

A review of the genera *Microlycus* Pic, 1922 and *Teroplas* Gorham, 1884 (Coleoptera: Lycidae)

Обзор родов *Microlycus* Pic, 1922 и *Teroplas* Gorham, 1884 (Coleoptera: Lycidae)

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КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Lycidae, Platerodini, *Microlycus*, *Teroplas*, новые виды, определительная таблица, Неотропика.

ABSTRACT. Six new species of platerodine net-winged beetles are described from Central America: *Microlycus calolycooides* sp.n., *M. capillatus* sp.n., *Teroplas hermani*, *T. talamancaensis*, *T. monticola* and *T. gasparyani* spp.n. The genus *Microlycus* Pic, 1922 is redescribed and diagnosis of the genus *Teroplas* Gorham, 1884 is redefined. A key to the genera and to species of *Microlycus* and *Teroplas* is provided.

РЕЗЮМЕ. Описывается шесть новых видов жуков-краснокрылов трибы Platerodini из Центральной Америки: *Microlycus calolycooides* sp.n., *M. capillatus* sp.n., *Teroplas hermani*, *T. talamancaensis*, *T. monticola* и *T. gasparyani* spp.n. Переописан род *Microlycus* Pic, 1922 и уточнён диагноз рода *Teroplas* Gorham, 1884. Приводится определительная таблица родов, а также видов *Microlycus* и *Teroplas*.

Introduction

The monotypic genus *Teroplas* was erected by Gorham [1884] for a platerodine species from Nicaragua and Panama. *Microlycus*, also monotypic, was added to accommodate a species from Mexico [Pic, 1922]. The subfamily Platerodinae that includes these genera was revised by Bocáková [2001] (its status consequently lowered to the tribal level [Kazantsev, 2005]). *Teroplas* was demonstrated to be characterized by the long parameres and conspicuous laterophyses of the aedeagus, while *Microlycus* was included in the subfamily incertae sedis, as no males were known in the genus.

The extensive recent collecting in Central America and an opportunity to examine the rich lycid collections of the American Museum of Natural History (New York), Instituto Nacional de Biodiversidad (Heredia, Costa Rica) and Zoological Institute (St.-Petersburg) allow adding several new species to *Microlycus* and *Teroplas*. A possibility to study additional material, including males of *Microlycus*, also allows redefining the diagnoses of these poorly known genera.

The following abbreviations are used in the paper: AMNH — American Museum of Natural History, New York; ICM — Insect Centre, Moscow; INBio — Instituto Nacional de Biodiversidad, Heredia, Costa Rica; ZISP — Zoological Institute of the Russian Academy of Sciences, St.-Petersburg.

Taxonomy

Microlycus Pic, 1922

Microlycus Pic, 1922: 22

Type species: *Microlycus minutus* Pic, 1922 (by monotypy)

REDESCRIPTION. Elongate, flattened (Fig. 1). Head transverse, narrowed behind eyes, flat behind antennal prominence. Fastigium right-angled. Labrum transverse, sclerotized, proximally lying inside epistoma. Eyes relatively small, spherical. Mandibles small, narrow, strongly curved inward distally. Maxillary palps small, 4-segmented, with ultimate palpomere flattened and dilated. Prementum short, undivided; labial palps small, 3-segmented, ultimate palpomere large, securiform. Gula absent. Antennal prominence inconspicuous, antennal sockets separated by minute lamina. Antenna 11-segmented, moderately long, conspicuously narrowing distally, with antennomeres 3–8 flattened, but almost parallel-sided; antennomere 3 not considerably longer than antennomere 2 (Fig. 1); antennal pubescence short and decumbent, complemented with long bristles on apices of antennomeres 4–11.

Pronotum transverse, with fine median carina near anterior margin; posterior angles produced backwards (Fig. 1). Prosteronum short, “Y”-shaped. Mesothoracic spiracles sclerotized, not protruding laterally beyond coxal limits. Mesoventrite short, trapezoidal, connected to mesepisternum by sternopleural apophyses; mesepimeron shorter than mesepisternum. Mesonotum with scutellum not attaining to anterior margin; scutellum with elongate parallel-sided postnotal plate. Elytra flattened, with four primary costae, costa 4 considerably more elevated in humeral area; interstices with regular double rows of roundish cells; elytral pubescence dense and erect; bottoms of cells glabrous. Metanotum square, with convex scuto-scutellar ridge; allocristae conspicuous, starting at middle of scutum; scutellum with median suture, postnotal plate without median suture. Discrimen (metasternal suture) incomplete. Metathoracic wing

with elongate anal cell; wedge cell absent; cu-a brace located below Cu veins fork; Cu veins connected to M.

Protrochantins similar to mesotrochantins. Pro- and mesocoxae not contiguous distally; metacoxae distinctly separated. Legs relatively short; trochanters elongate, metatrochanters slightly widening distally; femurs and tibiae flattened, femurs conspicuously wider than tibiae; tibiae basally curved, tibial spurs short and inconspicuous; tarsomeres 3–4 short, dilated distally, narrow tarsomeres 1–2 with apical plantar pads occupying about half of the tarsomere; all claws simple. Abdominal spiracles located dorsally on sternites near lateral edge.

Male. Paraproct not divided medially; spiculum gastrale absent. Aedeagus symmetric, with long median lobe, abruptly narrowed at meeting point with short free distally pointed parameres, and narrow dorsal laterophyses (Figs 4–6, 8–9).

Female. Similar to male, but larger, with shorter antennae. Ultimate ventrite with short median proximal projection (Fig. 2). Valvifers free, long and very narrow; coxites robust, approximate, free (Fig. 3) or proximally fused (Fig. 7); each two-partite; styli relatively large and long; proctiger elongate, supplied with pair of elongate proximal apophyses (Figs 3, 7).

DIAGNOSIS AND COMMENTS. *Microlycus* differs from other platerodines by the elongate symmetric median lobe, short and distally pointed parameres and short phallobase of the aedeagus, with laterophyses developed dorsad of the median lobe (Figs 4–6, 8–9). The external female genitalia, unlike in *Teroplas* that also has aedeagal laterophyses, consist of the large, bipartite coxites and long narrow valvifers (Figs 3, 7). Externally, *Microlycus* may be distinguished by the strongly elevated in humeral area primary elytral costa 4 (Fig. 1).

The distally crossed condition of the valvifers of the type species of *Microlycus*, *M. minutus* [Bocáková, 2001], reported in just one specimen and not confirmed by the condition of valvifers in the congeners, may be due to teratology, when the distal part of the genitalia, including the coxites, twisted by 180° and the valvifers, which are articulated with the coxites, intersected in their distal portion.

Microlycus includes four species, *M. minutus* Pic, 1922, *M. mexicanus* Bocáková, 2001, *M. calolycoides* sp.n. and *M. capillatus* sp.n. distributed in Mexico and Costa Rica (Fig. 22). The new species are described below.

Microlycus calolycoides Kazantsev, sp.n.

Figs 1–6.

MATERIAL. Holotype ♂: Costa Rica, Guanacaste, env. Santa Cecilia, 650–700 m, 31.III.2002, S.Sevak (ICM); paratype ♀: same labeled (ICM).

DESCRIPTION. Black. Lateral and anterior margins of pronotum pink; elytra in anterior half, except triangular infuscation along suture, two ultimate antennomeres, trochanters and femurs proximally testaceous.

Male. Head dorsally concave behind antennal prominence, antennal sockets contiguous. Eyes small, separated medially above by 2.5 times their radius. Ultimate maxillary palpomere as long as wide, dilated distally. Ultimate labial palpomere small, strongly dilated distally. Antennae attaining to elytral two thirds; antennomeres 3–10 almost parallel-sided, antennomere 3 about 1.5 times longer than antennomere 2 and 1.7 times shorter than antennomere 4 (Fig. 1).

Pronotum transverse, pentagonal, 1.6 times wider than long, with long acute posterior angles (Fig. 1). Scutellum narrow, parallel-sided, slightly emarginate at apex. Elytra long, slightly dilated distally, 4.75 times longer than pronotum and 3 times as long as wide humerally.

Aedeagus with short parameres, long narrow laterophyses and short phallobase (Figs 4–6).

Female. Similar to male, but larger, eyes separated medially above by 3 times their radius and antennae shorter. Ultimate ventrite transverse (Fig. 2), valvifers 1.6 times longer than coxites; coxites free; proctiger dilated distally (Fig. 3).

Length: 6.7 (male)–9.4 (female) mm. Width (humerally): 1.9 (male)–2.8 (female) mm.

ETYMOLOGY. The name is derived from *Calolycus*, alluding to the similarity of coloration of the new species with representatives of this platerodine genus.

DIAGNOSIS. *M. calolycoides* sp.n. is easily separable from all congeners by the coloration; it is also readily distinguishable from *M. capillatus* sp.n., the second species of the genus with known males, by the longer parameres (Figs 4–6).

Microlycus capillatus Kazantsev, sp.n.

Figs 7–9.

MATERIAL. Holotype ♂: Costa Rica, Cordillera de Talamanca, 1200–1500 m, 28.II.2001, Sevak (ICM); paratypes, 3 ♀♀: same labeled (ICM); Costa Rica, Puntarenas, 35 km NE San Vito, nr. Las Alturas, Rio Bella Vista, rd to Gravel Pit, 4300' (=1290 m), black light, 22.III.1991, L.Herman (AMNH); Costa Rica, Puntarenas, Buenos Aires, Sect. Altamira, La Amistad, 1200 m, 21.III–10.III.1994, R.Delgado (INBio).

DESCRIPTION. Black. Lateral margins of pronotum testaceous.

Male. Head dorsally almost flat behind antennal prominence, with two spot-like round impressions, antennal sockets contiguous. Eyes small, separated medially above by 2 times their radius. Ultimate maxillary and labial palpomeres slightly longer than wide, dilated, conspicuously wider than preceding palpomeres. Antennae almost attaining to elytral two thirds; antennomeres 3–10 parallel-sided, antennomere 3 about twice as long as antennomere 2 and 2.2 times shorter than antennomere 4.

Pronotum transverse, pentagonal, 1.7 times wider than long, with long acute posterior angles. Scutellum narrow, parallel-sided, slightly emarginate at apex. Elytra long, slightly dilated distally, 6.1 times longer than pronotum and 3.25 times as long as wide humerally, with conspicuous black erect pubescence.

Aedeagus with widened distally median lobe, short robust parameres and narrow laterophyses (Figs 8–9).

Female. Similar to male, but larger and antennae shorter. Ultimate ventrite almost square, with narrow median proximal projection; valvifers 1.6 times longer than coxites; coxites proximally fused; proctiger not dilated distally (Fig. 7).

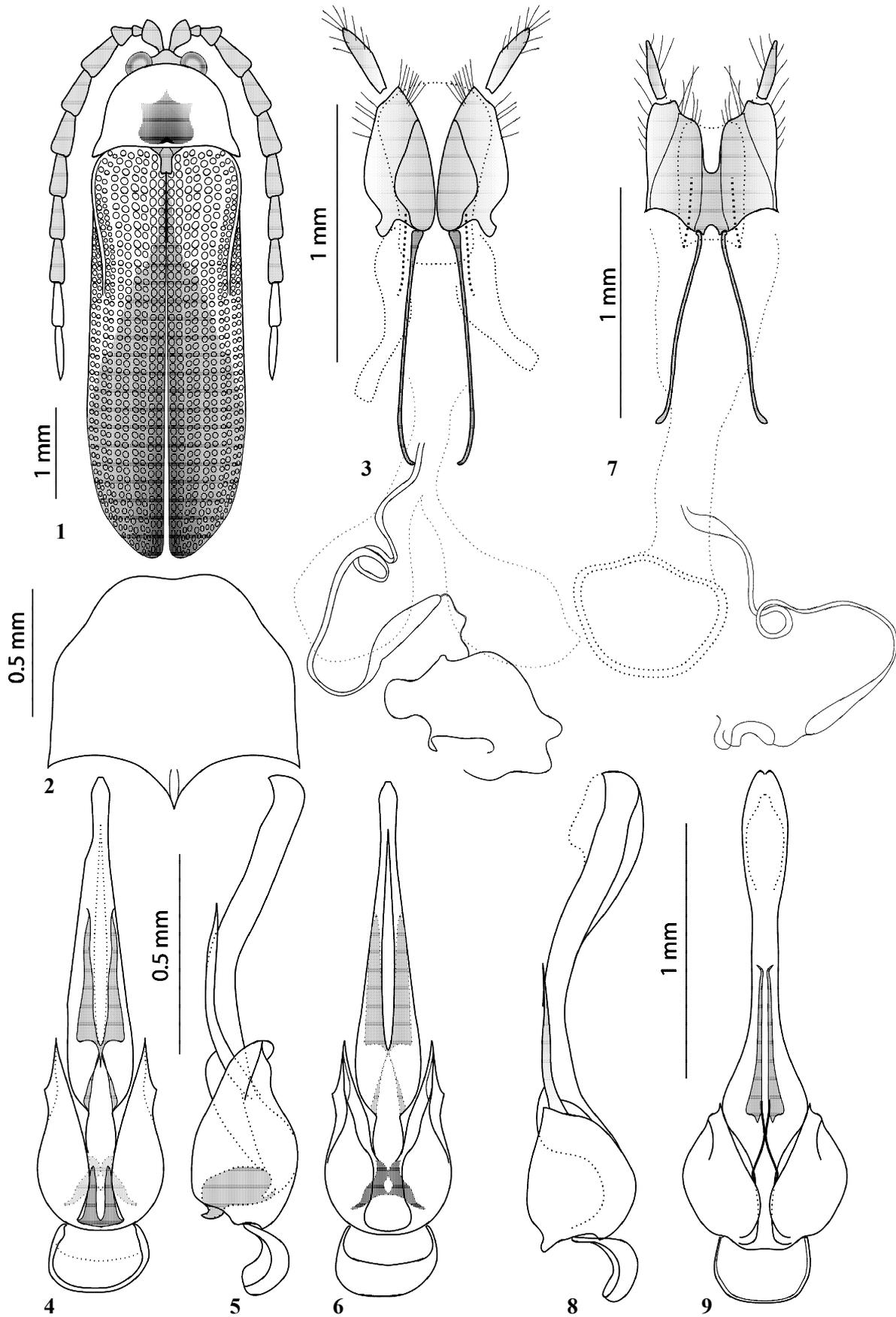
Length: 6.6–8.3 mm. Width (humerally): 1.8–2.2 mm.

ETYMOLOGY. The name is derived from the Latin for “hairy” due to the peculiar black erect pubescence.

DIAGNOSIS. Apart from the coloration *M. capillatus* sp.n. is distinguishable from *M. calolycoides* sp.n. by the shorter parameres of the aedeagus (Figs 8–9) and by the fused coxites (Fig. 7); it may also be distinguished from *M. minutus* and *M. mexicanus* by the mostly black pronotum, where only lateral margins are testaceous.

Figs 1–9. Details of *Microlycus* spp.: 1–6 — *M. calolycoides* sp.n.; 7–9 — *M. capillatus* sp.n.: 1 — body outline; 2 — ultimate ventrite; 3, 7 — female genitalia; 4–6, 8–9 — aedeagus (4, 9 — dorsal view; 5, 8 — lateral view; 6 — ventral view); 1, 4–6, 8–9 — holotype, ♂; 2–3, 7 — paratype, ♀.

Рис 1–9. Детали строения *Microlycus* spp.: 1–6 — *M. calolycoides* sp.n.; 7–9 — *M. capillatus* sp.n.: 1 — общие очертания тела; 2 — вершинный вентрит; 3, 7 — гениталии самки; 4–6, 8–9 — эдеагус (4, 9 — сверху; 5, 8 — сбоку; 6 — снизу); 1, 4–6, 8–9 — голотип, ♂; 2–3, 7 — паратип, ♀.



Teroplas Gorham, 1884

Teroplas Gorham, 1884: 243

Type species: *Teroplas fuscus* Gorham, 1884 (by monotypy)

DIAGNOSIS AND COMMENTS. *Teroplas* appears to be allied to *Microlycus*, both taxa possessing aedeagal laterophyses, differing, however, by the less developed humeral elytral costa, long parameres, relatively long phallobase and lateral location of the laterophyses of the aedeagus (Figs 12–21), as well as small simple coxites and robust valvifers of the external female genitalia (Fig. 11). *Teroplas* is noticeably diverse in the structure of antennae, with its male antennomere 3 ranging from short and similar to antennomere 2 to ramose and similar to antennomere 4 (Fig. 10).

Teroplas, also a strictly Central American taxon (Fig. 22), includes six species, *T. fuscus* Gorham, 1884, *T. oculatus* Bocáková, 2001, *T. hermani* sp.n., *T. talamancaensis* sp.n., *T. monticola* sp.n. and *T. gasparyani* sp.n. The description of the new species is given below.

Teroplas hermani Kazantsev, sp.n.

Fig. 15.

MATERIAL. Holotype ♂: Costa Rica, Puntarenas, 35 km NE San Vito, nr. Las Alturas, Rio Bella Vista, rd to Gravel Pit, 4300' (=1290 m), black light, 22.III.1991, L.Herman (AMNH); paratype ♂: same labeled (ICM).

DESCRIPTION. Black. Lateral margins of pronotum and elytral humeral spots testaceous.

Male. Head dorsally with prominent round impression behind antennal prominence, antennal sockets contiguous. Eyes large, separated medially above by about their radius. Ultimate maxillary palpomere elongate, parallel-sided, flattened distally. Ultimate labial palpomere dilated distally. Antennae attaining to elytral four fifths; antennomeres 3–10 serrate, antennomere 3 about 3.6 times longer than antennomere 2 and 1.8 times shorter than antennomere 4.

Pronotum transverse, pentagonal, 1.7 times wider than long, with acute laterally produced posterior angles. Scutellum almost parallel-sided, slightly emarginate at apex. Elytra long, widest at two thirds, 6.5 times longer than pronotum and 3.8 times as long as wide humerally.

Aedeagus with narrow median lobe hardly exceeding parameres in length (Fig. 15).

Female. Unknown.

Length: 6.8–7.7 mm. Width (humerally): 1.5–1.7 mm.

ETYMOLOGY. The species is named after Dr. L. Herman (AMNH, New York) who collected the type series.

DIAGNOSIS. *T. hermani* sp.n. belongs in the group with serrate male antennae, differing from *T. fuscus* and *T. oculatus* by the narrow median lobe of the aedeagus, which is only slightly longer than the parameres (Fig. 15).

Teroplas talamancaensis Kazantsev, sp.n.

Figs 16–17.

MATERIAL. Holotype ♂: Costa Rica, Cordillera de Talamanca, 1200–1500 m, 28.II.2001, Sevak (ICM).

DESCRIPTION. Black. Lateral margins of pronotum and elytral humeri testaceous.

Male. Head dorsally with roundish impression behind antennal prominence, antennal sockets contiguous. Eyes relatively small, separated medially above by 1.8 times their radius. Ultimate maxillary palpomere shorter than wide, dilated distally. Ultimate labial palpomere small, dilated distally. Antennae attaining to elytral two thirds; antennomeres 3–10 almost parallel-sided, antennomere 3 about 2 times longer than antennomere 2 and 1.8 times shorter than antennomere 4.

Pronotum transverse, pentagonal, 1.4 times wider than long, with acute posterior angles. Scutellum narrow, rounded at apex. Elytra long, widest near apices, 6 times longer than pronotum and 3.75 times as long as wide humerally.

Aedeagus with broad and hooked laterophyses and long narrow median basophyse (Figs 16–17).

Female. Unknown.

Length: 7.0 mm. Width (humerally): 1.6 mm.

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

DIAGNOSIS. *T. talamancaensis* sp.n. differs from all congeners by the smaller eyes, broad and hooked laterophyses and long narrow median basophyse of the aedeagus (Figs 16–17).

Teroplas monticola Kazantsev, sp.n.

Figs 18–19.

MATERIAL. Holotype ♂: Costa Rica, Cordillera de Talamanca, env. Villa Mills, 2650 m, 27.III.2001, Sevak (ICM).

DESCRIPTION. Black. Lateral margins of pronotum testaceous.

Male. Head dorsally with prominent round impression behind antennal prominence, antennal sockets contiguous. Eyes large, separated medially above by less than their radius. Ultimate maxillary palpomere slightly dilated distally, about as long as palpomere 2. Ultimate labial palpomere small, dilated distally. Antennae attaining to elytral two thirds, narrow, flattened from antennomere 3; antennomeres 3–10 almost parallel-sided, antennomere 3 about twice as long as antennomere 2 and 3.25 times shorter than antennomere 4.

Pronotum strongly transverse, pentagonal, almost twice as wide as long, with acute, but rounded posterior angles. Scutellum square, slightly emarginate at apex. Elytra long, widest near middle, 8.3 times longer than pronotum and 3.6 times as long as wide humerally.

Aedeagus with relatively long parameres; median lobe with minute preapical spine and large blunt proximal lobe (Figs 18–19).

Female. Unknown.

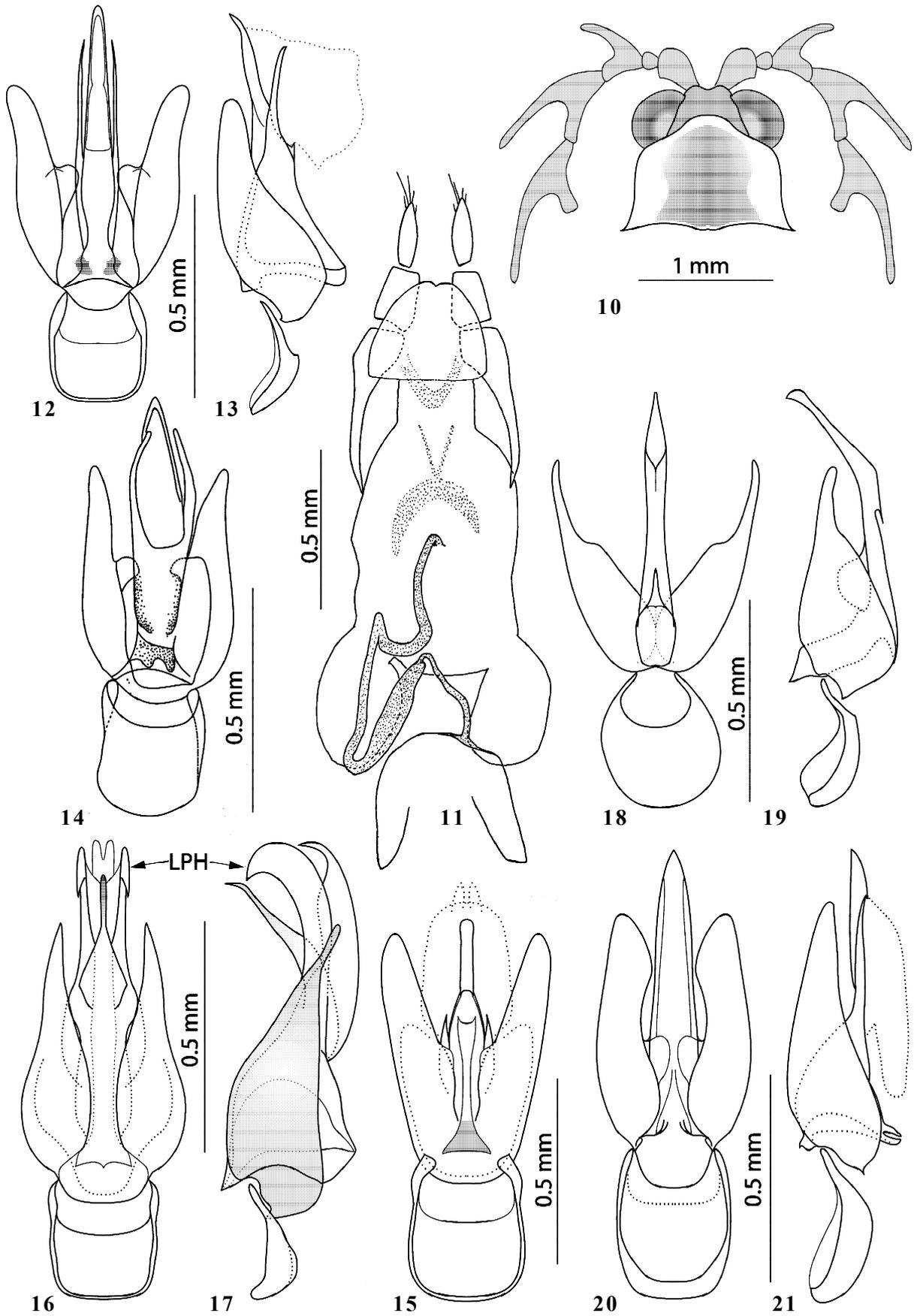
Length: 7.9 mm. Width (humerally): 1.6 mm.

ETYMOLOGY. The specific name is derived from the Latin for “highlander”, alluding to the fact that its type specimen was captured at the highest altitude from where the *Teroplas* species are known.

DIAGNOSIS. *T. monticola* sp.n. differs from all congeners by the long body, the uniformly black elytra and the

Figs 10–21. Details of *Teroplas* spp.: 10–13 — *T. fuscus* Gorham; 14 — *T. oculatus* Bocáková; 15 — *T. hermani* sp.n.; 16–17 — *T. talamancaensis* sp.n.; 18–19 — *T. monticola* sp.n.; 20–21 — *T. gasparyani* sp.n.: 10 — head and pronotum; 11 — female genitalia [after Bocáková, 2001]; 12–20 — aedeagus (12, 15–16, 20 — dorsal view; 13, 17, 19, 21 — lateral view; 14, 18 — ventral view); 15–21 — holotype, ♂; LPH — laterophyse.

Рис. 10–21. Детали строения *Teroplas* spp.: 10–13 — *T. fuscus* Gorham; 14 — *T. oculatus* Bocáková; 15 — *T. hermani* sp.n.; 16–17 — *T. talamancaensis* sp.n.; 18–19 — *T. monticola* sp.n.; 20–21 — *T. gasparyani* sp.n.: 10 — голова и переднеспинка; 11 — гениталии самки [по Bocáková, 2001]; 12–20 — эдеагус (12, 15–16, 20 — сверху; 13, 17, 19, 21 — сбоку; 14, 18 — снизу); 15–21 — голотип, ♂; LPH — латерофиз.



narrow median lobe and absence of laterophyses of the aedeagus (Figs 18–19).

COMMENTS. The parameres of the aedeagus of the holotype of *T. monticola* sp.n. are slightly asymmetric and the median lobe is somewhat deformed, which is considered to be an artefact of teratology and not reflected in illustration.

Teroplas gasparyani Kazantsev, sp.n.
Figs 20–21.

MATERIAL. Holotype ♂: Mexico, Madrono, 25 km SW Col. Victoria, 1200 m, 3.IV.2002, Gasparyan (ZIN).

DESCRIPTION. Black. Lateral margins of pronotum and elytral humeri testaceous.

Male. Head dorsally with conspicuous round impression behind antennal prominence, antennal sockets contiguous. Eyes relatively large, separated medially above by about their radius. Ultimate maxillary palpomere elongate, slightly dilated distally, about as long as palpomere 2. Ultimate labial palpomere small, strongly dilated distally. Antennae attaining to elytral three fourths, narrow, flattened from antennomere 3; antennomeres 3–10 almost parallel-sided, antennomere 3 about twice as long as antennomere 2 and 2.2 times shorter than antennomere 4.

Pronotum strongly transverse, pentagonal, 1.5 times as wide as long, with acute laterally produced posterior angles. Scutellum square, rounded at apex. Elytra long, slightly dilated distally, 5.1 times longer than pronotum and 3.3 times as long as wide humerally.

Aedeagus with straight, relatively broad median lobe and long, slightly expanded distally parameres (Figs 20–21).

Female. Unknown.

Length: 6.3 mm. Width (humerally): 1.6 mm.

ETYMOLOGY. The species is named after Dr. Gasparyan (ZIN, St. Petersburg) who collected the unique specimen.

DIAGNOSIS. *T. gasparyani* sp.n. can readily be distinguished from all congeners by the long and slightly expanded distally parameres of the aedeagus (Figs 20–21).

The ten known species of *Microlycus* and *Teroplas* are all confined to Mesoamerica (Fig. 22); they may be distinguished by the following key.

KEY TO *MICROLYCUS* PIC AND *TEROPLAS* GORHAM

1. Elytral primary costa 4 conspicuously elevated at humeri (Fig. 1). External female genitalia with large, bipartite coxites and long narrow valvifers (Figs 3, 7). Aedeagus with short parameres and short phallobase; laterophyses developed dorsad of median lobe (Figs 4–6, 8–9)..... (*Microlycus*) 2
 - Elytral primary costa 4 not conspicuously elevated at humeri. External female genitalia with short uniform coxites and robust valvifers (Fig. 11). Aedeagus with long parameres and relatively long phallobase; laterophyses developed laterad of median lobe (Figs 12–21)..... (*Teroplas*) 5
2. Pronotum pink; elytra proximally testaceous. Aedeagus with relatively long parameres (Figs 4–6). Costa Rica ..
..... *M. calolycoides* sp.n.
 - Pronotum black and testaceous; elytra uniformly black
..... 3
3. Pronotum black with testaceous lateral margins. Aedeagus with relatively short parameres (Figs 8–9). Costa Rica ..
..... *M. capillatus* sp.n.
 - Pronotum testaceous, with black basal median spot .. 4
4. Pronotum anteriorly produced; antennomere 4 about as long as antennomere 5. Mexico *M. mexicanus* Bocáková
 - Pronotum anteriorly not produced; antennomere 4 about

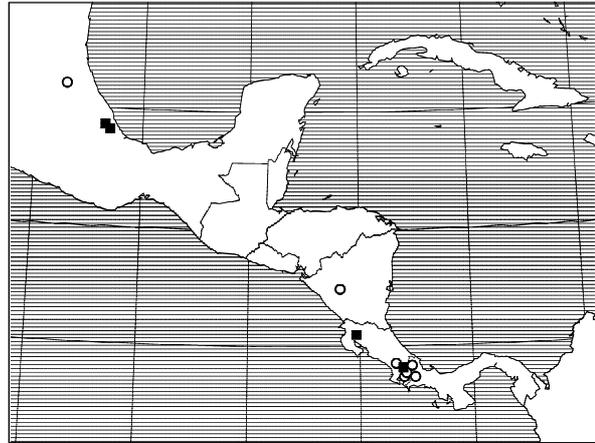


Fig. 22. Distribution of *Microlycus* Pic (black squares) and *Teroplas* Gorham (white circles).

Рис. 22. Распространение *Microlycus* Pic (черные квадраты) и *Teroplas* Gorham (белые кружки).

- 1.5 times longer than antennomere 5. Mexico
..... *M. minutus* Pic
5. Male antennomeres 4–10 ramose or serrate 6
 - Male antennomeres 4–10 parallel-sided 8
6. Male antennomeres 4–10 ramose (Fig. 10). Median lobe of aedeagus distally relatively narrow (Figs 12–13). Nicaragua, Costa Rica, Panama *T. fuscus* Gorham
 - Male antennomeres 4–10 serrate 7
7. Median lobe of aedeagus broad, parameres relatively short (Fig. 14). Panama *T. oculus* Bocáková
 - Median lobe of aedeagus narrow, parameres almost as long as median lobe (Fig. 15). Costa Rica *T. hermani* sp.n.
8. Aedeagus with broad and hooked laterophyses and long narrow median basophyse (Figs 16–17). Costa Rica
..... *T. talamancaensis* sp.n.
 - Laterophyses narrow; median basophyse short (Figs 18–21) 9
9. Elytra uniformly black. Median lobe of aedeagus narrow (Figs 18–19). Costa Rica *T. monticola* sp.n.
 - Elytra with testaceous humeri. Median lobe of aedeagus relatively broad, parameres conspicuously widened distally (Figs 20–21). Mexico *T. gasparyani* sp.n.

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References

- Bocáková M. 2001. Revision and phylogenetic analysis of the subfamily Platerodinae (Coleoptera: Lycidae) // European Journal of Entomology. Vol.98. P.53–85.
- Gorham H.S. 1884. Malacodermata. Supplement / Biologia Centrali-Americana. Insecta. Coleoptera. Vol.3. No.2. (1880–1886). London. P.225–311.
- Kazantsev S.V. 2005. Morphology of Lycidae with some considerations on evolution of the Coleoptera // Elytron. Vol.17–18 (2004) et Coleopterological Monographs. Vol.3. P.73–248.
- Pic M. 1922. Contribution à l'étude des Lycides // L'Echange, hors texte. Vol.37–38. Nos.404–410. (1921–1922). P.1–28.