

Brachylophora, a new brachypterous genus of Rhopalophorini (Coleoptera, Cerambycidae)

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ABSTRACT. *Brachylophora*, a new brachypterous genus of Rhopalophorini (Coleoptera, Cerambycidae). *Brachylophora auricollis* (Bruch, 1918) **comb. nov.** = *Pasiphyle auricollis* Bruch, 1918, originally described from Argentina (Salta), is redescribed and illustrated. Although with reduced elytra, the genus is transferred from Rhinotragini to Rhopalophorini based on the following characters: eyes well separated in both sexes, frons between eyes depressed and lacking frontal suture; pro-, meso-, and metasternum planar; mesothorax parallel-sided, not at all declivous before mesosternal process; metasternum large, together with mesosternum twice length of prosternum, metepisternum very wide, entire suture separating it from metasternum clearly visible when viewed from below; female ovipositor shortened with short cylindrical styles; and, more generally, structural features of hind legs, and surface ornamentation. Habitus similar to *Coremia* group. Bolivian specimens were netted as they visited flowers of *Croton* sp. (Euphorbiaceae).

KEY WORDS. Brachypterous Rhopalophorini; Cerambycinae; host flower, Neotropical.

RESUMO. *Brachylophora*, gênero braquíptero de Rhopalophorini (Coleoptera, Cerambycidae). *Brachylophora auricollis* (Bruch, 1918) **comb. nov.** = *Pasiphyle auricollis* Bruch, 1918, originalmente descrito de Argentina (Salta), é redescrito e ilustrado. Embora com élitros reduzidos, o gênero é incluído em Rhopalophorini com base nos seguintes caracteres: olhos bem afastados em ambos os sexos, fronte deprimida entre os lobos inferiores e sem sutura frontal, pro-, meso- e metasterno no mesmo nível, mesosterno com bordas laterais paralelas e sem declive antes do processo, metasterno amplo, junto com o mesosterno, duas vezes mais longo que prosterno, metepisterno largo, sutura metepisternal inteiramente visível, ovipositor encurtado com estilos pouco alongados e cilíndricos e pela estrutura das pernas posteriores. Habitus semelhante do grupo *Coremia*. Os exemplares da Bolívia foram coletados quanto estavam visitando as flores de *Croton* sp. (Euphorbiaceae).

PALAVRAS-CHAVE. Cerambycinae; flor-hospedeira; Neotropical; Rhopalophorini braquíptero.

Bruch (1918) described a second species of the genus *Pasiphyle* Thomson, 1864, *P. auricollis* from Argentina (Salta), with some doubt as to its true taxonomic position, and, as he stated, the species was provisionally placed in this genus. Examination of the genotype, *Pasiphyle mystica* Thomson, 1864, indicated many important character differences between the two species, precluding the retention of Bruch's species in the genus, and its subsequent removal to the Rhopalophorini, as detailed below.

Marques & Napp (1966) analysed the comparative morphology of the tribe Rhopalophorini Blanchard, 1845 with respect to the Compsocerini Thomson, 1864.

Mermudes & Napp (2004) analysed the comparative morphology of the tribe Rhopalophorini Blanchard, 1845 and one genus of Rhinotragini Thomson, 1860 with respect to the African tribe, Cleomenini Lacordaire, 1869. The authors elegantly demonstrated the need to remove the Neotropical genera from the Cleomenini to attain a more harmonious concept of the Neotropical Cerambycinae.

The new genus, *Brachylophora*, described here, with its short elytra, is unique amongst the Rhopalophorini; and maybe of singular importance for our understanding of the evolutionary affinities between the Rhopalophorini and Rhinotragini since it seems to demonstrate a number of cha-

acters more typical of one tribe or the other; a conclusion which will have to be assessed by the experts of higher taxonomy.

Today, Monné & Hovore (2006) list 173 species, distributed between 24 genera, within the tribe Rhopalophorini (most of them restricted to Latin America).

MATERIAL AND METHODS

All the Bolivian material was collected whilst visiting flowers of an unidentified species of *Croton* Linnaeus, between 400–680 m altitude, in both semi-dry and humid Chaco Forests lying to the east of the eastern Cordillera of the Andes, in the Departments of Santa Cruz (10–20 km south of Abapo) and Tarija (24 km east of Villamontes, 100 km north of the Bolivia-Argentina border), Bolivia.

Scrutiny of the papers referenced above, examination of *Coremia* Audinet-Serville, 1834, *Dirocoremia* Marques, 1994, *Rhopalophora* Audinet-Serville, 1834, and other genera of Rhopalophorini, and 98 species of Rhinotragini in 29 genera (in the author's collection) provided the basis for the observations regarding the comparative morphology of the two tribes.

Measurements. Total length = tip of mandibles to apex of abdomen.

The acronyms used in the text are as follows: Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Brazil (DZUP); Florida State Collection of Arthropods, Gainesville, Florida, USA (FSCA); Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Brazil (MCNZ); Museo Noel Kempff Mercado, Universidad Autónoma Gabriel René Moreno, Santa Cruz de la Sierra, Bolivia (MNKM); Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil (MNRJ); Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil (MZSP); Robin Clarke/Sonia Zamalloa private collection, Hotel Flora & Fauna, Buena Vista, Santa Cruz, Bolivia (RCSZ).

TAXONOMY

Brachylophora's affinities to the Rhinotragini are suggested by the following character states: genae short, only half length of inferior lobes (this linear comparison approximates the condition in many Rhinotragini, in Rhopalophorini among some *Coremia* group members), antennae shorter than body (as in many Rhinotragini, less commonly in Rhopalophorini), in male filiform with slightly serrate basal segments (as in the Rhinotragini genus *Isthmiade* Thomson, 1864), scape subcylindrical, not sulcate and antennomere III the longest, IV shorter than III and V, V-X incrementally shorter (formula typical of most Rhinotragini, less frequent in Rhopalophorini); apex of prosternal process expanded laterally, almost triangular (although small and short, reminiscent of some *Ommata* White, 1855, *Phespia* Bates, 1873 and other genera of Rhinotragini); elytra short, only reaching base of urosternite I, and strongly dehiscent sutural margins (recalling the Rhinotragini genera *Neophygopoda* Melzer, 1933 and some species of *Epimelitta* Bates, 1870); abdomen almost parallel-sided, urosternite I slightly shorter than II+III, abdominal process relatively narrow (typical of Rhinotragini, less so for Rhopalophorini); legs markedly unequal in length (ratio 1:2:4), front legs remarkably short (4–5 times shorter than hind legs, proportions found in some *Ommata* and *Xenocrasis* Bates, 1873, but only approached by few Rhopalophorini).

Brachylophora's affinities to the Rhopalophorini (apparently closest to the *Coremia* group) are given under the description of the genus, among which the following character states are atypical of, or have not been observed in, the Rhinotragini: head (excluding occiput) short, eyes well separated in both sexes (not infrequent in Rhopalophorini, atypical of Rhinotragini), eyes, especially superior lobes, raised well above orbital surface (as in *Coremia* group, and less so in *Rhopalophora*, seldom observed in Rhinotragini), frons distinctly transverse, depressed between eyes and lacking frontal suture (conditions found in *Dihammaphora* Chevrolat, 1859 and some *Coremia* group species, atypical of Rhinotragini, even though frontal suture may be evanescent towards apex in heavily punctured species of the *Rhinotragus* group); pro-, meso-, and metasternum almost planar (as in many Rhopalophorini, not observed in Rhinotragini); mesothorax almost parallel-sided, not at all declivous before mesosternal

process (typical of the *Coremia* group, not observed in Rhinotragini); metasternum large, together with mesosternum twice length of prosternum (as in *Coremia* and other genera, not observed in Rhinotragini), metepisternum very wide, entire suture between it and metasternum clearly visible when viewed from directly below (probably unknown in Rhinotragini); metafemoral clavae very much larger than those of pro- and mesofemora (typical of the *Coremia* group, and other Rhopalophorini, less common in Rhinotragini, most of which tend to have cylindrical metafemoral clavae), strongly curved tibia (common in Rhopalophorini, atypical of Rhinotragini), metatarsus very long, equal to length of metatibia, metatarsomere I much longer than II+III, II long, III diminutive (character combinations only approached by *Ommata* (*Agaone*) Pascoe 1859 and a few other Rhinotragini), only III with tarsal brush ventrally (as in many Rhopalophorini, only absent from metatarsomere I in *Ommata* (*Agaone*) and a few other Rhinotragini); surface ornamentation almost uniform, covered with dense small punctures and short recumbent pubescence, (typical of *Coremia* group and *Rhopalophora*, usually more diverse in Rhinotragini), and almost completely devoid of long setae, both on body and appendages (as in most *Coremia* group species, *Rhopalophora* and other genera, not observed in Rhinotragini); female ovipositor shortened with short cylindrical styles (as in *Lathusia* Zajciw, 1959, *Thalusia* Thomson, 1864 and other Rhopalophorini, generally longer with pyriform styles in most Rhinotragini examined).

In conclusion, the monotypic genus, *Brachylophora*, should be considered a member of the Rhopalophorini because it shares many primary characters with other members of this tribe, few primary characters differing from this tribe and, apart from the short elytra, few primary characters with the Rhinotragini.

Brachylophora gen. nov.

Type-species: *Brachylophora auricollis* (Bruch, 1918) **comb. nov.**, here designated.

Pasiphyle auricollis Bruch, 1918: 26; Monné, 2005: 498 (cat.)

Description. Head short, genae short; frons depressed, transverse, without clypeal or frontal sutures; vertex slightly rising to front border of pronotum. Eyes well separated in both sexes, moderately large, more so in male, slightly oblique, closely and almost completely enclosing antennal alveoli, interlobal connection nearly as wide as superior lobes and posterior margin of eyes weakly sinuate.

Antennae 11-segmented, short, longer in males; devoid of setae; scape subcylindrical, without sulcus, pedicel small, antennomeres III–XI filiform, sides of III–V slightly widening to short, pre-apical spine, VII–XI parallel-sided (sides of VI+VII slightly widening to minute apical spine); antennomere III the longest; IV shorter than V, V+VI equal in male, VII–X incrementally shorter, XI as long as VIII, with small apical cone.

Prothorax moderately convex, quadrate, unarmed, widest near middle, sides weakly sinuous; prosternum slightly declivous across middle, prosternal process flat, planar with prosternum, only slightly elevated above mesosternum, and relatively wide, sides of apex distinctly widened, apical angles acute, apical margin straight; coxal cavities weakly angled at sides, widely open behind.

Mesothorax almost parallel-sided, mesosternal process flat and wide, wider than coxal cavities. Elytra short reaching base of urosternite I, strongly dehiscent along sutural margins, apices rounded.

Metathorax large, together with mesosternum twice length of prothorax, somewhat convex, but metasternum flattened and planar with mesosternum; metepisternum broad and rectangular, entire suture between it and metasternum clearly visible when viewed from directly below.

Abdomen subparallel; urosternite I shorter than II+III; V undifferentiated, transverse, very short in male.

Legs markedly unequal in length (ratio 1:2:4), pedunculate-clavate, peduncles long and lacking carinas or sulci, claws not abrupt, metafemoral clavae very large, passing apex of abdomen by its entire length; metatibia strongly curved and abruptly narrowed near middle by excision on underside; metatarsus long, metatarsomere I 1.5 longer than II+III, III diminutive, only III with complete tarsal brush ventrally.

Female ovipositor shortened, with short cylindrical styles. Male genitalia not examined.

Surface ornamentation almost uniform, covered with dense small punctures and short recumbent pubescence, only longer on pronotum and almost completely devoid of long setae, both on body and appendages.

Discussion. The genus is immediately recognisable by the short elytra. Other diagnostic characters are: basal antennomeres spined laterally, metatibia excised and narrowed at middle, and hind leg 4–5 times longer than foreleg.

Etymology. Short (*brachy*) winged Rhopalophorini (*lophora*).

***Brachylophora auricollis* (Bruch, 1918) comb. nov.**

(Figs. 1–3)

Redescription of male, 7.9 mm. General colour dull, opaque black, including appendages (only base of metatarsus narrowly orange-yellow); pronotum suffused ochraceous.

Surface ornamentation. General pubescence almost uniformly distributed, relatively sparse, short and recumbent, cinnamon on dorsad, greyer below, dense and long on sides of pronotum, on disc the hairs differently oriented, and sparser to delimit a large rectangular area occupying most of disc. Almost devoid of long setae, only relatively short ones bordering hind margin of eyes. General puncturation on dorsad almost uniformly dense to confluent, mixture of small to medium sized, rounded punctures; on underside punctures more uniform in size and smaller; two post-lateral, smooth areas on metasternum; area of mentum-submentum multicarinate, gula smooth and impunctate; antennae densely

micro-punctate, scape smoother with moderately dense punctures; legs transversely reticulate and sparsely punctured. Sexual puncturation not apparent.

Structure. Head: genae half as long (0.14 mm) as width of inferior lobes (0.25 mm); labrum small, sides rounded, transversely depressed for apical half, with row of small, setiferous punctures bordering, slightly rounded, apical margin; frons wider (1.00 mm) than long (0.60 mm), half width of head including eyes (1.95 mm), moderately depressed between antennal tubercles; inferior lobes of eyes longer than wide, about twice as long as superior lobes (0.30 mm), superior lobes well separated (interocular 0.70 mm) and prominent (raised well above surface of vertex).

Antennal tubercles rounded but prominent; antenna reaching apical third of urosternite III. Scape (0.65 mm), pedicel small (0.15 mm), quadrate, the sides rounded, antennomeres III (0.90 mm), IV (0.60 mm), V + VI (0.70 mm), VII (0.65 mm), VIII (0.55 mm), IX (0.50 mm), X (0.45 mm), XI (0.65 mm).

Prothorax widest (1.25 mm) just behind middle, narrowed and slightly emarginate from middle to very short pre-apical constriction, the same, but less so, to hind margin. Pronotum somewhat flattened on disc, the latter slightly uneven, especially sides, but lacking distinct calli or depressions; front margin (0.90 mm) narrower than hind margin (1.15 mm), both with narrow borders and planar with rest of pronotum.

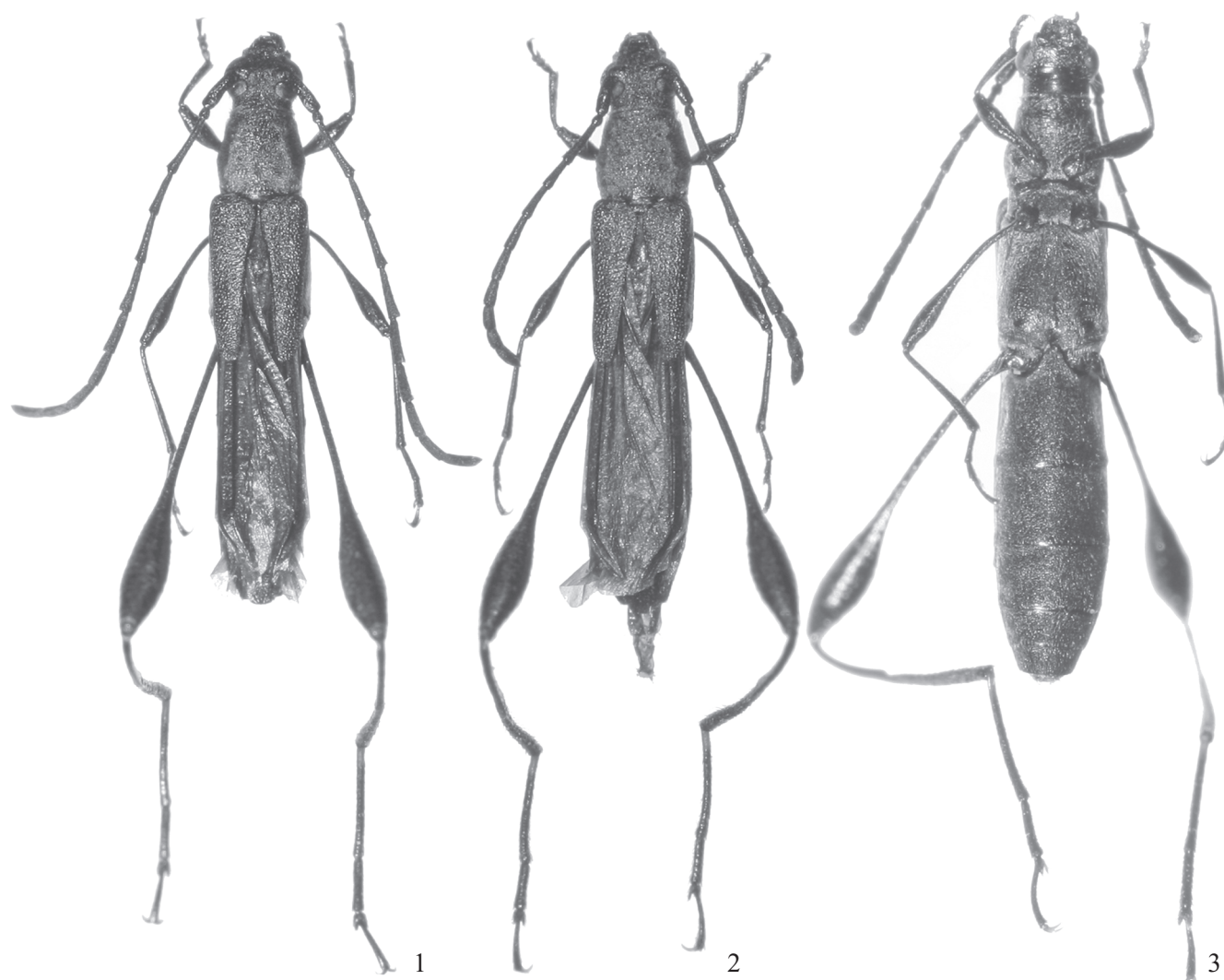
Mesothorax not at all declivous before mesosternal process, process very wide (0.65 mm), considerably wider than coxal cavities (0.50 mm), apical margin just passing middle of coxae, widely V-shaped in male, less deeply excavate in female.

Elytra subparallel, short (2.35 mm), flat (and lacking costae), strongly dehiscent along sutural margins, apices well separated and broadly rounded, humeri prominent and slightly projecting forwards.

Metathorax quadrate, parallel-sided, metasternal process broad and rounded, somewhat removed from apex of mesosternal process, metasternal suture represented by smooth, glabrous line, only depressed at apex; metepisternum wide (1.00 mm), only narrowing slightly towards apex.

Abdomen convex, elongate (3.50 mm), shorter than forebody (4.00 mm); basally parallel-sided, then tapering to apex; urosternite I (1.25 mm) slightly shorter than II+III (1.50 mm); V transverse and moderately rounded at apex, very short (0.20 mm) and only half as long as IV; abdominal process relatively narrow and rounded at apex.

Legs: front legs remarkably short (2.7 mm), 4.7 times shorter than hind legs (12.8 mm), peduncles narrow, cylindrical and very long on metafemora (occupying basal two-thirds), as long as clava and flattened on mesofemora; profemoral clava fusiform and not large, mesofemoral clava elongate and relatively narrow, metafemoral clava fusiform, very large, but only moderately abrupt. Tibiae moderately slender, hardly thickened at apex, meso- and metatibiae flattened; metatarsus long (3.3 mm), almost as long as metatibia (3.70 mm), metatarsomere I very long (1.70 mm), II long (0.80 mm), III diminutive (0.20 mm) and hardly widened.



Figs. 1–3. *Brachylophora auricollis* (Bruch, 1918) **comb. nov.**: 1, male, size 7.9 mm; 2, female, size 8.2 mm; 3, female, size 8.5 mm., ventral view.

Female. Only moderately dimorphic, some characters have been mentioned under the description of the genus, others are as follows: colour of pronotum darker, some without ochraceous hue; eyes smaller, antennae shorter (reaching apex of urosternite I) with slightly different formula: scape (0.60 mm), pedicel (0.15 mm), antennomeres III (0.70 mm), IV (0.50 mm), V (0.55 mm), VI (0.50 mm), VII (0.45 mm), VIII (0.45 mm), IX (0.40 mm), X (0.35 mm), XI (0.45 mm). Pronotum slightly more transverse. Abdomen longer (4.50 mm), equal to forebody, urosternite I (1.80 mm) subequal with II+III (1.90 mm); urosternite V not much shorter than IV; abdominal process slightly wider than male.

Measurements (mm) 14 males/12 females: Total length 6.85–7.90/6.50–9.00; length of pronotum 0.95–1.25/1.00–1.30; width of pronotum 0.95–1.25/1.10–1.35; length of elytra 1.90–2.35/1.95–2.40; humeral width 1.00–1.35/1.15–1.50.

Material examined. BOLIVIA, *Tarija*, 21°21'S/63°12'W, c.400m, Semi-dry Chaco Forest, Lomas El Quince, 34 km W Villamontes, R. Clarke/S.

Zamalloa col., on/flying to flowers of *Croton* sp.: 2 males, 1 female, 12.XII.2007 (FSCA); 2 males, 2 females, 13.XII.2007 (MNKM), 2 males, 5 females 13.XII.2007 (RCSZ). *Santa Cruz*, Santa Cruz-Yacuiba Highway, 19°00'S/63°14'W, 680 m, Foothill Chaco Forest, 20 km S Abapo, R. Clarke/S. *Zamalloa* col., on/flying to flowers of *Croton* sp.: 2 males, 1 female, 17.XII.2007 (MZSP); 1 male, 1 female, 17.XII.2007 (MNRJ); 1 male, 1 female, 17.XII.2007 (MCNZ); 1 male, 1 female 17.XII.2007/17.XII.2007, (DZUP), 3 males, 17.XII.2007 (RCSZ). 18°59'S/63°14'W, 520m, Foothill Chaco Forest, 10 km S Abapo, 1 male, 2.I.2008 (DZUP). ARGENTINA, *Salta*, Pocitos, 3 males, XI.1951, Prosen col. (MZSP). BRAZIL, *Ceará*, Russas, 1 male, 1 female [the only example seen with orange coloured pronotum] (MZSP). BRAZIL, *Bahia*, Condeuba, 1 male, XII.1975, S. Souza col. (MZSP). [This large (11.5 mm) specimen presents some character differences suggesting it might be another species: general colour more chestnut; pubescence denser and longer; prosternal process narrower; metatibial notch at apex of basal third; metatibia with strong, semi-recumbent brush occupying apical half; metatarsomere I slightly shorter.]

Discussion. Monné (2005) also records this species from Paraguay, and Paraíba in Brazil. Since Wappes *et. al.* (2006)

do not record this species, it may be added to the Bolivian Rhopalophorini.

Somewhat surprising, for such a singular species, was how plentiful it was found to be in Bolivia (many more were observed than collected) in two different life-zones (semi-dry and humid Chaco Forest, separated by 400 m altitude), at localities separated by 300 km. One might assume the collectors were there at the opportune moment, but two weeks later, and again 50 weeks after that (when there were very few insects visiting flowers), further specimens were observed at the Abapo localities.

No doubt Bolivia has received very little attention entomologically. Looking at the sparse records for the Bolivian Chaco it seems that visits by earlier entomologists were somewhat perfunctory and, maybe, restricted to short delays along the railroad (which runs through dry Chaco), or the environs of the few "pensiones" found along the old Yacuiba-Santa Cruz road, a distance of 600 km.

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