotype #m: Body length 52.98; pronotum length 12.61 × 18.49 maximum
610 width; tegmen length 42.22 × 15.43 width; interocular width 0.4; interantennal width between sockets
611 2.6. Paratype #m: Body length 40.98; pronotum length 09.21 × 15.14 maximum width; tegmen length
612 31.22 × 14.31 width; interocular width 0.2; interantennal width between sockets 1.8.

613

614 Allotype #f: Body length 35.79; pronotum length 9.70 × 17.05 maximum width; tegmen length 8.90 ×
615 11.15 width; interocular width 1.5; interantennal width between sockets 4.5.

616

617 **Coloration.** Holotype #m: General coloration brown (Fig. 11A). Pronotum brown with the anterior
618 margin pale brown; central disk pale brown with scattered black marks (Fig. 11 B). Head dark
619 brown/black; clypeus and labrum brown. Antennae with basal segments dark pigmented and apical
620 segments whitish yellow. Ocelli light brown (Fig. 11C). Legs dark brown. Spines and tarsal claws
621 brown, pulvilli and arolia pale brown. Tegmina and abdomen following general coloration of body,
622 but with tergites and sternites dark hind margins (Fig. 11A).

623

624 **Etymology.** The specific name refers to the type locality Itubera, state of Bahia, northeast Brazil

625

626 **Distribution.** Brazil (Bahia). See Fig. 17 for details.

627

628 ***Monastria itabuna* Tarli, Grandcolas & Pellens sp. n.**

629 Male – Figure 13.

630 Female – Figure 12E–H.

631

632 **Type material.** Holotype #m, Brazil, Bahia, Itabuna. CEPLAC, Matinha. 14°46'20''S, 39°13'18''W.
633 Elevation 46m, 11 V 2007, J. A. Rafael & F. F. Xavier F (INPA). Allotype #f, and 1 Paratype #m,
634 same data as holotype (INPA).

635

636 **Diagnosis.** This species is characterized by having L1 sclerite with apical region having a lateral
637 branch slightly curved with some spines that contact the crown in the posterior region. L2d sclerite,
638 hook with short apical region, internal margin concave, lateral external margin strongly curved, with
639 large sub-apical notch. R2 sclerite cleft curved inward with the apex directed forward. Sclerite N
640 smaller in the dorsal region and with a large rough ventral surface. R3d narrow near R2 in dorsal view
641 and wider, rectangular in the distal region in ventral view. R3v sclerite large, with quadrangular and
642 truncated latero-distal end. Caudal branch long, wide in the center and narrow in the apex.

643

644 **Description. Male.** Head subtriangular, with narrow interocular space measuring approximately 1/6 of
645 the distance between the antennal sockets. Ocelli developed and slightly deflected; frontal suture with
646 a strong cuticular invagination. Clypeus distal half narrower transversally and orange brown (Fig.
647 13C). Pronotum transverse, pentagonal, dorsal surface rough with striae; anterior margin rounded;
648 lateral margins slightly wider with sharp angles, round ends and a conspicuous small protuberance;
649 hind margin nearly straight (Fig. 13B). Legs short and robust. Fore-femora ventro-anterior margins
650 with 20 or 18 spines of the same size; ventro-posterior margins with 4 small spines. Middle-legs
651 ventro-anterior margins with 5 or 4 large spines. Supra-anal plate quadrangular with setae on the
652 surface, hind margin straight and slightly rounded laterally, bilobed with a slight invagination in the
653 median portion. Subgenital plate asymmetrical with long styles, left funneled in the apical region, right
654 with same caliper all along. L1 sclerite with apical region with two distinct parts, a lateral branch
655 slightly curved with some spines that contact the crown in the posterior region (Fig. 13G, H). L2d
656 sclerite, hook with short apical region, internal margin concave, lateral external margin strongly
657 curved, with large sub-apical notch (Fig. 13F, I). R2 sclerite cleft curved inward with the apex directed
658 forward (Fig. 13D). Sclerite N smaller in the dorsal region and with a large rough ventral surface. R3d
659 narrow near R2 in dorsal view and wider, rectangular in the distal region when in ventral view (Fig.
660 13D, E). R3v sclerite large, with quadrangular and truncated latero-distal end. Caudal branch long,
661 wide in the center and narrow in the apex (Fig. 13E).

662

663 **Female (Allotype).** Head rounded, with wide interocular space measuring 1/2 the distance between
664 the antennal sockets. Eyes with straight interocular margin. Ocelli developed and deflected. Frons
665 broad, frontal suture with a cuticular invagination (Fig. 12H). Pronotum subtriangular, fore region

666 rounded and slightly concave near the margins, dorsal region rough with deep striae, lateral margins
667 rounded ending in a small corner, hind margin slightly curved in the median region (Fig. 12F).
668 Tegmina with straight lateral anterior angle, hind margin truncated with a slight curvature in the region
669 of radial vein; not extending further than the second abdominal tergite and lateral margin orange all
670 along its extension (Fig. 12E). Legs short and robust. Fore-femora ventro-anterior margins with 19
671 small spines of the same size; ventro-posterior margins with 4 spines. Middle-legs ventro-anterior
672 margins with 9 spines. Supra-anal plate bilobed with a median incision and each lobe slightly rounded
673 (Fig. 12G). Tergites with nearly straight lateral angles (Fig. 12E).

674

675 **Measurements (mm).** Holotype #m: Body length 53.05; pronotum length 12.70 × 19.37 maximum
676 width; tegmen length 40.40 × 15.55 width; interocular width 0.9; interantennal width between sockets
677 2.7. Paratype #m: Body length 54.09; pronotum length 12.22 × 21.02 maximum width; tegmen length
678 43.12 × 19.61 width; interocular width 0.5; interantennal width between sockets 2.8.
679 Allotype #f: Body length 40.70; pronotum length 11.25 × 19.80 maximum width; tegmen length 12.30
680 × 13.00 width; interocular width – 3.0; interantennal width between sockets 5.7.

681

682 **Coloration.** Holotype #m: General coloration dark brown (Fig. 13A). Pronotum dark brown with the
683 anterior margin yellowish brown; central disk yellowish brown with scattered black marks (Fig. 13B).
684 Head dark brown; clypeus and labrum yellowish brown. Antennae with basal segments dark
685 pigmented and apical segments whitish yellow. Ocelli yellowish/pale brown (Fig. 13C). Legs and
686 spines brown; tarsal claws, pulvilli and arolia yellowish brown. Tegmina and abdomen following
687 general coloration of body but with tergites and sternites with brown posterior margin (Fig. 13A).

688

689 **Etymology.** The specific name refers to the type locality Itabuna, state of Bahia, northeast Brazil.

690

691 **Distribution.** Brazil (Bahia). See Fig. 17 for details.

692

693 ***Monastria kaingangue* Tarli, Grandcolas & Pellens sp. n.**

694 Male – Figure 14.

695 Female – Figure 15.

696

697 **Type material.** Holotype #m, Brazil, São Paulo, Campinas. “Pico das Cabras”. 22°54'23.9"S
698 46°49'34.4"W. 14 october 2014, coll. V. M. Ghirotto (MZUSP). Allotype: 1#f, same data as holotype
699 (MZUSP).

700

701 **Paratypes** – Santa Catarina: 1#m, Urubici, “Parque Nacional de São Joaquim, Vacas Gordas”, 977m,
702 28°08'44.4"S, 49°37'09.3"W, 22 X 2015, coll. R. Pellens (MNHN). 2m#, 1f#, São Bonifácio, Santo

703 Amaro da Imperatriz, -27.830854 -48.964832, 09 X 2014, P. Grandcolas & Vitor D. Tarli rec.
704 (MNHN). São Paulo: 1#m Bocaina, IV 1924, Luderm? “27” (MZUSP). 1#m Bocaina, IV 1924, “29”
705 (MZUSP). Rio Grande do Sul: 1#m, 2#f, Derrubadas, Parque Estadual do Turvo, 391m, -27.236413 -
706 53.979640, 05 X 2014, R. Pellens & Vitor D. Tarli rec. (MNHN).

707

708 **Diagnosis.** This species is characterized by having two intercalated rows of spines in the ventro-
709 anterior margins of fore-femora; one row with 5 or 6 spines, and another with 32 or 33 spines of the
710 same size. L1 sclerite with lateral branch curved, rounded and smooth with some small spines, and a
711 curved region with grooves in its interior and a projection with a rounded end directed upwards at its
712 right side. L2d sclerite hook with long apical region, and rounded curvature of the margin near the
713 notch. R2 sclerite cleft curved inward with a wide and sclerotized apex directed forward. R3d with a
714 clear prominence like a tooth in ventral view. R3v sclerite with quadrangular and truncated latero-
715 distal region, and caudal branch near the tooth from R3d sclerite.

716

717 **Description. Male.** Head subtriangular, interocular space approximately 1/3 distance between
718 antennae. Frons slightly elevated. Ocelli developed and deflected. Frontal suture with a cuticular
719 invagination (Fig. 14C). Pronotum pentagonal, fore margin rounded, with rounded lateral angles, hind
720 margin slightly curved in the medial portion (Fig. 14B). Legs short and robust. Fore-femora ventro-
721 anterior margins with two intercalated rows of spines, one with 6 or 5, and another with 33 or 32
722 spines of the same size; ventro-posterior margins with one large and a thin spine out of the row, 6
723 small spines. Middle legs ventro-anterior margins with 11 or 10 spines. Tegmina with orange lateral
724 margins in the first half of its length (Fig. 14A). Supra-anal plate quadrangular with setae on the
725 surface, hind margin straight and slightly rounded laterally, bilobed with a slight invagination in the
726 median portion. Subgenital plate asymmetrical with long styles, left funneled in the apical region, right
727 with same caliper all along. L1 sclerite with apical region with two distinct parts: a lateral branch
728 curved, rounded and smooth with some small spines, and a curved region with grooves in its interior
729 and a projection with a rounded end directed upwards at its right side (Fig. 14G, H). L2d sclerite hook
730 with long apical region and rounded curvature of the margin near the notch (Fig. 14F, I). R2 sclerite
731 cleft curved inward with a wide and very sclerotized apex directed forward (Fig. 14D). Sclerite N tiny
732 in dorsal and large and wide in ventral view. R3d with a clear prominence like a tooth in ventral view
733 (Fig. 14D, E). R3v sclerite with quadrangular and truncated latero-distal region, and caudal branch
734 near the tooth from R3d sclerite (Fig. 14E).

735

736 **Female (Paratype).** Head rounded, with wide interocular space measuring approximately 1/2 the
737 distance between the antennal sockets. Eyes with straight interocular margin. Ocelli developed and
738 slightly deflected. Frontal suture with a cuticular invagination. Clypeus distal half transparent yellow
739 and larger (Fig. 15D). Pronotum subtriangular with anterior region rounded and slightly concave near

740 the margins; dorsal region rough with deep striae, lateral angles rounded ending in a corner and hind
741 margin slightly curved in the median region (Fig. 15B). Tegmina with little rounded lateral anterior
742 angles, orange lateral margins, and rounded and curved hind margins. Long, reaching the fifth
743 abdominal tergite (Fig. 15A). Legs short and robust. Fore-femora ventro-anterior margins with 31 or
744 32 spines of the same size; ventro-posterior margins with 3 spines. Middle legs ventro-anterior
745 margins with 5 spines. Supra-anal plate bilobed with a very small median incision. Lobe lateral
746 margins slightly rounded and posterior margin straight (Fig. 15C). Tergites with rounded lateral angles
747 (Fig. 15A).

748

749 **Measurements (mm).** Holotype m#: Body length 52.80; pronotum length 12.05 × 17.35 maximum
750 width; tegmen length 40.75 × 14.70 width; interocular width 1.7; interantennal width between sockets
751 5.5. Paratypes m#: Body length 52.60 – 64.30; pronotum length 11.15 – 14.13 × 15.08 – 19.07
752 maximum width; tegmen length 36.16 – 42.34 × 13.81 – 20.73 width; interocular width 0.9 – 1.2;
753 interantennal width between sockets 2.5 – 3.1.

754 Allotype f#: Body length 42.52; pronotum length 11.03 × 17.86 maximum width; tegmen length 17.05
755 × 12.55 width; interocular width 3.1; interantennal width between sockets 5.6. Paratypes f#: Body
756 length 39.15 – 47.18; pronotum length 10.04 – 12.22 × 16.12 – 19.41 maximum width; tegmen length
757 14.86 – 18.72 × 09.92 – 13.34 width; interocular width 1.4 – 1.6; interantennal width between sockets
758 2.7 – 3.0.

759

760

761 **Coloration.** Holotype m#: General coloration dark brown (Fig. 14A). Pronotum dark brown with the
762 anterior margin yellowish brown; central disk orange brown with scattered dark brown marks (Fig. 14
763 B). Head dark brown; clypeus and labrum yellowish brown. Antennae with basal segments dark
764 pigmented and apical segments whitish yellow. Ocelli pale brown (Fig. 14C). Legs dark brown and
765 spines brown; pulvilli white, tarsal claws and arolia light brown. Tegmina with orange lateral margins
766 and abdomen following general coloration of body (Fig. 14A).

767

768 **Etymology.** The word kaingangue derives from the Tupi – Guarani. It is the name of an Indian group
769 originally distributed from São Paulo to Rio Grande do Sul. The name is an allusion to the similarity
770 of their distribution ranges and a tribute to this people that were certainly aware of the existence of this
771 cockroach.

772

773 **Distribution.** Brazil (São Paulo, Santa Catarina, Rio Grande do Sul). See Fig. 17 for details.

774

775 ***Monastria sagittata* Tarli, Grandcolas & Pellens sp. n.**

776 Figure 16.

777

778 **Type material.** Holotype m#. Brazil, Minas Gerais, Serra do Cipó. March 1967, coll. D. Vital
779 (MZUSP).

780

781 **Diagnosis.** This species is characterized by having pronotum with shallow, smooth and slightly
782 striated dorsal surface; wide lateral margins with sharp angles. Tegmina anal field wide with the CuP
783 vein perpendicular to the lateral. Subgenital plate asymmetrical with one small style. L1 sclerite with a
784 distinct spear shaped apical region, hind margin with a large non-sclerotized projection, and fore
785 region with a small projection directed upwards. Lateral branch small with strong teeth and spines.
786 L2d sclerite, hook with subconical and narrow anterior region, very short and curved and internal
787 ventral margin strongly convex.

788

789 **Description. Male.** Head subtriangular, with interocular space measuring approximately 1/3 of the
790 distance between the antennal sockets. Ocelli developed and slightly deflected; frontal suture with a
791 cuticular invagination (Fig. 16C). Pronotum broad, transverse and pentagonal; dorsal surface shallow,
792 smooth and slightly striated; anterior margin rounded; lateral margins wider with sharp angles; hind
793 margin nearly straight (Fig. 16B). Tegmina characterized by a wide anal field with the CuP vein
794 perpendicular to the lateral (Fig. 16A). Legs short and robust. Fore-femora ventro-anterior margins
795 with 21 or 20 spines of the same size; ventro-posterior margins with 4 spines. Middle-legs ventro-
796 anterior margins with 5 or 4 large spines. Supra-anal plate quadrangular with setae on the surface, hind
797 margin straight and slightly rounded laterally, bilobed with narrower lobes and strong invagination in
798 the median portion. Subgenital plate asymmetrical with one small style. L1 sclerite with a roughly
799 triangular spear-shaped apical region, hind margin with a large non-sclerotized projection, fore region
800 with a small lateral projection directed upwards, and lateral branch small with strong teeth and spines
801 (Fig. 16G, H). L2d sclerite hook with subconical and narrow anterior region, very short, curved and
802 internal ventral margin strongly convex (Fig. 16F, I). R2 sclerite cleft slightly curved inwards with the
803 apex slightly sclerotized (Fig. 16D, E). The other sclerites were partially destroyed with an unhappy
804 manipulation.

805

806

807 **Female.** Unknown

808

809 **Measurements (mm).** Holotype m#: Body length 51.28; pronotum length 11.94 × 21.54 maximum
810 width; tegmen length 41.97 × 17.00 width; interocular width 1.8; interantennal width between sockets
811 5.4.

812

813 **Coloration.** Holotype m#: General coloration pale brown (Fig. 16A). Pronotum pale brown with a
814 buff anterior margin; central disk brown ochre with scattered dark brown marks (Fig. 16B). Head with
815 dark brown interocular space, orange frons and amber clypeus and labrum. Antennae with segments
816 yellowish brown. Ocelli brown (Fig. 16C). Legs and spines yellowish brown; pulvilli yellow whitish,
817 tarsal claws and arolia yellowish brown. Tegmina and abdomen following general coloration of body
818 (Fig. 16A).

819

820 **Etymology.** The name “sagittata” derives from the Latin sagitta, meaning arrow, referring to arrow-
821 shaped apex of the L1 sclerite.

822

823 **Distribution.** Brazil (Minas Gerais). See Fig. 17 for details.

824

825 ***Hiereoblatta papillosa* (Thunberg, 1826) comb. n.**

826 Figure 18.

827

828 *Blatta papillosa* Thunberg, 1826: 276; Scudder, 1868: 18.

829 *Monastria papillosa* Shelford, 1907–1908: 467; Kirby, 1910: 565; Princis, 1949: 66; Princis, 1963:
830 142.

831

832 Among all the material examined to revise the genus *Monastria* was the type of *Blatta papillosa*
833 Thunberg, 1826. This species was assigned to *Monastria* very early and maintained until today after
834 being synonymized several times. As can be seen in the Fig. 18, the coloration, pronotum, head,
835 tegmina and general shape of this specimen does not correspond to those that characterize the genus
836 *Monastria*. In fact, the general characteristics of this species are in accordance with the genus
837 *Hiereoblatta* Rehn, 1937 (see Fig. 1D) as described in our identification key. Here, for the sake of
838 delimiting the genus *Monastria* we propose the new combination *Hiereoblatta papillosa*. We do not
839 propose here to solve the synonyms of this species because, as was the case for *Monastria*, the genus
840 *Hiereoblatta* needs to be revised, and any proposition of solution of the several synonymies would be
841 premature without a careful study.

842

843 **Conclusions**

844

845 With this revision, the genus *Monastria* is now known as having 8 species, and one of the species
846 previously accepted as belonging to this genus is now assigned to *Hiereoblatta*. The records of
847 occurrence of the specimens analyzed here indicate that the distribution range of the genus is much
848 broader than previously known, and confirm the initial hypothesis of an endemism to the Neotropical
849 Atlantic forest. The characterization of juveniles and adults of the radiation of Blaberinae of the

850 Atlantic forest and the determination keys provided will significantly contribute to a rapid
851 identification of the species belonging to this group that are often found together in the field.

852

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876

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878

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1000

1001 **Legends**

1002

1003 Figure 1. Five genera of Blaberinae endemic from the Neotropical Atlantic forest. Habitus, dorsal
1004 view: A) *Monastria*; B) *Petasodes*; C) *Minablatta*; D) *Hiereoblatta*; E) *Monachoda*. Scales: 1 cm.

1005

1006 Figure 2. Juveniles stages of five genera of Blaberinae endemic to the Neotropical Atlantic forest.
1007 Habitus, dorsal view: A) *Monastria*, B) *Petasodes*, C) *Minablatta*, D) *Hiereoblatta*, E) *Monachoda*.
1008 Scales: 1 cm.

1009

1010 Figure 3. Scanning electron photographs showing dorsal cuticular microsculptures of juveniles: A)
1011 *Monastria*, B) *Petasodes*, C) *Minablatta*, D) *Hiereoblatta*, E) *Monachoda*. Note that the scale differs
1012 among pictures.

1013

1014 Figure 4. *Monastria biguttata*, female holotype. Scales: Habitus=1 cm

1015

1016 Figure 5. *Monastria biguttata*, ♂: **A)** Habitus, dorsal view; **B)** Pronotum, dorsal view; **C)** Head,
1017 ventral view; **D)** Right phallomere, dorsal view; **E)** Right phallomere, ventral view; **F)** Left
1018 phallomere (L2d), ventral view; **G)** Median sclerite (L1), dorsal view; **H)** Median sclerite (L1), detail;
1019 **I)** Left phallomere (L2d), dorsal view. Scales: Habitus=1 cm, Pronotum=5 mm, Head=2 mm, all others
1020 =1 mm.

1021

1022 Figure 6. Figs. **A-D)**, *Monastria biguttata*, ♀: **A)** Habitus, dorsal view; **B)** Pronotum, dorsal view; **C)**
1023 Supra-anal plate, dorsal view; **D)** Head, ventral view. Figs. **E-H)**, *Monastria similis*, ♀: **E)** Habitus,
1024 dorsal view; **F)** Pronotum, dorsal view; **G)** Supra-anal plate, dorsal view; **H)** Head, ventral view.
1025 Scales: Habitus=1 cm, Pronotum=5 mm, Supra-anal plate=5 mm, Head=2 mm.

1026

1027 Figure 7. Male juveniles of *Monastria* in different stages of development. Scales: Habitus=5 mm. Note
1028 the rough surface covered by particles in all stages.

1029

1030 Figure 8. *Monastria similis*, ♂: **A)** Habitus, dorsal view; **B)** Pronotum, dorsal view; **C)** Head, ventral
1031 view; **D)** Right phallomere, dorsal view; **E)** Right phallomere, ventral view; **F)** Left phallomere (L2d),

1032 ventral view; **G**) Left phallomere (L2d), dorsal view; **H**) Median sclerite (L1), dorsal view; **I**) Median
1033 sclerite (L1), detail (see Fig. 5 for abbreviations). Scales: Habitus=1 cm, Pronotum=5 mm, Head=2
1034 mm, all other figures=1 mm.

1035

1036 Figure 9. Figs. **A-D**, *Monastria angulata*, Syntype ♀: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal
1037 view; **C**) Supra-anal plate, dorsal view; **D**) Head, ventral view. Figs. **E-H**, *Monastria cabocla* sp. n.
1038 Allotype ♀: **E**) Habitus, dorsal view; **F**) Pronotum, dorsal view; **G**) Supra-anal plate, dorsal view; **H**)
1039 Head, ventral view. Scales: Habitus=1cm, Pronotum=5mm, Supra-anal plate=5mm, Head=2 mm.

1040

1041 Figure 10. *Monastria cabocla* sp. n., Holotype ♂: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal view;
1042 **C**) Head, ventral view; **D**) Right phallomere, dorsal view; **E**) Right phallomere, ventral view; **F**) Left
1043 phallomere (L2d), ventral view; **G**) Median sclerite (L1), dorsal view; **H**) Median sclerite (L1), detail;
1044 **I**) Left phallomere (L2d), dorsal view (see Fig. 5 for abbreviations). Scales: Habitus=1cm,
1045 Pronotum=5mm, Head=2 mm, all others =1 mm.

1046

1047 Figure 11. *Monastria itubera* sp. n., Holotype ♂: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal view;
1048 **C**) Head, ventral view; **D**) Right phallomere, dorsal view; **E**) Right phallomere, ventral view; **F**) Left
1049 phallomere (L2d), ventral view; **G**) Left phallomere (L2d), dorsal view; **H**) Median sclerite (L1),
1050 dorsal view; **I**) Median sclerite (L1), detail (see Fig. 5 for abbreviations). Scales: Habitus=1cm,
1051 Pronotum=5mm, Head=2 mm, all others =1 mm.

1052

1053 Figure 12. Figs. **A-D**, *Monastria itubera* sp. n., Allotype ♀: **A**) Habitus, dorsal view; **B**) Pronotum,
1054 dorsal view; **C**) Supra-anal plate, dorsal view; **D**) Head, ventral view. Figs. **E-H**, *Monastria itabuna*
1055 sp. n., Allotype ♀: **E**) Habitus, dorsal view; **F**) Pronotum, dorsal view; **G**) Supra-anal plate, dorsal
1056 view; **H**) Head, ventral view. Scales: Habitus=1cm, Pronotum=5mm, Supra-anal plate=5mm, Head=2
1057 mm.

1058

1059 Figure 13. *Monastria itabuna* sp. n., Holotype ♂: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal view;
1060 **C**) Head, ventral view; **D**) Right phallomere, dorsal view; **E**) Right phallomere, ventral view; **F**) Left
1061 phallomere (L2d), ventral view; **G**) Median sclerite (L1), dorsal view; **H**) Median sclerite (L1), detail;
1062 **I**) Left phallomere (L2d), dorsal view (see Fig. 5 for abbreviations). Scales: Habitus=1cm,
1063 Pronotum=5mm, Head=2 mm, all others =1 mm.

1064

1065 Figure 14. *Monastria kaingangue* sp. n., Holotype ♂: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal
1066 view; **C**) Head, ventral view; **D**) Right phallomere, dorsal view; **E**) Right phallomere, ventral view; **F**)
1067 Left phallomere (L2d), ventral view; **G**) Median sclerite (L1), dorsal view; **H**) Median sclerite (L1),

1068 detail; **I**) Left phallomere (L2d), dorsal view (see Fig. 5 for abbreviations). Scales: Habitus=1cm,
1069 Pronotum=5mm, Head=2 mm, all others =1 mm.

1070

1071 Figure 15. *Monastria kaingangue* sp. n., Allotype ♀: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal
1072 view; **C**) Supra-anal plate, dorsal view; **D**) Head, ventral view. Scales: Habitus=1cm, Pronotum=5mm,
1073 Supra-anal plate=5mm, Head=2 mm.

1074

1075 Figure 16. *Monastria sagittata* sp. n., Holotype ♂: **A**) Habitus, dorsal view; **B**) Pronotum, dorsal view;
1076 **C**) Head, ventral view; **D**) Right phallomere, dorsal view; **E**) Right phallomere, ventral view; **F**) Left
1077 phallomere (L2d), ventral view; **G**) Median sclerite (L1), dorsal view; **H**) Median sclerite (L1), detail;
1078 **I**) Left phallomere (L2d), dorsal view (see Fig. 5 for abbreviations). Scales: Habitus=1cm,
1079 Pronotum=5mm, Head=2 mm, all other figures=1 mm.

1080

1081 Figure 17. Geographic location of sites where the different species of *Monastria* were collected.
1082 *Monastria angulata* is not included in the map for it is only known from a specimen from Bahia,
1083 without any mention of locality.

1084

1085 Figure 18. *Hiereoblatta papillosa* (Thunberg, 1826) comb. n., female holotype. Not to scale.

1086

1087



Figure 1

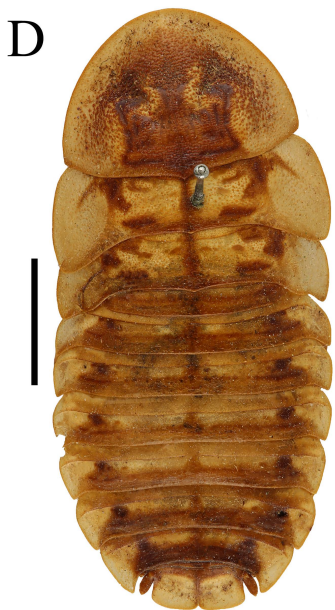
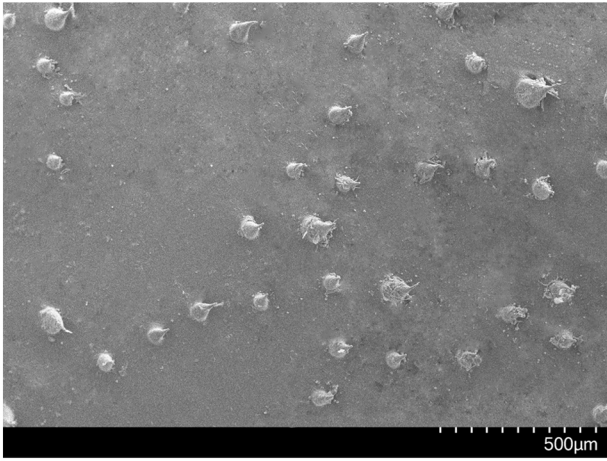
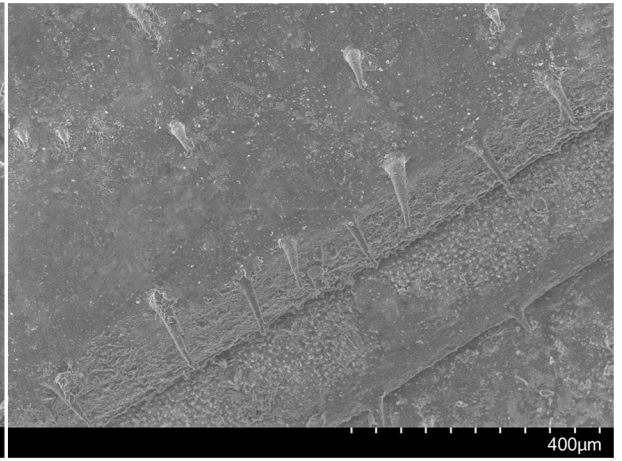
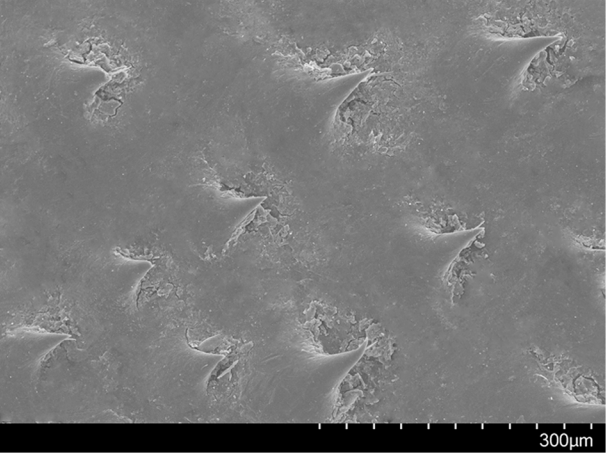
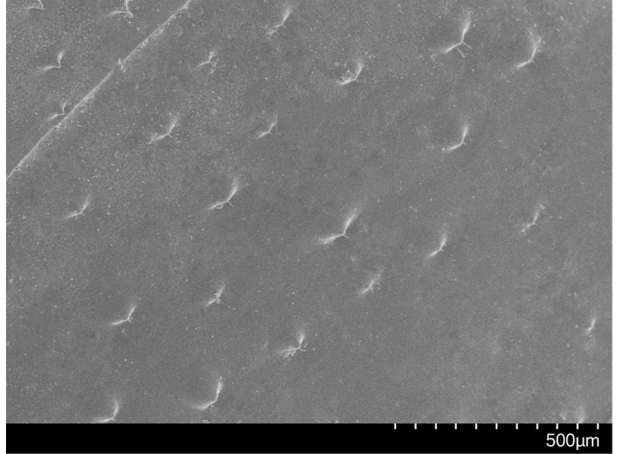
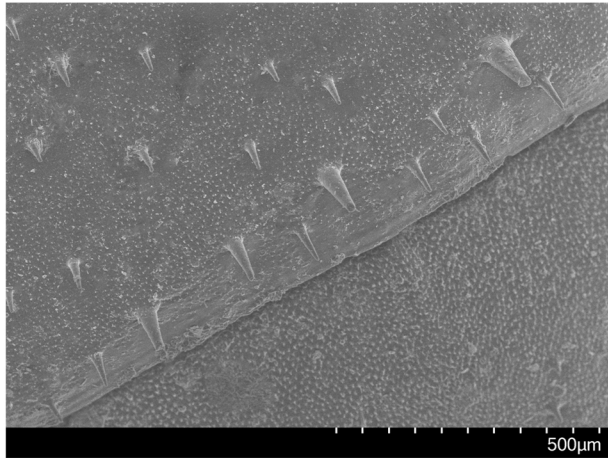


Figure 2

A**B****C****D****E****Figure 3**



biguttata
10
Amer. merid.



Chamaechoba
biguttata
Thoby.

Uppsala Univ. Zool. Mus.
Thunbergsaml. nr. 22492
Blatta biguttata
Amer. merid. TYP

16

Figure 4

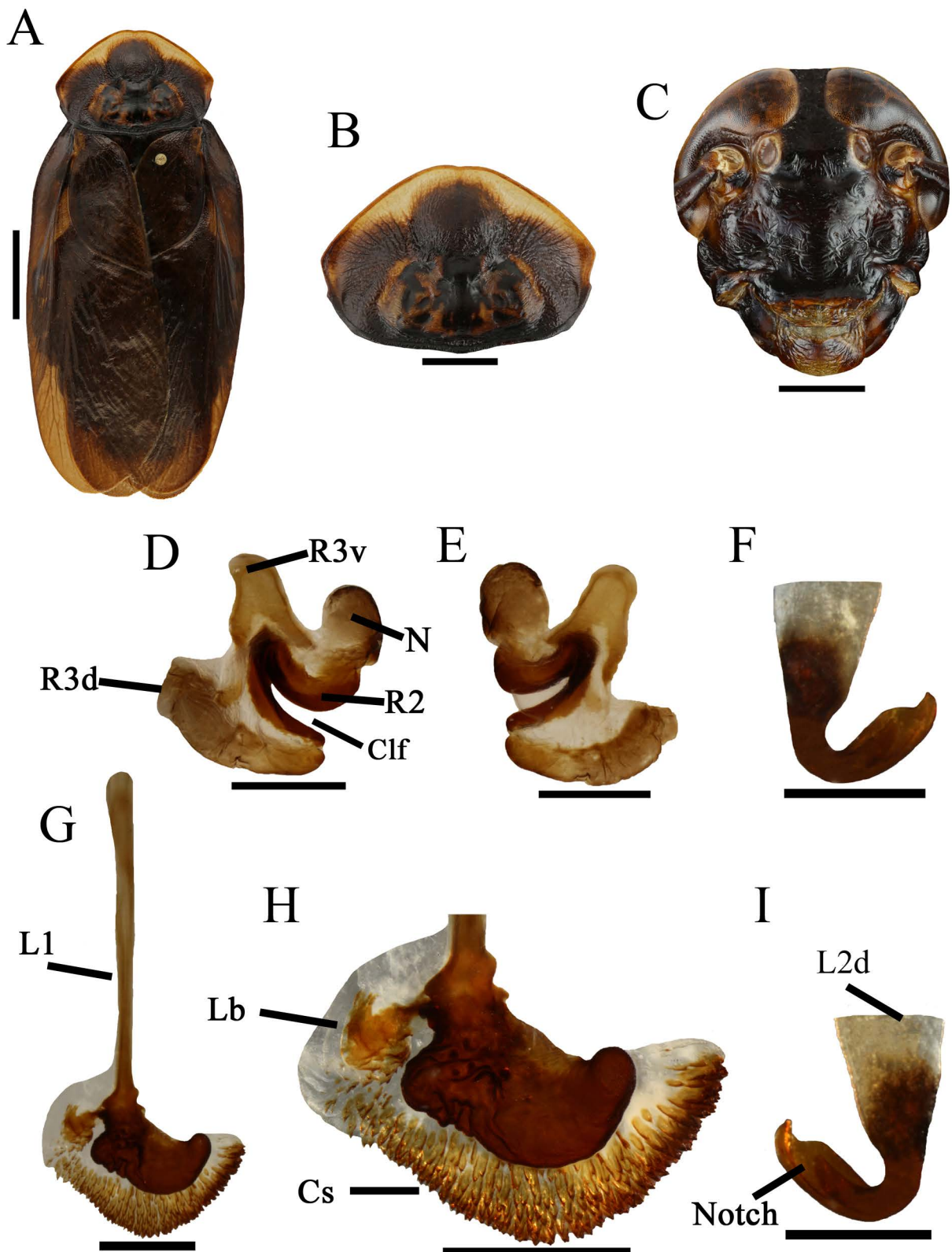


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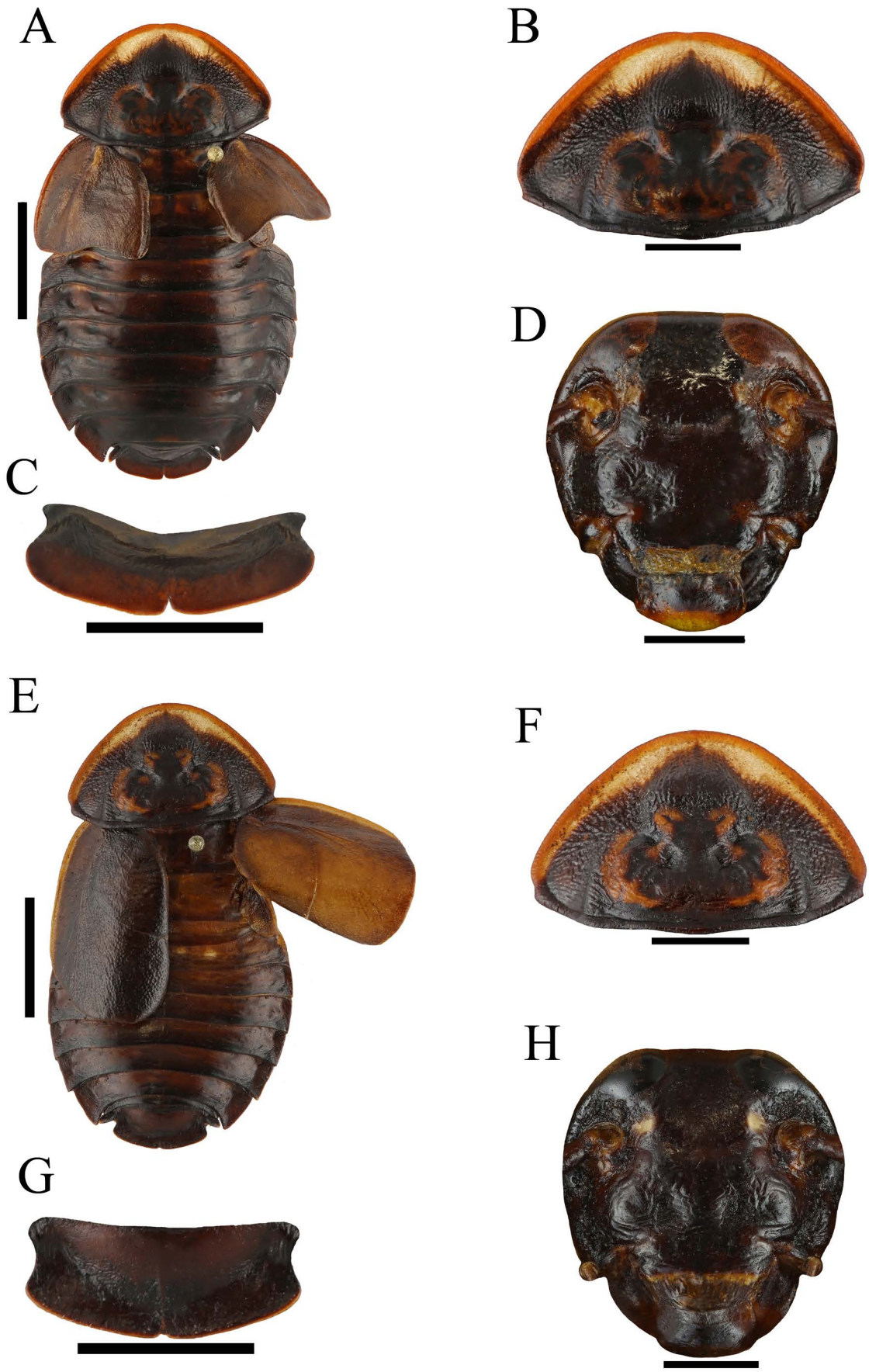


Figure 6

A



B



C



D



E



Figure 7

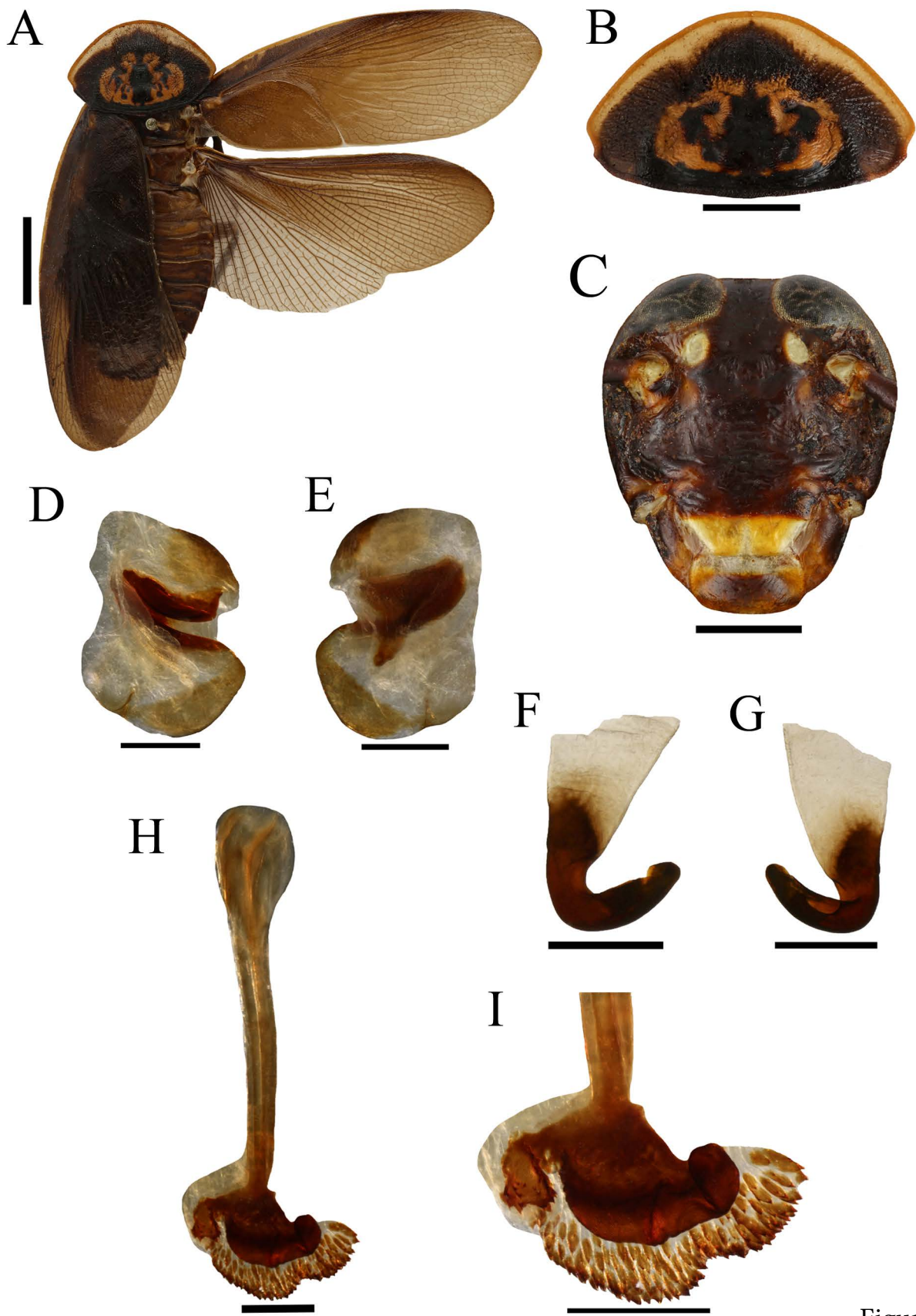


Figure 8



Figure 9

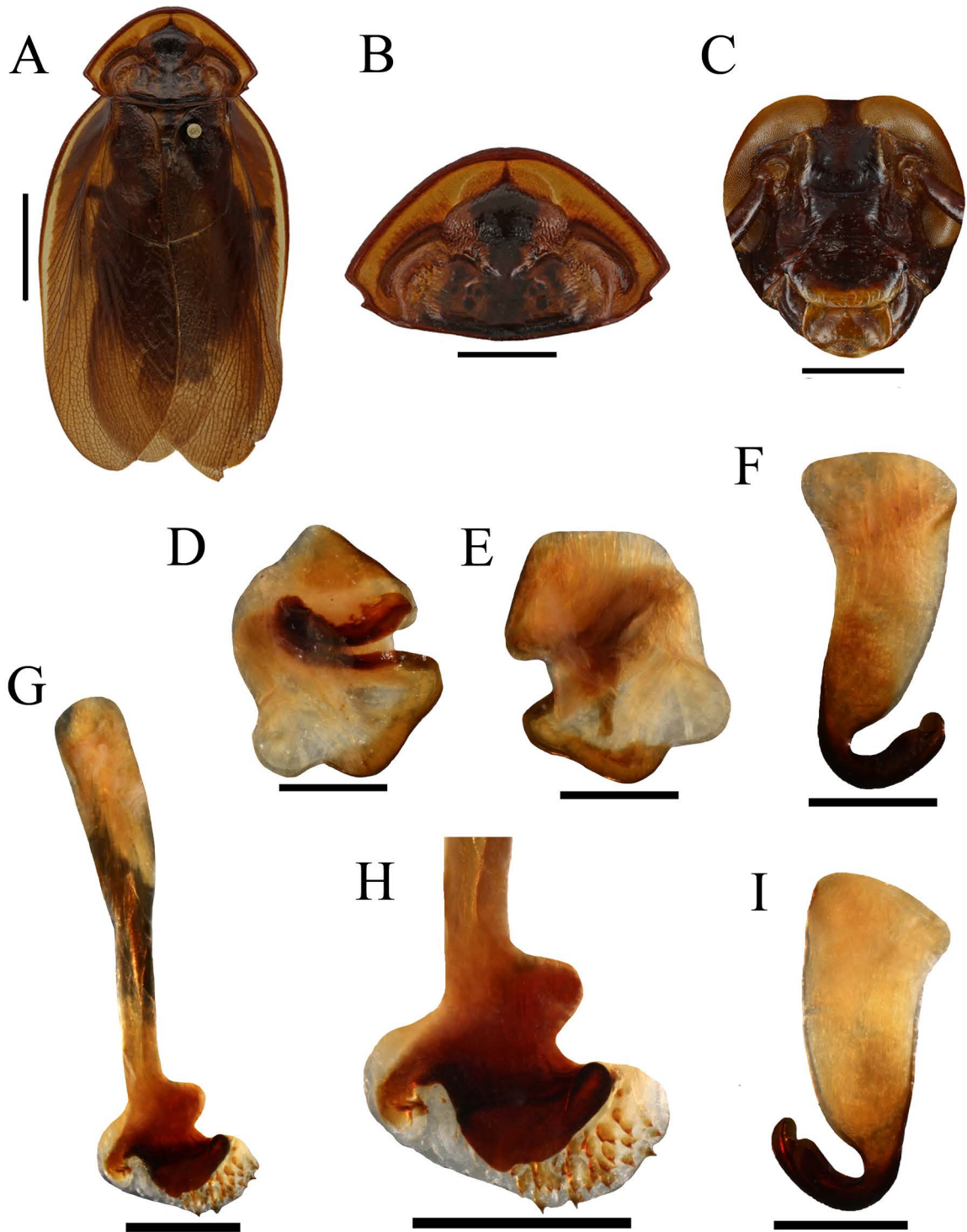


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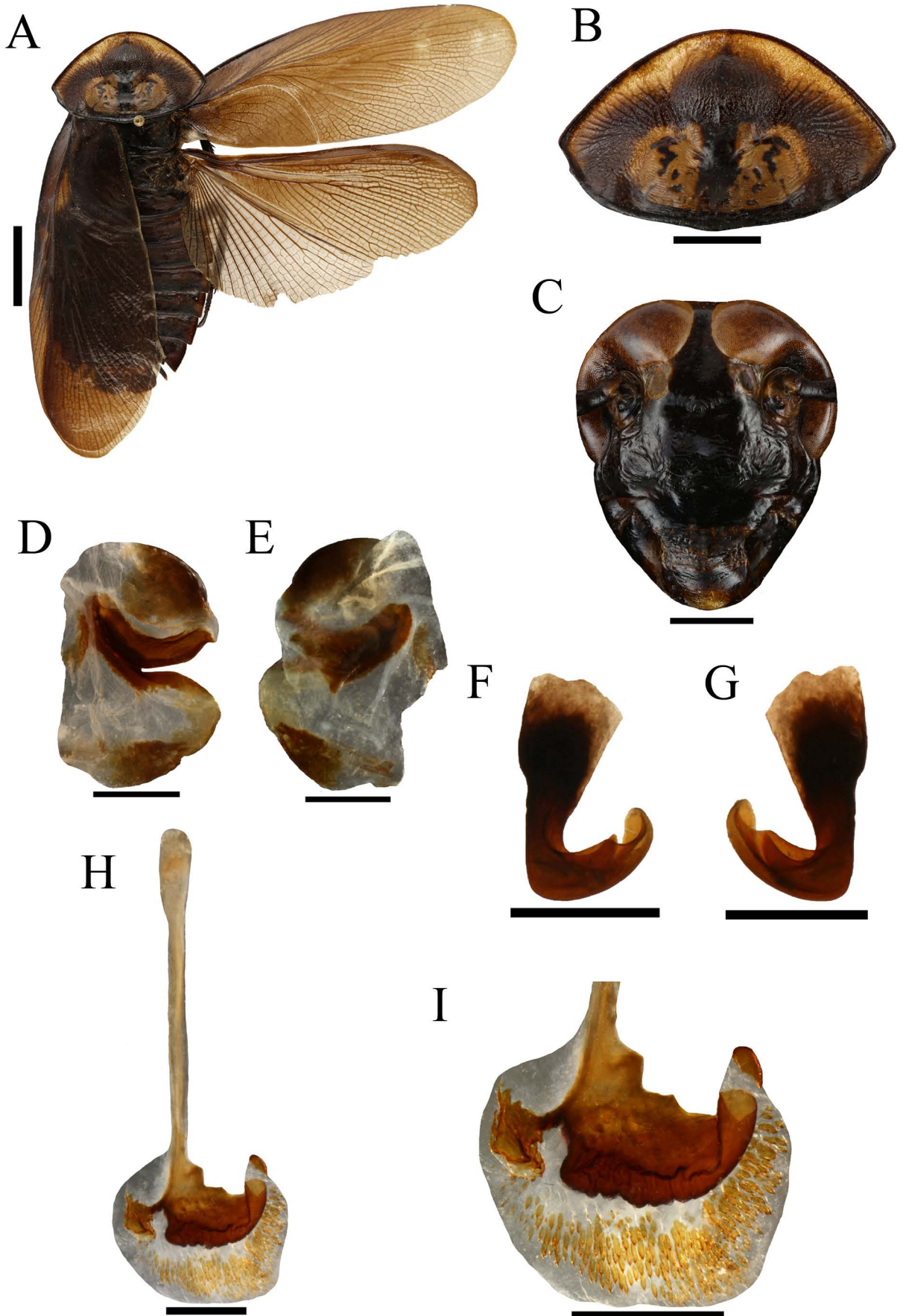


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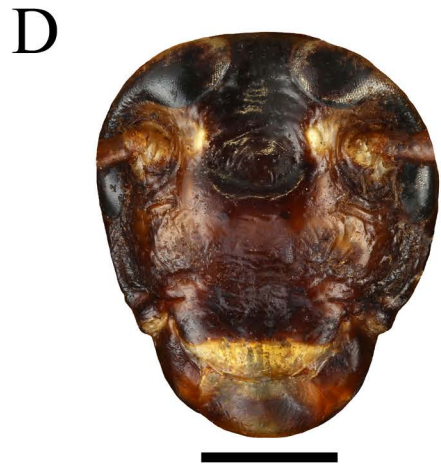


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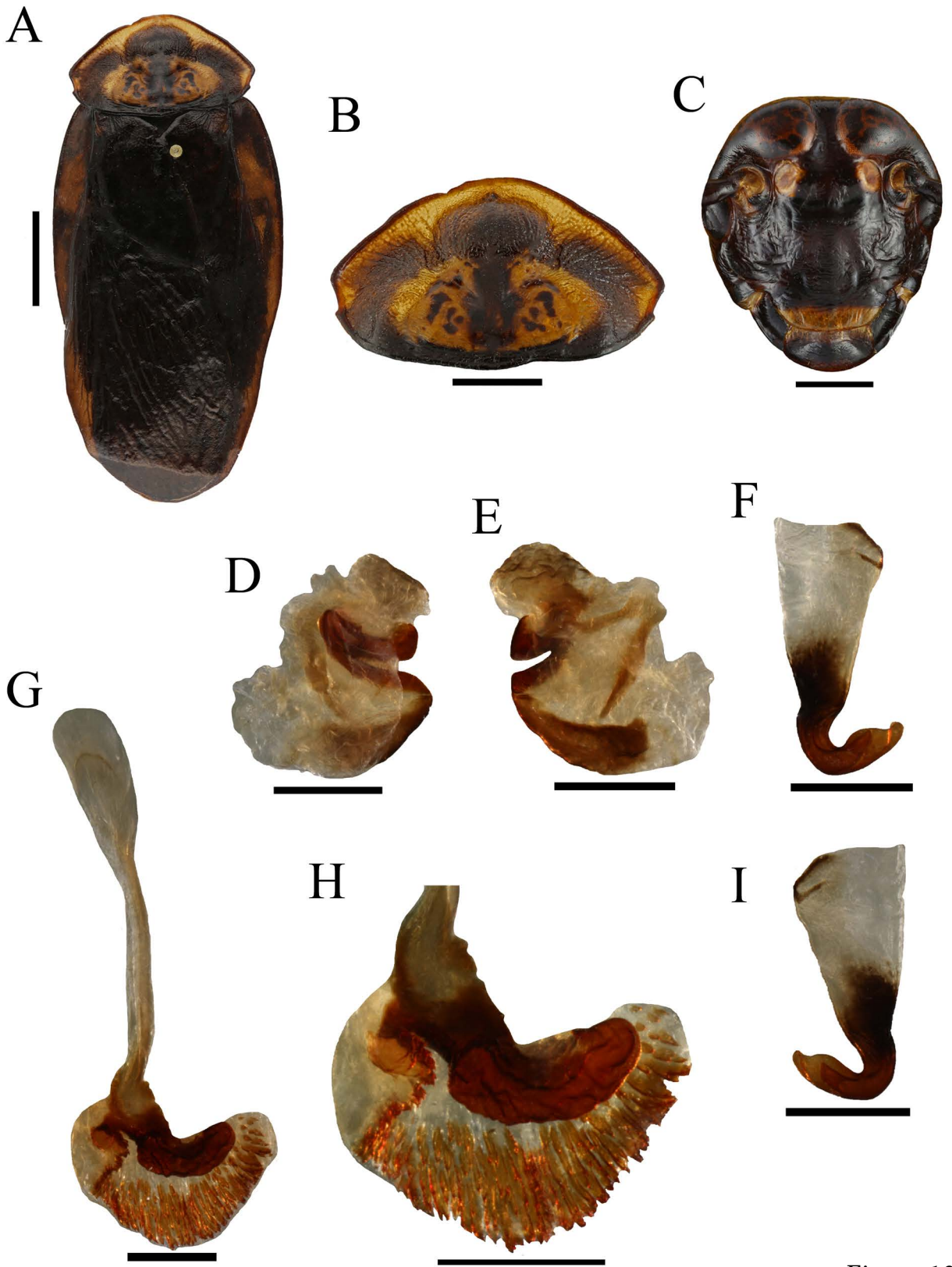


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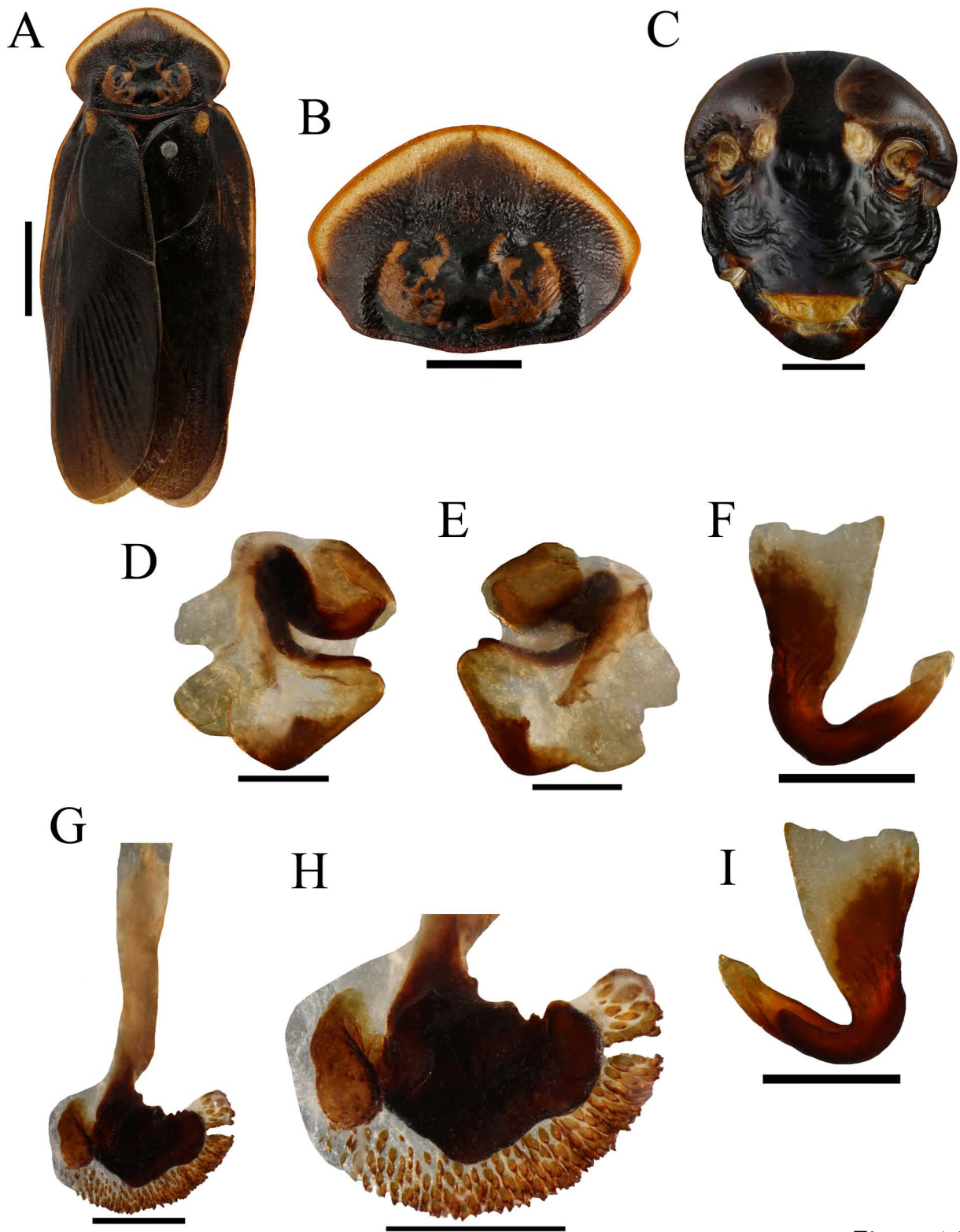


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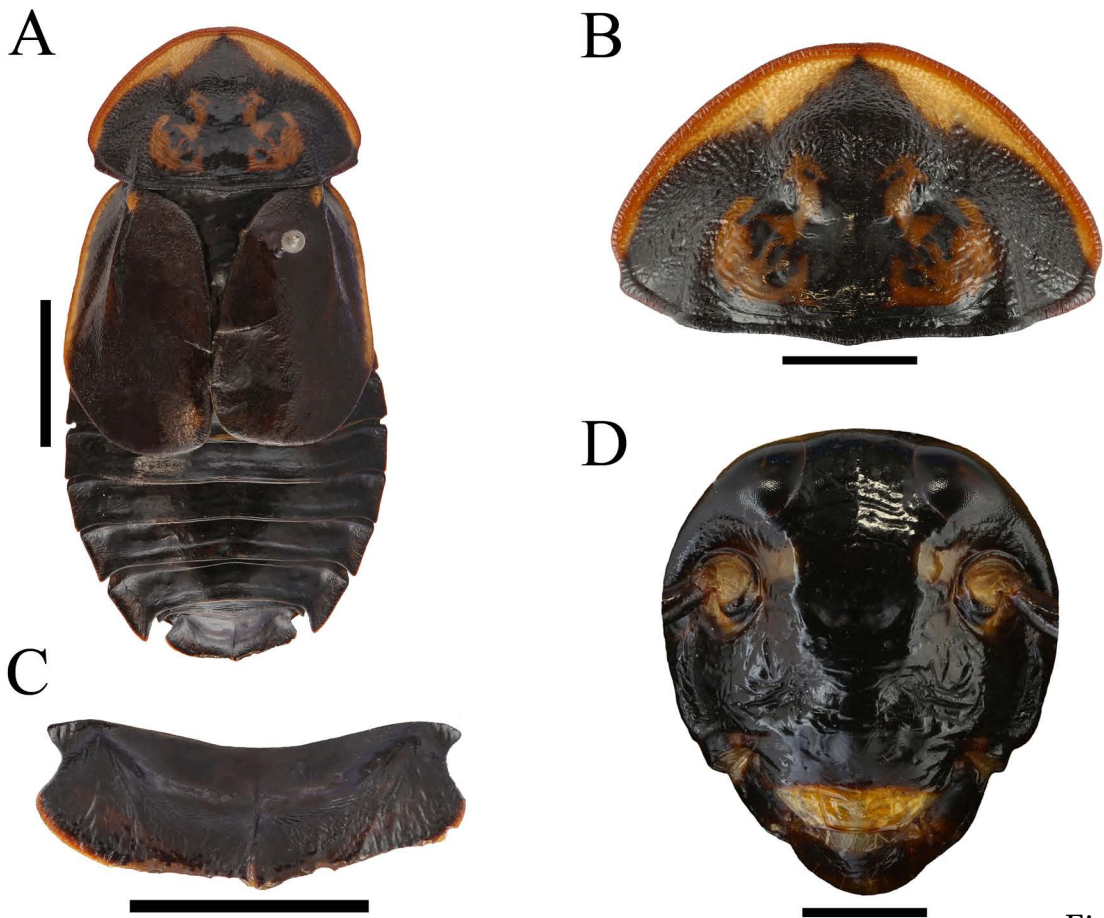


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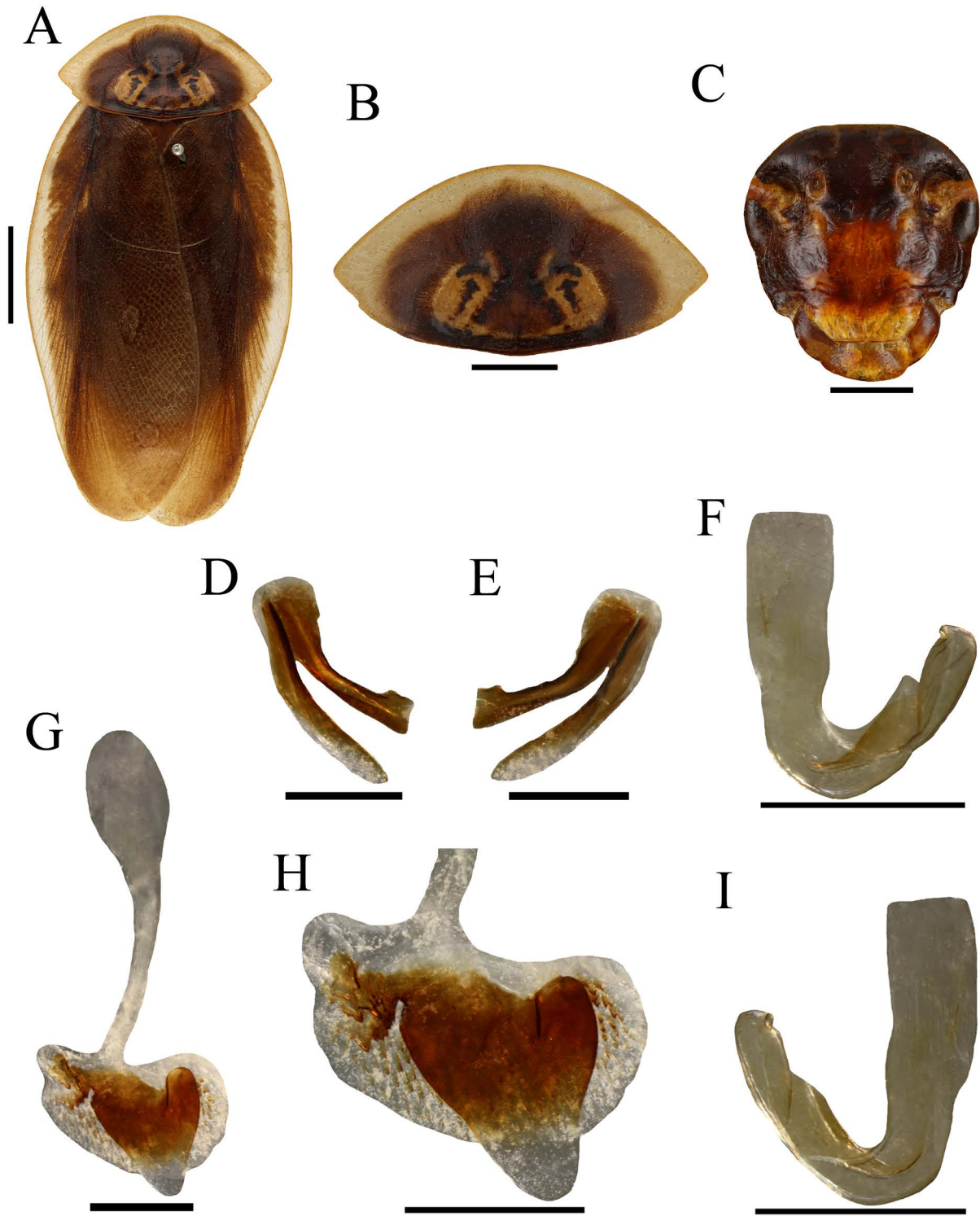


Figure 16

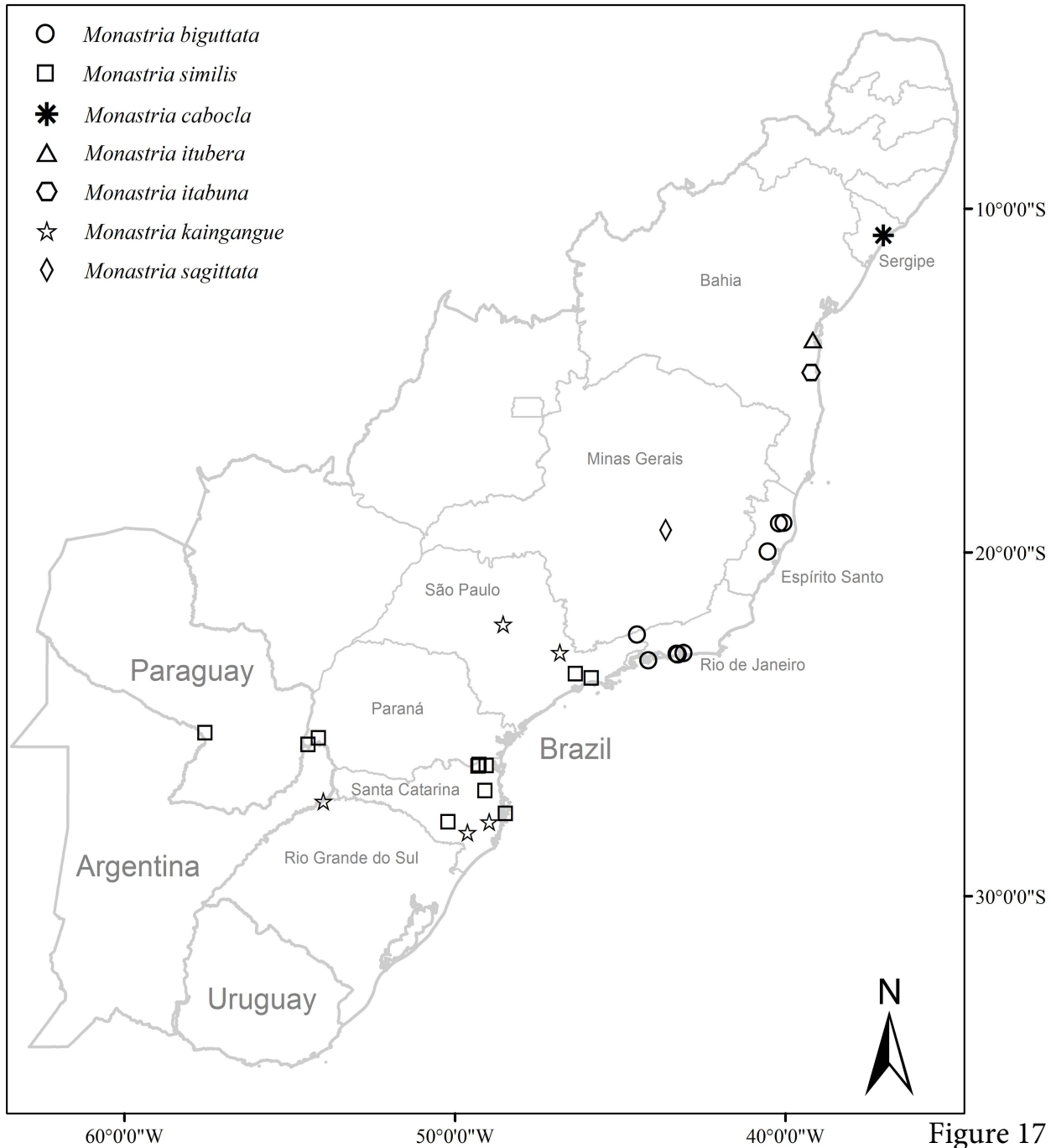


Figure 17