Russian Entomol. J. 15(4): 367–392

New firefly taxa from Hispaniola and Puerto Rico (Coleoptera: Lampyridae), with notes on biogeography

Новые таксоны светлячков с Испаниолы и Пуэрто-Рико (Lampyridae: Coleoptera), с замечаниями по биогеографии

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KEY WORDS: Coleoptera, Lampyridae, new tribe, new genera, new species, taxonomy, biogeography, Neotropics.
КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Lampyridae, новая триба, новые рода, новые виды, биогеография, Неотропика.

ABSTRACT. Two new firefly genera, *Cheguevaria* Kazantsev, 2006 **gen.n.** and *Rufolychnia* Kazantsev, 2006 **gen.n.**, and twenty two new species, *Cheguevaria taino*, *C. angusta*, *Lychnacris konstantinovi*, *L. neslihanae*, *L. pedernalis*, *Erythrolychnia nigriventris*, *E. unicolor*, *Callopisma rufoviolacea*, *Robopus branhami*, *R. cayeyensis*, *R. erythrolytris*, *R. kasikus*, *R. niger*, *R. roseinotatus*, *Heterophotinus alius*, *H. constanzae*, *H. limpioensis*, *H. merielae*, *H. nigricollis*, *H. viridicolor*, *Microdiphot baorucoensis* and *Presbyolampis vegaensis* Kazantsev, 2006 **spp.n.**, are described from Hispaniola and Puerto Rico. *Lychnacris* Motschulsky, 1853 is for the first time reported from the Greater Antilles and *Microdiphot* Barber, 1941 and *Presbyolampis* Buck, 1947 for the first time reported from Hispaniola. Lectotypes are designated for *Pyractomena vitticollis* Motschulsky, 1853, *Erythrolychnia dimidiatipennis* Motschulsky, 1853 and *Pygolampis quadrinotata* Motschulsky, 1854. *Heterophotinus* E.Olivier, 1894 is revalidated from synonymy with *Robopus* Motschulsky, 1853. *Erythrolychnia albopalpis* Leng et Mutchler, 1922 is synonymized with *E. bipartita* E.Olivier, 1912. *Lucidota marginipennis* Leng et Mutchler, 1922 is transferred to *Robopus*; *Photinus quadrinotatus* (Motschulsky), *Diphotus dubiosus* (Leng et Mutchler, 1922), *D. glaucus* (Olivier, 1790), *D. lengi* (Mutchler, 1923), *D. quadrimaculatus* (Laporte, 1840), *D. triangularis* (E.Olivier, 1912) and *D. vittatus* (Olivier, 1790) are transferred to *Heterophotinus*; *Callopisma postica* (E.Olivier, 1899), *C. mariposa* Leng et Mutchler, 1922 and *C. emarginata* Leng et Mutchler, 1922 — to *Lychnacris*. A new tribe, Cheguevariini Kazantsev, 2006 **tr.n.**, is established and tentatively placed in the Lampyridae incertae sedis. A key to the tribes and genera, as well as a checklist of fireflies of Hispaniola and Puerto Rico are provided.

РЕЗЮМЕ. С Испаниолы и Пуэрто-Рико описывается два новых рода светлячков, *Cheguevaria* Kazantsev, 2006 **gen.n.** и *Rufolychnia* Kazantsev, 2006 **gen.n.**, и двадцать два новых вида, *Cheguevaria taino*, *C. angusta*, *Lychnacris konstantinovi*, *L. neslihanae*, *L. pedernalis*, *Erythrolychnia nigriventris*, *E. unicolor*, *Callopisma rufoviolacea*, *Robopus branhami*, *R. cayeyensis*, *R. erythrolytris*, *R. kasikus*, *R. niger*, *R. roseinotatus*, *Heterophotinus alius*, *H. constanzae*, *H. limpioensis*, *H. merielae*, *H. nigricollis*, *H. viridicolor*, *Microdiphot baorucoensis* и *Presbyolampis vegaensis* Kazantsev, 2006 **spp.n.** *Lychnacris* Motschulsky, 1853 впервые приводится для Больших Антильских островов, а *Microdiphot* Barber, 1941 и *Presbyolampis* Buck, 1947 — для Испаниолы. Обозначаются лектотипы для *Pyractomena vitticollis* Motschulsky, 1853, *Erythrolychnia dimidiatipennis* Motschulsky, 1853 и *Pygolampis quadrinotata* Motschulsky, 1854. *Heterophotinus* E.Olivier, 1894 восстанавливается из синономии к *Robopus* Motschulsky, 1853. *Erythrolychnia albopalpis* Leng et Mutchler, 1922 сводится в синонимы к *E. bipartita* E.Olivier, 1912. *Lucidota marginipennis* Leng et Mutchler, 1922 переносится в *Robopus*; *Photinus quadrinotatus* (Motschulsky), *Diphotus dubiosus* (Leng et Mutchler, 1922), *D. glaucus* (Olivier, 1790), *D. lengi* (Mutchler, 1923), *D. quadrimaculatus* (Laporte, 1840), *D. triangularis* (E.Olivier, 1912) и *D. vittatus* (Olivier, 1790) переносятся в *Heterophotinus*; а *Callopisma postica* (E.Olivier, 1899), *C. mariposa* Leng et Mutchler, 1922 и *C. emarginata* Leng et Mutchler, 1922 — в *Lychnacris*. Устанавливается новая триба, Cheguevariini Kazantsev, 2006 **tr.n.**, которая в предварительном порядке включается в Lampyridae incertae sedis. Приводится определительная таблица триб и родов, а также полный список светлячков Испаниолы и Пуэрто-Рико.

Introduction

The firefly fauna of the Greater Antillean islands Hispaniola (Haiti) and Puerto Rico, the study of which began in the 18th [Olivier, 1790] and continued in the 19th century [Laporte, 1840; Motschulsky, 1853, 1854], has not been revised since Leng and Mutchler's [1922]

treatise of the Lycidae, Lampyridae and Cantharidae of the West Indies and Mutchler's [1923a; 1923b] additional notes. These authors acknowledged 16 species of Lampyridae of four genera, *Erythrolychnia* Motschulsky, 1853, *Callopisma* Motschulsky, 1853, *Pyractomena* Melsheimer, 1845 and *Photinus* Laporte, 1833, from Hispaniola and nine species and the same four genera, with *Erythrolychnia* replaced with *Lucidota* Laporte, 1833, from Puerto Rico. Only one species, *Photinus vittatus* (Olivier, 1790), was found to occur on both islands. Leng and Mutchler [1922] and Mutchler [1923b] also listed 13 firefly species from Jamaica. Subsequent studies on the Jamaican lampyrids, however, raised the number of species-group taxa found on the island first to 44 [Barber, 1941], then to 54 [Buck, 1947], finally to 56 [McDermott & Buck, 1959] and added four new genera, *Diphotus* Barber, 1941, *Microdiphot* Barber, 1941, *Jamphotus* Barber, 1941 and *Presbyolampis* Buck, 1947. Unsurprisingly, the recent collecting on Hispaniola and Puerto Rico allows doubling the number of species and genera of the Lampyridae of these two islands as well.

Leng and Mutchler [1922] separated the higher level lampyrid taxa they studied mostly by their antennal structure and placed the West Indian fireflies in genera and subfamilies alike according to the relative length and degree of flattening and serration of the antennae — with one exception: they grouped all reddish fireflies with black elytral apices in the genus *Callopisma*, irrespective of their morphologies, even despite differences in their antennal structure. In fact, the above characters, being rather variable in fireflies, are of limited taxonomic value, as already noted by McDermott and Buck [1959] and McDermott [1962], and many Jamaican *Photinus* and all *Photinus* species of Hispaniola and Puerto Rico, except for the obscure *Ph. quadrinotatus* (Motschulsky, 1854), were transferred to *Diphotus* or *Pyractomena* [Buck, 1947; McDermott, 1955; 1964]. McDermott also [1962] doubted Leng and Mutchler's placement of the West Indian taxa with long flattened antennae in *Lucidota* and suppressed *Diphotus* to a synonym of *Robopus* Motschulsky, 1854 [McDermott, 1964]. In the course of the present study *Lucidota* was found to be absent from the Greater Antilles, while the "*Callopisma*" species described by Leng and Mutchler were found to be not congeneric with *Callopisma rufa* (Olivier, 1790), the type species of the genus, belonging in most cases to *Lychnacris* Motschulsky, 1853, of the tribe Lamprocerini, in one case representing a new genus of the tribe Photinini, with at least some Cuban taxa being in fact *Robopus*.

Descriptions of the new lampyrid taxa from Hispaniola and Puerto Rico, along with the taxonomic notes that were deemed necessary are presented below. As the higher classification of Lampyridae is conspicuously artificial and in need of revision, as pointed out by different authors [e.g., McDermott, 1964; Crowson, 1972; Branham & Wenzel, 2003], no attempt is made to assign the regarded taxa to the subfamilies.

The following abbreviations are used in this paper:
AMNH — American Museum of Natural History, New York;
CMNH — Carnegie Museum of Natural History, Cleveland;
ICM — Insect Center, Moscow;
LSAM — Louisiana State Arthropod Museum, Baton Rouge;
USNM — US National Museum of Natural History, Washington, D.C.;
ZMMU — Zoological Museum of the Moscow University.

Material and Methods

The material studied was chiefly ethyl acetate preserved, with specimens pinned or glued on cardboard rectangles or triangles. For more detailed examination some male and/or female specimens of most of the species were relaxed in water, then, for approximately 24 hours, in 10% KOH of room temperature. Certain KOH treated parts of the body, including the aedeagi, external female genitalia and ultimate abdominal segments, were placed in microvials with glycerin. The apex of abdomen often providing better differential characters than the aedeagus, the unique specimens in most cases were not dissected.

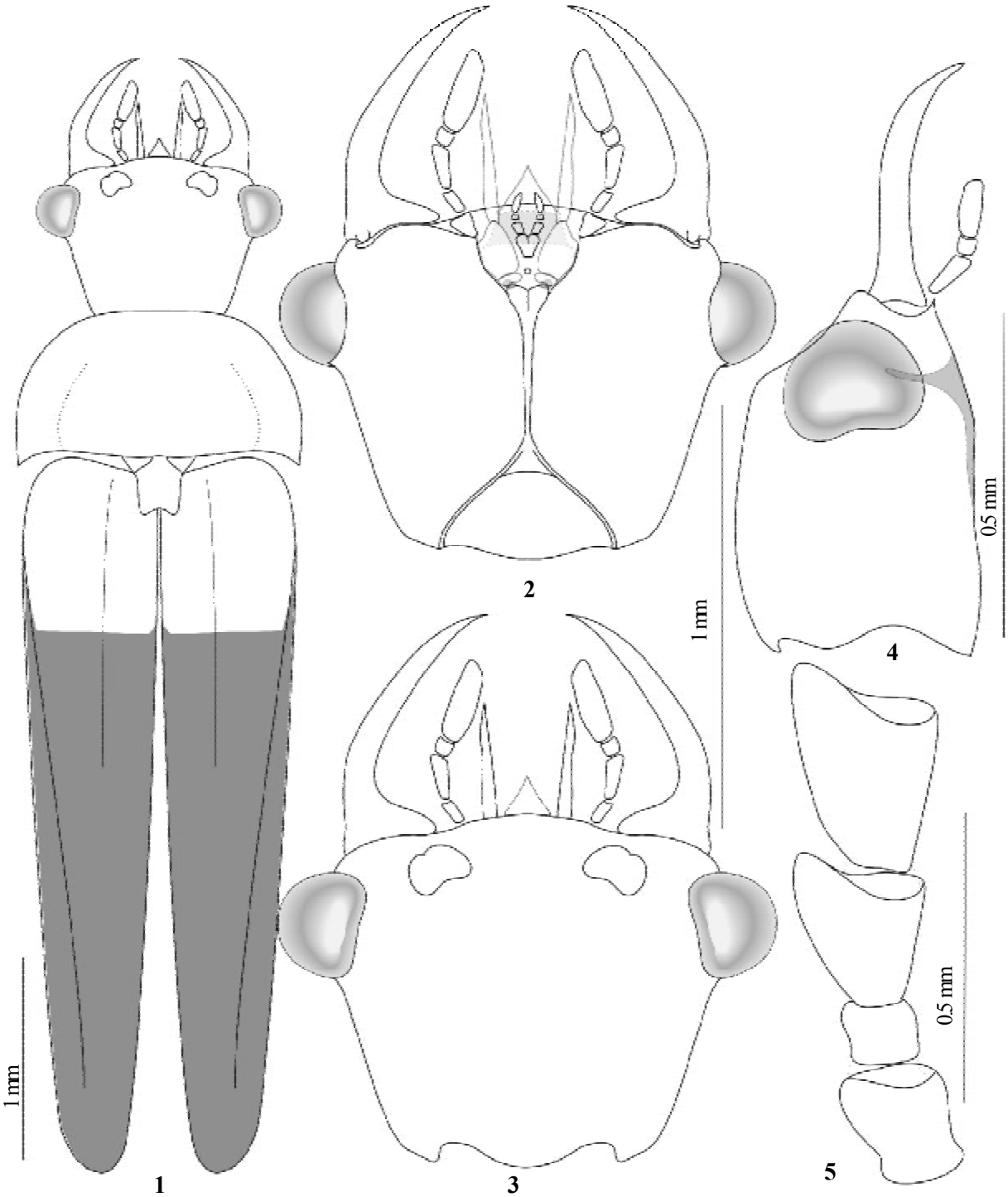
Taxonomy

Key to the Lampyridae tribes and genera of Hispaniola and Puerto Rico

1. Head completely exposed (Fig. 1). Elytral epipleures absent. All male abdominal segments and genitalia symmetric (Figs 13–17) [Cheguevariini Kazantsev, 2006 **tr.n.**] .... *Cheguevaria* Kazantsev, 2006 **gen.n.**
– Head completely covered by pronotum (e.g., Figs 28, 32, 37, 49). Elytral epipleures present. At least some male abdominal segments and phallobase asymmetric (e.g., Figs 33–35, 40–42, 45–46, 52–53) 2
2. All claws bifid [Photurini] ..... *Presbyolampis* Buck
– All claws simple, at most anterior claw with basal tooth ... 3
3. Mandibles small, with narrow, glabrous apices. Photic organ on ventrites 5 and 6 [Cratomorphini] .... *Pyractomena* Melsheimer
– Mandibles uniform, gradually tapering apically. Photic organ (in Hispaniolan and Puerto Rican species) on ventrite 6 absent 4
4. Abdominal spiracles ventral [Lamprocerini] .... *Lychnacris* Motschulsky
– Abdominal spiracles dorsal [Photinini] 5
5. Males with seven ventrites (Figs 30, 39) 6
– Males with eight ventrites (e.g., Figs 22, 24, 27, 50, 58) ... 7
6. Eyes large. Photic organ on ventrite 5 (Fig. 30) .... *Erythrolychnia* Motschulsky
– Eyes small. Photic organ on ventrite 7 (Fig. 39) .... *Callopisma* Motschulsky
7. Male antenna long, reaching over elytral half, conspicuously flattened and serrate. Anterior claw with basal tooth. External female genitalia without conspicuous coxital baculus (Figs 48, 56) 8
— Male antennae hardly attaining to middle of elytra, almost filiform. All claws simple. External female genitalia with conspicuous coxital baculus (Fig. 78) 9
8. Ventrite 7 long, almost truncate, with pronounced distal angles, ventrite 8 deeply emarginate apically (Figs 44–45). Aedeagus robust, its median lobe distally dilated and laterally hooked (Fig. 46). Female ultimate ventrite broad, with short spiculum ventrale (Fig. 47) .... *Rufolychnia* Kazantsev, 2006 **gen.n.**

– Ventrite 7 short, emarginate medially, without pronounced distal angles, ventrite 8 rounded apically (Figs 50–52, 58). Aedeagus elongate, its median lobe distally narrowed (Figs 53–54, 60–64). Female ultimate ventrite constricted distally, with long spiculum ventrale (Fig. 55) ..... *Robopus* Motschulsky

9. Body flattened and relatively wide, pronotum transverse (Figs 65, 67–68, 70, 79) ..... *Heterophotinus* E.Olivier, **nom.rev.**
– Body narrow, almost cylindrical; pronotum slightly elongate (Fig. 83) ..... *Microdiphot* Buck



Figs 1–5. Details of *Cheguevaria taino* **gen.n.**, **sp.n.**, holotype male: 1 — body outline; 2–4 — head; 5 — antennomeres 1–4; 1, 3 — dorsal view; 2, 5 — ventral view; 4 — lateral view.

Рис. 1–5. Детали строения *Cheguevaria taino* **gen.n.**, **sp.n.**, голотип, самец: 1 — общие очертания тела; 2–4 — голова; 5 — антенномеры 1–4; 1, 3 — сверху; 2, 5 — снизу; 4 — сбоку.

CHEGUEVARIINI Kazantsev **tr.n.**

Type genus: *Cheguevaria* Kazantsev **gen.n.**

DIAGNOSIS. *Cheguevaria* Kazantsev **gen.n.**, separated as Cheguevariini **tr.n.**, though resembling certain Phengodidae in the shape and structure of the head, does not possess such phengodid features, as the bi- or uniramose 12-segmented antennae, conspicuous clypeus and prominent ventral tentorial groove [Crowson, 1972; Wittmer, 1976]. In the Phengodidae, as well as in the other cantharoids, it is sternite 9 that forms the genital capsule with tergites 8 and 9 (Figs 18–19), whereas in Cheguevariini **tr.n.** the large and widened tergite 8 receives sternites 8 and 9 (Figs 13, 17), this type of structure characteristic of the Lampyridae (e.g., Figs 22, 24, 26, 30, 50) and not reported elsewhere in the Cantharoidea. As the latter condition of the ultimate abdominal segments is an apparent synapomorphy of the fireflies, the new tribe is considered to be a lampyrid lineage.

The characters that distinguish Cheguevariini **tr.n.** from other lampyrids, the exposed non-retractable head, short pronotum, absent elytral epipleures, symmetric aedeagus and absent photic organs, are hypothetically plesiomorphic, as both apparently more primitive from the beetles evolution standpoint and widely shared by the non-lampyrid cantharoids. At the same time, the enlarged head with long mandibles is hypothesized to represent its apomorphy. Given its numerous plesiomorphies, Cheguevariini **tr.n.** seems to deserve to be placed, possibly as a subfamily, at the root of the Lampyridae. However, as the fireflies have never been analyzed morphologically and phylogenetically at a higher level with a satisfactory outcome [e.g., McDermott, 1964; Crowson, 1972; Branham & Wenzel, 2003], it is included, pending further studies, in the Lampyridae incertae sedis.

Cheguevaria Kazantsev **gen.n.**

Type species: *Cheguevaria taino* **sp.n.**

DESCRIPTION. **Male**. Alate, relatively small, not exceeding 5 mm in length, elongate (Fig. 1), moderately flattened. Head transverse, feebly narrowed behind eyes (Figs 2–3). Fastigium blunt, ca. 130 degrees (Fig. 4). Tentorium represented by posterior pits and a pair of short slender ventral arms connected by bridge (Figs 2, 4); dorsal tentorial maculae absent (Fig. 3). Labrum transverse, non-sclerotized, lying inside epistoma (Fig. 2). Eyes small, lateral, spherical (Figs 2–3). Mandibles prominent, feebly bent inwards and downwards (Figs 2–4). Maxillary palps long, slender, 4–segmented, with ultimate palpomere conspicuously elongate and parallel-sided (Fig. 2). Prementum divided distally, labial palps minute, 3-segmented, pointed distally, mentum inconspicuous (Fig. 2). Gula long, gular sutures fused (Fig. 2). Antennal sockets small, separated by about twice their diameter (Fig. 3). Antenna 11-segmented, relatively short, with antennomeres 3–11 flattened and serrate; scapus and pedicel short (both conspicuously transverse in *C. angusta* **sp.n.**), subequal in length; antennomere 3 longer and wider than antennomere 2 (Fig. 5); antennal pubescence short and decumbent.

Pronotum transverse, trapezoidal, deflexed laterally, with inconspicuous furrowed median elevation; posterior angles sharp (Fig. 1). Prosternum short, triangular, furca without posterior lateral processes (Fig. 6). Mesothoracic spiracles elongate, extending beyond coxal limits (Fig. 6). Mesoventrite narrow, V-shaped, fused to mesepisternum; mesepimeron transverse (Fig. 6). Mesonotum with scutellum not attaining to anterior margin; scutellum with square postnotal plate (Fig. 7). Elytra elongate, tapering distally, alveolate; with prominent humeral costa, almost attaining to elytral apex (Fig. 1). Metanotum elongate, with straight scutoscutellar ridge; allocristae inconspicuous, starting in the middle of scutum; scutellum without median suture (Fig. 8). Metaventrite almost square; discrimen (metasternal suture) complete, attaining to mesoventrite (Fig. 6). Metendosternite small, with incomplete transverse sutures and without lateral arms (Figs 9–10). Metathoracic wing with C not merging with RA (merging with RA at apical hinge in *C. angusta* **sp.n.**) and elongate anal cell; wedge cell absent; inconspicuous cu–a brace at Cu veins fork; Cu veins approaching, but not connected to M vein (Fig. 11).

Pro- and mesocoxae elongate; metacoxae narrowly separated (Fig. 6). Legs narrow; trochanters elongate, subcylindrical, obliquely connected to femora; femora and tibiae flattened, tibial spurs absent; tarsomeres 1–4 narrow, tarsomeres 1–3 without plantar pads, tarsomere 4 lobed and provided with plantar pad; all claws simple (Fig. 12). Abdominal spiracles located dorsally on lateral edge of sternites. Tergite 8 large, embracing sternites 8–9 and tergite 9 (paraproct); sternite 8 with distal median projection (Fig. 13); paraproct medially undivided, spiculum gastrale absent (Fig. 16).

Aedeagus lightly sclerotized, symmetric, with elongate parameres and straight median lobe; phallobase without median suture (Figs 14–15).

Female. Unknown.

ETYMOLOGY. The new genus is named after E. "Che" Guevara, the legendary Latin American revolutionary, very popular in the Caribbean region.

BIOLOGY. Nothing is known about the biology of *Cheguevaria* **gen.n.**, except that males were captured at lower stratus vegetation in the remnants of the lowland (Puerto Rico) or low mountain (Hispaniola) forests.

DIAGNOSIS. *Cheguevaria* **gen.n.** is easily differentiated from all other lampyrid genera by the tribal characters, i.e., by the large, exposed and non-retractable head, short pronotum (Fig. 1), absent elytral epipleures, absent photic organs and symmetric aedeagus (Figs 14–15).

Cheguevaria taino Kazantsev, **sp.n.**
Figs 1–16.

MATERIAL: Holotype, ♂, Puerto Rico, Isabella, Bosque Guajataca, 200 m, 8.IV.2005, S. Kazantsev leg. (ICM); paratype, ♂, same label (ICM).

DESCRIPTION. **Male**. Testaceous; most of head, antennae except antennomere 11, elytral distal three fourths, abdominal apex and legs brownish to dark brown; antennomere 11 whitish yellow.

Eyes small (interocular distance ca. 3 times greater than eye radius) (Fig. 2). Antennae almost attaining to elytral middle, with antennomere 3 slightly longer than wide, about twice as long as antennomere 2 and ca. 1.3 times shorter than antennomere 4 (Fig. 5).

Pronotum transverse, almost twice as wide as long, bisinuate basally, glabrous, with rounded anterior and minute acute posterior angles (Fig. 1). Scutellum parallel-sided, emarginate at apex (Fig. 1).

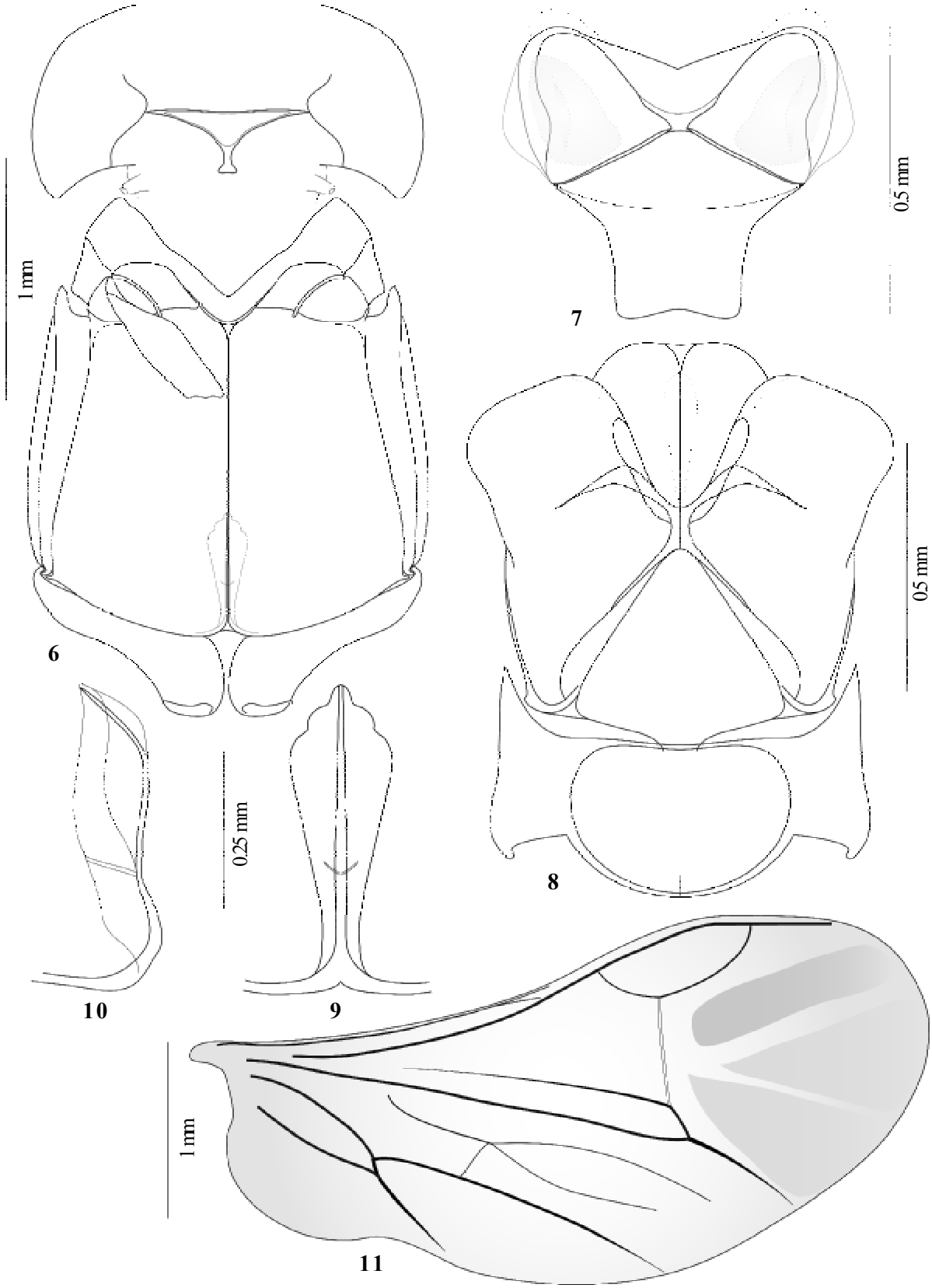
Elytra relatively long, 2.6 times as long as wide at humeri, widest at humeri, densely alveolate, with noticeable second costa in proximal half (Fig. 1).

Aedeagus with elongate unmodified parameres and straight narrow median lobe; phallobase with distal projections (Figs 14–15).

Female. Unknown.

Length: 4.0–4.2 mm. Width (humerally): 1.25–1.3 mm.

ETYMOLOGY. *C. taino* **sp.n.** is named after the indigenous people of the Greater Antilles who were the first "Americans" to meet Christopher Columbus in 1492.



Figs 6–11. Details of *Cheguevaria taino* **gen.n.**, **sp.n.**, holotype, male: 6 — thorax; 7 — mesonotum; 8 — metanotum; 9–10 — metendosternite; 11 — metathoracic wing; 6–7, 9 — ventral view; 8, 11 — dorsal view; 10 — lateral view.

Рис. 6–11. Детали строения *Cheguevaria taino* **gen.n.**, **sp.n.**, голотип, самец: 6 — торакс; 7 — мезонотум; 8 — метанотум; 9–10 — метэндостернит; 11 — заднее крыло; 6–7, 9 — снизу; 8, 11 — сверху; 10 — сбоку.

DIAGNOSIS. *C. taino* **sp.n.** is easily distinguished from *C. angusta* **sp.n.**, the second known species of the genus, by the broader shape and the different coloration.

Cheguevaria angusta Kazantsev, **sp.n.**
Fig. 17.

MATERIAL: Holotype, ♂, Dominican Republic, 15 km N Azua, 1000 m, 6.II.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Testaceous; head, antennae except antennomere 11, elytra, abdomen and legs, except coxae and trochanters, dark brown; antennomere 11 whitish yellow.

Eyes small (interocular distance ca. 2.5 times greater than eye radius). Antennae attaining to elytral two fifths, with transverse scapus and pedicel (antennomere 2), antennomere 3 slightly wider than long, about twice as long as pedicel and ca. 2 times shorter than antennomere 4.

Pronotum transverse, 1.3 times as wide as long, bisinuate basally, with pronounced anterior and acute posterior angles. Scutellum short, parallel-sided, emarginate at apex.

Elytra relatively long, 3 times as long as wide at humeri, widest at humeri, densely alveolate, alveolae arranged in longitudinal rows in proximal half.

Tergite 8 long, distally constricted (Fig. 17).

Female. Unknown.

Length: 3.7 mm. Width (humerally): 1.1 mm.

ETYMOLOGY. The name is derived from the Latin for "narrow" alluding to the body outline of the new species.

DIAGNOSIS. *C. angusta* **sp.n.** may be distinguished from *C. taino* **sp.n.** by the coloration, the narrower and more parallel body, transverse scapus and pedicel, pronounced anterior pronotal angles and distally constricted tergite 8 (Fig. 17).

CRATOMORPHINI

Pyractomena vitticollis Motschulsky, 1853

Pyractomena vitticollis Motschulsky, 1853: 38

Lecontea vitticollis (Motschulsky): E.Olivier, 1912: 23

MATERIAL: Lectotype (hereby designated), ♂, "Antilles", "*Pyractomena vitticollis* Mots."(Motschulsky's manuscript label), "Type" (ZMMU).

COMMENTS. As Motschulsky's [1853] description does not indicate the uniqueness of the specimen, the lectotype of *Pyractomena vitticollis* is hereby designated in compliance with the International Code of Zoological Nomenclature to clarify the application of the name to a taxon. *P. vitticollis* has been correctly interpreted by Olivier [1912] and Leng and Muthcler [1922].

LAMPROCERINI

Lychnacris Motschulsky, 1853

Lychnacris Motschulsky, 1853: 33

type species: *Lychnacris triguttula* Motschulsky, 1853

DIAGNOSIS. *Lychnacris* is easily differentiated from all other Greater Antillean lampyrid genera by the ventral location of abdominal spiracles, which bring the genus to the tribe Lamprocerini.

COMMENTS. The following species described in or referred to *Callopisma* by Leng & Mutschler [1922] in fact belong to *Lychnacris*: *L. emarginata* (Leng et Mutchler, 1922), **comb.n.**, *L. mariposa* (Leng et Mutchler, 1922), **comb.n.** and *L. postica* (E.Olivier, 1899), **comb.n.**

Lychnacris konstantinovi Kazantsev, **sp.n.**
Figs 20–22.

MATERIAL: Holotype, ♂, Dominican Republic, Pedernales, 15 km N Cabo Rojo, 670 m, 18°06.76N 71°37.24W, 10.VII.2004, A. Konstantinov leg. (ICM); paratype, ♂, same label (ICM).

DESCRIPTION. **Male**. Reddish testaceous; palps, antennae, distal elytral third and tarsi black; disk of pronotum, meso- and metapleuron and abdomen except ventrite 8 pink.

Eyes small (interocular distance 2.3 times greater than eye radius). Labrum transverse, emarginate distally. Antennae attaining to elytral two thirds, from antennomere 3 conspicuously flattened, with antennomere 3 2.7 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, 1.6 times wider than long, with triangularly produced anterior margin and small acute posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 20).

Elytra broad, 1.75 times as long as wide, rounded, widest in the middle (Fig. 20), densely punctuate, with obscure oblique longitudinal costae.

Ventrite 7 with small median projection, tergite 8 tridentate distally (Fig. 21). Aedeagus relatively broad (Fig. 22).

Female. Unknown.

Length: 8.4–8.5 mm. Width: 3.9–4.0 mm.

ETYMOLOGY. The new species is named after Dr. A. Konstantinov (Washington, D.C.) who collected the type series.

DIAGNOSIS. *L. konstantinovi* **sp.n.** may be distinguished from other *Lychnacris* species with widened elytra (*L. emarginata* Leng et Mutchler, 1922, **comb.n.** and *C. mariposa* Leng et Mutchler, 1922, **comb.n.**). by the details of the coloration, structure of the terminal abdominal segments and the aedeagus (Figs 21–22).

Lychnacris neslihanae Kazantsev, **sp.n.**
Figs 23–25.

MATERIAL: Holotype, ♂, Dominican Republic: San Cristobal, env. El Guineo, 500 m, 6.II.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Reddish testaceous; palps, antennae except yellow 1.5 ultimate antennomeres, tibiae externally, tarsi and margins of tergites black; distal elytral half metallic violet; disk of pronotum, hypomeron, meso- and metapleuron and ventrites except ventrite 8 pink.

Eyes small (interocular distance 2.2 times greater than eye radius). Labrum transverse, slightly emarginate distally. Antennae attaining to elytral two thirds, from antennomere 3 flattened, with antennomere 3 3.6 times longer than antennomere 2 and 1.1 times shorter than antennomere 4.

Pronotum transverse, 1.6 times wider than long, with produced anterior margin and small rounded posterior angles. Scutellum elongate, almost parallel-sided, rounded at apex (Fig. 23).

Elytra broad, 1.75 times as long as wide, rounded, widest in distal two thirds (Fig. 23), densely and coarsely punctuate, with obscure oblique longitudinal costae.

Ventrite 7 slightly emarginate medially, tergite 8 distally almost truncate (Fig. 24). Aedeagus narrow (Fig. 25).

Female. Unknown.

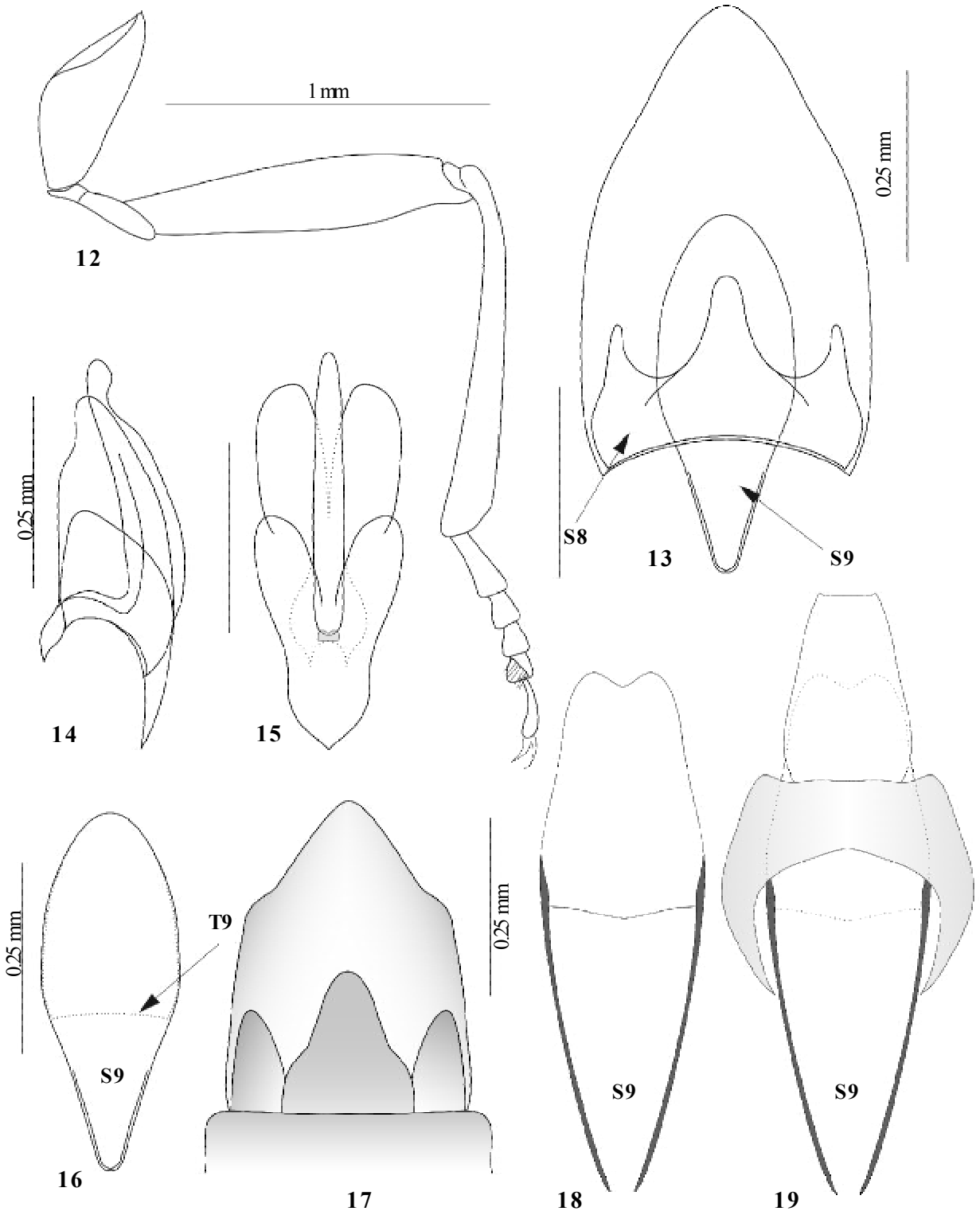
Length: 6.3 mm. Width: 3.2 mm.

ETYMOLOGY. The new species is named after my colleague, Cantharidae student Neslihan Silkin (Gazi University, Ankara).

DIAGNOSIS. *L. neslihanae* **sp.n.** is readily distinguishable from other *Lychnacris* species by the more rounded elytra (Fig. 23), conspicuous violet tint of the elytral apices, yellow 1.5 ultimate antennomeres, almost truncate ultimate tergite (Fig. 24) and by the structure of the aedeagus (Fig. 25).

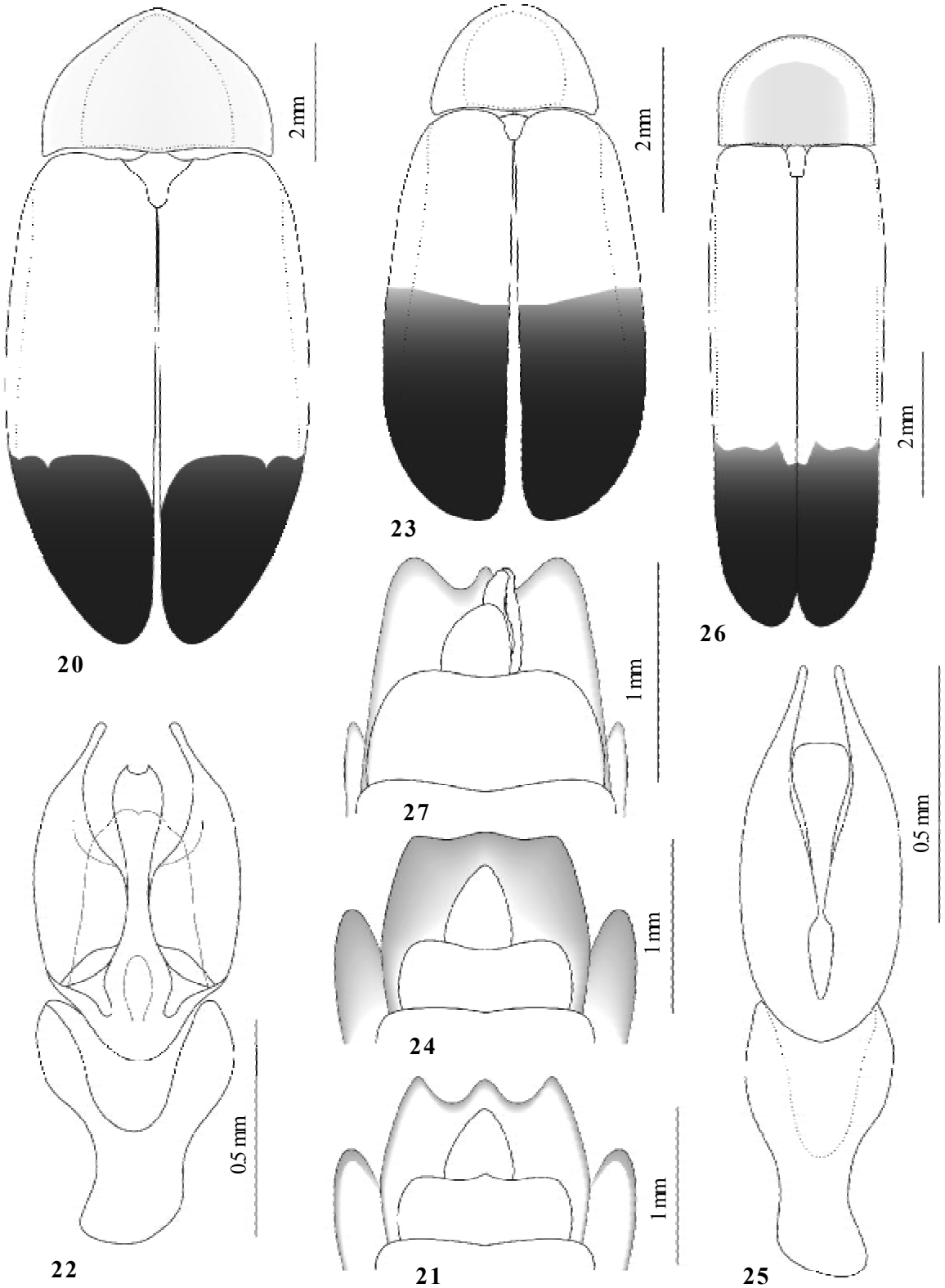
Lychnacris pedernalis Kazantsev, **sp.n.**
Figs 26–27.

MATERIAL: Holotype, ♂, Dominican Republic, Pedernales, 15 km N Cabo Rojo, 670 m, 18°06.76N 71°37.24W, 10.VII.2004, A. Konstantinov leg. (ICM); paratype, ♂, Domin-



Figs 12–19. Details of *Cheguevaria* spp. and *Phengodes* sp.: 12–16 — *Cheguevaria taino* **sp.n.**, holotype, male; 17 — *Cheguevaria angusta* **sp.n.**, holotype, male; 18–19 — *Phengodes* sp.; 12 — middle leg; 13, 17, 18 — terminal abdominal segments; 14–15 — aedeagus; 16 — sternite 9 and tergite 9; 19 — sternite 9; 13, 16–17, 19 — ventral view; 14 — lateral view; 15, 18 — dorsal view; S — sternite; T — tergite.

Рис. 12–19. Детали строения *Cheguevaria* spp. и *Phengodes* sp.: 12–16 — *Cheguevaria taino* **sp.n.**, голотип, самец; 17 — *Cheguevaria angusta* **sp.n.**, голотип, самец; 18–19 — *Phengodes* sp.; 12 — средняя нога; 13, 17, 18 — вершинные сегменты брюшка; 14–15 — эдеагус; 16 — стернит 9 и тергит 9; 19 — стернит 9; 13, 16–17, 19 — снизу; 14 — сбоку; 15, 18 — сверху; S — стернит; T — тергит.



Figs 20–27. Details of *Lychnacris* spp., holotypes, males: 20–22 — *L. konstantinovi* **sp.n.**; 23–25 — *L. neslihanae* **sp.n.**; 26–27 — *L. pedernalis* **sp.n.**; 20, 23, 26 — body outline; 21, 24, 27 — terminal abdominal segments; 22, 25 — aedeagus; 20, 23, 26 – dorsal view; 21–22, 24–25, 27 — ventral view.

Рис. 20–27. Детали строения *Lychnacris* spp., голотипы, самцы: 20–22 — *L. konstantinovi* **sp.n.**; 23–25 — *L. neslihanae* **sp.n.**; 26–27 — *L. pedernalis* **sp.n.**; 20, 23, 26 — общие очертания тела; 21, 24, 27 — вершинные сегменты брюшка; 22, 25 — эдеагус; 20, 23, 26 – сверху; 21–22, 24–25, 27 — снизу.

ican Republic, Pedernales, Upper Las Abejas, 38 km NNW Cabo Rojo, 18°09N 71°38W, 1350 m, mesic deciduous forest, sweeping, 22.VII.1990, L. Masner leg. (CMNH).

DESCRIPTION. **Male**. Reddish testaceous; head, palps, antennae, distal elytral third, femora distally, tibiae and tarsi black; disk of pronotum, meso- and metapleuron and abdomen except ventrite 8 pinkish.

Eyes small (interocular distance 2.3 times greater than eye radius). Labrum transverse, almost truncate distally. Antennae attaining to elytral five sixths, from antennomere 3 conspicuously flattened, with antennomere 3 2.7 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, 1.4 times wider than long, with rounded anterior margin and small acute posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 26).

Elytra long, 2.4 times as long as wide, almost parallel-sided (Fig. 26), finely punctuate, with obscure longitudinal costae.

Ventrite 7 medially emarginate, tergite 8 distally tridentate (Fig. 27).

Female. Unknown.

Length: 7.6–8.7 mm. Width: 2.8–3.0 mm.

ETYMOLOGY. The new species is named after the province (Pedernales, Dominican Republic) where it was found.

BIOLOGY. One of the specimens of the type series was collected by sweeping in the mesic deciduous forest, at 1350 m above sea level.

DIAGNOSIS. *L. pedernalis* **sp.n.** may be distinguished from *L. postica* (E.Olivier, 1899), **comb.n.**, described from Santo Domingo and also characterized by the narrow body, by the black head and tibiae.

PHOTININI

Erythrolychnia bipartita (E.Olivier, 1912)

Pygolampis bipartita E.Olivier, 1912: 24

Erythrolychnia albopalpis Leng et Mutchler, 1922: 448, **syn.n.**

MATERIAL: ♂, Dominican Republic, Puerta Plata, I–II, "*bipartitus*" (E. Olivier's manuscript label) (AMNH); ♂, Haiti, Saona, VII or VIII, "*Erythrolychnia albopalpis* **sp.n.**", "Holotype No. 24518" (AMNH).

COMMENTS. The holotype of *Erythrolychnia albopalpis* Leng et Mutchler, 1922 does not have any differences from the specimen of *E. bipartita* (E.Olivier), which bears E.Olivier's identification label. In the description *E. albopalpis* was not compared to *E. bipartita* [Leng & Mutchler, 1922]. So, a new synonymy is established: *Erythrolychnia bipartita* (E.Olivier, 1912) = *Erythrolychnia albopalpis* Leng et Mutchler, 1922, **syn.n.** *E. bipartita*, along with *E. quinquenotata* (Laporte, 1840) and *E. olivieri* Leng et Mutchler, 1922, forms a separate species group, differing from *E. fulgida* (Olivier, 1790) and allied species by the robust antenna with flattened and serrate antennomeres 3–11.

Erythrolychnia fulgida (Olivier, 1790)

Lampyris fulgida Olivier, 1790: 16

Erythrolychnia dimidiatipennis Motschulsky, 1853: 29

Pygolampis fulgida (Olivier): E.Olivier, 1912: 24

MATERIAL: Lectotype (hereby designated), ♀, "St. Domingo", "*Erythrolychnia dimidiatipennis* Mots."(Motschulsky's manuscript label), "Type" (ZMMU); ♀, "Haiti", "*Erythrolychnia fulgida* Ol."(E. Olivier's manuscript label) (USNM).

COMMENTS. As Motschulsky's [1853] description does not indicate the uniqueness of the specimen, the lectotype of *Erythrolychnia dimidiatipennis* is hereby designated in compliance with the International Code of Zoological Nomenclature to clarify the application of the name to a taxon. The lectotype of *E. dimidiatipennis* is definitely conspesific with the USNM specimen of *E. fulgida* identified by E.Olivier.

Erythrolychnia nigriventris Kazantsev, **sp.n.**

Figs 28–31.

MATERIAL: Holotype, ♂, Dominican Republic, La Vega, env. Constanza, ca. 1250–1550 m, 11.II.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Black; pronotal lateral and anterior margins, elytra except obscure dark spots at humeri and apices testaceous; photic spot on ventrite 5 whitish yellow; lateral margins of pronotal median infuscation and ventral spots on coxae pink.

Eyes large (interocular distance more than 2 times smaller than eye radius). Antennae filiform, narrow, tapering distally, attaining to elytral third, with antennomere 3 ca. 3 times longer than antennomere 2 and subequal in length to antennomere 4 (Fig. 29).

Pronotum transverse, 1.2 times wider than long, slightly sinuate basally, semielliptic anteriorly (Fig. 28). Scutellum elongate, rounded at apex.

Elytra long, 2.5 times as long as wide, tapering distally, densely punctuate, with oblique longitudinal costae; sides slightly deflexed (Fig. 28).

Ventrite 7 triangular, feebly emarginate medially; tergite 8 with prominent distal angles (Fig. 30). Aedeagus with parallel-sided median lobe and almost parallel-sided parameres (Fig. 31).

Female. Unknown.

Length: 15.0 mm. Width: 4.6 mm.

ETYMOLOGY. The name is derived from the Latin for "black" and "abdomen", alluding to the coloration of the new species.

DIAGNOSIS. *E. nigriventris* **sp.n.** belongs to the *E. fulgida* group, differing by the uniformly black underside, including the abdomen, and by the structure of the aedeagus (Fig. 31).

Erythrolychnia unicolor Kazantsev, **sp.n.**

Figs 32–35.

MATERIAL: Holotype, ♂, Dominican Republic, Pedernales, env. Cabeza de Agua, 300 m, 3.II.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Testaceous; head, antennae, palps, front tibiae, middle and hind tibiae distally and tarsi black; ventrites 6 and 7 brownish; transverse photic spot on ventrite 5 whitish yellow.

Eyes large (interocular distance more than 2 times smaller than eye radius). Antennae filiform, narrow, tapering distally, attaining to elytral third, with antennomere 3 2.5 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, 1.3 times wider than long, slightly sinuate basally, medially somewhat triangularly produced forward (Fig. 32). Scutellum elongate, narrow, rounded at apex.

Elytra moderately long, 1.8 times as long as wide, densely punctuate, with traces of oblique longitudinal costae; sides slightly deflexed (Fig. 32).

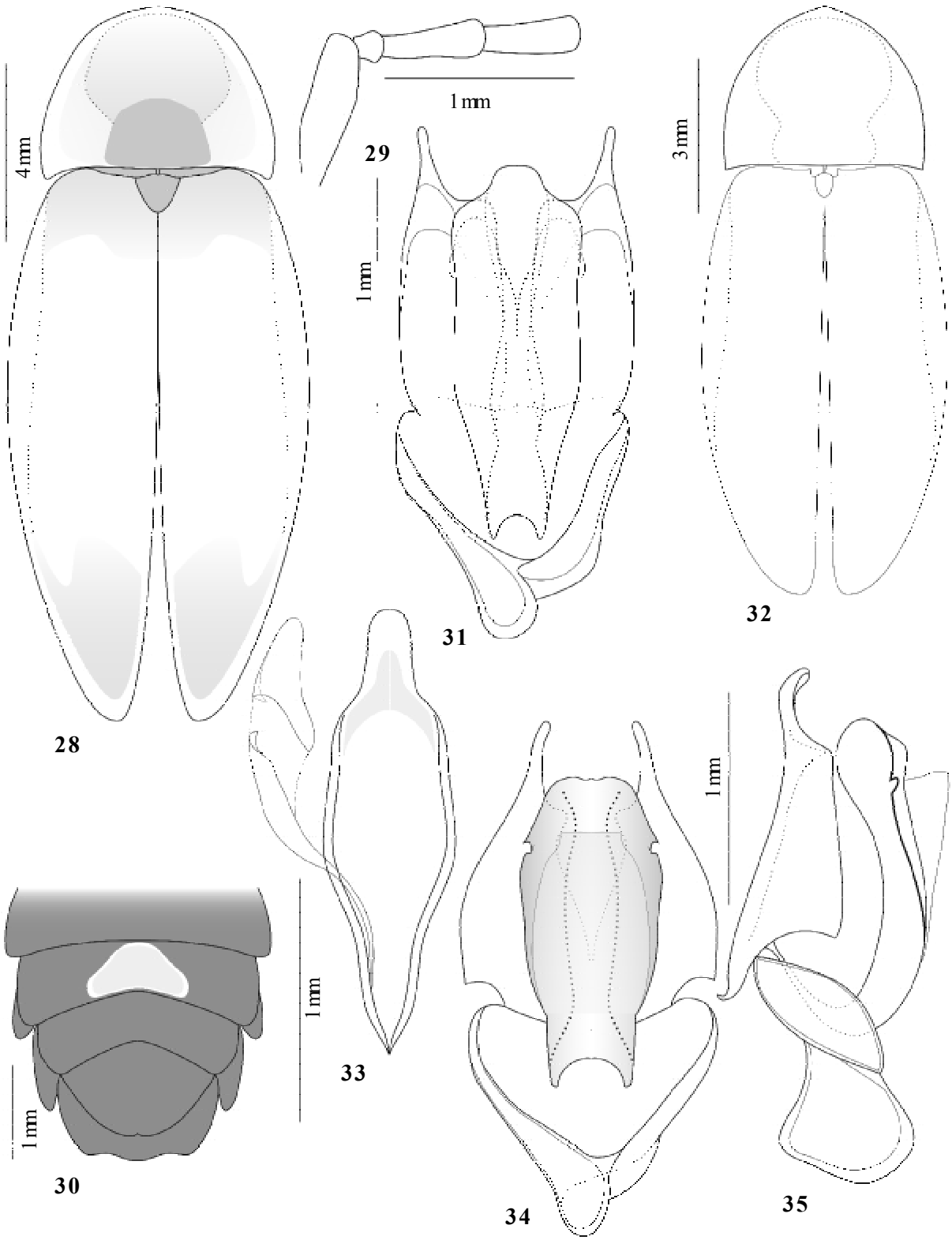
Tergite 8 oval, without conspicuous distal angles; sternite 9 and tergites 9 and 10 lateral (Fig. 33). Median lobe of aedeagus incised laterally; parameres distally narrowed (Figs 34–35).

Female. Unknown.

Length: 12.3 mm. Width: 5.0 mm.

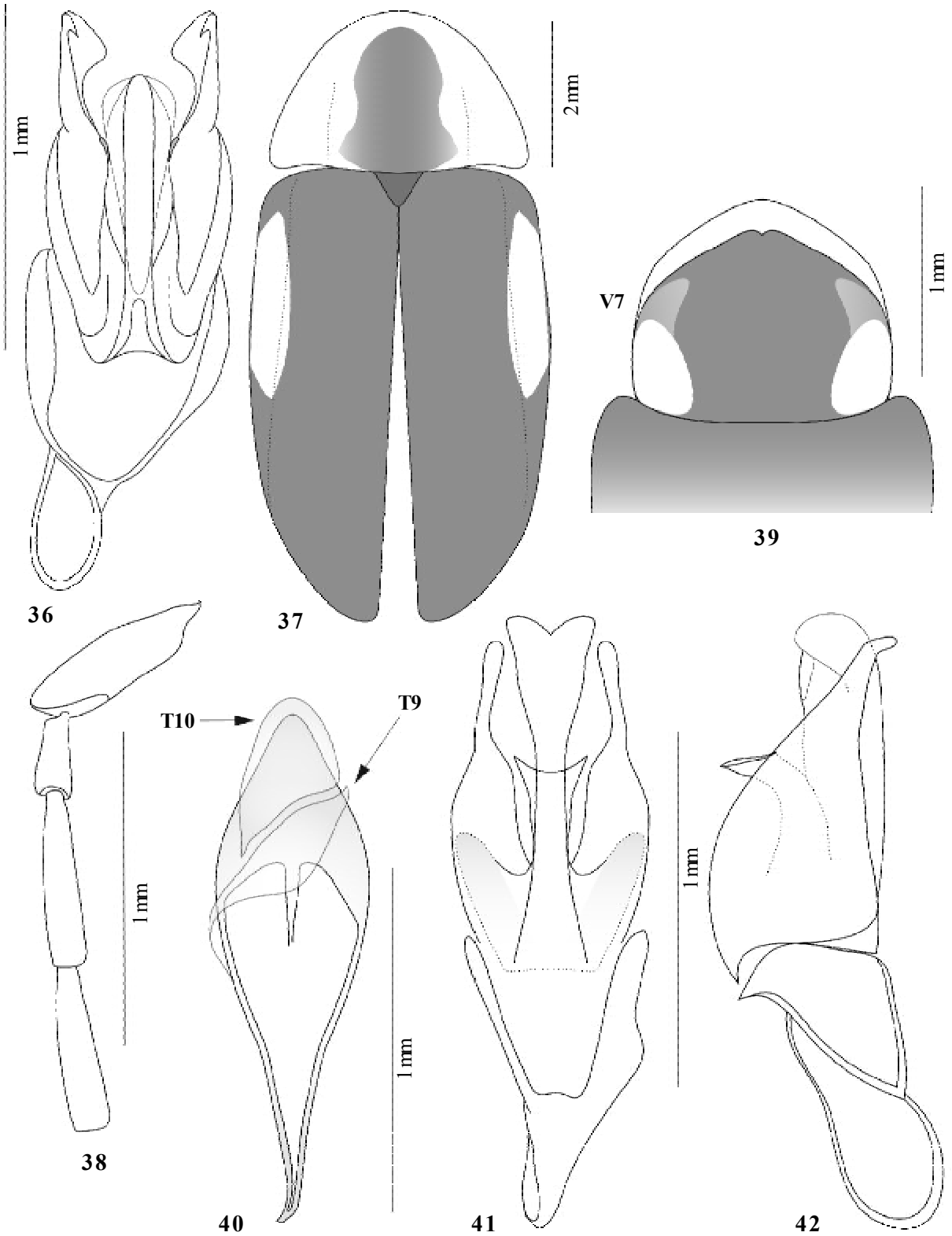
ETYMOLOGY. The name is derived from the Latin for "of one colour", alluding to the uniformly testaceous upperside of the new species.

DIAGNOSIS. *E. unicolor* **sp.n.**, also belonging to the *E. fulgida* group, is easily distinguished from other *Erythrolychnia* species by the uniformly testaceous upperside and the structure of the aedeagus (Figs 34–35).



Figs 28–35. Details of *Erythrolychnia* spp., holotype, male: 28–31 — *E. nigriventris* **sp.n.**; 32–35 — *E. unicolor* **sp.n.**; 28, 32 — body outline; 29 — antennomeres 1–4; 30 — terminal abdominal segments; 31, 34–35 — aedeagus; 33 — sternite 9 with tergites 9 and 10; 28–29, 32 — dorsal view; 30–31, 34 — ventral view; 33, 35 — lateral view.

Рис. 28–35. Детали строения *Erythrolychnia* spp., голотип, самец: 28–31 — *E. nigriventris* **sp.n.**; 32–35 — *E. unicolor* **sp.n.**; 28, 32 — общие очертания тела; 29 — антенномеры 1–4; 30 — вершинные сегменты брюшка; 31, 34–35 — эдеагус; 33 — стернит 9 с тергитами 9 и 10; 28–29, 32 — сверху; 30–31, 34 — снизу; 33, 35 — сбоку.



Figs 36–42. Details of *Callopisma* spp.: 36 — *C. rufa*; 37–42 — *C. rufoviolacea* **sp.n.**, holotype, male; 36, 41–42 — aedeagus; 37 — body outline; 38 — antennomeres 1–4; 39 — terminal abdominal segments, 40 — sternite 9 with tergites 9 and 10; 36, 38–39, 41 — ventral view; 37 — dorsal view; 40, 42 — lateral view; T — tergite; V — ventrite.

Рис. 36–42. Детали строения *Callopisma* spp.: 36 — *C. rufa*; 37–42 — *C. rufoviolacea* **sp.n.**, голотип, самец; 36, 41–42 — эдеагус; 37 — общие очертания тела; 38 — антенномеры 1–4; 39 — вершинные сегменты брюшка; 40 — стернит 9 с тергитами 9 и 10; 36, 38–39, 41 — снизу; 37 — сверху; 40, 42 — сбоку; T — тергит; V — вентрит.

Callopisma Motschulsky, 1853

Callopisma Motschulsky, 1853: 41
Type species: *Lampyris rufa* Olivier, 1790

REDESCRIPTION. **Male**. Alate, over 8 mm in length, oval (Fig. 37). Head transverse, small. Fastigium blunt. Labrum transverse, sclerotized, lying anteriad of epistoma. Eyes small. Mandibles minute, strongly evenly curved inwards. Maxillary palps short, but robust, 4-segmented, with ultimate palpomere elongate and basally dilated and swollen. Labial palps small, 3-segmented, ultimate palpomere elongate and basally dilated. Antennal sockets small, round, separated by about half their diameter. Antenna 11-segmented, relatively short, with antennomeres 3–11 slightly flattened (filiform in *C. rufoviolacea* **sp.n.** — Fig. 38); pedicel conspicuously shorter than antennomere 3 (Fig. 38); antennal pubescence short and decumbent, with longer erect bristles.

Pronotum transverse, triangularly produced distally, deflexed laterally; posterior angles acute or rounded (Fig. 37). Prosternum short, Y-shaped. Mesonotum with triangular postnotal plate. Elytra elongate, tapering distally; with inconspicuous oblique longitudinal costae (Fig. 37). Metaventrite transverse. Metathoracic wing with elongate anal cell; wedge cell present; conspicuous cu–a brace slightly distad of Cu veins fork; Cu veins fused to M vein.

Pro- and mesocoxae elongate; metacoxae narrowly separated. Legs robust, flattened; trochanters short, obliquely connected to femora; tibial spurs present; tarsomeres 1–4 narrow, tarsomere 4 lobed and provided with plantar pad; all claws simple (anterior claw of protarsus with acute basal dent in *C. rufoviolacea* **sp.n.**).

Abdomen with 7 ventrites. Photic organ on ventrite 7 (Fig. 39). Abdominal spiracles dorsal on lateral edge of sternites. Ventrite 7 (sternite 8) as wide as tergite 8, medially produced distally, completely covering sternite 9 and tergites 9 and 10 (Fig. 39); sternite 9 slightly asymmetric; tergite 9 strongly asymmetric, tergite 10 present; sternite 9 lateral (Fig. 40). Aedeagus with long, distally narrowed and hooked parameres and distally dilated median lobe; phallobase large, strongly asymmetric (Figs 36, 41–42).

Female. Similar to male, but ultimate abdominal segments elongate and triangular.

BIOLOGY. No preimaginal forms have been observed or collected in *Callopisma*; the altitude the two known species of this taxon have been encountered ranges from lowlands (*C. rufa*) to 1370 m above the sea level (*C. rufoviolacea* **sp.n.**).

DIAGNOSIS. *Callopisma* is evidently close to *Erythrolychnia*, differing by the small male eyes and location of the photic organ on ventrite 7 instead of ventrite 5 (Fig. 39). The two known species of *Callopisma* are also distinguishable by the conspicuous metallic tint of the dark violet parts of the elytra.

Callopisma rufoviolacea Kazantsev, **sp.n.**
Figs 37–42.

MATERIAL: Holotype, ♂, Dominican Republic, Sierra de Baoruco, Las Abejas, 1370 m, 18°08.85N 71°36.93W, 11.VIII.2004, A. Konstantinov leg. (ICM).

DESCRIPTION. **Male**. Black; pronotum, except broad median stripe, and photic spots on ventrite 7 testaceous; elytra deep metallic violet with elongate lateral testaceous spots distad of humeri (Fig. 37).

Eyes small (interocular distance ca. 2.5 times greater than eye radius). Antennae attaining to elytral middle, filiform, with scapus elongate and almost parallel-sided; antennomere 3 twice as long as antennomere 2 and subequal in length to antennomere 4 (Fig. 38).

Pronotum transverse, 1.7 times wider than long, slightly bisinuate basally, narrowed and evenly rounded anteriorly (Fig.). Scutellum elongate, rounded at apex (Fig. 37).

Elytra moderately long, only 1.6 times as long as wide, densely rugulose; sides broadly deflexed (Fig. 37). Anterior claw of protarsus with acute basal dent.

Ventrite 7 1.4 times wider than long; sternite 9 ca. 3 times longer than tergites 9 and 10 combined (Figs 39–40). Aedeagus with bifurcate median lobe; parameres only slightly bent distally (Figs 41–42).

Female. Unknown.

Length: 8.3 mm. Width: 4.2 mm.

ETYMOLOGY. The name is derived from the Latin for "red" and "violet", alluding to the two colors of the upperside of the new species.

DIAGNOSIS. *C. rufoviolacea* **sp.n.** is easily distinguished from *C. rufa* by the coloration, wider body, filiform antennae and the structure of the aedeagus (Figs 41–42).

Rufolychnia Kazantsev, **gen.n.**

Type species: *Callopisma borencona* Leng et Mutchler, 1922

DESCRIPTION. **Male**. Alate, over 11 mm in length, almost parallel-sided. Head transverse, small. Fastigium blunt. Labrum transverse, sclerotized, lying anteriad of epistoma. Eyes relatively small. Mandibles relatively large, abruptly bent inwards. Maxillary palps short, but robust, 4-segmented, with ultimate palpomere elongate and basally dilated and swollen. Labial palps small, 3-segmented, ultimate palpomere elongate and basally dilated. Antennal sockets small, round, separated by about third their diameter. Antenna 11-segmented, long, attaining at least to elytral two thirds, with antennomeres 3–11 flattened, wide and serrate (Fig. 43); scapus elongate and almost parallel-sided; pedicel conspicuously shorter than antennomere 3 (Fig. 43); antennal pubescence short and decumbent, with minute erect bristles.

Pronotum transverse, triangularly produced forward, laterally and distally deflexed; posterior angles pronounced. Prosternum short, Y-shaped. Mesonotum with triangular postnotal plate. Elytra elongate, parallel-sided; without conspicuous longitudinal costae. Metaventrite transverse.

Pro- and mesocoxae elongate; metacoxae narrowly separated. Legs slender, tibiae flattened; trochanters short, obliquely connected to femora; tibial spurs minute; tarsomeres 1–4 narrow, tarsomere 4 lobed and provided with plantar pad; anterior claw of protarsus with blunt basal dent.

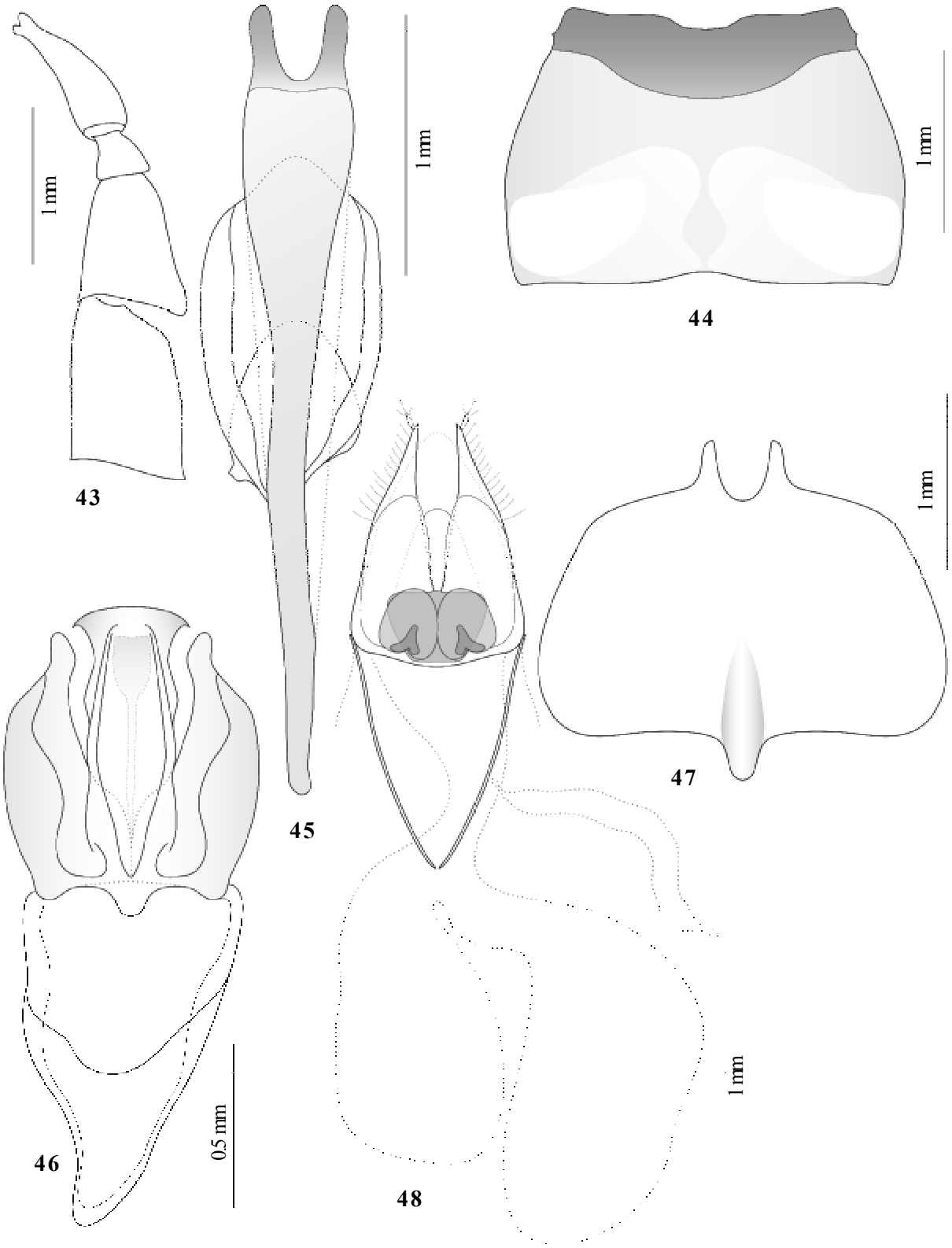
Abdomen with 8 ventrites. Photic organ located on ventrite 7 (Fig. 44). Abdominal spiracles located dorsally on lateral edge of sternites. Ventrite 7 (sternite 8) transverse, almost truncate (Fig. 44). Ventrite 8 (sternite 9) long and narrow, slightly asymmetric, distally emarginate; tergite 10 apparently fused with tergite 9 (Fig. 45). Aedeagus short and robust, with dilated distally median lobe; phallobase asymmetric (Fig. 46).

Female. Similar to male, but antennae conspicuously narrower, ultimate ventrite with median emarginate projection (Fig. 47) External female genitalia without coxital baculus (Fig. 48).

ETYMOLOGY. The name of the new genus is derived from the Latin for "red" and "lantern" alluding to the orange light emitted by males and females of *Rufolychnia borencona* (Leng et Mutchler, 1922), **comb.n.**, the only known species of the genus.

BIOLOGY. Males and females of *Rufolychnia borencona* were observed flying at night in the mature secondary rain forest, emitting orange light. Altitudes where this species was captured range from 370 to 800 m above sea level.

DIAGNOSIS. *Rufolychnia* **gen.n.** is easily differentiated from other photinine taxa by the eight male abdominal ven-



Figs 43–48. Details of *Rufolychnia borencona*, ventral view: 43–46 — male; 47–48 — female; 43 — antennomeres 1–4; 44, 47 — ventrite 7/sternite 8; 45 — sternite 9 with tergite 9; 46 — aedeagus; 48 — external genitalia.

Рис. 43–48. Детали строения *Rufolychnia borencona*, снизу: 43–46 — самец; 47–48 — самка; 43 — антенномеры 1–4; 44, 47 — вентрит 7/стернит 8; 45 — стернит 9 с тергитом 9; 46 — эдеагус; 48 — наружные гениталии.

trites, long flattened and serrate antennae, long, almost truncate ventrite 7 (Fig. 44), deeply emarginate apically ventrite 8 (Fig. 45), broad ultimate female ventrite, with short spiculum ventrale (Fig. 47) and by the short robust aedeagus (Fig. 46).

Rufolychnia borencona (Leng et Mutchler, 1922), **comb.n.**

Callopisma borencona Leng et Mutchler, 1922: 440

MATERIAL: Holotype, ♂, Puerto Rico, Mayaguez, May, R.H. Van Zwaluwenburg leg., holotype No. 24537 (AMNH); 10 ♂♂ and 14 ♀♀, Puerto Rico, Sierra de Luquillo, 500–550 m, 3–5.IV.2005, S. Kazantsev leg. (ICM).

DISTRIBUTION. Puerto Rico: Mayaguez, in the West Coast, Adjuntas and Aibonito, in Cordillera Central, Sierra de Cayey and Sierra de Luquillo, in the eastern part of the island.

Robopus branhami Kazantsev, **sp.n.**
Figs 49–50.

MATERIAL: Holotype, ♂, Dominican Republic: Pedernales, env. Los Arroyos, ca. 1450 m, 4–5.II.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Dark brown; palps except ultimate palpomeres, pronotum except proximal half, coxae distally and femora proximally and ventrites 7 and 8 distally testaceous; pronotal proximal half except laterally pink.

Eyes relatively small (interocular distance about twice as great as eye radius). labrum transverse, emarginate medially. Antennae attaining to elytral two thirds, antennomeres conspicuously flattened and serrate; antennomere 3 about 3 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, 1.4 times wider than long, semicircular, with minute posterior angles. Scutellum triangular, rounded at apex (Fig. 49).

Elytra relatively long, 2.8 times as long as wide, almost parallel-sided, widest in the middle, very densely punctuate, narrowly deflexed at sides, with traces of oblique longitudinal costae (Fig. 49).

Luminous areas on ventrite 7 (sternite 8) broadly separated; tergite 8 with pronounced distal angles and noticeable median projection (Fig. 50).

Female. Unknown.

Length: 8.0 mm. Width: 3.0 mm.

ETYMOLOGY. The species is named after a well-known Lampyridae specialist Dr. M. Branham (University of Florida, Gainesville).

DIAGNOSIS. *R. branhami* **sp.n.** is easily distinguishable from the congenerics by the coloration and the shape of the ultimate abdominal segments (Figs 49–50).

Robopus cayeyensis Kazantsev, **sp.n.**
Figs. 51–56

MATERIAL: Holotype, ♂, Puerto Rico: Sierra de Cayey, 600–650 m, 6–7.IV.2005, S. Kazantsev leg. (ICM); paratypes, 12 ♂♂ and ♀♀, same label (ICM).

DESCRIPTION. **Male**. Black; anterior and lateral margins of pronotum, scutellum, elytra except narrow black margin at apices, coxae distally, trochanters and femora proximally testaceous; two ultimate abdominal ventrites whitish yellow; ventrite 8 with black distal margin.

Eyes moderately large (interocular distance subequal to eye radius). Antennae attaining to elytral four fifths, with antennomere 3 1.3 times longer than wide distally, 3.5 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, 1.4 times wider than long, sinuate basally, with parallel sides, triangularly produced anterior margin and short, nearly straight posterior angles. Scutellum triangular, rounded at apex.

Elytra relatively long, 2.4 times as long as wide at humeri, parallel-sided, finely rugulose, with obscure traces of longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, almost contiguous (Fig. 51). Tergite 8 oval, widened in the middle; sternite 9 long, asymmetrical, paraproct (tergite 9) strongly asymmetrical (Fig. 52). Aedeagus with elongate dentate distally parameres and straight narrow median lobe; phallobase short, asymmetrical (Figs 53–54).

Female. Similar to male, but eyes smaller, with interocular distance 2 times greater than eye radius, antennae narrower and shorter, attaining only to elytral third. Ultimate ventrite distally constricted and medially emarginate, with short spiculum ventrale (Fig. 55). Valvifers free, long and slender; coxites with non-sclerotized distal and sclerotized proximal part; styli minute, proctiger triangular (Fig. 56).

Length: 10.2–11.0 mm. Width: 4.0–4.3 mm.

ETYMOLOGY. *R. cayeyensis* **sp.n.** is named after Sierra de Cayey, a mountain ridge in Puerto Rico, where the specimens of the type series were collected.

BIOLOGY. The type series of the new species was collected at night near river bank in the mature secondary forest at 600–650 m above sea level.

DIAGNOSIS. *R. cayeyensis* **sp.n.** is readily distinguished from the congenerics by the coloration and the structure of the aedeagus (Figs 53–54).

Robopus erythrolytris Kazantsev, **sp.n.**
Figs 57–58.

MATERIAL: Holotype, ♂, Haiti, Cap-Haitien, 21.V.1925, G.N. Wolcott leg. (AMNH); paratype, ♂, same label (ICM).

DESCRIPTION. **Male**. Reddish testaceous; antennae, palps, distal two fifths of elytra, ventrite 5 distally, ventrite 6, tergites 7 and 8, tibiae distally and tarsi black; ventrite 7 except at luminous areas and ventrite 8 brownish.

Eyes relatively small (interocular distance about 1.5 times greater than eye radius). Antennae attaining to elytral two thirds, with antennomere 3 2.7 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, 1.4 times wider than long, sinuate basally, with parallel sides, triangularly produced anterior margin and short, nearly straight posterior angles. Scutellum triangular, rounded at apex (Fig. 57).

Elytra relatively long, 2.6 times as long as wide at humeri, widest in the middle, finely rugulose, conspicuously deflexed at sides (Fig. 57).

Luminous areas on ventrite 7 (sternite 8) nearly contiguous (Fig. 58). Tergite 8 trapezoidal (Fig. 58).

Female. Unknown.

Length: 8.5–9.3 mm. Width: 3.4–3.8 mm.

ETYMOLOGY. The name is derived from the Greek for "red" and "elytra", alluding to the dominant colour of elytra of the new species.

DIAGNOSIS. *R. erythrolytris* **sp.n.** is easily distinguishable from the congenerics by the coloration and the shape of the ultimate abdominal segments (Figs 57–58).

Robopus kasikus Kazantsev, **sp.n.**
Figs 59–60.

MATERIAL: Holotype, ♂, Haiti, Diquini, 31.X.(19)25, W.A. Hoffman leg. (USNM).

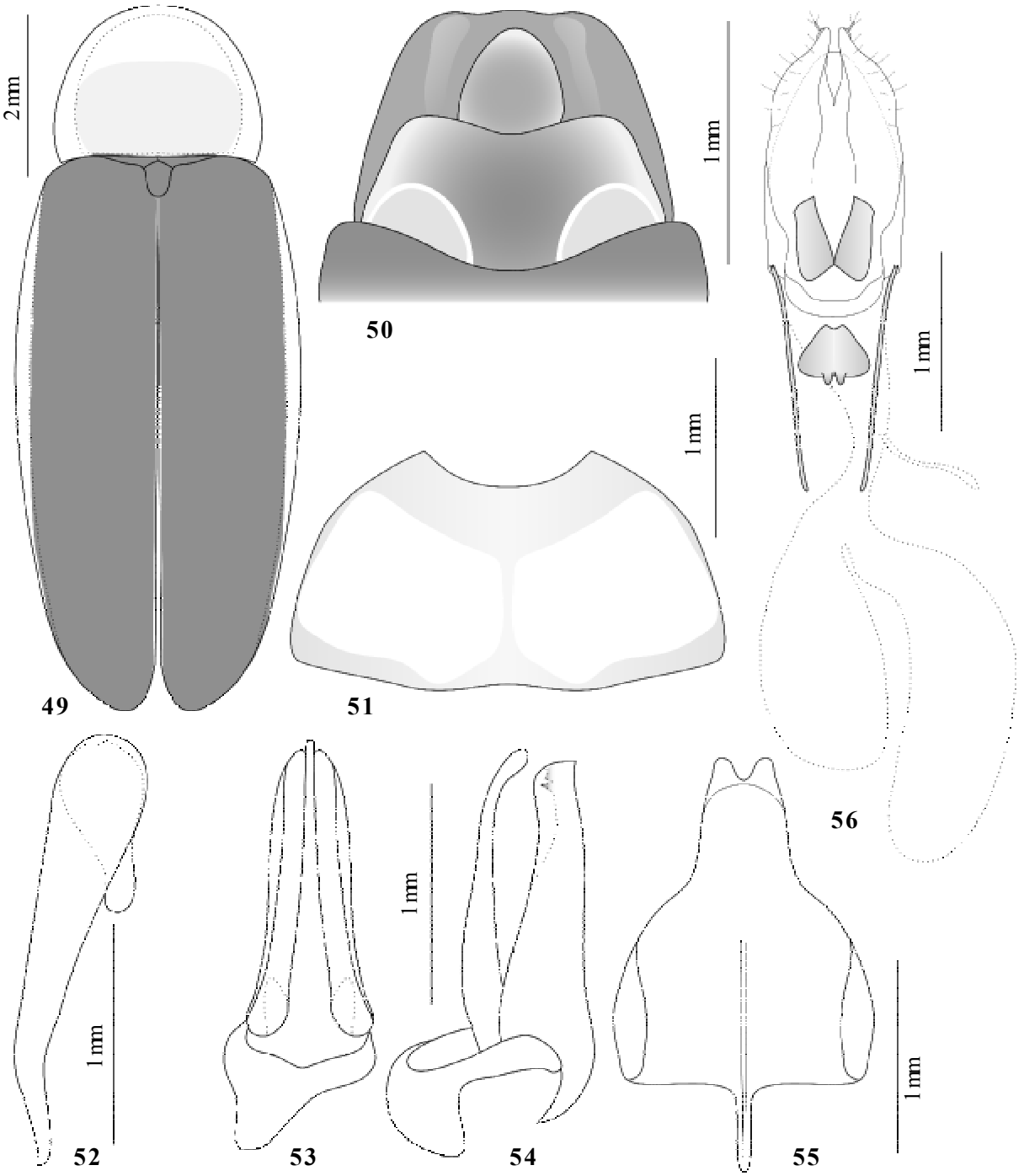
DESCRIPTION. **Male**. Reddish testaceous; antennae, palps, distal half of elytra, tibiae distally and tarsi black; abdominal ventrites pink.

Eyes small (interocular distance about 2.5:1.5 times greater than eye radius). Antennae attaining to elytral two thirds,

antennomeres 3–11 conspicuously flattened, with antennomere 3 about 3 times longer than antennomere 2 and 1.1 times shorter than antennomere 4.

Pronotum transverse, 1.3 times wider than long, almost stright basally, angularly convex at sides, with rounded anterior margin and minute acute posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 59).

Elytra relatively long, 2.5 times as long as wide at humeri, parallel-sided, finely punctuate, not deflexed at sides (Fig. 59).



Figs 49–56. Details of *Robopus* spp.: 49–50 — *R. branhami* **sp.n.**; 51–56 — *R. cayeyensis* **sp.n.**; 49–54 — holotype, male; 55–56 — paratype, female; 49 — body outline; 50 — terminal abdominal segments; 51, 55 — ventrite 7; 52 — ventrite 8 and tergite 9; 53–54 — aedeagus; 56 — external genitalia; 49 — dorsal view; 50–53, 55–56 — ventral view; 54 — lateral view.

Рис. 49–56. Детали строения *Robopus* spp.: 49–50 — *R. branhami* **sp.n.**; 51–56 — *R. cayeyensis* **sp.n.**; 49–54 — голотип, самец; 55–56 — паратип, самка; 49 — общие очертания тела; 50 — вершинные сегменты брюшка; 51, 55 — вентрит 7; 52 — вентрит 8 и тергит 9; 53–54 — эдеагус; 56 — наружные гениталии; 49 — сверху; 50–53, 55–56 — снизу; 54 — сбоку.

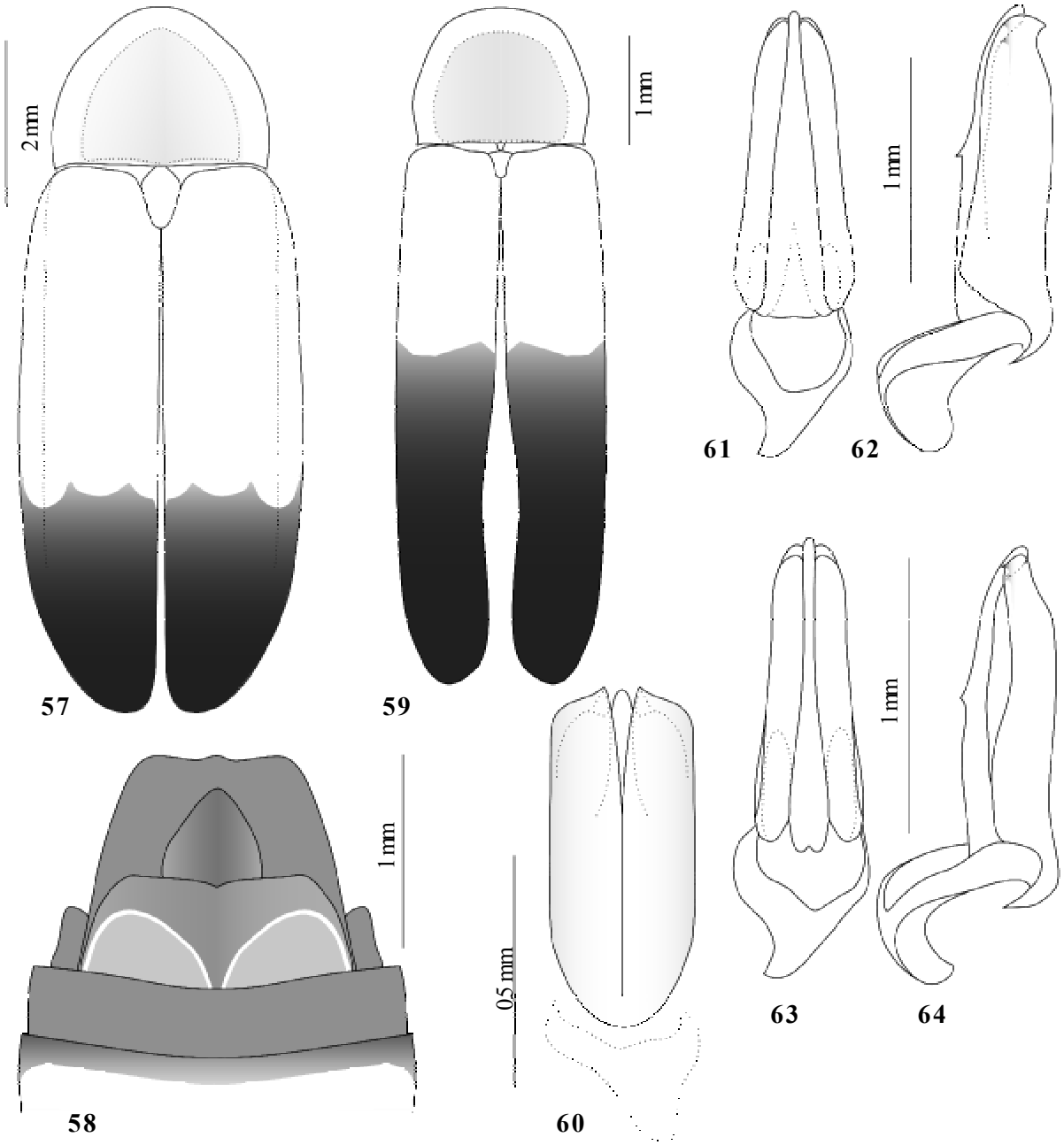
Luminous areas on ventrite 7 (sternite 8) broadly separated. Aedeagus relatively broad with parallel-sided parameral tube (Fig. 60).

Female. Unknown.

Length: 6.2 mm. Width: 2.0 mm.

ETYMOLOGY. The name is derived from the Taino for "chief".

DIAGNOSIS. *R. kasikus* **sp.n.** is distinguishable from *R. erythrolytris* **sp.n.** and *R. branhami* **sp.n.** of similar upperside coloration pattern by the shape of the pronotum and parallel-sided elytra (Fig. 59), broader antennal segments and uniformly pink abdominal ventrites. The holotype of *R. kasikus* **sp.n.** has not been dissected, its aedeagus is naturally exposed, but the phallobase is not seen (Fig. 60).



Figs 57–64. Details of *Robopus* spp., holotypes, males: 57–58 — *R. erythrolytris* **sp.n.**; 59–60 — *R. kasikus* **sp.n.**; 61–62 — *R. niger* **sp.n.**; 63–64 — *R. roseinotatus* **sp.n.**; 57, 59 — body outline; 58 — ultimate abdominal segments; 60–64 — aedeagus; 57, 59 — dorsal view; 58, 60–61, 63 — ventral view; 62, 64 — lateral view.

Рис. 57–64. Детали строения *Robopus* spp., голотипы, самцы: 57–58 — *R. erythrolytris* **sp.n.**; 59–60 — *R. kasikus* **sp.n.**; 61–62 — *R. niger* **sp.n.**; 63–64 — *R. roseinotatus* **sp.n.**; 57, 59 — общие очертания тела; 58 — вершинные сегменты брюшка; 60–64 — эдеагус; 57, 59 — сверху; 58, 60–61, 63 — снизу; 62, 64 — сбоку.

Robopus marginipennis (Leng et Mutchler, 1922), **comb.n.**

Lucidota marginipennis Leng et Mutchler, 1922: 438

MATERIAL: Holotype, ♂, Puerto Rico, Aibonito, June, H.G. Barber & F.E. Watson leg. (AMNH); 6 ♂♂ and ♀, Puerto Rico, Sierra de Cayey, 600–650 m, 6–7.IV.2005, S. Kazantsev leg. (ICM).

DISTRIBUTION. Puerto Rico: Aibonito, in Cordillera Central, and Sierra de Cayey, in eastern part of the island.

BIOLOGY. A series of *R. marginipennis* was collected at night near river bank in the mature secondary forest at 600–650 m above sea level.

COMMENTS. *Lucidota marginipennis* Leng et Mutchler is undoubtedly congeneric with *Robopus roseicollis* Motschulsky, the type species of *Robopus*.

Robopus niger Kazantsev, **sp.n.**
Figs 61–62.

MATERIAL: Holotype, ♂, Puerto Rico, Sierra de Cayey, 600–650 m, 6–7.IV.2005, S. Kazantsev leg. (ICM); paratypes, 4 ♂♂, same label (ICM).

DESCRIPTION. **Male**. Black; anterior and lateral margins of pronotum, scutellum, coxae distally, trochanters and femora proximally grayish testaceous; two ultimate abdominal ventrites whitish yellow; ventrite 8 with black distal margin.

Eyes moderately large (interocular distance subequal to eye radius). Antennae attaining to elytral four fifths, with antennomere 3 2.6 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, 1.4 times wider than long, sinuate basally, with almost parallel sides, triangularly produced anterior margin and short posterior angles. Scutellum triangular, rounded at apex.

Elytra long, 3 times as long as wide at humeri, slightly diverging distally, finely rugulose, with obscure traces of longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, almost contiguous. Tergite 8 oval, widened in the middle; sternite 9 long, asymmetrical, paraproct (tergite 9) strongly asymmetrical. Aedeagus with elongate dentate distally parameres and straight narrow median lobe; phallobase short, asymmetrical (Figs 61–62).

Female. Unknown.

Length: 10.2–11.0 mm. Width: 4.0–4.3 mm.

ETYMOLOGY. The name is derived from the Latin for "black" alluding to the coloration of the new species.

BIOLOGY. The type series of *R. niger* **sp.n.** was collected at night near river bank in the mature secondary forest at 600–650 m above sea level.

DIAGNOSIS. *R. niger* **sp.n.** is close to *R. cayeyensis* **sp.n.**, differing by the uniformly black elytra and details of the aedeagus (Figs 61–62).

Robopus roseinotatus Kazantsev **sp.n.**
Figs 63–64.

MATERIAL: Holotype, ♂, Puerto Rico, Sierra de Luquillo, 500–550 m, 3–5.IV.2005, S. Kazantsev leg. (ICM); paratypes: 27 ♂♂ and ♀, same label (ICM and ZMMU); 6 ♂♂, Puerto Rico, El Verde Field Station, Queb. Prieta, 370 m, Malaise trap, 6–10.II.1990, O.S. Flint, Jr. leg. (USNM and ICM); ♂, Puerto Rico, Caribbean Nt. For., Luquillo Div., El Yunque Rec. Ar., 26.V.(19)86, E.G. Riley & D.A. Rider leg. (LSAC).

DESCRIPTION. **Male**. Dark brown; maxillary and labial palps, except ultimate palpomeres, antennomere 1 ventrally, anterior two fifths and wide lateral margins of pronotum, scutellum, wide elytral margins, coxae distally, trochanters, femora proximally, tibiae exteriorly and two ultimate abdominal ventrites whitish yellow; posterior three fifths of pronotum except two black basal spots, hypomeron except the deflexed part, prosternum, mesonotal scutum and mesoventrite pink; ventrite 8 with black distal margin.

Eyes moderately large (interocular distance subequal to eye radius). Antennae attaining to elytral four fifths, with antennomere 3 ca. 3 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, 1.3 times wider than long, sinuate basally, with parallel sides, triangularly produced, but rather widely rounded anterior margin and short acute posterior angles. Scutellum elongate, triangular, rounded at apex.

Elytra relatively long, 2.6 times as long as wide at humeri, parallel-sided, finely rugulose, with traces of oblique longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) fused into one large spot. Tergite 8 oval, widened in the middle; sternite 9 long, asymmetrical. Aedeagus with elongate dentate distally parameres and straight narrow median lobe; phallobase short, asymmetrical (Figs 63–64).

Female. Similar to male, but eyes smaller, with interocular distance 2 times greater than eye radius, antennae narrower and shorter, attaining only to elytral middle. Ultimate ventrite distally constricted and medially emarginate; luminous areas broadly separated.

Length: 10.2–11.0 mm. Width: 4.0–4.3 mm.

ETYMOLOGY. The name is derived from the Latin for "pink" and "marked" alluding to coloration of the new species.

BIOLOGY. The greater part of the type series of *R. roseinotatus* **sp.n.** was collected at night in the mature secondary rain forest at 500–550 m above sea level.

DIAGNOSIS. *R. roseinotatus* **sp.n.** differs from the somewhat similarly colored *R. marginipennis* by the more rounded anteriorly pronotum, presence of a pair of the conspicuous black basal pronotal spots, wider light elytral margins with less conspicuous borders, larger luminous area, mostly whitish yellow ventrite 8 and the details of the aedeagus (Figs 63–64).

Heterophotinus E.Olivier, 1894, **nom. rev.**

Heterophotinus E.Olivier, 1894: 24

Pygolampis Motschulsky, 1853: 48 [preoccupied by *Pygolampis* Germar, 1824]

Diphotus Barber, 1941: 4

Type species: *Photinus limbipennis* Jacquelin-Duval, 1857

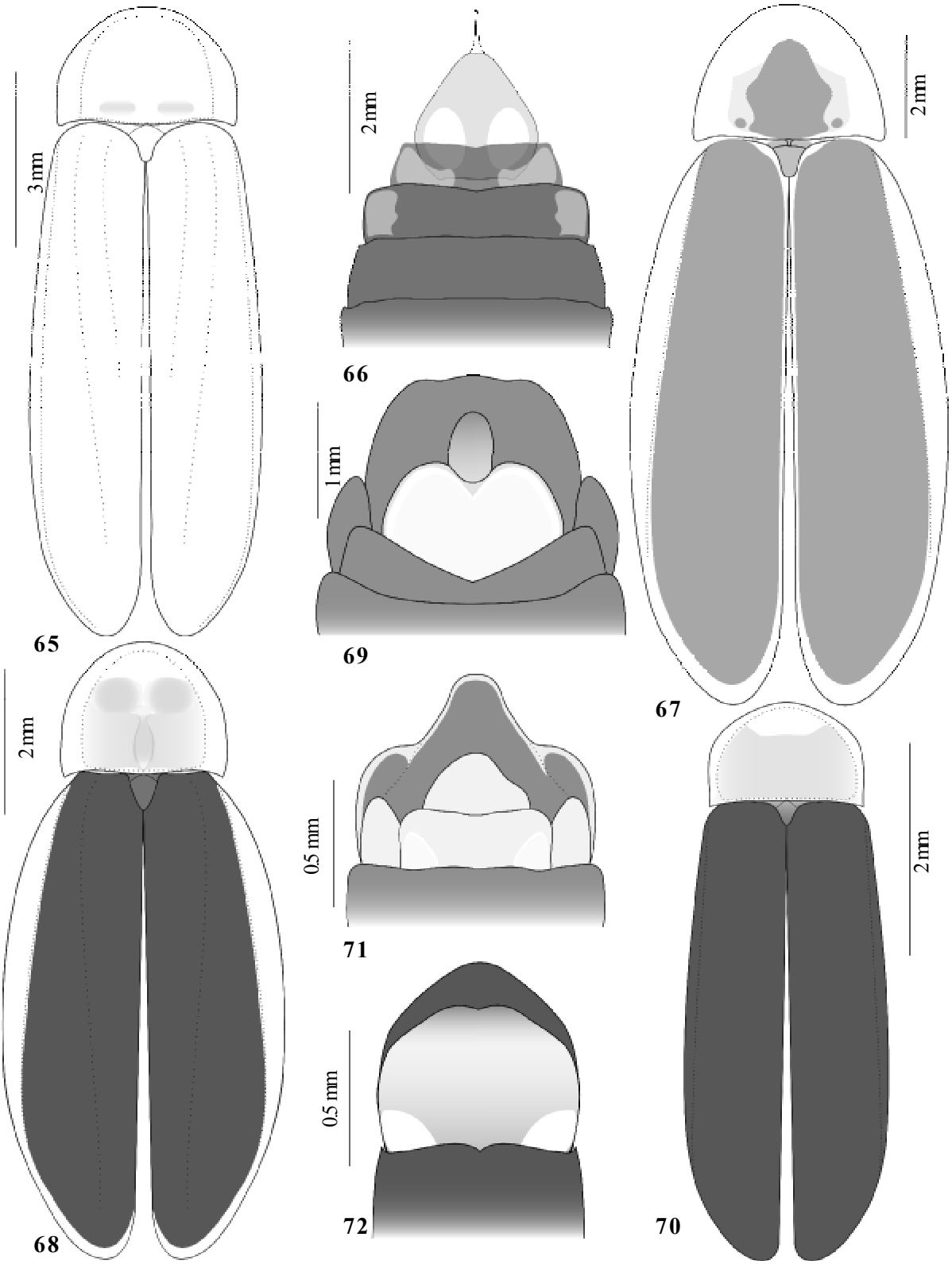
DIAGNOSIS. *Heterophotinus*, similar in appearance to *Robopus*, is readily distinguishable by the short filiform male antennae that do not attain to the middle of elytra and by the simple claws.

DISTRIBUTION. *Heterophotinus*, unlike *Robopus* that appears to be confined to Hispaniola, Puerto Rico and Cuba, also occurs in Jamaica and is known from Central and South America as well [McDermott, 1964; 1966].

COMMENTS. *Heterophotinus* was synonymized with *Robopus* along with *Diphotus* by McDermott [1964] who stated that the taxon is characterized by the short and filiform male antennae. However, in *Robopus roseicollis*, the type species of *Robopus*, the conspicuously flattened and serrate male antennae almost attain to the elytral apices. *Heterophotinus* also differs from *Robopus* by the simple claws and was separated by Motschulsky [1853] under the name *Pygolampis*, which turned out to be preoccupied by *Pygolampis* Germar, 1824 (Heteroptera).

Heterophotinus alius Kazantsev, **sp.n.**
Figs 65–66.

MATERIAL: Holotype, ♀, Dominican Republic, Pedernales, env. Los Arroyos, ca. 1450 m, 4–5.II.2006, S. Kazantsev leg. (ICM); paratype, ♀, Haiti, Kenscoff, 1–6.VIII.1961, J. Maldonado leg. (USNM).



Figs 65–72. Details of *Heterophotinus* spp.: 65–66 — *H. alius* **sp.n.**; 67 — *H. constanzae* **sp.n.**; 68–69 — *H. limpioensis* **sp.n.**; 70–72 — *H. nigricollis* **sp.n.**; 65–66 — holotype, female; 67–72 — holotype, male; 65, 67–68, 70 — body outline; 66, 69, 71–72 — ultimate abdominal segments; 65, 67–68, 70 — dorsal view; 66, 69, 71–72 — ventral view.

Рис. 65–72. Детали строения *Heterophotinus* spp.: 65–66 — *H. alius* **sp.n.**; 67 — *H. constanzae* **sp.n.**; 68–69 — *H. limpioensis* **sp.n.**; 70–72 — *H. nigricollis* **sp.n.**; 65–66 — голотип, самка; 67–72 — голотип, самец; 65, 67–68, 70 — общие очертания тела; 66, 69, 71–72 — вершинные сегменты брюшка; 65, 67–68, 70 — сверху; 66, 69, 71–72 — снизу.

DESCRIPTION. **Female**. Whitish testaceous; head except labrum, antennae, palps, basal pronotal spots, meso- and metathorax ventrally, abdomen except ventrite 7 and lateral spots on ventrites 5 and 6 and legs except coxae proximally, femora distally and tibiae externally dark brown.

Eyes relatively large (interocular distance subequal to eye radius). Antennae filiform, less than twice as long as pronotum, with antennomere 3 2 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, 1.5 times wider than long, with rounded anterior margin and short acute posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 65).

Elytra relatively long, 2.7 times as long as wide at humeri, widest in three fifths, densely punctuate, narrowly deflexed, with two conspicuous oblique longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) broadly separated (Fig. 66).

Male. Unknown.

Length: 11.8–12.6 mm. Width: 4.7–4.8 mm.

ETYMOLOGY. The name is derived from the Latin for "other, different" alluding to the conspicuous differences from *H. glaucus* (Olivier, 1790) and *H. viridicolor* **sp.n.**

BIOLOGY. The female holotype of *H. alius* **sp.n.** was collected one hour after sunset sitting on a leaf of a bush approximately two meters above ground at the edge of a thicket at a river bank. The continuously emitted light is greenish white.

DIAGNOSIS. *H. alius* **sp.n.** is readily distinguishable from somewhat similarly colored *H. glaucus* and *H. viridicolor* **sp.n.** by the noticeably more parallel-sided body (Fig. 65) and predominantly black abdomen (Fig. 66).

Heterophotinus constanzae Kazantsev, **sp.n.**
Fig. 67.

MATERIAL: Holotype, ♂, Dominican Republic: La Vega, env. Constanza, 1250–1550 m, 11.II.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Dark brown; pronotum except dark median infuscation, elytral margins, including suture, coxae distally and femora except distally testaceous; proximal half of pronotal disk laterad of median infuscation and hypomeron pink; ventrite 7 white.

Eyes large (interocular distance 1.5 smaller than eye radius). Labrum triangular, slightly emarginate distally. Antennae filiform, narrow, attaining to elytral proximal third, with antennomere 3 2.8 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, wide, 1.4 times wider than long, with rounded anterior margin and small posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 67).

Elytra long, 3.2 times as long as wide at humeri, diverging distally, densely punctuate, with traces of longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, contiguous; tergite 8 with pronounced distal angles and noticeable median process.

Female. Unknown.

Length: 14.5 mm. Width: 5.0 mm.

ETYMOLOGY. The specific name is derived from the type locality.

DIAGNOSIS. *H. constanzae* **sp.n.** is readily distinguished from the somewhat similarly coloured *H. limpioensis* **sp.n.** by the greater size, larger eyes and details of the coloration.

Heterophotinus limpioensis Kazantsev, **sp.n.**
Figs 68–69.

MATERIAL: Holotype, ♂, Dominican Republic, Elias Pina, Nelga de Maco, SE Rio Limpio, 800–850 m, 19–21.IV.2006, S. Kazantsev leg. (ICM); paratypes, 2 ♀♀, same label (ICM).

DESCRIPTION. **Male**. Black; pronotal sides and anterior half and elytral margins, excluding suture, coxae and femora proximally and tibiae exteriorly grayish testaceous; proximal half of pronotal disk and prothorax ventrally pink; ventrite 7 white.

Eyes moderately large (interocular distance slightly smaller than eye radius). Labrum transverse, emarginate medially. Antennae filiform, attaining to elytral third, with antennomere 3 2.7 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, wide, 1.4 times wider than long, with rounded anterior margin and short posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 68).

Elytra long, 2.8 times as long as wide at humeri, conspicuously rounded, widest in the middle, densely punctuate, with one conspicuous and two obscure longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, completely fused and occupying almost all ventral surface; tergite 8 slightly produced medially, with hardly noticeable distal angles (Fig. 69).

Female. Similar to male, but eyes smaller, with interocular distance 2 times greater than eye radius. Ultimate ventrite elongate, triangular, medially rounded and emarginate.

Length: 8.8–9.2 mm. Width: 3.8–4.0 mm.

ETYMOLOGY. The new species is named after Rio Limpio, the valley where all specimens of the type series were collected.

DIAGNOSIS. *H. limpioensis* **sp.n.** may be distinguished from other *Heterophotinus* species by the coloration, elytral shape and structure of the terminal abdominal segments (Figs 68–69).

Heterophotinus nigricollis Kazantsev **sp.n.**
Figs 70–72.

MATERIAL: Holotype, ♂, Dominican Republic, Sierra de Baoruco, Las Abejas, 1370 m, 18°08.85N 71°36.93W, 11.VIII.2004, A. Konstantinov leg. (ICM); paratype, ♀, Haiti, St. Michel, 21.I.1927, G.H. Wolcott leg. (AMNH).

DESCRIPTION. **Male**. Black; head, prothorax except anterior and lateral pronotal margins and scutal plates of mesonotum pink; anterior third and lateral pronotal margins, distal margin of tergite 8, procoxae and profemora testaceous; ventrites 7 and 8 whitish yellow.

Eyes small (interocular distance 2.5 greater than eye radius). Labrum transverse, rounded distally. Antennae filiform, attaining to elytral middle, with antennomere 3 approximately 2 times longer than antennomere 2 and 1.2 times shorter than antennomere 4.

Pronotum transverse, wide, 1.6 times wider than long, with triangularly produced anterior margin, nearly straight sides and small posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 70).

Elytra long, 2.7 times as long as wide at humeri, slightly diverging distally, densely punctuate, with obscure traces of longitudinal costae.

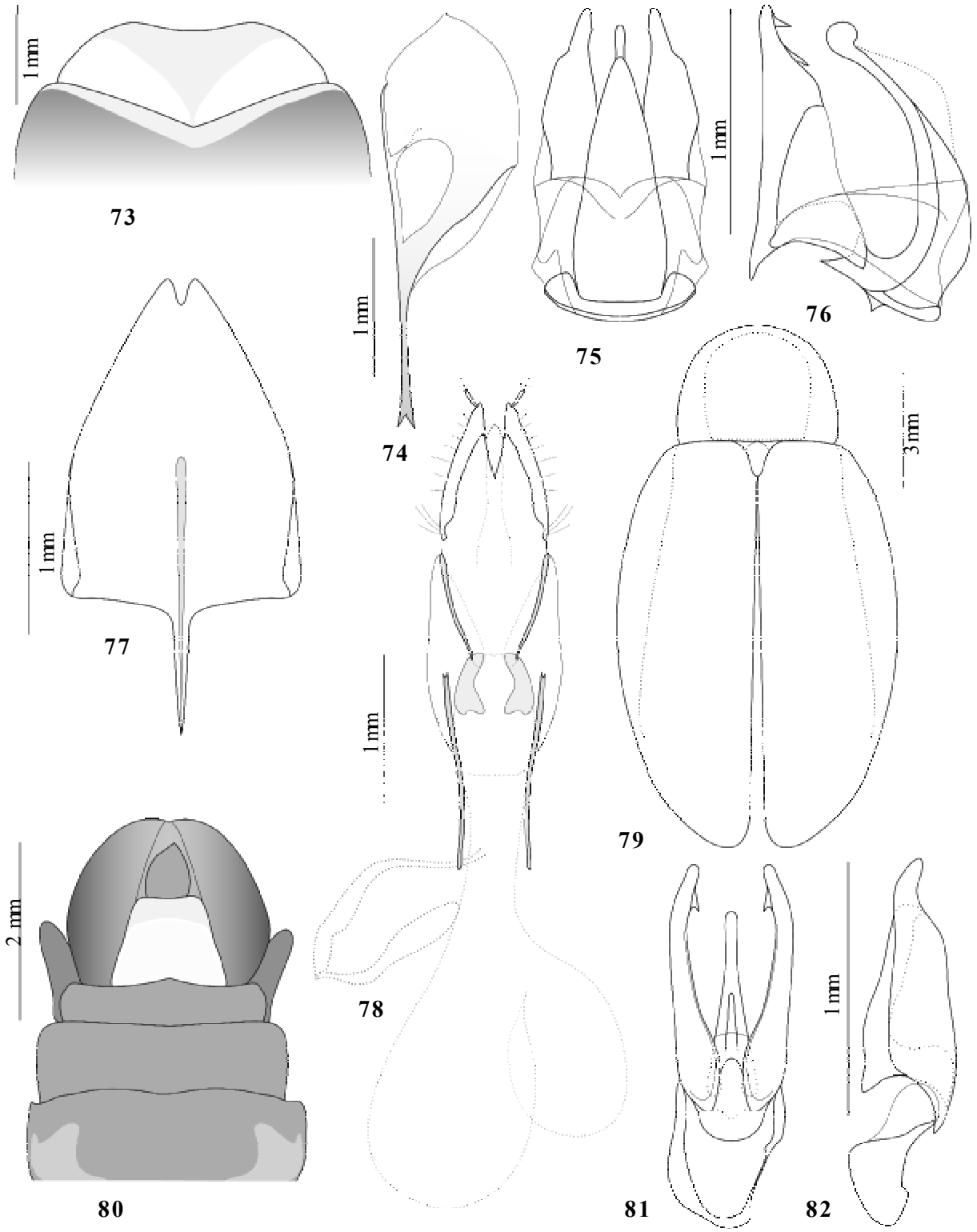
Luminous areas on ventrite 7 (sternite 8) small, widely separated; tergite 8 with long median projection, its sides deflexed (Fig. 71).

Female. Similar to male, but eyes smaller, antennae shorter, only slightly reaching over pronotum . Ultimate ventrite relatively broad, whitish yellow, with darkened apex, with minute median emargination (Fig. 72).

Length: 4.0 mm (female) – 5.0 mm (male). Width: 1.8 mm (female) – 2.0 mm (male).

ETYMOLOGY. The specific name is derived from the Latin from "black body" alluding to the coloration of the new species.

DIAGNOSIS. *H. nigricollis* **sp.n.** is readily distinguished from other *Heterophotinus* species by the small size, colora-



Figs 73–82. Details of *Heterophotinus* spp.: 73–78 — *H. merielae* **sp.n.**; 79–82 — *H. viridicolor* **sp.n.**; 73–76, 79–82 — holotype, male; 77–78 — paratype, female; 73 — ventrites 6 and 7; 74 — ventrite 8; 75–76, 81–82 — aedeagus; 77 — ventrite 7; 78 — external genitalia; 79 — body outline; 80 — ultimate abdominal segments; 73–75, 77–78, 80 — ventral view; 76, 82 — lateral view; 79, 81 — dorsal view.

Рис. 73–82. Детали строения *Heterophotinus* spp.: 73–78 — *H. merielae* **sp.n.**; 79–82 — *H. viridicolor* **sp.n.**; 73–76, 79–82 — голотип, самец; 77–78 — паратип, самка; 73 — вентриты 6 и 7; 74 — вентрит 8; 75–76, 81–82 — эдеагус; 77 — вентрит 7; 78 — наружные гениталии;79 — общие очертания тела; 80 — вершинные сегменты брюшка; 73–75, 77–78, 80 — снизу; 76, 82 — сбоку; 79, 81 — сверху.

tion, wide pronotum and structure of the terminal abdominal segments (Figs 70–72).

Heterophotinus merielae Kazantsev, **sp.n.** Figs 73–78.

MATERIAL: Holotype, ♂, Dominican Republic, Elias Pina, Nelga de Maco, SE Rio Limpio, 800–850 m, 19–21.IV.2006, S. Kazantsev leg. (ICM); paratypes: ♂ and ♀, same label; 4 ♂♂, Dominican Republic, Dajabon, 2 km W El Carrizal, 450 m, 18.IV.2006, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Dark brown; head except clypeus and labrum black; palps, antennae except antennomeres 1 and 2, pronotal sides and anterior half, scutellum (excluding scutal plates), elytral margins and three narrow longitudinal stripes, ventrites 7 and 8, ventrites 5 and 6 distally, coxae, femora proximally and tibiae exteriorly grayish testaceous; proximal two thirds of pronotal disk except two thick median black stripes, pro- and mesothorax ventrally and transverse stripes on ventrites 1–4 pink.

Eyes relatively large (interocular distance subequal to eye radius). Labrum transverse, emarginate medially. Antennae filiform, attaining to elytral middle, with antennomere 3 2.6 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, 1.2 times wider than long, with rounded anterior margin and straight posterior angles. Scutellum elongate, triangular, rounded at apex.

Elytra long, 2.8 times as long as wide at humeri, almost parallel-sided, densely punctuate, with two obscure longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, contiguous (Fig. 73). Tergite 8 semicircular; ventrite 8 (sternite 9) asymmetric, with long spiculum gastrale (Fig. 74). Aedeagus, with elongate, distally bidentate parameres and curved narrow median lobe (Figs 75–76).

Female. Similar to male, but eyes smaller, with interocular distance 2 times greater than eye radius. Ultimate ventrite elongate, triangular, medially emarginate, with short spiculum ventrale (Fig. 77). Valvifers free, slender and relatively short; coxites with non-sclerotized distal part and elongate sclerotized coxital baculus; styli minute, proctiger triangular (Fig. 78).

Length: 11.0–14.2 mm. Width: 3.6–5.0 mm.

ETYMOLOGY. The new species is named after Ms. Meriel Darzen who provided much appreciated assistance to the ICM Dominican Republic Expedition in Elias Pina and Dajabon Provinces.

BIOLOGY. Male specimens of *H. merielae* **sp.n.** were observed flying in thick mountain valley forest around tree branches, sometimes at considerable height, emitting strong greenish white light, in relatively long flashes. The female was found on the ground.

DIAGNOSIS. *H. merielae* **sp.n.** is readily distinguished from other *Heterophotinus* species by the coloration and the structure of the aedeagus (Figs 75–76).

Heterophotinus quadrinotatus (Motschulsky, 1854), **comb.n.**

Pygolampis quadrinotata Motschulsky, 1854: 24

Photinus quadrinotatus (Motschulsky): Leng & Mutchler, 1922: 473

MATERIAL: Lectotype (hereby designated), ♂, "St. Domingo", "*Pygolampis quadrinotata* Mots."(Motschulsky's manuscript label), "Type" (ZMMU).

COMMENTS. As Motschulsky's [1854] description does not indicate the uniqueness of the specimen, the lectotype of *Pygolampis quadrinotata* is hereby designated in compliance with the International Code of Zoological Nomenclature to clarify the application of the name to a taxon. The lectotype of *Pygolampis quadrinotata* Motschulsky has been found to belong to *Heterophotinus*. The taxon is therefore transferred to *Heterophotinus* as *H. quadrinotatus* (Motschulsky, 1854), **comb.n.**

Heterophotinus viridicolor Kazantsev, **sp.n.** Figs 79–82.

MATERIAL: Holotype, ♂, Dominican Republic, Elias Pina, Nelga de Maco, SE Rio Limpio, 800–850 m, 19–21.IV.2006, S. Kazantsev leg. (ICM); paratypes, 8 ♂♂, same label (ICM).

DESCRIPTION. **Male**. Greenish; head, palps, antennae, abdomen except ventrite 7 and ventrites 1–4 proximally, tibiae distally and tarsi externally dark brown; ventrites 1–4 proximally pink; ventrite 7 white.

Eyes relatively large (interocular distance 1.3 times shorter than eye radius). Labrum transverse, truncate distally. Antennae filiform, attaining to elytral two fifths, with antennomere 3 3 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, 1.4 times wider than long, with rounded anterior margin and small rounded posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 56).

Elytra elongate, 2.7 times as long as wide at humeri, rounded, broadly deflexed, widest in the middle (Fig. 79), densely punctuate, with obscure longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, totally contiguous; tergite 8 broad, enveloping ventrites 7 and 8 from sides (Fig. 80). Aedeagus with elongate distally unidentate parameres and relatively short, straight, flattened laterally median lobe; phallobase asymmetric (Figs 81–82).

Female. Unknown.

Length: 11.8–13.0 mm. Width: 5.0–6.2 mm.

ETYMOLOGY. The name of the new species is derived from the Latin for "green colour" alluding to its coloration.

DIAGNOSIS. *H. viridicolor* **sp.n.** is readily distinguished from other *Heterophotinus* species by the wide body, uniformly greenish upperside, rounded elytra (Fig. 79) and structure of the terminal abdominal segments (Fig. 80) and the aedeagus (Figs 81–82).

Microdiphot baorucoensis Kazantsev, **sp.n.** Figs 83–84.

MATERIAL: Holotype, ♂, Dominican Republic, Pedernales, env. Los Arroyos, ca. 1450 m, 4–5.II.2006, S. Kazantsev leg. (ICM).

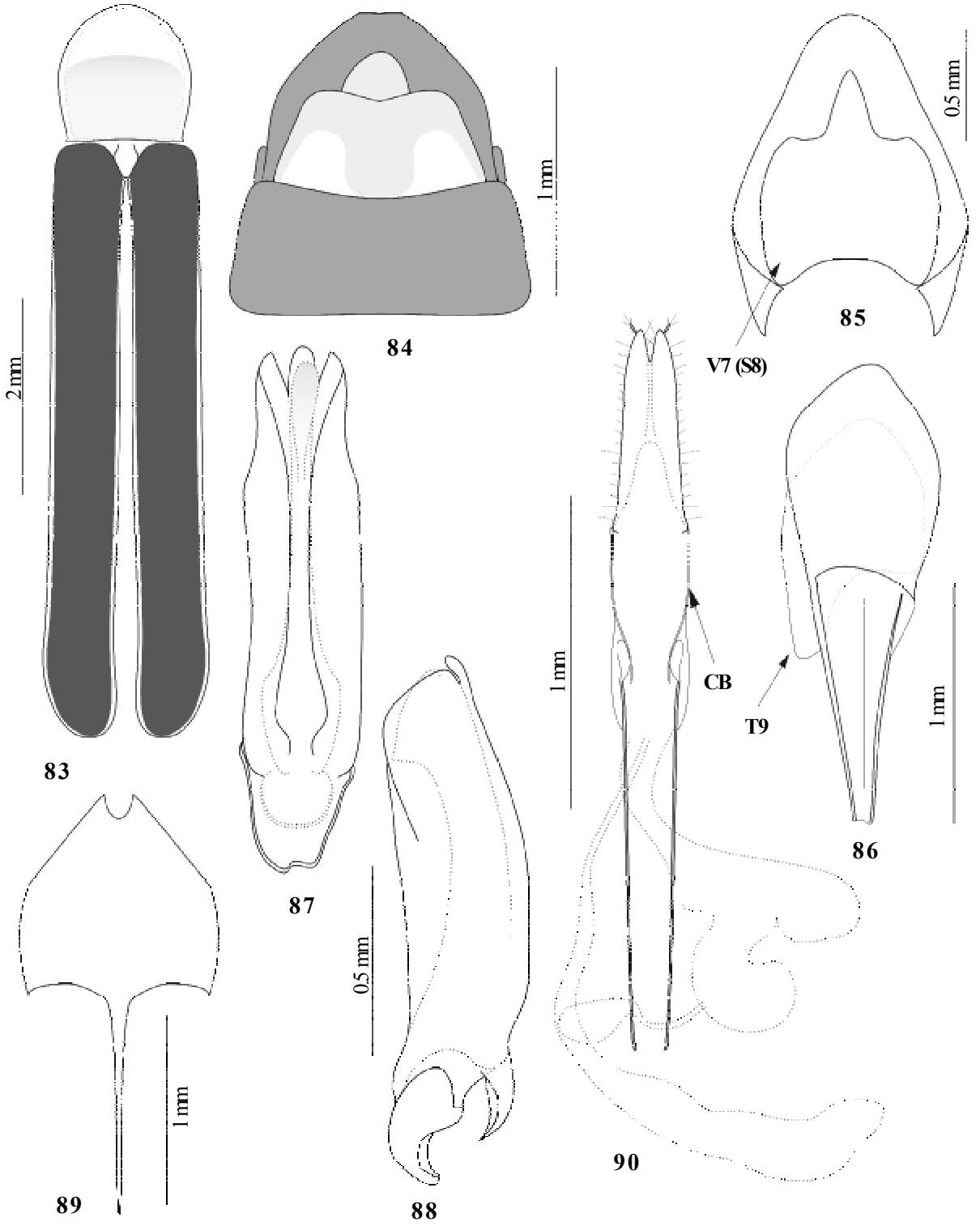
DESCRIPTION. **Male**. Dark brown; pronotal anterior third and narrow lateral margins, scutellum, narrow elytral margins, ventrite 7 distally and ventrite 8 testaceous; pronotal proximal two thirds except narrow lateral margins, pro- and mesothorax ventrally and ventrites 1–3 pink; ventrite 7 proximally whitish yellow.

Eyes relatively small (interocular distance about 2 times greater than eye radius). Labrum transverse, straight distally. Antennae filiform, attaining to elytral two thirds, with antennomere 3 2.7 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum almost square, widest in the middle, with rounded anterior margin and minute acute posterior angles. Scutellum elongate, triangular, rounded at apex (Fig. 83).

Elytra long, 5.2 times as long as wide at humeri, parallel-sided (Fig. 83), densely punctuate, with two obscure longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, separated. Tergite 8 triangularly produced distally (Fig. 84).



Figs 83–90. Details of *Microdiphot* and *Presbyolampis* spp.: 83–84 — *Microdiphot baorucoensis* **sp.n.**; 85–90 — *Presbyolampis vegaensis* **sp.n.**; 83–88 — holotype, male; 89–90 — paratype, female; 83 — body outline; 84 — terminal abdominal segments; 85, 89 — ventrite 7 and tergite 8; 86 — ventrite 8 and tergite 9; 87–88 — aedeagus; 90 — external genitalia; 83 — dorsal view; 84–87, 89–90 — ventral view; 88 — lateral view; CB — coxital baculus; S — sternite; T — tergite; V — ventrite.

Рис. 83–90. Детали строения *Microdiphot* и *Presbyolampis* spp.: 83–84 — *Microdiphot baorucoensis* **sp.n.**; 85–90 — *Presbyolampis vegaensis* **sp.n.**; 83–88 — голотип, самец; 89–90 — паратип, самка; 83 — общие очертания тела; 84 — вершинные сегменты брюшка; 85, 89 — вентрит 7 и тергит 8; 86 — вентрит 8 и тергит 9; 87–88 — эдеагус; 90 — наружные гениталии; 83 — сбоку; 84–87, 89–90 — снизу; 88 — сбоку; CB — бакулюс коксита; S — стернит; T — тергит; V — вентрит.

Female. Unknown.

Length: 7.8 mm. Width: 1.8 mm.

ETYMOLOGY. The new species is named after the mountain range (Sierra de Baoruco, Dominican Republic) where it was discovered.

DIAGNOSIS. *M. baorucoensis* **sp.n.** is readily distinguished from other *Microdiphot* species by the greater size, details of the coloration and structure of the terminal abdominal segments (Figs 83–84).

This is the first record of a *Microdiphot* species outside Jamaica.

PHOTURINI

Presbyolampis vegaensis Kazantsev, **sp.n.**
Figs 85–90.

MATERIAL: Holotype, ♂, Dominican Republic, La Vega, env. La Cienaga, 1120 m, 8.IV.2005, S. Kazantsev leg. (ICM); paratypes: 18 ♂♂, same label; ♀, Dominican Republic, La Vega, env. Jarabacoa, ca. 600–700 m, 7.IV.2005, S. Kazantsev leg.; 5 ♂♂, Dominican Republic, Elias Pina, Nelga de Maco, SE Rio Limpio, 800–850 m, 19–21.IV.2005, S. Kazantsev leg. (ICM, AMNH and ZMMU).

DESCRIPTION. **Male**. Testaceous; head, antennae, metaventrite, abdomen except luminous (ventrites 5 and 6) and terminal segments and tibiae and tarsi dark brown; proximal half of pronotum pinkish with median infuscation.

Eyes large (interocular distance subequal to eye radius). Antennae filiform, almost attaining to elytral two fifths, with antennomere 3 1.3 times longer than antennomere 2 and subequal in length to antennomere 4.

Pronotum transverse, 1.3 times wider than long, bisinuate basally, with rounded anterior margin and acute posterior angles. Scutellum triangular, rounded at apex.

Elytra relatively long, 2.7 times as long as wide at humeri, widest in the middle, densely punctuate, with four obscure longitudinal costae.

Luminous areas on sternites 6 and 7 (ventrites 5 and 6) large, occupying all ventral surface. Tergite 8 triangular; ventrite 7 (sternite 8) elongate, with distal median projection (Fig. 85); paraproct (tergite 9) asymmetrical, medially undivided; sternite 9 also asymmetrical (Fig. 86). Aedeagus slightly asymmetrical, with elongate parameres and straight narrow median lobe; phallobase relatively small (Figs 87–88).

Female. Similar to male, but eyes much smaller, with interocular distance 2.5 times greater than eye radius. Ultimate ventrite medially emarginate, with long spiculum ventrale (Fig. 89). Valvifers free, long and slender; coxites with non-sclerotized distal part and sclerotized long and slender coxital baculus; styli minute, proctiger triangular (Fig. 90).

Length: 10.2–11.0 mm. Width: 4.0–4.3 mm.

ETYMOLOGY. *P. vegaensis* **sp.n.** is named after the province La Vega in the Dominican Republic, where most specimens of the type series were collected.

BIOLOGY. All specimens of *P. vegaensis* **sp.n.** were collected shortly after sunset on or flying above grassy vegetation at banks of mountain rivers and brooks. Light is greenish white, emitted in short flashes.

DIAGNOSIS. *P. vegaensis* **sp.n.** is readily distinguished from *P. immigrans* Buck, 1947, the second, Jamaican, species of the genus, by the coloration, larger luminous organs and the structure of the aedeagus (Figs 87–88). As noted by McDermott and Buck [1959] and McDermott [1964], *Presbyolampis* is close to *Bicellonycha* Motschulsky 1853, distributed from the Southwestern USA to Northern South America, differing by the somewhat different type of the aedeagus.

This is the first record of *Presbyolampis* outside Jamaica.

Notes on biogeography

The information available on the Lampyridae of Cuba [Leng & Mutchler, 1922; Mutchler, 1923a; 1923b] is apparently incomplete and out-of-date. But even without exact details on the Cuban fauna the distribution patterns of the Greater Antillean fireflies allow making certain biogeographic conclusions.

Hispaniola and Puerto Rico have one endemic tribe, Cheguevariini, the only genus of which, *Cheguevaria*, occurs on both islands. Of the four non-endemic tribes recorded on Hispaniola and Puerto Rico, the cratomorphines, lamprocerines and photurines are also present only in the Western Hemisphere, while the photinines are distributed throughout the Holarctic and Palaeotropical dominions. The Cratomorphini and Lamprocerini are represented by one non-endemic genus each, *Pyractomena* and *Lychnacris*, respectively. The only photurine genus, *Presbyolampis*, has so far been registered only in Jamaica and Hispaniola. Of the six photinine genera, four, *Erythrolychnia*, *Callopisma*, *Rufolychnia* and *Robopus*, appear to be endemic to Hispaniola and Puerto Rico, the latter genus also undoubtedly occurring in Cuba. *Microdiphot* is known only from Jamaica and Hispaniola, while *Heterophotinus* is believed to be present in the Neotropics as well [McDermott, 1964].

Seven of the ten Hispaniola and Puerto Rico lampyrid genera are thus Greater Antillean endemics. All three non-endemic genera, *Pyractomena*, *Lychnacris* and *Heterophotinus*, are encountered on both islands and two of them, *Pyractomena* and *Lychnacris*, are not reported from Jamaica. Two genera are endemic to Hispaniola (*Erythrolychnia* and *Callopisma*) and one to Puerto Rico (*Rufolychnia*). Whereas Hispaniola and Puerto Rico have five genera in common (*Cheguevaria*, *Pyractomena*, *Lychnacris*, *Robopus* and *Heterophotinus*), and Jamaica and Hispaniola have three (*Heterophotinus*, *Presbyolampis* and *Microdiphot*), *Heterophotinus* is the only genus registered both on Puerto Rico and Jamaica. The most noticeable negative feature of the firefly fauna of Hispaniola and Puerto Rico is the absence of *Photinus* and *Photuris*, present in Jamaica [the former quite abundant with its 29 species — McDermott & Buck, 1959] and widespread in both Americas.

The distribution data on the Caribbean lampyrids provide strong support in favour of the continental origin of the Greater Antilles. The endemic tribe Cheguevariini and the photinine genera *Erythrolychnia*, *Callopisma*, *Rufolychnia* and *Robopus* that are absent from Jamaica and have no close relatives anywhere else, including both Americas, are apparently true relict groups whose ancestors, hypothetically, in Mesoamerica, disappeared and whose Hispaniolan and Puerto Rican descendants are all that remains of their kind. Their conspicuous absence on Jamaica, in the direction of trades and hurricanes, rejects the possibility of their over water dispersal. And, as there is no geological evidence of the existence of a land bridge between the Greater Antilles and the American continent at least

since the Cretaceous [Darlington, 1938], these groups may be confidently traced to the times when these islands split from their parent blocks; also, they must have survived the asteroid Chixzulub explosion that occurred 65 million years ago and the subsequent gigantic tsunamis that obliterated most larger animals in the West Indies.

The differences between Jamaica and the other Greater Antillean islands in firefly distribution also support hypotheses suggesting that Jamaica had a different history, having emerged considerably later or having suffered literal life obliteration. The origin of the firefly fauna of Jamaica is best explained by the over water dispersals from Central America (of *Photinus* and *Photuris*) and the adjacent Greater Antillean islands (of *Microdiphot* and *Presbyolampis*), with a possible introduction of *Heterophotinus* from both directions. Apart from the presence of the widespread nearctic and neotropical genera *Photinus* and *Photuris* that are absent on Hispaniola and Puerto Rico, the fact that may be explained by Jamaica's proximity to the nearest continental land and its being the first to get life transmitted by the occasional hurricanes therefrom [Darlington, 1938], this island is characterized by the absence of most of the firefly taxa endemic to the Greater Antilles. The only endemic Jamaican genus, *Jamphotus*, is apparently very close to *Heterophotinus* and, as the occurrence of apterous females is not uncommon in many other lampyrid genera [e.g., Cicero, 1988], is probably synonymous with it.

Checklist of the Lampyridae of Hispaniola and Puerto Rico

CHEGUEVARIINI Kazantsev, 2006, **tr.n.**

Cheguevaria Kazantsev, 2006, **gen.n.**

type species: *Cheguevaria taino* Kazantsev **sp.n.**

taino Kazantsev, 2006, **sp.n.** Puerto Rico.

angusta Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

CRATOMORPHINI

Pyractomena Melsheimer, 1845

Pyractomena Melsheimer, 1845: 304
Pyrectomena Motschulsky, 1853: 37 (lapsus calami)
Lecontea E.Olivier, 1899: 371 (unjustified replacement)
type species: *Pyractomena lucifera* Melsheimer, 1845

galeata E.Olivier, 1899. Puerto Rico and St. Thomas.
Pyractomena galeata E.Olivier, 1899: 91
Lecontea galeata (E.Olivier): E.Olivier, 1912: 23

heterodoxa (Leng et Mutchler, 1922). Puerto Rico.
Photinus heterodoxus Leng et Mutchler, 1922: 457
Pyractomena heterodoxa (Leng et Mutchler, 1922): McDermott, 1964: 16

vitticollis Motschulsky, 1853. Hispaniola: Dominican Republic.
Pyractomena vitticollis Motschulsky, 1853: 38
Lecontea vitticollis (Motschulsky): E.Olivier, 1912: 23

watsoni Leng et Mutchler, 1922. Hispaniola: Dominican Republic.
Pyractomena watsoni Leng et Mutchler, 1922: 453

LAMPROCERINI

Lychnacris Motschulsky, 1853

Lychnacris Motschulsky, 1853: 33
type species: *Lychnacris triguttula* Motschulsky, 1853

emarginata (Leng and Mutchler, 1922), **comb. n.**. Puerto Rico.
Callopisma emarginata Leng et Mutchler, 1922: 443

konstantinovi Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

mariposa (Leng and Mutchler, 1922), **comb. n.**. Hispaniola: Dominican Republic.
Callopisma mariposa Leng et Mutchler, 1922: 442

neslihanae Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

pedernalis Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

postica (E.Olivier, 1899), **comb. n.**. Hispaniola: Dominican Republic.
Lychnuris postica E.Olivier, 1899: 90
Callopisma postica (E.Olivier): E.Olivier, 1912: 20

PHOTININI

Erythrolychnia Motschulsky, 1853

Erythrolychnia Motschulsky, 1853: 29
type species: *Erythrolychnia dimidiatipennis* Motschulsky, 1853

bipartita (E.Olivier, 1912). Hispaniola: Dominican Republic.
Pygolampis bipartita E.Olivier, 1912: 24
Erythrolychnia albopalpis Leng et Mutchler, 1922: 448, **syn.n.**

clarki Mutchler, 1923. Hispaniola: Dominican Republic.
Erythrolychnia clarki Mutchler, 1923a: 11

fulgida (Olivier, 1790). Hispaniola: Dominican Republic.
Lampyris fulgida Olivier, 1790: 16
Erythrolychnia dimidiatipennis Motschulsky, 1853: 29
Pygolampis fulgida (Olivier): E.Olivier, 1912: 24

nigriventris Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

olivieri Leng et Mutchler, 1922. Hispaniola: Dominican Republic.
Erythrolychnia olivieri Leng et Mutchler, 1922: 448

quinquenotata (Laporte, 1840). Hispaniola: Dominican Republic.
Photinus quinquenotatus Laporte, 1840: 269
Pygolampis quinquenotatus (Laporte): E.Olivier, 1912: 24

unicolor Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

Callopisma Motschulsky, 1853

Callopisma Motschulsky, 1853: 41
type species: *Lampyris rufa* Olivier, 1790

rufa (Olivier, 1790). Hispaniola: Haiti.
Lampyris rufa Olivier, 1790: 28
Callopisma rufa (Olivier): Motschulsky, 1853: 42
Photinus rufus (Olivier): Gorham, 1880: 23
Callopisma rufa var. *humeralis* E.Olivier, 1912: 19

rufoviolacea Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

Rufolychnia Kazantsev, 2006, **gen.n.**

type species: *Callopisma borencona* Leng et Mutchler, 1922

borencona (Leng et Mutchler, 1922), **comb.n.** Puerto Rico.
Callopisma borencona Leng et Mutchler, 1922: 440

Robopus Motschulsky, 1853

Robopus Motschulsky, 1853: 41
Rabopus Motschulsky, 1854: 42 [lapsus calami]
type species: *Robopus roseicollis* Motschulsky, 1853

branhami Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
cayeyensis Kazantsev, 2006, **sp.n.** Puerto Rico.
erythrolytris Kazantsev, 2006, **sp.n.** Hispaniola: Haiti.
kasikus Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
marginipennis (Leng et Mutchler, 1922), **comb.n.**
Lucidota marginipennis Leng et Mutchler, 1922: 438
niger Kazantsev, 2006, **sp.n.** Puerto Rico.
roseicollis Motschulsky, 1853. Puerto Rico.
Robopus roseicollis Motschulsky, 1853: 42
Photinus decorus Gemminger et Harold, 1869: 1642 [replacement name]
Pygolampis decorus (Gemminger et Harold): E.Olivier, 1907: 35
Lucidota decorus (Gemminger et Harold): Leng and Mutchler, 1922: 436
roseinotatus Kazantsev, 2006, **sp.n.** Puerto Rico.

Heterophotinus E.Olivier, 1894, **nom.rev.**

Heterophotinus E.Olivier, 1894: 24 [replacement name]
Pygolampis Motschulsky, 1853: 48 [preoccupied by *Pygolampis* Germar, 1824]
Diphotus Barber, 1941: 4
type species: *Photinus limbipennis* Jacquelin-Duval, 1857
alius Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
constanzae Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
dubiosus (Leng et Mutchler, 1922), **comb.n.** Puerto Rico.
Photinus dubiosus Leng et Mutchler, 1922: 461
Diphotus dubiosus (Leng et Mutchler): McDermott, 1955: 50
glaucus (Olivier, 1790), **comb.n.** Cuba, Hispaniola and Jamaica.
Lampyris glauca Olivier, 1790: 13
Pygolampis glauca (Olivier): E.Olivier, 1912: 30
Photinus glaucus (Olivier): Leng and Mutchler, 1922: 460
Diphotus glaucus (Olivier): Barber, 1941: 3
lengi (Mutchler, 1923), **comb.n.** Hispaniola: Haiti.
Photinus lengi Mutchler, 1923b: 2
Diphotus lengi (Mutchler): McDermott, 1955: 50
limpioensis Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
merielae Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
nigricollis Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
quadrimaculatus (Laporte, 1840), **comb.n.** Hispaniola: Haiti and Dominican Republic.
Photinus quadrimaculatus Laporte, 1840: 269
Pygolampis quadrimaculata (Laporte): Motschulsky, 1853: 49
Pygolampis interrupta Motschulsky, 1854: 24
Photinus divisus Gemminger, 1870: 119
Pygolampis divisus (Gemminger): E.Olivier, 1912: 25
Diphotus quadrimaculatus (Laporte): McDermott, 1955: 50
Callopisma interrupta (Motschulsky): McDermott, 1964: 15
quadrinotatus (Motschulsky, 1854), **comb.n.** Hispaniola: Dominican Republic.
Pygolampis quadrinotata Motschulsky, 1854: 24
Photinus quadrinotatus (Motschulsky): Leng and Mutchler, 1922: 473
triangularis (E.Olivier, 1912), **comb.n.** Puerto Rico.
Photinus triangularis E.Olivier, 1912: 25
Diphotus triangularis (E.Olivier): McDermott, 1955: 50
viridicolor Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.
vittatus (Olivier, 1790), **comb.n.** Hispaniola and Puerto Rico.
Lampyris vittata Olivier, 1790: 23
Lampyris suturalis Schönherr, 1817: 65
Photinus vittatus (Olivier): Gorham, 1898: 320
Pygolampis vittata (Olivier): E.Olivier, 1912: 27
Diphotus vittatus (Olivier): McDermott, 1955: 50

Microdiphot Barber, 1941

Microdiphot Barber, 1941: 12
type species: *Microdiphot cavernarum* Barber, 1941
baorucoensis Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

PHOTURINI

Presbyolampis Buck, 1947

Presbyolampis Buck, 1947: 75
type species: *Presbyolampis immigrans* Buck, 1947
vegaensis Kazantsev, 2006, **sp.n.** Hispaniola: Dominican Republic.

ACKNOWLEDGEMENTS. It is my pleasant duty to express gratitude to Dr. L.H. Herman (American Museum of Natural History, New York), Dr. R.L. Davidson (Carnegie Museum of Natural History, Cleveland), Dr. D. Furth and Mr. G.F. Hevel (US National Museum of Natural History, Washington, D.C.) and Dr. V. Bayless and Dr. C. Carlton (Louisiana State Arthropod Museum, Baton Rouge) through whose courtesy I was able to study the Lampyridae collections in their care. Special thanks are to Dr. A. Konstantinov (Washington, D.C.) who kindly passed over the interesting firefly material from his collecting trips to the Dominican Republic.

References

Barber H.S. 1941. Species of fireflies in Jamaica (Coleoptera, Lampyridae) // Proceedings of the Rochester Academy of Sciences. Vol.8. No.1. P.1–13.
Branham M.A. & Wenzel J.W. 2003. The origin of photic behavior and the evolution of sexual communication in fireflies (Coleoptera: Lampyridae) // Cladistics. Vol.19. P.1–22.
Buck J.B. 1947. Studies on the firefly, IV. Ten new lampyrids from Jamaica // Proceedings of the United States National Museum. Vol.97(3210). P.59–79. 2 pls.
Cicero J.M. 1988. Ontophylogenetics of cantharoid larviforms (Coleoptera: Cantharoidea) // The Coleopterists Bulletin. Vol.42(2). P.105–151.
Crowson R.A. 1972. A review of classification of Cantharoidea, with the definition of two new families, Cneoglossidae and Omethidae // Revista de la Universidad de Madrid. Vol.22. No.82. P.35–77.
Darlington P.J. 1938. The origin of the fauna of the Greater Antilles, with discussion of dispersal of animals over water and through the air // Quart. Rev. Biol. Vol.13. P.274–300.
Laporte F.L. de Castelnau. 1840. Histoire naturelle des insectes coléoptères // Histoire naturelle des animaux articulés. T.1. Paris: Dumenil. P.1–297.
Leng C.W. & Mutchler A.J. 1922. The Lycidae, Lampyridae and Cantharidae (Telephoridae) of the West Indies // Bulletin of the American Museum of Natural History, New York. Vol.4. P.413–499.
McDermott F.A. 1955. A note on the genus *Diphotus* Barber 1941 (Coleoptera; Lampyridae) // The Coleopterists' Bulletin. Vol.9. No.4. P.49–52.
McDermott F.A. 1962. Illustrations of the aedeagi of the Lampyridae (Coleoptera) // The Coleopterists' Bulletin. Vol.16. P.21–27.
McDermott F.A. 1964. The taxonomy of the Lampyridae (Coleoptera) // Transactions of the American Entomological Society. Vol.90. P.1–72.

McDermott F.A. 1966. Lampyridae // W.O. Steel (ed.). Coleopterorum Catalogus Supplementa (Ed. secunda). Pars 9. W.Junk, Berlin. P.1–149.
McDermott F.A. & Buck J.B. 1959. The lampyrid fireflies of Jamaica // Transactions of the American Entomological Society. Vol.85. P.1–112. 13 pls.
Motschulsky V.I. 1853. Lampyrides // Etudes entomologiques. Vol.1 (1852). P.25–58.
Motschulsky V.I. 1854. Lampyrides (continuation) // Etudes entomologiques. Vol.3. P.15–26.
Mutchler A.J. 1923a. Notes on West Indian Lycidae and Lampyridae (Coleoptera), with descriptions of new forms // American Museum Novitates. Vol.60. P.1–13.
Mutchler A.J. 1923b. Notes on West Indian Lampyridae and Cantharidae (Coleoptera) with descriptions of new forms // American Museum Novitates. Vol.63. P.1–9.
Olivier A.G. 1790. Entomologie, ou histoire naturelle des insectes, avec leurs caractères génériques et spécifiques, leur description, leur synonymie et leur figure enluminée. T.2. Paris. P.1–497.
Olivier E. 1912. Révision des Coléoptères Malacodermes du groupe des Lampyrides // Revue Scientifique du Bourbonnais et du Centre de la France. T.24 (1911). P.24–112.
Wittmer W. 1976. Arbeiten zu einer revision der Familie Phengodidae (Col.) // Entomologische Arbeiten aus dem Museum G. Frey, Tutzing bei München. Bd.27. S.415–524.