New fireflies from Puerto Rico (Coleoptera: Lampyridae)

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Two firefly species, Cheguevaria montana sp. n. and Heterophotinus yuyinque sp. n., are described from Puerto Rico. A checklist of Lampyridae of Puerto Rico is provided.

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Fourteen species of Lampyridae belonging to seven genera – Aspisoma Laporte, 1833, Pyractomena Melshheimer, 1845, Lychnacris Motschulsky, 1853, Robopus Motschulsky, 1853, Heterophotinus E. Olivier, 1894, Rufolychnia Kazantsev, 2006 and Cheguevaria Kazantsev, 2006 – have so far been recorded from Puerto Rico (Santiago-Blay & Medina-Gaud, 1986; Kazantsev, 2006). Four genera (Aspisoma, Lychnacris, Rufolychnia and Cheguevaria) have so far been represented on the island by one species each.

Description of two new lampyrid species from Puerto Rico, one from the genus Cheguevaria, the other from Heterophotinus, is presented below.

The following abbreviation is used in this paper: ZMMU – Zoological Museum of Moscow University.

Cheguevaria montana sp. n. (Figs 1-2)


Description. Male. Testaceous; head, antennae except antennomere 11, elytra except 1/20 distally, abdomen and legs black; antennomere 11 white.

Eyes small (interocular distance ca. 4.3 times greater than eye radius). Antennae attaining to elytral third, with antennomere 11 slightly longer than wide, about 2.3 times longer than antennomere 2 and ca. 1.4 times shorter than antennomere 4.

Pronotum transverse, almost twice as wide as long, bisinuate basally, glabrous, with pronounced anterior and minute acute posterior angles. Scutel-lum parallel-sided, rounded at apex.

Elytra moderately long, 2.4 times as long as wide at humeri, parallel-sided, densely alveolate, with noticeable first and second costae in proximal third.

Genital capsule with elongate sternite provided with relatively long median projection (Fig. 1). Aedeagus with relatively short parameres and straight median lobe, conspicuously widened at base (Fig. 2).

Length: 4.9 mm. Width (humerally): 1.5 mm.
Female. Unknown.

Comparison. Cheguevaria montana sp. n., being undoubtedly closely related to C. taino Kazantsev, is easily distinguished from it by the uniformly black head and abdomen and reduced testaceus area on the elytra, as well as by the longer median projection of sternite 8 (Fig. 1) and broader parameres and more robust median lobe of the aedeagus (Fig. 2).

Etymology. The name montana is derived from the Latin for ‘montane’ alluding to the relatively high altitude the new species was taken at.

Robopus cordilleraensis sp. n. (Fig. 3)


Paratypes. 2 ♂ and 1 ♀; same label; 2 ♂♂. Puerto Rico, Cordillera Central, Monte Guilarte, ca. 1000 m, 11.I.2008, S. Kazantsev leg. (author’s collection).

Description. Male. Dark brown; antennomere 1, palpomeres 1-3, pronotal sides and anterior third, elytral margins, narrower at suture, wider at sides, legs, except tibiae and tarsi, and ventrites 7 and 8 whitish yellow; proximal two thirds of pronotal disk and prothorax ventrally bright pink, with infuscated M-sign.

Eyes relatively small (interocular distance ca. 1.6 times greater than eye radius). Labrum transverse, slightly concave anteriorly. Antennae serrate, attaining to elytral three fourths, with
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Antennomere 3 4 times longer than antennomere 2 and 1.25 times shorter than antennomere 4.

Pronotum transverse, 1.2 times wider than long, semicircular, with almost straight posterior angles. Scutellum elongate, triangular, rounded at apex.

Elytra long, 2.1 times as long as wide at humeri, almost parallel-sided, densely punctuate, with obscure longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) separated, occupying ca. half sternal length. Ventrite 8 (sternite 9) elongate, medially prolonged. Aedeagus elongate, with relatively short median lobe and bidentate parameral apices (Fig. 3).

**Female.** Similar to male, but eyes somewhat smaller, with interocular distance 2.5 times greater than eye radius, and antennae conspicuously narrower.

Length: 8.5-9.6 mm. Width: 3.2-3.7 mm.

**Diagnosis.** Robopus cordilleraensis sp. n. may be distinguished from the similarly coloured *R. marginipennis* (Leng et Mutchler) by the sparser and coarser punctuation of the pronotal disk and the structure of the aedeagus with shorter median lobe and bidentate parameral apices (Fig. 3).

**Etymology.** The new species is named after the Cordillera Central, the mountainous district in
Central Puerto Rico, where the type series was collected.

**Heterophotinus yuyinque** sp. n.  
(Figs 4-7)

*Holotype, ♂, Puerto Rico, Sierra de Luquillo, El-Yunque, Rd 191, km 13, 700-750 m, 15-17.I.2008, S. Kazantsev leg. (author’s collection).

**Paratypes.** 2 ♂♂ and 13 ♀♀. Same label (author’s collection and ZMMU).

**Description. Male.** Dark brown to black; antennomere 1, pronotal sides and anterior half, elytral margins, narrow at suture, wider at sides, legs, except tibiae distally and tarsomeres 3-5, whitish yellow; ventrites 7 and 8 white; proximal half of pronotal disk and prothorax ventrally, except at sides, pink.

Eyes relatively large (interocular distance subequal to eye radius). Labrum transverse, straight anteriorly. Antennae filiform, attaining to elytral middle. Ultimate ventrite times greater than eye radius, and antennae longer than antennomere 2 and subequal in length to antennomere 4.

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

Elytra long, 2.6 times as long as wide at humeral, parallel-sided, densely punctuate, with two obscure longitudinal costae.

Luminous areas on ventrite 7 (sternite 8) large, contiguous, occupying all sternal surface. Ventrite 8 (sternite 9) long, with long spiculum gastrale and incised and inwardly bent apex (Figs 3-4). Aedeagus, with elongate, distally slightly bidentate parameres and curved distally median lobe, constricted before apex (Figs 5-6).

**Female.** Similar to male, but pronotum uniformly pink, except for narrow whitish yellow border, eyes smaller, with interocular distance 1.5 times greater than eye radius, and antennae longer, attaining to elytral middle. Ultimate ventrite elongate, triangular, medially deeply incised, with short spiculum ventrale.

Length: 8.0-10.9 mm. Width: 2.7-3.7 mm.

**Comparison. Heterophotinus yuyinque** sp. n. is readily distinguished from other *Heterophotinus* species by the coloration and the structure of ventrite 8 (Figs 3-4) and aedeagus (Figs 5-6).

**Etymology.** The new species is named after Taíno’s protecting spirit said to live on top of the El-Yunque Mountain where the type series was collected.

**Checklist of Lampyridae of Puerto Rico**

**CHEGUEVARIINI**

*Cheguevaria* Kazantsev, 2006

*Cheguevaria* Kazantsev, 2006: 370  
type species: *Cheguevaria taino* Kazantsev, 2006

* • taino* Kazantsev, 2006: 370  
* • montana* sp. n.

**CRATOMORPHINI**

*Aspisoma* Laporte, 1833  
*Aspidosoma* Lacordaire, 1857  
*Nyctophanes* Dejean, 1833  
type species: *Lampyris ignita* Linnaeus, 1767  
* • ignita* Linnaeus, 1767. Also occurring in Central America, Colombia, Venezuela, Cuba, Hispaniola.

*Lampyris* ignita Linnaeus, 1767: 645  

*Aspisoma* polyzona Chevrolat, 1834: 9

**Pyrauctomena Melsheimer, 1845**

*Pyrauctomena* Melsheimer, 1845: 304  
*Pyrauctomena* Motschulsky, 1853: 37 (lapsus calami)  
*Lecontea* E. Olivier, 1899: 371 (unjustified replacement)  
type species: *Pyrauctomena lucifera* Melsheimer, 1845  
* • galeata* E. Olivier, 1899  
*Pyrauctomena galeata* E. Olivier, 1899: 91  
*Lecontea galeata* (E. Olivier). E. Olivier, 1912: 23  
* • heterodoxa* (Leng et Mutchler, 1922)  
*Photinus heterodoxus* Leng et Mutchler, 1922: 457  
*Pyrauctomena heterodoxa* (Leng et Mutchler, 1922): McDermott, 1964: 16

**LAMPROCERINI**

*Lychnacris Motschulsky, 1853*  
*Lychnacris* Motschulsky, 1853: 33  
type species: *Lychnacris triguttula* Motschulsky, 1853  
* • emarginata* (Leng et Mutchler, 1922)  
*Callopisma emarginata* Leng et Mutchler, 1922: 443

**PHOTININI**

*Rufolychnia Kazantsev, 2006*  
*Rufolychnia* Kazantsev, 2006: 378  
type species: *Callopisma borencona* Leng et Mutchler, 1922  
* • borencona* (Leng et Mutchler, 1922)  
*Callopisma borencona* Leng et Mutchler, 1922: 440

*Robopus Motschulsky, 1853*  
*Robopus* Motschulsky, 1853: 41  
*Robopus Motschulsky, 1854: 42 [lapsus calami]  
type species: *Robopus roseicollis* Motschulsky, 1853  
* • cayeryensis* Kazantsev, 2006: 380  
* • cordilleranaensis* sp. n.  
* • margiineron* (Leng et Mutchler, 1922)  
*Lucidota margiineron* Leng et Mutchler, 1922: 438  
* • niger* Kazantsev, 2006: 383  
* • roseicollis* Motschulsky, 1853  
*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 & Mutchler, 1922: 436  
* • roseinotatus* Kazantsev, 2006: 383  
*Heterophotinus* E. Olivier, 1894  
*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  
* • dubiosus* (Leng et Mutchler, 1922)  
*Photinus dubiosus* Leng et Mutchler, 1922: 461  
*Diphotus dubiosus* (Leng et Mutchler): McDermott, 1955: 50
• triangularis (E. Olivier, 1912)
Photinus triangularis E. Olivier, 1912: 25
Diphotus triangularis (E. Olivier): McDermott, 1955: 50
• vittatus (Olivier, 1790). Also occurring on Hispaniola.
Lampyris vittata Olivier, 1790: 23
Lampyris suturalis Schöntherr, 1817: 65
Photinus vittatus (Olivier): Gorham, 1898: 320
Pygolampis vittata (Olivier): E. Olivier, 1912: 27
Diphotus vittatus (Olivier): McDermott, 1955: 50
• yuyinque sp. n.

References

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