



New species of *Laparocerus* Schönherr, 1834 (Coleoptera, Curculionidae) from the island of Tenerife (Canary Islands)

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Abstract

The weevil genus *Laparocerus* Schönherr (1834) is distributed and very diverse in the Macaronesian region. In advance of a larger monographic study of the genus, five new species endemic to the island of Tenerife (Canary Islands) are described in this first contribution: *L. tinguaro* n.sp., *L. boticarius* n.sp., *L. chasnensis* n.sp., *L. aguiari* n.sp., and *L. subparallelus* n.sp. Detailed descriptions (including photographs of holotypes and drawings of aedeagus, spermatheca, and sternite VIII) are supplemented with diagnostic remarks referring to similar or related taxa. Data on the distribution within the island, phenology, and the host-plants are also provided. A total of 697 specimens have been studied.

Key words: Curculionidae, Entiminae, *Laparocerus*, Canary Islands, new species

Introduction

Laparocerus is a genus described by Schönherr (1834), belonging to the subfamily Entiminae, tribe Laparocerini (f. Alonso-Zarazaga & Lyall, 1999), and is distributed in the Macaronesia (archipelagos of the Azores, Madeira, Selvagens, and Canaries), with a single species on the mainland (West Morocco). Up to the present time, 106 valid taxa have been assigned to the genus (Machado, 2006)

The author is engaged in a monographic study of the genus, which includes a thorough field survey, the systematic revision, and phylogeny based on molecular data. The present contribution is an advance of the results consisting of the description of five new species discovered on the island of Tenerife.

Materials and methods

This study is based upon examination of 697 specimens collected by the author (v. Machado, 2003) or borrowed from the several institutions and colleagues. The acronyms used are the following:

AAC	Agustín Aguiar Clavijo, private collection. La Laguna, Spain.
AMC	Antonio Machado Carrillo, private collection. La Laguna, Spain.
CG	Christoph German, private collection. Hinterkapellen, Switzerland.
LM	Luigi Magnano, private collection. Poggibonsi, Italy.
MM	Michael Morris, private collection. Dorchester, United Kingdom.
MNCN	Museo Nacional de Ciencias Naturales. Madrid, Spain.
MNHN	Muséum National d'Histoire Naturelle. Paris, France.
MZUR	Museo di Zoologia dell' Università di Roma "La Sapienza", Italy.
NHM	The Natural History Museum. London, United Kingdom.
RB	Roman Borovec, private collection. Nechanice, Czech Republic.

RGB Rafael García Becerra, private collection. S/C de la Palma, Spain.
TFMC Museo de Ciencias Naturales. Santa Cruz de Tenerife, Spain.

Type specimens have been chosen from a single locality or a few neighbouring ones, disregarding specimens from other areas in order to minimize genetic variability. Holotypes have been donated and deposited in the Natural History Museum of Santa Cruz de Tenerife (TFMC).

Dissections were made according to standard entomological techniques. Photographs were done with a Nikon digital camera, and drawings using a camera lucida attached to a microscope. Measurements were taken with a stereoscopic microscope provided with a micrometer. Sizes of specimens were measured without rostrum. Symbols L, W and H refer to length, width and height, respectively. Abdominal transversal convexity is obtained dividing the maximum height of abdomen by its maximum width. Eye convexity is expressed here as the percentage of a theoretical complete ellipsoid or globe emerging from the profile of the head; thus, a 50% would mean a hemispheric protruding eye, a 10% a fairly flat eye, etcetera.

The term *prorostrum* (Damoiseau, 1967) refers to the anterior and dorsal portion of the rostrum delimited by the line where the apical declivity usually starts, just behind the level of insertion of the antennae; the *meta-rostrum* is the posterior portion. Spermathecal terminology follows Thompson (1989).

Results

Laparocerus aguiari n. sp.

(Figures 1, 6, and 11-A)

Measurements of holotype (♂). *Length*: total (without rostrum) 8.15 mm, head 1.85 mm, rostrum 0.90 mm, scape 2.25 mm, funicle 1.62 mm, articles (1st/ 2nd/ 3rd/ 4th) 0.52 /0.52 /0.38 /0.34 mm, club 0.68 mm, pronotum 1.70 mm, elytra 6.00 mm, tibiae (pro- /meso- /meta-) 2.60 /2.40 /2.85 mm. *Width*: head (with eyes) 1.36 mm, frons 0.70 mm, rostrum (with pterygia 0.90 mm, rostrum (minimum) 0.66 mm, rostrum (base) 0.80 mm, scape 0.19 mm, club 0.18 mm, pronotum (anterior /maximum /posterior) 1.55 /2.27/ 2.00 mm, and elytra (maximum) 3.53 mm. *Height*: abdomen 2.95 mm.

Description of males. *Laparocerus* of large size (length without rostrum: 7.4–9.1 mm, elongated and fusiform, with long limbs. General colouration dark olivaceous; antennae ferruginous, partly infuscated. Integument piceous-brown, dull, clothed by appressed minute brassy and coppery scales; chequered on elytra, and with emergent short black setae; their basal region usually rubbed as a large dark and completely dull area, very conspicuous. *Antennae* long and very thin; scape straight, longer than pronotum, abruptly capitate (10% of length); first two articles of funicle almost equal; club fusiform, thin, a trifle shorter than the three previous articles together. *Head* normal, with a few shallow large punctures discernible among clothing of scales (frons and vertex); rostrum short, quadrangular, its dorsum with subparallel sides, feebly concave; pro-rostrum well delimited, epistomal keel complete, sharply marked; pterygia small, not protruding; frons clearly depressed, median fovea rhomboidal, elongated, precise and deep. Eyes reaching rim of front. big, oval, somewhat flattened (convexity about 25%), their cusp slightly shifted backwards. *Pronotum* 0.68× width of elytra, transverse, more constricted anteriorly than posteriorly (brief collar); sides moderately and evenly curved, widest about middle: surface fully covered with very large, coarse, deep punctures (interstices approximately of one diameter, irregular), totally surrounded by conspicuous micro-punctures if scales missing (scales not longer than diameter of large punctures); a larger hyaline linear scale emerging from each puncture (hard to see). Very rarely, an incipient median line free of punctures. *Scutellum* almost equilateral, usually covered by a conspicuous patch of tight longer scales of flavescent colour. *Elytra* elongate-acuminate, widest well after middle, in first half smoothly curved; base not much wider than base of pronotum; shoulders rounded, not exerted, but small humeral carina always present. Striae marked by small deep punctures (with a

tiny scale inside); evanescent towards the apex; intervals fairly flat, absolutely dull, with irregular 2–3 rows of suberect black setae, moderately bent backwards, small at disc and increasingly dense and longer on apical third (flanks and apex), but not more than half the width of 3rd interval on disc: cover of appressed tiny scales dense, chequered. Basal region usually abraded, forming a more or less large dull piceous macula. *Abdomen* with sparse cover of longer linear suberect flavescent scales intermixed with more appressed ones; transverse micro-reticulation more or less compressed (obsolete in median margin of 2nd and 3rd ventrites); inter-meso-coxal carina small; 5th ventrite very slightly truncated. *Legs* slender and long; protibiae recurved at top inwards with mucro covered by comb of dense bristles; outer angle round; meso- and metatibiae apically slightly expanded inwards and also mucronate. *Genitalia* (figure 6 A–B). Aedeagus strongly curved in lateral view, sharp and flat-ending, but laterally compressed at apical plate (beset with some minute dorsal setae). Apodemes of median lobe short; internal sac with an almost inconspicuous small linear field of denticles.



FIGURE 1–5. Holotype of: 1 *Laparocerus aguiari* n. sp. 2 *Laparocerus boticarius* n.sp. 3 *Laparocerus chasnensis* n.sp. 4 *Laparocerus subparallelus* n.sp. and 5 *Laparocerus tinguaro* n.sp. Scale = 5 mm.

Description of females. Length (without rostrum) 7.5–9.5 mm, bigger than males; base of elytra exceedingly much broader (subquadrate), widest at middle (width ratio of elytra/ pronotum = 1.9 instead of 1.5); sides less curved in basal half; shoulders projecting laterally, rounded, with strong developed humeral carina (7th interval). Rostrum a trifle more convergent dorsally; frons more depressed. All tibiae mucronate; protibia not recurved apically. 5th ventrite apically keeled; sternite VIII (figure 11-A) very robust and spear-like ended (0.5× length of elytra). Spermatheca, figure 6-C.

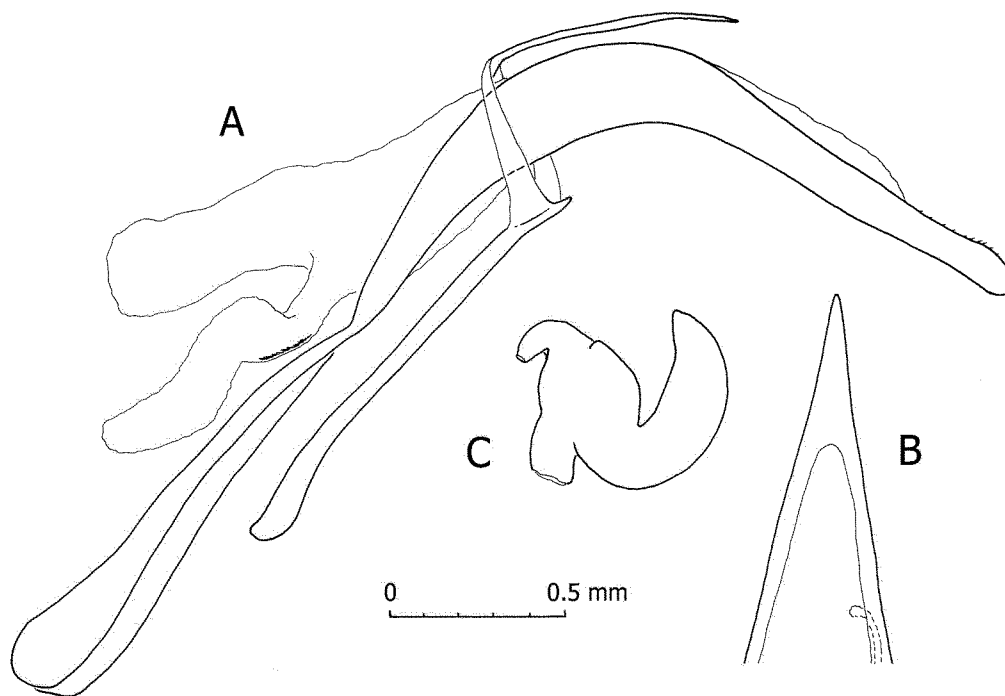


FIGURE 6. *Laparocerus aguiari* n. sp. **A.** Male genitalia, lateral view. **B.** Apical end of median lobe in dorsal view. **C.** Spermatheca.

Etymology. The species is dedicated to biologist Agustín Aguiar, for the many joyful hours in the field, collecting together.

Diagnostic remarks. *Laparocerus aguiari* n.sp. is well characterised by its big size, straight and thin capitulate scape, heavily punctured pronotum, the dull integument of elytra, their brassy-coppery tiny vestiture with emergent small black setae, and the humeral carina, being the shoulders salient only in the females. This features are somehow intermediate between *L. crassus* Roudier, 1957 and *L. rugosicollis* Uyttenboogaart, 1937. *L. crassus* is very similar in general aspect, equally dull, but still bigger, with shoulders extraordinarily salient (7th interval basally explanated) and sides of elytra parallel in first half (elytral base square), in both sexes, not just the females. Additionally, the punctures of striae are bigger and the emergent setae recurved, not slightly bent as in *aguiari* n.sp. Conversely, *L. rugosicollis*, resembles the habitus of *aguiari* males in both sexes, but the elytra are more oval and uniformly curved (widest at middle), with no humeral carina, and the emergent setae are longer, thinner and straight. More distinctive is the integument, clearly almost shiny instead of dull, especially on the elytra.

Material examined. Holotype: Tenerife, Teno, Las Portelas W, 800 m (UTM 28R 03181 31349), 1♂ 15-11-2003 leg. A. Machado (TFMC, reg. CO-15489). **Paratypes:** same data, 24 exx (AMC, 1 TFMC, 2 NHM); Monte de Erjos 1 ex 28-10-1973; Monte del Agua, 900 m, 1 ex 15-2-2000, 18 exx 6-12-2001; Teno Alto, El Pino 800 m, 7 exx 15-11-2003 leg. A. Machado (AMC). Las Portelas N 800 m, 9 exx 1-11-2002, 17 exx 15-11-2003 leg. A. Aguiar (AAC, 2 MNHN). Monte de los Silos, 850 m 1 ex 18-3-1984 leg. E. Colonnelli (MZUR). Cumbre de Erjos 4 exx 6-12-2003; Monte del Agua 5 exx 6-12-2003 leg. R. García (RGB).

Distribution and ecology. *Laparocerus aguiari* n. sp. seems to be restricted to the Teno massif in the NW of the island of Tenerife. It has been collected in forested as well as open shrubby habitats, at altitudes directly exposed to the trade winds cloud-layer. It is nocturnal, active in autumn-winter, and polyphagous, having been collected feeding on *Carlina xeranthemoides*, *Isoplexis canariensis*, *Viburnum rigidum*, *Andryala pinnatifida*, *Erica arborea*, *Chamaecytisus proliferus*, *Myrica faya*, and *Rubus ulmifolius*.

Laparocerus boticarius n. sp.

(Figures 2, 7, and 11-E)

Measurements of holotype (♂). *Length*: total (without rostrum) 7.35 mm, head 1.5 mm, eyes 0.48 mm, rostrum 0.80 mm, scape 1.82 mm, funicle 1.47 mm, articles (1st/ 2nd/ 3rd/ 4th) 0.36 /0.44 /0.26 /0.24 mm, club 0.51 mm, pronotum 1.65 mm, elytra 5.05 mm, tibiae (pro- /meso- /meta-) 2.15 /2.00 /2.20 mm. *Width*: head (with eyes) 1.14 mm, eyes 0.30 mm, frons 0.6 mm, rostrum (with pterygia) 0.80 mm, rostrum (minimum) 0.50 mm, scape 0.14 mm, club 0.18 mm, pronotum (anterior /maximum /posterior) 1.35 /2.05/ 1.75 mm, and elytra (maximum) 3.30 mm. *Height*: abdomen 2.60 mm.

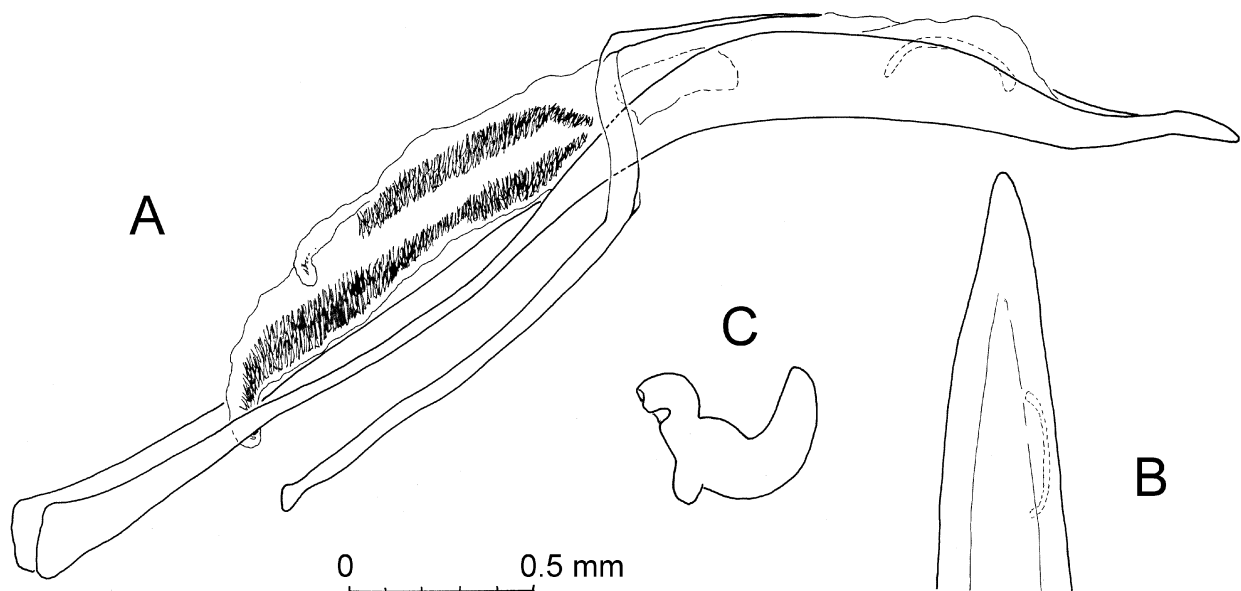


FIGURE 7. *Laparocerus boticarius* n.sp. A. Male genitalia, lateral view. B. Apical end of median lobe in dorsal view. C. Spermatheca.

Description of males. *Laparocerus* of moderate size (length without rostrum: 6.2–7.6 mm, elongate-oval and very convex in outline. Integument piceous, nitid with some metallic glimmer (extremities usually somewhat ferruginous), clothed with a sparse cinereous pubescence of small linear recumbent scales, very deciduous in dorsum (maintained only in immature specimens); if present, not chequered on elytra. *Antennae* slender, scape capitate (last fourth), bi-sinuate, longer than pronotum; scape much longer than funicle, 2nd article 1.2× longer than 1st; club fusiform, as long as the three previous articles together. *Head* small, subconical; rostrum narrow, longer than broad (L/W = 1.6), dorsally almost parallel-sided; prorostrum well defined, laterally punctured, micro-reticulated at middle and epistome, feebly canaliculate; metarostrum variable punctured; pterygia long but little protruding; frons slightly depressed, with small and superficial median fovea; eyes reaching rim of frons, oval (L/W = 1.38); evenly convex and moderately prominent (30%). *Pronotum* 0.6× width of elytra, moderately transverse (L/W = 0.8), very convex, sides strongly and evenly rounded

(globular appearance), anterior margin slightly narrower than posterior, slightly constricted into a thin collar, basal margin rimmed. Surface shiny, densely invested with small punctures and often a few irregularly disperse larger ones; usually no trace of median line. Punctures vary from very to fairly shallowly impressed (more shiny appearance). *Scutellum* small, almost equilateral, punctured. *Elytra* about 3× longer than pronotum, elongate-oval, very and evenly convex (abdominal transversal convexity 79%); sides uniformly curved, maximum width at middle, apical declivity smooth; shoulders rounded off, vanished. Striae marked by small shallow punctures, more superficial apicad. Intervals flat, occasionally subconvex, alutaceous, less shiny than pronotum, with uniform cover of 7-8 little pubescent linear recumbent scales across and longitudinal row of short erect piliferous setae of cinereous colour (1/3 width of 3rd interval in the disc; at apex 1/1). Pubescence is normally missing; if preserved, there is no chequered pattern at all. *Abdomen*. Integument shiny, with vestiture of very sparse scales. Metasternum and coxae densely covered with long hairs. Inter meso-coxal ridge also hairy, short, narrow, and very little elevated. Ventrites with dense transverse micro-reticulation (sub-nitid), except for distal margin in the middle (nitid and punctured). 5th ventrite smoothly truncated at apex. *Legs* fairly robust and hairy; protibiae almost straight, apically enlarged both sides as a fan, with short mucro internally (usually hidden by a brush of long setae); apical fanned rim fringed by a row of 20 denticles or more; mesotibiae with very small mucro, abruptly enlarged at the end; metatibiae progressively enlarged, with imperceptible granule. *Genitalia* (figure 7 A–B). Aedeagus fairly straight and apically sinuate. Apodemes of the median lobe as long as tube; internal sac with two large and dense fields of denticles.

Description of females. Length without rostrum, 6.1–8.0 mm. Same as male, but elytra completely oval (L/W = 1.3 instead of 1.5); declivity at apex almost vertical; punctures at pronotum usually more superficial. Metasternum and coxae beset with normal hairs. Tibiae unarmed. 5th ventrite apically rounded; sternite VIII, figure 11-E. Spermatheca, fig. 7-C.

Etymology. The specific epithet derives from the old Spanish term “botica” for a pharmacy. The somehow ampulliform habitus of the insect reminded me of a laboratory bottle used in pharmacies.

Diagnostic remarks. The peculiar oval habitus of *L. boticarius* n.sp. resembles at first look that of the next species, *L. chasnensis* n.sp., which has a clavate scape (instead of capitate), double system of punctures on the pronotum (instead of simple), and the surface of elytra is free of both decumbent and long erect hairy scales. The closest genetically relative (unpublished data) of *boticarius* n.sp. is *L. bolivari* Uyttenboogaart, 1937, present in the same region of Teno. Both species have bristled elytra and are very similar in most other characters, but *L. bolivari* is less oval in both sexes, and always of much smaller size (below 6 mm); its rostrum has less parallel sides, manifestly convergent to the apex. In doubtful cases, check the number of denticles fringing the apical fanned rim of the protibia: about 15 in *L. bolivari* and 20 in *L. boticarius* n.sp. Also present in Teno is *L. escalerae* Uyttenboogaart, 1937, more elongate in habitus, with more robust head, smaller rostrum, and larger and flattened eyes (18%); elytra are beset of larger and deep punctures along the striae, and some smaller punctures in the intervals; decumbent scales on elytra (if present) form patches, and the erect setae are much longer.

Material examined. Holotype: Tenerife, Teno: Los Carrizales, 650 m (UTM 28R 031830 313325), 1♂ 8-2-2005, leg. A. Machado (TFMC, Reg. CO-15491). **Paratypes:** same locality and collector, 24 exx (the majority immature), 6-12-2001; 108 exx 8-2-2005 (AMC, 2 MNHN, 2 MNHN, 2 MNCN, 2 NHM). Buenavista: Los Carrizales 675 m, 42 exx 25-1-2005 leg. A. Aguiar (AAC, 2 TFMC, 2 MNHN). Los Carrizales, 650 m. 22 exx 6-12-2001 leg. R. García (RGB). Los Carrizales, 750 m. 10 exx, 23-12-2003 leg. Ch. German (CG).

Distribution and ecology. *L. boticarius* lives in scrub vegetation just below the sylvan district, on the north-western part of Tenerife. It feeds on *Retama monosperma* and, more frequently, on *Cistus monspeliensis*. It is active in winter and at night.

Laparocerus chasnensis n. sp.

(Figures 3, 8, and 11-C)

Measurements of holotype (♂). *Length*: total (without rostrum) 6.4 mm, head 1.40 mm, rostrum 0.90 mm, scape 1.40 mm, funicle 0.94 mm, articles (1st/ 2nd/ 3rd/ 4th) 0.22 /0.36 /0.20 /0.16 mm, club 0.50 mm, pronotum 1.45 mm, elytra 4.70 mm, tibiae (pro- /meso- /meta-) 1.70 /1.50 /1.80 mm. *Width*: head (with eyes) 1.10 mm, frons 0.56 mm, rostrum (with pterygia) 0.70 mm, rostrum (minimum) 0.50 mm, rostrum (base) 0.50 mm, scape 0.06 mm, club 0.18 mm, pronotum (anterior /maximum /posterior) 1.30 /1.90/ 1.60 mm, and elytra (maximum) 4.70 mm. *Height*: abdomen 2.55 mm.

Description of males. *Laparocerus* of median size (length without rostrum: 6.1–7.1 mm, oval and more convex, bulky in outline (abdomen transversal convexity 80%). Integument piceous, subnitid, at extremities testaceous more or less infuscated (often also elytra). Vestiture of hair-like scales on extremities and head, hardly visible on pronotum, practically absent on elytra. *Antennae* relatively short; scape as long as pronotum, clavate, slightly sinuate; first two of funicle subequals; club elongated, a trifle longer than the three previous articles together. *Head* relatively narrow, densely punctured, beset with sparse linear scales; frons and rostrum almost on the same dorsal plane; rostrum long and narrow, fairly parallel-sided (minute constriction before eyes), faintly canaliculated; prorostrum well delimited, punctured laterally, epistomal keel elevated, convex, vanished at middle; pterygia small, not protruding; frons concave, medial fovea deep and short. Eyes big and oval, little convex and not prominent (about 20–25%), touching the frontal rim. Mandibles with external angle salient and sharp (retained basis of deciduous process). *Pronotum* 0.75× width of elytra, transverse, more constricted anteriorly than posteriorly; sides strongly curved, widest just after middle (potbellied appearance, figure 6): surface shiny, more convex, riddled by a mix of small and even smaller punctures (often coarsely on sides); remnants of small recumbent flavescent linear scales; disc usually without trace of free median line. *Scutellum* broad, short, punctured. *Elytra* 3.2× longer than pronotum and less shiny, oval, hardly acuminate at apex (declivity straight and very steep), manifestly convex; sides uniformly curved; humeri moderately salient, rounded off, with incipient humeral carina (7th interval); striae marked by superficial small punctures, vanishing in second half; intervals wide, hardly subconvex, with conspicuous transverse micro-reticulation (sometimes corrugated) and double irregular line of very minute punctures bearing microscopic whitish scales, hard to see except at apex and along margin intervals (developed as pubescence). *Legs* relatively short: protibia straight with indication of internal preapical sinuosity, at apex slightly dilated both sides; internally with a minute mucro (hard to see); meso- and metatibiae thickened apically, articular surface not very oblique. *Abdomen* covered by well developed uniform pubescence of overlapping testaceous hairy scales. Ventrites with transverse micro-reticulation, shiny and punctured in distal margin. Coxae internally with dense cover of scales. Inter-mesocoxal carina very short and small, almost granular. 5th ventrite slightly truncated. *Legs*. Protibiae almost straight, slightly bent downwards at apex; outer apical angle blunt, inner angle expanded, with mucro, as in the mesotibiae (mucro smaller). Meso and metatibial articular surfaces fairly oblique, not perpendicular to axis of tibiae. *Genitalia* (figure 8 A–B). Aedeagus moderately arcuate, with broad and pointed apical plate, slightly truncated in lateral view. Apodemes long; internal sac with on large and very conspicuous field of denticles, and two smaller ones.

Description of females. Length (without rostrum) 6.7–7.5 mm, much bigger and broader than males; pronotum more “potbellied”; elytra wider and laterally less curved, somewhat quadrangular (L/W = 1.3 instead of 1.5) with more conspicuous humeri (basal rim sometimes concave); apical declivity vertical with preapical sinuosity (apex not visible from above). Tibiae simple. 5th ventrite apically rounded; sternite VIII, figure 11-C. Spermatheca, figure 8-C.

Etymology. The specific adjectival epithet derives from the old aboriginal name “Chasna”, the region in Tenerife (nowadays Vilaflor), where the species was discovered.

Diagnostic remarks. This new species is characterized by its median size, piceous, unsquamose and fairly globose habitus, and especially by the apex of protibiae dilated both-sides and the progressively swollen scape of the antenna (not capitate), a combination being unparalleled in any other species of the island. Rubbed specimens of *L. curvipes* Lindberg, 1950 (the tiny pubescence is easily dislodged), which was described from almost the same area (San Miguel), may resemble *L. chasnensis* n.sp. at first sight, but the capitate scape of the former and their abnormally bent tibiae (very strongly and incurved in the males) are sufficient evidence to separate them. Moreover, the head of *L. curvipes* is broader, with trapezoid rostrum, and much smaller and almost hemispheric eyes. See above for diagnostic differences with *L. boticarius* n.sp.

An outstanding character of *L. chasnensis*, unparalleled in other *Laparocerus* species, is the presence of a portion of the base of the deciduous process in the external angle of the mandibles, forming an acute projection.

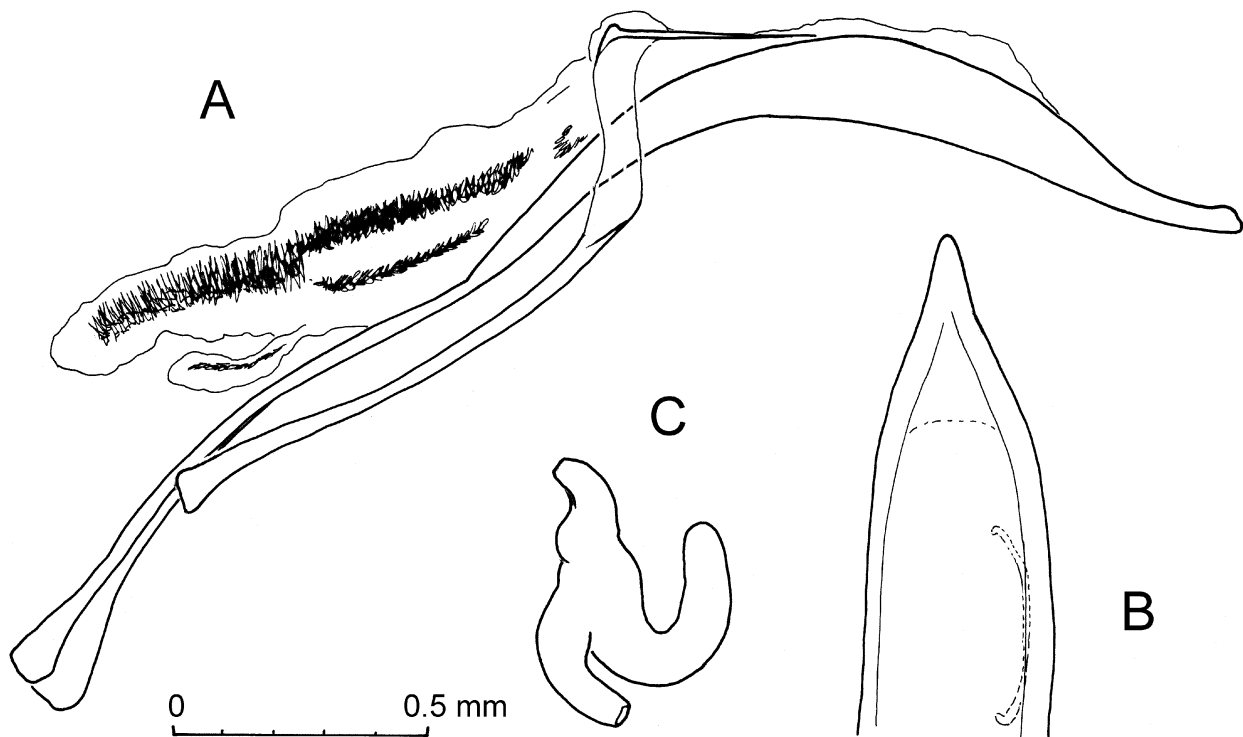


FIGURE 8. *Laparocerus chasnensis* n.sp. **A.** Male genitalia, lateral view. **B.** Apical end of median lobe in dorsal view. **C.** Spermatheca.

Material examined. Holotype: Tenerife, El Frontón-Vilaflor, km 6.5, 1020 m (UTM 28R 03398 31125), 1♂ 6-12-2003 leg. A. Machado (TFMC reg. CO-15494), this locality area is known as Euchoba. **Paratypes:** same locality and collector, 34 exx 6-12-2003 (some immature), at km 7, 1070 m, 18 exx 5-12-2003 (AMC, 2 MNCN, 2 NHM). Vilaflor: Euchoba 33 exx 5-12-2003 leg. A. Aguiar (AAC, 2 TFMC, 2 MNHN). Same date and locality, 15 exx; Vilaflor: Las Quemadas, 1 ex 5-12-2003 leg. R. García (RGB).

Distribution and ecology. Endemic to the island of Tenerife, collected in the open scrub vegetation intermixed with the pinewood, in the southern slopes of the island. It was abundant on *Cistus monspeliensis*, but occasionally also on *Chamaecytisus proliferus*. Active during night and in the rainy season (autumn-winter).

Laparocerus subparallelus n. sp.

(Figures 4, 9, and 11-D)

Measurements of holotype (♂). *Length*: total (without rostrum) 5.0 mm, head 1.6 mm, eyes 0.30 mm, rostrum 0.48 mm, scape 1.08 mm, funicle 0.56 mm, articles (1st/ 2nd/ 3rd/ 4th) 0.22 /0.24 /0.14 /0.10 mm, club 0.50 mm, pronotum 1.20 mm, elytra 3.20 mm, tibiae (pro- /meso- /meta-) 1.20 /1.10 /1.27 mm. *Width*: head (with eyes) 0.86 mm, eyes 0.25 mm, frons 0.48 mm, rostrum (with pterygia 0.57 mm, rostrum (minimum) 0.40 mm, scape 0.11 mm, club 0.14 mm, pronotum (anterior /maximum /posterior) 1.00 /1.34/ 1.20 mm, and elytra (maximum) 1.98 mm. *Height*: abdomen 1.54 mm.

Description of males. *Laparocerus* of small size (length without rostrum: 4.0–5.9 mm, of elongate and parallel outline (somewhat cylindrical appearance). Integument nitid, piceous (tibia, tarsus and antennae rufo-ferruginous), clothed with cinereous or flavescens pubescence of linear recumbent scales, sometimes with coppery tinge, chequered on elytra; emergent testaceous bristles on elytra. *Antennae* relative short; scape not longer than pronotum, arcuate, strongly capitate (apical fifth); 1st and 2nd articles of funicle subequal; club big, fusiform, longer than three previous articles together. *Head* bulky and short, base wide and inflated (clearly much wider than width at eyes); rostrum very short, quadrate, dorsally trapezoidal (very constricted before insertion of antennae) surface fairly even, punctured, without lateral keels, prorostrum badly delimited (apical declivity very smooth); epistomal keel complete, moderately elevated; pterygia almost flat; frons convex, small rhomboid median puncture; occiput very convex. Eyes oval (L/W = 1.2), evenly convex, little protruding (25%), reaching rim of frons; temples much longer than length of eyes. *Pronotum* 0.7× width of elytra, slightly transverse (L/W = 0.89), sides more or less curved, anterior margin a trifle more constricted than base; surface convex, shiny, densely and separately punctured (punctures small with some scattered bigger ones; variable); sometimes an indication of short median line; vestiture of intermixed lanceolate recumbent and hair-like hyaline scales (on collar transversely oriented). Anterior rim slightly concave at middle. *Scutellum* small, almost equilateral, punctured. *Elytra* 2.7× longer than pronotum, elongate with fairly parallel sides (L/W = 1.6), convex, not acuminate at apex, maximum width at middle (rarely slightly before); integument nitid, alutaceous (often corrugate); scale cover as in pronotum, chequered. Striae small and precisely punctured; intervals feebly subconvex or even, with a row of erect setae, small in first half, longer and straighter apicad (always oriented backwards). *Abdomen*. Integument shiny, transversely rugulose-striated or punctuated (usually margin of ventrites). Inter-mesocoxal ridge smallish. 5th ventrite as long as two previous ventrites together; apically truncated. *Legs* normal, straight and hairy. Protibiae pre-apically lightly thinned and bent, apex expanded both-sides with terminal rim fairly straight, outer angle round, internal acute, with strong mucro; meso- and metatibiae dilated at apex, with smaller mucro. *Genitalia* (figure 9 A–B). Aedeagus bent at base of tube, with short narrowing tip. Apodemes longer than tube; internal sac with a main large and dense field of denticles.

Description of females. Length without rostrum, 4.2–6.2 mm. Same as male, but broader and shorter, with elytra less parallel, suboval (L/W= 1.35). Pro- and mesotibiae with thin and small mucro; metatibiae unarmed. 5th ventrite apically rounded; sternite VIII, figure 11-D. Spermatheca, figure 9–C.

Etymology. The specific epithet is an adjective and refers to the subparallel habitus of the species.

Diagnostic remarks. This species is quite variable in size and outline, but easy to recognise by the subparallel-cylindrical habitus of males and, particularly, by the bulky head, with short trapezoid rostrum and inflated base (both sexes). This combination is sufficient to separate it from its two closest relatives, *L. scapularis* Wollaston, 1864 and *L. bolivari* Uyttenboogaart, 1937, both of which are of very similar aspect, with longer and more parallel rostrum, and the head which is never more broader at the base than at the eyes (tempora equal or shorter than length of eye). Furthermore, *L. bolivari* has no double punctuation on pronotum. The genetic distance of *L. subparallelus* n.sp. with *L. scapularis* is 4.5% and with *L. bolivari* 6.6%. A series of *L. subparallelus* n.sp. from pinewoods at Vilaflor, are very small and more cylindrical in appearance. It may be related to the different habitat and host-plant (*Lotus*).

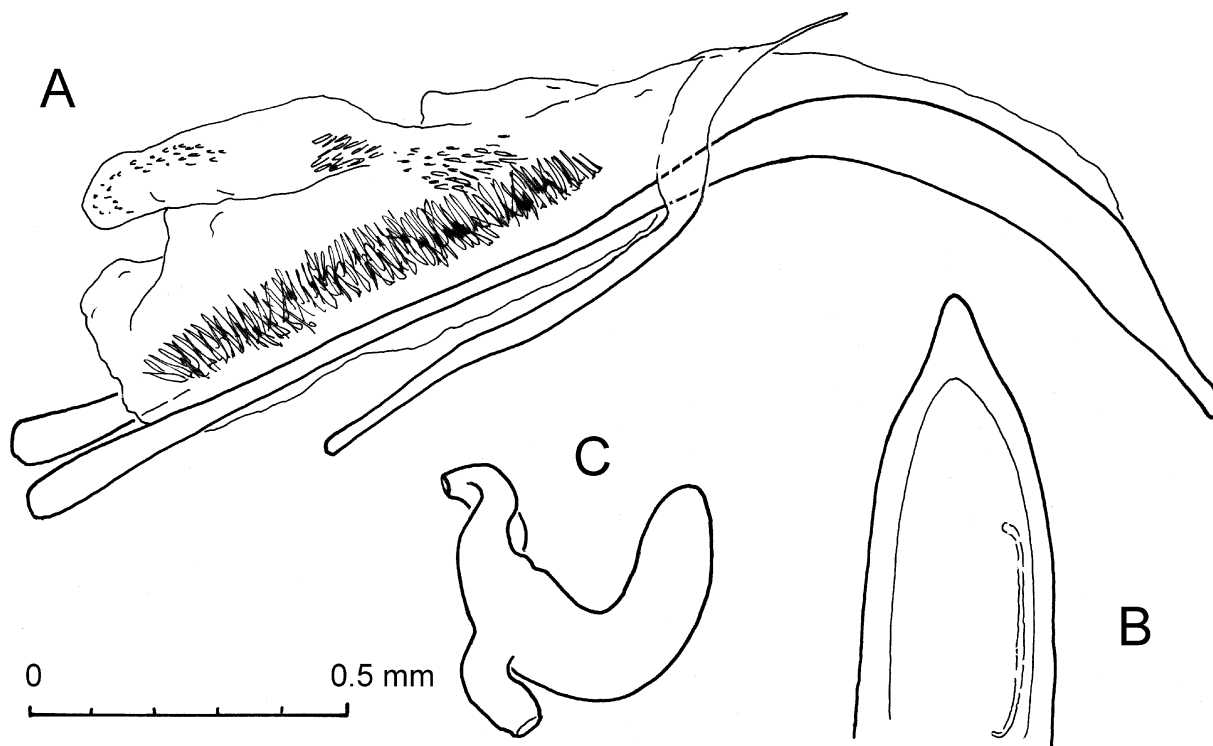


FIGURE 9. *Laparocerus subparallelus* n.sp. **A.** Male genitalia, lateral view. **B.** Apical end of median lobe in dorsal view. **C.** Spermatheca.

Material examined. Holotype: Tenerife, Boca Tauce, km 2 W, 2000 m (UTM 28R 03355 31211), 1♂ 6-12-2003 leg. A. Machado (TFMC Reg. CO-15497). **Paratypes:** same locality and collector, 69 exx (AMC); Boca Tauce, 2000 m, 44 exx 9-6-2002, 10 exx 6-12-2003 leg. A. Machado (AMC, 2 MNCN, 2 NHM). Same locality, 17 exx 6-12-2003 leg. R. García (RGB). Same locality and date, 31 exx leg. A. Aguiar (AAC, 2 TFMC, 2 MNHN). **Not paratypes:** Las Cañadas, 2000 m, 16 exx 19-4-1970, Vilaflor (La Florida) 1700 m, 15 exx 6-12-2003; Vilaflor (Los Llanitos), 1700 m, 15 exx (several immature) 6-12-2003; Vilaflor (Las Quemadas, km 9.1) 6 exx 6-12-2003 leg. A. Machado (AMC).

Distribution and ecology. Endemic to the island of Tenerife, *L. subparallelus* n.sp. lives at high elevation in the south-western district of Las Cañadas and neighbouring slopes. It was collected abundantly at night during winter-spring in the high-mountain shrub formations, feeding on *Spartocytisus supranubius* and *Adenocarpus viscosus*, but also on the understory of lofty pinewoods, feeding on *Lotus campylocladus*.

***Laparocerus tinguaro* n. sp.**

(Figures 5, 10, and 11-B)

Measurements of holotype (♂). *Length:* total (without rostrum) 6.6 mm, head 1.45 mm, rostrum 0.74 mm, scape 1.66 mm, funicle 1.18 mm, articles (1st/ 2nd/ 3rd/ 4th) 0.40 /0.44 /0.30 /0.22mm, club 0.66 mm, pronotum 1.30 mm, elytra 4.70 mm, tibiae (pro- /meso- /meta-) 2.00 /1.80 /2.25 mm. *Width:* head (with eyes) 1.20 mm, frons 0.74 mm, rostrum (with pterygia) 0.82 mm, rostrum (minimum) 0.50 mm, rostrum (basal) 0.60, scape 0.16 mm, club 0.20 mm, pronotum (anterior /maximum /posterior) 1.35 /1.75/ 1.60 mm, and elytra (maximum) 2.95 mm. *Height:* abdomen 2.20 mm.

Description of males. *Laparocerus* of moderate size (length without rostrum: 6.0–6.9 mm, moderately depressed and fusiform in outline. General colouration olivaceous brown. Integument moderately shining, dark ferruginous brown except for apical part of tibiae and the tarsi, these usually clearer. Vestiture more or less dense, formed by small linear recumbent brassy scales with some copper tinge, more or less tessellate on elytra. *Antennae* slender, scape capitate and slightly bent, longer than pronotum; funicle slightly shorter than pronotum, 2nd article somewhat longer (1.23×) than first, more shorter than 3rd + 4th; club fusiform, as long as the three previous articles together. *Head* subconical, frons and rostrum almost on the same dorsal plane (sometimes slightly depressed at union); rostrum short, narrower dorsally than ventrally, with convergent sides, constricted before insertion of antennae; pterygia small and little prominent (base of scape visible from above); rostral surface almost smooth with remnants of isodiametric micro-reticulation and a few dispersed micro-punctures; pronotum not well delimited, epistomal keel vanished at middle. Frons more densely micro-punctate, laterally pubescent, with deep longitudinal median fovea, variable in size. Eyes oval in side view, evenly convex and moderately prominent (about 30%); not reaching rim of frons. *Pronotum* 0.6× width of elytra, transverse, subconvex; hind margin a little wider than front margin, sides moderately curved. Punctures double: micropunctures (insertion of scales) abundant and dense; macropunctures separated, less dense, particularly on disc. Median smooth line absent, lineal scales (longer than on elytra) convergent towards midline and base, often ending in conspicuous patch. *Scutellum* triangular, short and wider than long. *Elytra* oval-acuminate, 3.3× longer than pronotum; maximal width before middle; disc flattened (abdomen transversal convexity 74%); sutural interval slightly elevated at base (post-scutellar ridge) in the *forma typica*. Basal rim fairly straight; humeri rounded off, sometimes slightly angular. Striae marked by rows of deep large punctures in disc and flanks, diminishing apicad. Intervals subconvex, micro-reticulate and alutaceous, with 6–7 lineal scales across and one open row of emergent black thick setae (length = ½ width of 3rd interval) arcuate and oriented towards the apex, more developed in the flanks and apical declivity. Apex of elytra shortly beaked downwards (in side view). *Abdomen*. Integument shiny, transversely micro-reticulate, vestiture of very sparse scales. Inter-mesocoxal carina short, narrow, little elevated. 5th ventrite apically truncated. *Legs*. Protibiae almost straight, slightly bent downwards at apex; outer apical angle blunt, inner expanded, with mucro, as in the mesotibiae (mucro smaller). *Genitalia* (figure 10 A–B). Aedeagus with moderately sharp end and incipient preapical dorsal heel (in lateral view). Apodemes short, as long as 1/3 of tube; internal sac with fairly weak patch of sclerotized micro-denticles.

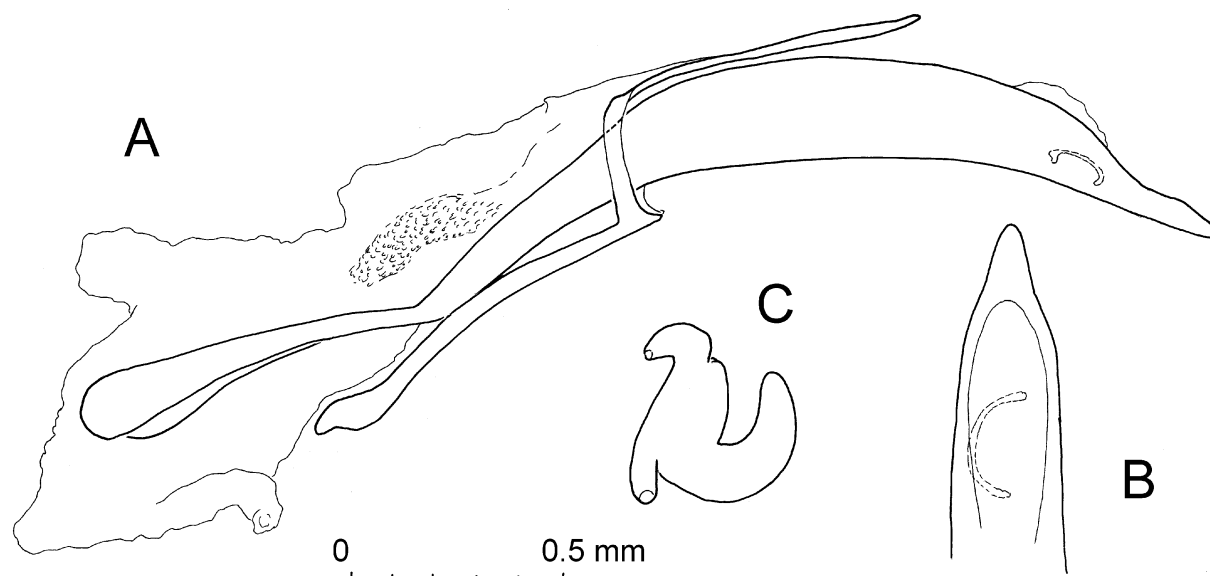


FIGURE 10. *Laparocerus tinguaro* n.sp. **A.** Male genitalia, lateral view. **B.** Apical end of median lobe in dorsal view. **C.** Spermatheca.

Description of females. Length (without rostrum) 6.3–7.2 mm. Same as males but more robust; elytra wider with more developed shoulders (sometimes indication of humeral carina), maximum width in anterior third, more acuminate apicad, macropunctures a trifle larger, and longer emergent setae (as long as width of 3rd interval). Tibiae simple. Ventriles fairly inflated; 5th ventrite apically blunt. Sternite VIII with elongate-lobulate fenestra (figure 11-B). Spermatheca, figure 10-C.

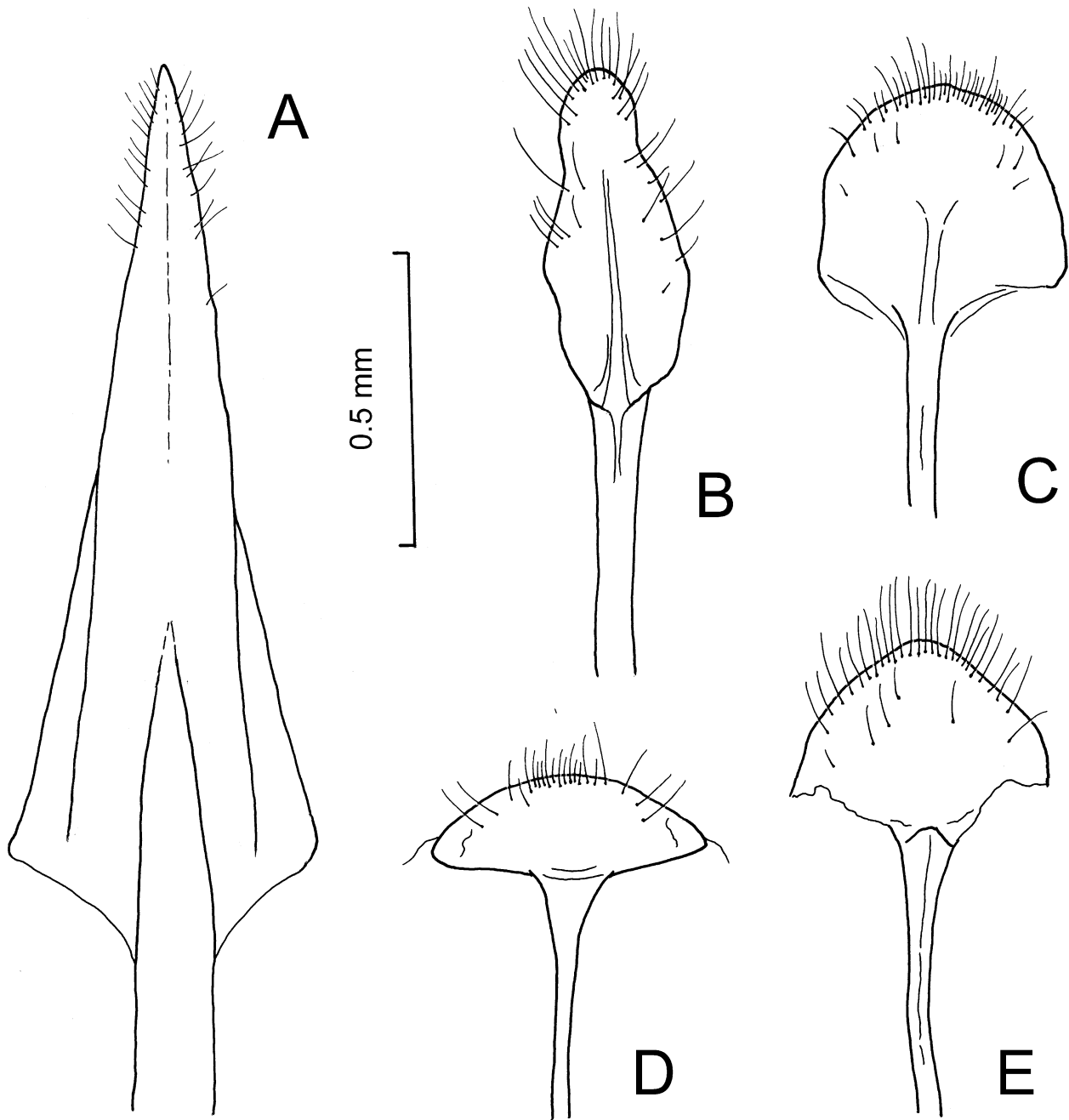


FIGURE 11. Sternite VIII of female. **A.** *Laparocerus aguiari* n.sp., **B.** *Laparocerus tinguaro* n.sp., **C.** *Laparocerus chasnensis* n.sp., **D.** *Laparocerus subparallelus* n.sp., **E.** *Laparocerus boticarius* n.sp.

Etymology. The specific epithet is the Guanche name of an aboriginal warrior of Tenerife, “Tinguaro” and it is a substantive in apposition, hence invariable.

Diagnostic remarks. The species is characterized by the straight and not internally notched male protibiae with blunt apical outer angle and internal mucro, prominent eyes, the oval-acuminate elytra with flattened

disc; the peculiar post-scutellar elevated sutural ridge, as well as by the rows of separated emergent black setae, very conspicuous on the flanks and apical third of the elytra. Other species of equivalent size in its region are *L. obtriangularis* Wollaston, 1864, and *L. obscurus* Wollaston, 1864, both also bearing black setae on the elytra. The former has very shiny black integument with metallic tinge; the head and prothorax are much narrower (parallel rostrum, bigger but more depressed eyes) and the elytra are shorter (relatively much broader than pronotum), and with a trisinuated basal rim. The female elytra of *L. tinguaro* n.sp. are not so triangular or cordiform as in *L. obtriangularis*, and the emergent setae are not so long and straight. Conversely, in *L. obscurus* the sub-erect setae are much shorter (even in the females) but more abundant; the elytra are not acuminate at all, and the humeral angles are slightly but clearly marked (notably in the females). In this species, male protibiae are strongly notched and curved in their distal half, and the second article is exceedingly much larger than the first.

Specimens of *L. tinguaro* n.sp. from the western part of the Anaga massif differ constantly in slightly smaller, rounder and more convex eyes (ratio length/width = 1.1, instead of 1.3), rostrum with punctures, no post-scutellar ridge developed, and disc less depressed. Perhaps it could be a subspecies?

Material examined. Holotype: Tenerife, Anaga: Cabezo de Paybo, 710 m (UTM 28R 03830 31588), 1 ♂ 26-11-2000, A. Machado leg. (TFMC Reg. CO-15500). **Paratypes:** same locality and collector, 27 exx 26-10-2002, 15 exx 17-10-2004 (AMC, 2 MNCN, 2 NHM); Túnel de Taganana N, 600 m, 2 exx 7-12-2001 leg. A. Machado (AMC). El Bailadero 9 exx 26-10-2002, 12 exx 17-10-2004 leg. A. Aguiar (AAC). Chinobre W, 1 ex 12-3-1993 leg. M.G. Morris (Coll. MM). El Bailadero, 600 m, 1 ex 1-2-1975, 1 ex 6-4-1975 leg. M. Brito, 2 exx 4-8-1957 leg. J.M. Fernández (TFMC); *ibidem* 1 exx 20-2-1984 leg. E. Colonnelli (MZUR). Lomo de las Bodegas, 500 m, 2 exx 22-12-2003 leg. Ch. Germann (CG). El Pijaral, 600 m, 1 ex 13-3-1985 leg. E. Colonnelli (MZUR). **Not paratypes:** Tenerife, Anaga: Las Carboneras, 650 m, 15 exx 15-12-1999 leg. A. Machado (AMC); Pista de Las Yedras, 740 m, 4 exx 15-12-1999 leg. A. Machado (AMC); Montes de Anaga, 1 ex 24-11-1974 leg. A. Machado (AMC). Las Mercedes, 1 ex. 20-12-1997 leg. St. Kadlec (Coll. RB), 1 ex 13-1-1957 leg. J.M. Fernández (TFMC) Tenerife). Casas de la Cumbre, 700 m, 1 exx. 2-5-1987, leg. E. Colonnelli (LM).

Distribution and ecology. *Laparocerus tinguaro* n.sp. lives in the damp laurel forest of eastern Tenerife. It feeds mainly on *Phyllis nobla*, a woody plant that grows often on the rocks directly exposed to the humidity of the clouds. It is active in autumn and winter, only during the night.

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