ISRAEL JOURNAL OF ENTOMOLOGY, Vol. 50 (2), pp. 11–29 (14 July 2020)

This contribution is published to honor Prof. Vladimir Chikatunov, a scientist, a colleague and a friend, on the occasion of his 80th birthday.

Chikatunolepta n. gen. – a new genus of Saharo-Arabian Monoleptites (Coleoptera: Chrysomelidae: Galerucinae)

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ABSTRACT

The genus *Chikatunolepta* n. gen. is proposed to accommodate yellow species of Monoleptites leaf-beetles up to now classified in the genus *Nymphius* Weise, 1900: *Chikatunolepta buettikeri* (Medvedev, 1996) n. comb. (type species), *Ch. emir* (Lopatin, 2006) n. comb., and *Ch. millingeni* (Pic, 1915) n. comb. = *Nymphius artificiosus* (Peyerimhoff, 1931) n. syn., = *Nymphius friedmani* (Lopatin, 2002) n. syn. The new genus is characterised by a pale body, large pronotum, peculiar structure of the abdomen, very long and thin aedeagus and long basimetatarsomere. Morphological characters of all included species are illustrated in detail.

KEYWORDS: Coleoptera, Chrysomelidae, Galerucinae, Monoleptites, leaf-beetles, taxonomy, new genus, new synonymy, Saharo-Arabian chorotype.

INTRODUCTION

So called Monoleptites, a group of genera within the tribe Luperini (Chrysomelidae: Galerucinae) distributed worldwide, are characterised by the elongate metatarsomere I and lacking deep pronotal depressions (Wilcox 1973; Wagner 2003). While many Afrotropical Monoleptites genera and species were taxonomically assessed during the last 20 years (see a review in Wagner 2017*a*), taxa from other biogeographical regions are more or less waiting for a comprehensive revision. In the species-rich Oriental Region only several genera were revised (Hazmi & Wagner 2010*a–c*, 2013; Lee 2020). The Palaearctic fauna comprises a relatively low number of species of the worldwide genus *Monolepta* Chevrolat, 1836. On the other hand, there is a taxonomically very difficult genus *Calomicrus* Dillwyn, 1829 and some similar genera, which probably contain also species closely related to *Monolepta* (or species that will be transferred to *Monolepta* in the future) (e.g. Bezděk 2015).

The present paper deals with the description of a new genus of Monoleptites, *Chikatunolepta* n. gen., occuring in the Arabian Peninsula, Levant and northern Africa. In dorsal view, it resembles some species of *Calomicrus* and it is not a surprise that all *Chikatunolepta* n. gen. species were originally described or at least later classified in *Calomicrus*. Altogether five species-level taxa are transferred herein into the new genus. Pic (1915) described *Luperus (Calomicrus) millingeni*

DOI: 10.5281/zenodo.3945126; ISSN (online) 2224-6304
Received: 24 May 2020 / Revised: 5 July 2020 / Accepted: 9 July 2020
urn:lsid:zoobank.org:pub:A9B32D0B-A916-430F-9E25-CF446922CA31

Pic, 1915 from the Hejaz region in today's Saudi Arabia. Its identity was unclear for many decades until Medvedev (1996) described *Calomicrus (Nymphius) buettikeri* Medvedev, 1996 from Saudi Arabia and compared it with *Calomicrus millingeni*. Based on peculiar abdominal appendages Medvedev (1996) classified these two yellow species in *Nymphius* Weise, 1900 and downgraded *Nymphius* to a subgenus of *Calomicrus*. Lopatin (2002, 2006) followed Medvedev's arrangement, when describing additional two species *Calomicrus (Nymphius) friedmani* Lopatin, 2002 from Israel and *C. (N.) emir* Lopatin, 2006 from the United Arab Emirates. *Nymphius* was correctly treated as a separate genus by Fogato (1981). Beenen (2010) also catalogued *Nymphius* as a valid genus and included both true metallic *Nymphius* from Asia Minor, Caucasus and Near East, and yellow species with male abdominal appendages from the Arabian Peninsula and Levant. The last species in this group is *Luperodes artificiosus* Peyerimhoff, 1931 described from Algeria. Based on the drawing of the abdomen provided in the original description (Peyerimhoff 1931) it was provisionally transferred to *Nymphius*, but it was also announced that the yellow *Nymphius* species with elongate metatarsomeres I are not congeneric with true *Nymphius* (metallic species, with less elongate metatarsomeres) and should be placed into a separate new genus (Bezděk 2008).

MATERIALS AND METHODS

All measurements were made using an ocular grid mounted on a MBS-10 stereomicroscope (at 16× magnification for the body length and 32× magnification for other measurements). The photographs (except Figs 53–56) were taken with Canon EOS 550D and Canon EOS 800D digital cameras with a Canon MP-E 65 mm objective. Images of the same specimen at different focal planes were combined using Helicon Focus 7 software.

The examined material is housed in the following collections: Jan Bezděk collection, Brno, Czech Republic (JBCB); Muséum National d'Historie Naturelle, Paris, France (MNHN); Naturhistorisches Museum, Basel, Switzerland (NHMB); National Museum, Prague, Czech Republic (NMPC); Steinhardt Museum of Natural History, Tel Aviv, Israel (TAUI); Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZIN).

TAXONOMY

Genus ***Chikatunolepta*** n. gen.

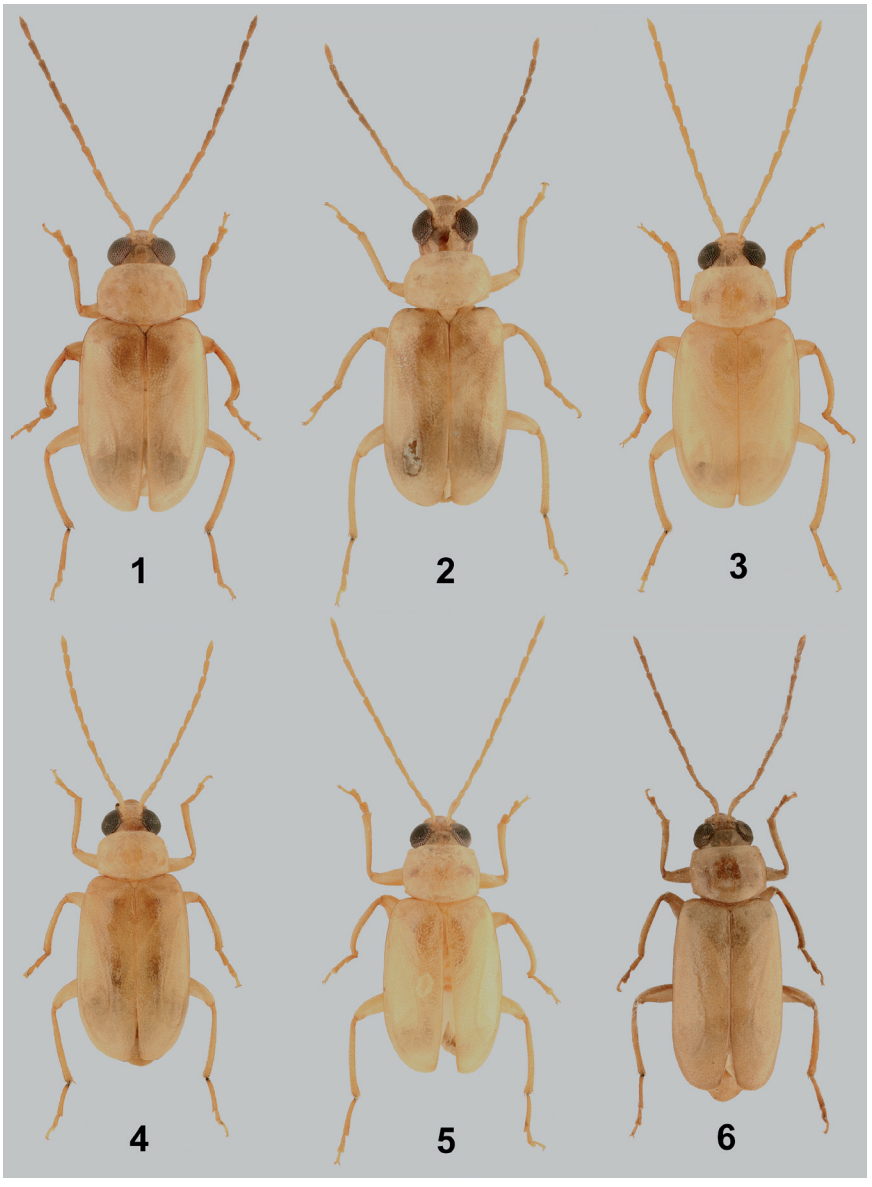
LSID: urn:lsid:zoobank.org:act:D7A8D880-E5C6-4C8F-AFFF-EEDF2A7485BF.

Type species: *Calomicrus buettikeri* Medvedev, 1996, designated here.

Etymology: The genus is named after Prof. Vladimir Chikatunov, a coleopterist at the Steinhardt Museum of Natural History, Tel Aviv, Israel, and *Monolepta*, a well known genus in Monoleptites. Feminine gender.

Description: Small species (3.3–4.7 mm). Body completely yellow or pale brown, except black extreme base of basimetatarsomere, elytra sometimes with poorly

defined brownish pattern (Figs 1–6). Very extreme lateral margin of epipleura in anterior quarter brown to black.

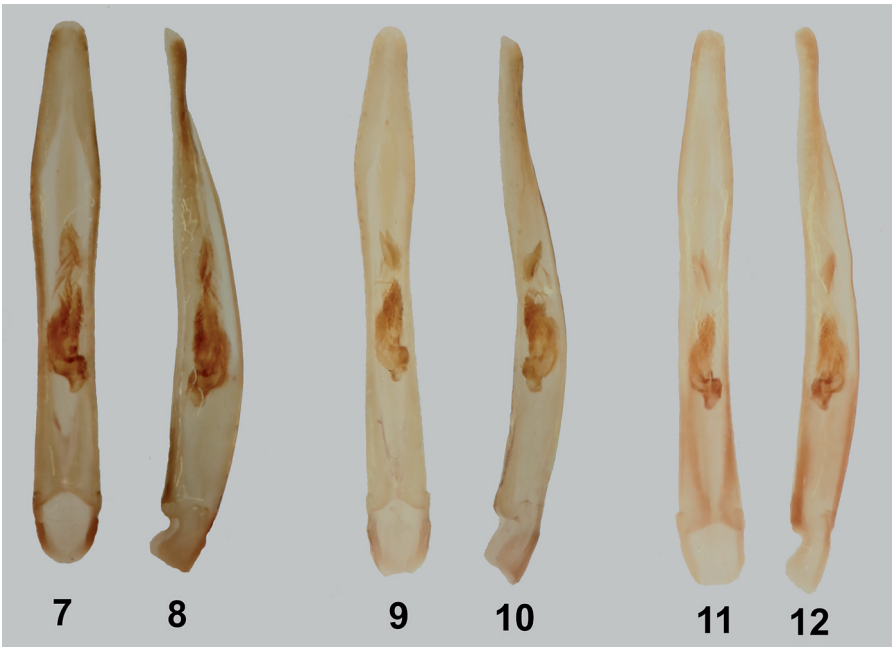


Figs 1–6: *Chikatunolepta* spp., habitus: (1) *Ch. buettikeri* (Medvedev), male; (2) *Ch. buettikeri* (Medvedev), female; (3) *Ch. emir* (Lopatin), male; (4) *Ch. emir* (Lopatin), female; (5) *Ch. millingeni* (Pic), male; (6) *Ch. millingeni* (Pic), female.

Male. Labrum transverse with straight anterior margin and rounded anterior angles, surface with several pores bearing long seta. Anterior part of head with triangular elevation, its posterior process forming narrow nasal keel. Interantennal space as wide as antennal insertion. Eyes large. Frons narrow, 1.00–1.20× as wide as diameter of eye. Antennae filiform, 0.80–0.90× as long as body, antennomeres II and III subequal (III 1.00–1.15× longer than II), IV–X long, 3.40–3.80× as long as wide.

Pronotum glabrous, lustrous, 1.25–1.40× as wide as long, widest in middle, slightly convex, surface covered with very small punctures and sometimes with traces of indistinct transverse impressions. Anterior margin straight or nearly straight, lateral margins slightly rounded, posterior margin widely rounded. Anterior margin unbordered, lateral and posterior margins thinly bordered. Anterior angles swollen, posterior angles obtusangulate, all angles with setigerous pore bearing long seta. Scutellum small, subtriangular.

Elytra subparallel, relatively flat, almost glabrous (with very sparse setae on lateral and apical slopes), 0.65–0.70× as long as body, 1.50–1.75× as long as wide at humeral part, densely covered with fine confused punctures. Humeral calli developed. Epipleura almost impunctate, glabrous, wide in anterior half, narrowed



Figs 7–12: *Chikatunolepta* spp., aedeagi in ventral (7, 9, 11) and lateral (8, 10, 12) views: (7, 8) *Ch. buettikeri* (Medvedev); (9, 10) *Ch. emir* (Lopatin); (11, 12) *Ch. millingeni* (Pic). Not to scale.

before elytral midlength, then very narrow and disappearing towards apex. Basal part of epipleura slightly impressed. Macropterous.

Anterior coxal cavities semiopen posteriorly (Fig. 51). Prosternal process very thin and elevated between procoxae. Abdominal ventrite III (or ventrites II and III) with median processes covered with long setae in middle part, V with two long narrow incisions (Figs 13–15, 25–27, 37–39). Protarsomere I slightly enlarged. Mesofemora robust with posterior margin slightly emarginate in apical third (Fig. 49), mesotibiae bent (in *Ch. buettikeri* also with vertical subapical lamella), mesotarsomere I enlarged. Metatarsomeres I very long, 7.50–8.00× as long as broad (Fig. 50). All tibiae with apical spur. Claws appendiculate.

Male genitalia. Aedeagus long and narrow, 8.50–9.80× as long as wide, ventral side with elongate apical cavity, basal two-thirds with distinct groove, narrow basally, gradually divergent anteriorly (Figs 22–24, 34–36, 46–48). Internal sac with sclerite complex containing larger curved basal sclerite fringed anteriorly and bare basally, and pair of very small winged-like sclerites anteriorly (Figs 7–12).

Female. Mid legs and abdomen not modified. Pro- and mesotarsomeres I not enlarged, narrow and parallel. Last abdominal ventrite entire, without incisions. Spermatheca with elongate nodulus covered with traces of transverse wrinkles, nodulus and cornu gradually connected, cornu C-shaped, apex of cornu with long bent thin appendix, spermathecal duct S-shaped, wide basally and then gradually narrowed (Figs 17, 29, 41). Bursa sclerites star-shaped, composed of two connected plates (Figs 18, 30, 42). Sternite VIII suboval, posterior margin with short setae, tignum very long, slender (Figs 16, 28, 40). Gonocoxae with apices bearing long setae, basal part of gonocoxae forming two wing-shaped plates separated by deep incision (Figs 19, 31, 43).

Comparison: The representatives of *Chikatunolepta* n. gen. have very long basimetatarsus with black extreme base, subequal antennomeres II and III, head with large eyes and interocular space as wide as or slightly wider than transverse diameter of eye, large pronotum, mid legs with enlarged femora, modified tibiae and enlarged mesotarsomere I, male abdomen modified, and long narrow aedeagus. Such combination of characters is unknown in any other genus of Monoleptites.

The Monoleptites fauna of the Arabian Peninsula includes five species of *Monolepta* Chevrolat, 1836, three species of *Calomicrus*, one species of *Galerudolphia* Hincks, 1949, and one species of *Afromaculepta* Hasenkamp & Wagner, 2010.

The Afrotropical genus *Galerudolphia* was revised by Bolz and Wagner (2005). One of the species, *G. arabica* (Medvedev, 1996), is distributed in Saudi Arabia and Yemen (Medvedev 1996; Bolz & Wagner 2005; Bezděk 2012). *Galerudolphia* species can be distiguished from *Chikatunolepta* n. gen. as follows: pronotum convergent anteriorly, trapezoidal; antennomere III always longer than II; anterior coxal cavities closed; mid legs not modified in males, abdomen not modified in males, aedeagus with incised apex, spermatheca with barrel-like nodulus and short right-angled cornu without appendix. The same characters in *Chikatunolepta* n.

gen.: pronotum subquadrangular; antennomeres II and III subequal; anterior coxal cavities semiopen; mid legs and abdomen modified in males, aedeagus without incised apex, spermatheca with elongate nodulus gradually connected with C-shaped cornu, cornu terminated with long bent appendix.

Another Afrotropical genus *Afromaculepta* comprises six species (Hasenkamp & Wagner 2000). One of them, a very widely distributed *A. decemmaculata* (Jacoby, 1886), penetrates into Yemen (Beenen 2010, 2019; Bezděk 2012). The genus *Afromaculepta* is characterised by a yellow body with a black vertex, antennae (except basal antennomeres) and spots on elytra, unmodified abdomen in males, and closed anterior coxal cavities (these characters also distinguish *Afromaculepta* from *Chikatunolepta* n. gen.). The structure of the spermateca is very similar to that of *Chikatunolepta* n. gen.

Monolepta species from the Arabian Peninsula were recently revised by Schlich and Wagner (2010) with four recognized species. An additional species, *Monolepta syriaca* (Weise, 1924) from Turkey, Syria and Israel was transferred from *Calomicrus* by Bezděk (2018). In habitus and coloration, *Monolepta syriaca* and *M. saudica* Medvedev, 1996 are similar to *Chikatunolepta* species. *Monolepta* differs from *Chikatunolepta* n. gen. in having the mid legs and abdomen unmodified in males, anterior coxal cavities closed, shorter and wider aedeagus with different and more complicated structure of internal sclerites, and the spermatheca with a globular or subglobular nodulus well separated from the cornu.

Chikatunolepta n. gen. is habitually similar also to some species currently classified in the genus *Calomicrus*. However, the Palaearctic genus *Calomicrus* is evidently polyphyletic in the current concept and awaits a comprehensive revision. Many yellow *Calomicrus* species from arid areas of the Mediterranean, Near East and Arabian Peninsula show the habitual affinity to the genus *Monolepta* and their position in *Calomicrus* needs revision. There are three yellow *Calomicrus* species distributed in the Arabian Peninsula: *C. arabicus* Lopatin & Nesterova, 2006 from the United Arab Emirates and Oman, *C. vanharteni* Lopatin, 2001 from Yemen, and *C. ophthalmicus* (Ogloblin, 1936) from Afghanistan, Iran, Oman and Saudi Arabia. All three species have *Monolepta*-like structure of metatarsomere I (very long with black base) and unmodified male abdomen. I envisage future transfer of them to *Monolepta*, but such an act needs more comprehensive study exceeding the present one.

Additional genera *Nymphius* Weise, 1900, *Luperus* Geoffroy, 1762, and *Euluperus* Weise, 1886 marginally penetrate into the Levant and Near East from the north. These genera have a shorter and wider metatarsomere I without a black base, and a generally black or metallic body. The differentiation characters for these genera were summarized by Bezděk (2015). The species transferred here to *Chikatunolepta* n. gen. were previously classified in *Nymphius* Weise, 1900. The latter genus with five species and two subspecies distributed in Turkey, Caucasus, Bulgaria, Iran, Syria and Israel, is characterized by metallic green or green-blue coloration,

a strongly modified male abdomen and a relatively robust aedeagus. The *Nymphius* species have been recently reviewed by Bezděk (2008).

When compared with the identification key to the genera of afrotropical Monoleptites (e.g. Wagner 2007), *Chikatunolepta* n. gen. runs to couplets 4–5 (non-metallic species with subequal antennomeres II and III – genera *Monolepta*, *Afromaculepta* Hasenkamp & Wagner, 2010 and *Afronaumannia* Steiner & Wagner, 2005). The characters distinguishing *Monolepta* and *Afromaculepta* are discussed above. *Afronaumannia* includes five afrotropical species and differs from *Chikatunolepta* n. gen. by subtrapezoidal pronotum, antennomere III longer than II, not modified male abdomen, and different structure of aedeagus and its internal sclerites (Steiner & Wagner 2005).

Chikatunolepta buettikeri (Medvedev, 1996) **n. comb.**

(Figs 1, 2, 7, 8, 13–24, 53, 54)

Calomicrus buettikeri Medvedev, 1996: 251. (Type locality: Saudi Arabia, Maraba).
Nymphius buettikeri (Medvedev): Beenen 2010: 485; Bezděk 2012*a*: 427.

Main diagnostic characters: *Male* (Fig. 1). Abdomen with ventrite I not modified, II slightly elevated, III with short flat finger-like process obliquely directed posteriorly, IV with raised posterior margin; middle parts of ventrites I, II and IV covered with long pale setae (Figs 13–15). Protarsomere I subtriangular. Mesotibiae widely rounded with vertical subapical lamela dorsally, mesotarsomere I enlarged (Figs 20, 21).

Female (Fig. 2). Spermatheca with apical part of cornu longer than basal part, appendix shorter than apical part of cornu (Fig. 17).

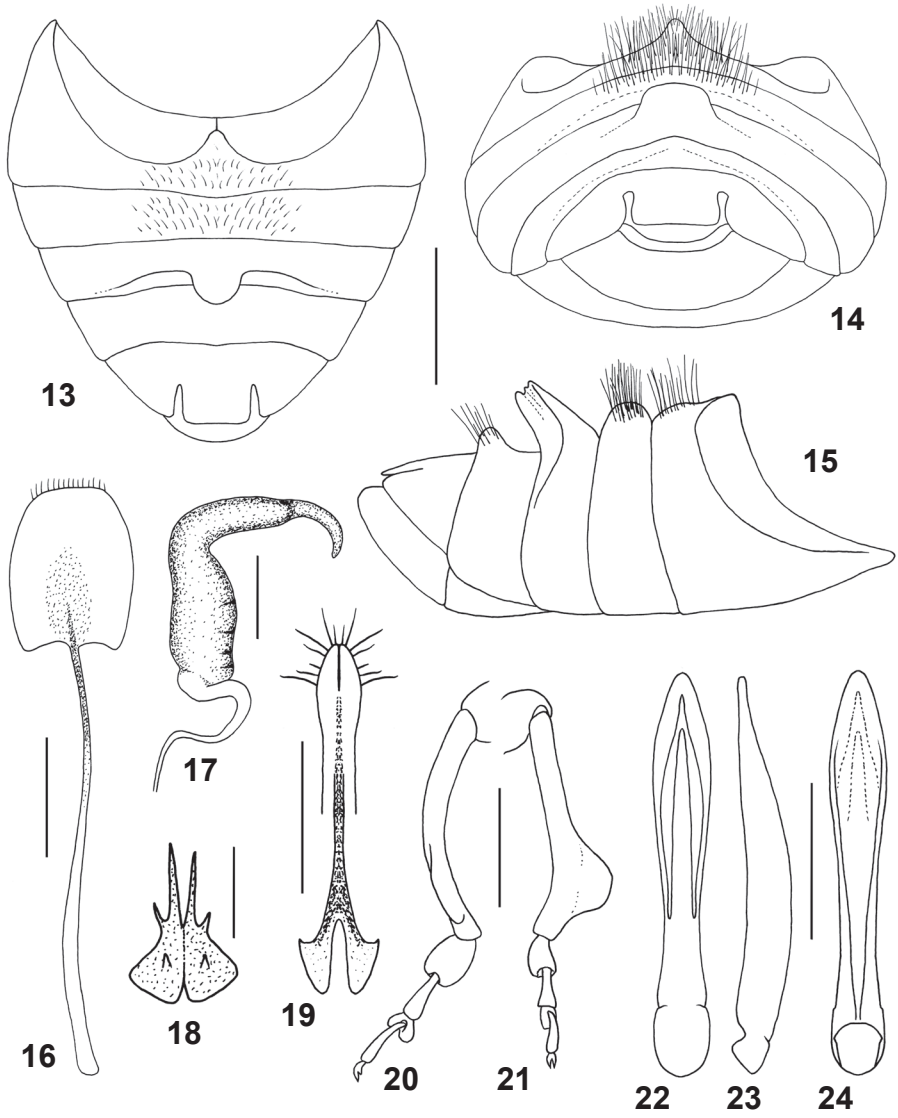
Holotype (examined, Figs 53, 54): ♂ **Saudi Arabia:** Maraba, 16.x.1979, W. Büttiker (NHMB).

Other material examined: Yemen: 2♂ 3♀, Al Hudaydah prov., Jabal Bura valley forest N. P., 15°52.4–5'N 43°24.6–25.2'E, 240–350 m, 4.xi.2010, J. Bezděk (JBCB); 1♂, Jabal Bura, 14°52'N 43°24'E, 225–600 m, 30.x–1.xi.2005, S. Kadlec (JBCB); 2♂ 4♀, same data but P. Kabátek (JBCB); 1♂, Wadi Anis, 60 km SW of Sana, 15°00'N 44°09'E, 1522 m, 7.x.2005, P. Kabátek (JBCB); 1♀, Suq ad Dabab, SWW of Ta´izz, 13°32'N 43°57'E, 1208 m, 26.x.2005, S. Kadlec (JBCB); 2♀, Wadi Surdud (Sari), W of Sana, 15°15'N 43°30'E, 627 m, 2.xi.2005, P. Kabátek (JBCB).

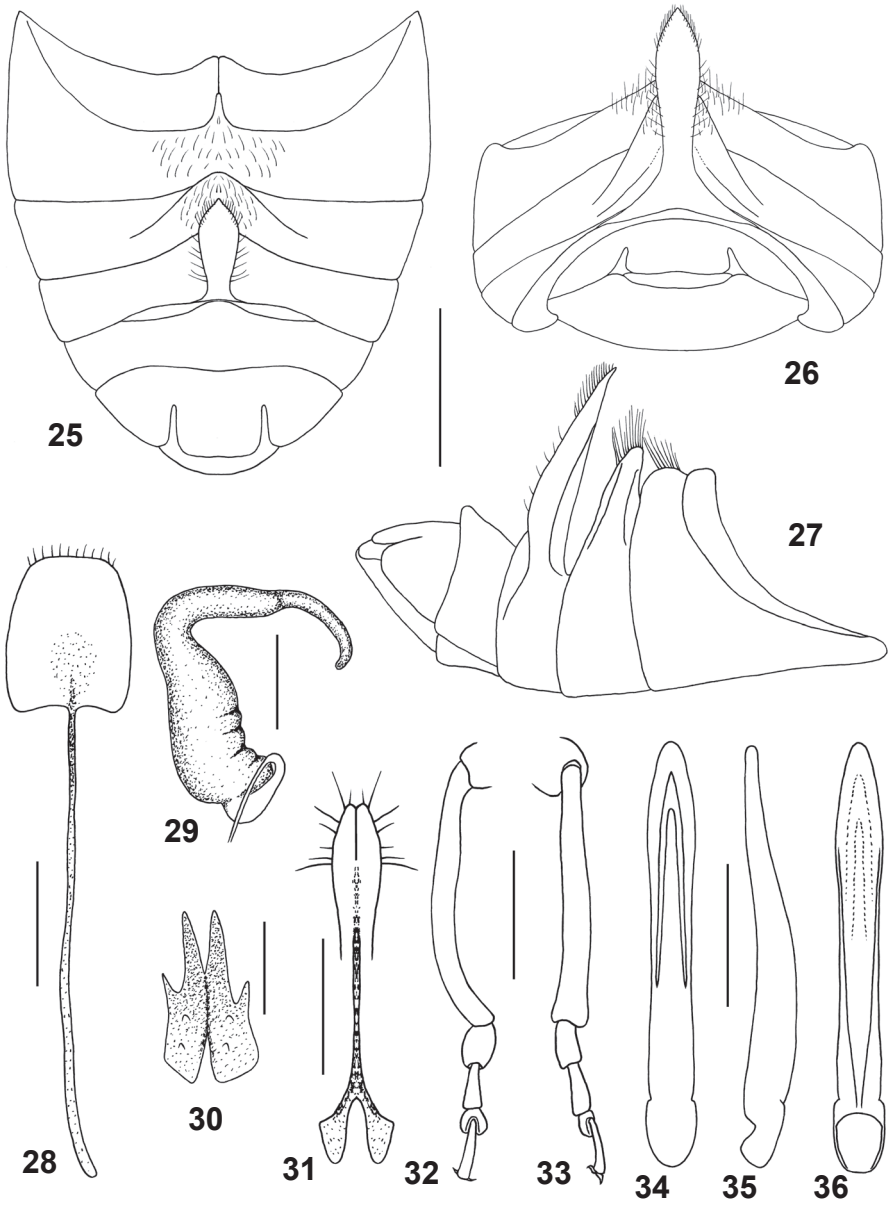
Distribution: Saudi Arabia (Medvedev 1996), Yemen (Bezděk 2012; present study).

Comparison: The males of *Chikatunolepta buettikeri* differ from *Ch. emir* and *Ch. millingeni* in the presence of subapical vertical lamela on mesotibia (Figs 20, 21) and the structure of abdomen having short and wide process on ventrite III and missing process on ventrite II (Figs 13–15). The females are indistinguishable in habitus.

Comments: In the figure plate in the original description of *Calomicrus buettikeri*, Medvedev (1996: 251) interchanged the drawings of the abdomina of *C. buettikeri* and *C. millingeni*. Contrary to the plate legend, his figure 47 pertains to *C. buettikeri* and figure 49 to *C. millingeni*. This mistake was adopted by Lopatin (2002, 2006) when describing *C. friedmani* and *C. emir*.



Figs 13–24: *Chikatunolepta buettikeri* (Medvedev), details: (13) male abdomen, ventral view; (14) male abdomen, caudal view; (15) male abdomen, lateral view; (16) sternite VIII; (17) spermatheca; (18) bursa sclerite; (19) gonocoxae; (20) male mesotibia, dorsal view; (21) male mesotibia, lateral view; (22) aedeagus, dorsal view; (23) aedeagus, lateral view; (24) aedeagus, ventral view. Scale bars: 0.25 mm for Figs 16, 19; 0.2 mm for Fig. 17; 0.1 mm for Fig. 18; 0.5 mm for Figs 13–15 and 20–24.



Figs 25–36: *Chikatunolepta emir* (Lopatin), details: (25) male abdomen, ventral view; (26) male abdomen, caudal view; (27) male abdomen, lateral view; (28) sternite VIII; (29) spermatheca; (30) bursa sclerite; (31) gonocoxae; (32) male mesotibia, dorsal view; (33) male mesotibia, lateral view; (34) aedeagus, dorsal view; (35) aedeagus, lateral view; (36) aedeagus, ventral view. Scale bars: 0.25 mm for Figs 28, 31; 0.2 mm for Fig. 29; 0.1 mm for Fig. 30; 0.5 mm for Figs 25–27 and 32–36.

Chikatunolepta emir (Lopatin, 2006) **n. comb.**

(Figs 3, 4, 9, 10, 25–36, 49–51, 55, 56)

Calomicrus (Nymphius) emir Lopatin, 2006: 261. (Type locality: United Arab Emirates, Wadi Wurayah, 25.24°N 56.17°E).
Calomicrus emir Lopatin: Lopatin 2008: 320.
Nymphius emir (Lopatin): Beenen 2010: 485; Bezděk & Batelka 2011: 251; Monks *et al*. 2019: 948.

Main diagnostic characters: *Male* (Fig. 3). Abdomen modified as follows: ventrite I moderately elevated, II with wide flat subtriangular process, III with lanceolate process with sharp apex and margins covered with short setae, IV with raised posterior margin; middle parts of ventrites I, II and IV covered with long pale setae (Figs 25–27). Protarsomere I subpentagonal. Mesotibiae widely rounded in apical half, without subapical lamella, mesotarsomere I enlarged (Figs 32, 33).

Female (Fig. 4). Spermatheca with apical part of cornu longer than basal part, appendix as long as apical part of cornu (Fig. 29).

Holotype (examined, Figs 55, 56): ♂ **United Arab Emirates:** Wadi Wurayah [25.24°N 56.17°E], 12–14.iv.2005, T. van Harten (ZIN).

Other material examined: United Arab Emirates: 2♂ 2♀, N of Masafi, 27.xi.2019, M. Snížek (JBCB); 1♂, Ras Al Khaimah, Wadi Shawqa, 25°06'N 56°02'E, 20.iii.2007, J. Batelka (JBCB); 2♂ 7♀, Ras Al Khaimah, Wadi Shawqa, 25°06'N 56°02'E, 3.x.2007, J. Batelka (JBCB); 13♂ 11♀, Wadi Safad, 25°13'N 56°19'E, 15–22.iv.2006, A. Van Harten (JBCB). **Oman:** 5♂ 4♀, Jabal Akhdar, 15 km N of Nizza, 23°00'N 57°34'E, 11.ii.2007, L. Major (JBCB).

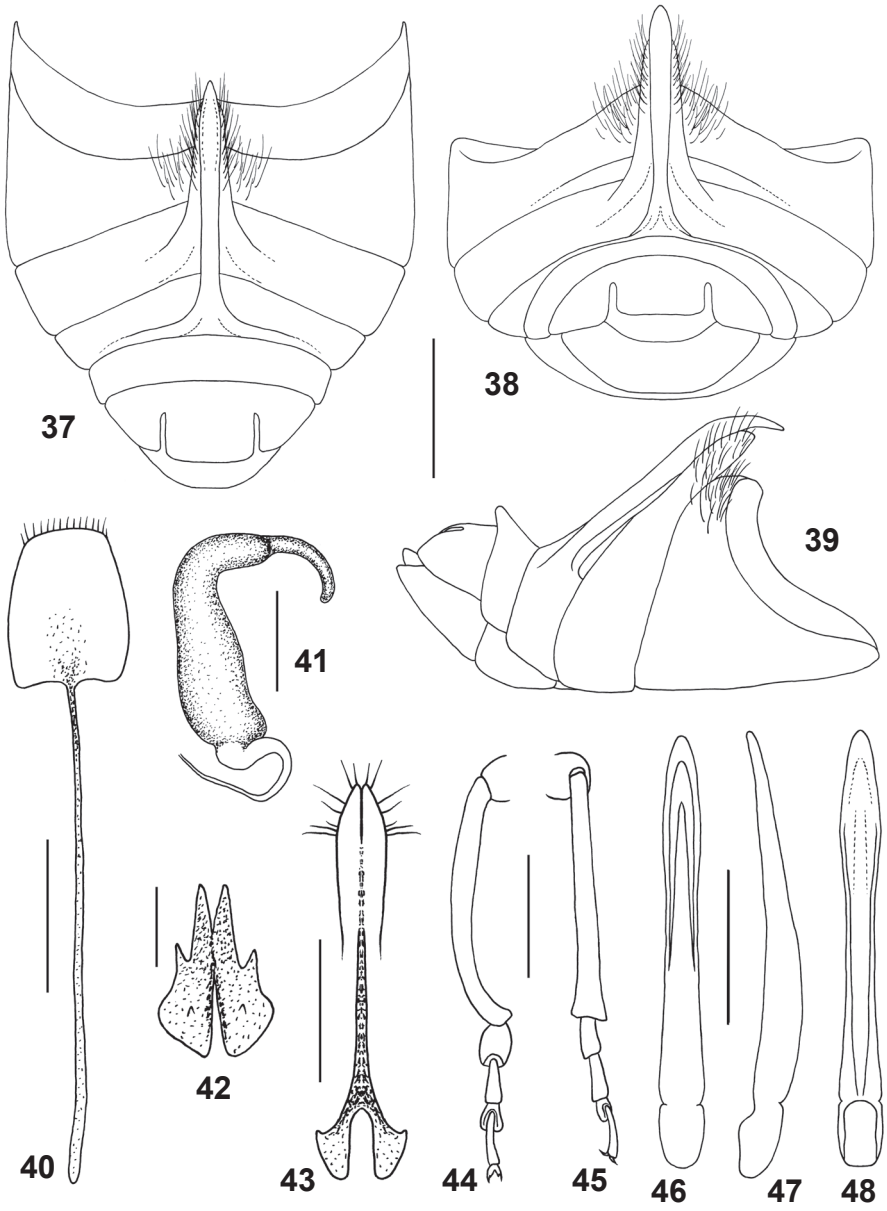
Distribution: Oman (Monks *et al.* 2019; present study), United Arab Emirates (Lopatin 2006, 2008; Bezděk & Batelka 2011; present study).

Comparison: The males of *Ch. emir* are very similar to that of *Ch. millingeni*. Both species differ in the structure of abdominal appendages: process on ventrite II is widely subtriangular, flat and much shorter than lanceolate and much longer process on ventrite III in *Ch. emir*, while process on ventrite II is long, narrowly subtriangular, only slightly shorter than very long, narrow and parallel process on ventrite III in *Ch. millingeni* (Figs 25–27, 37–39). The females are indistinguishable in habitus.

Chikatunolepta millingeni (Pic, 1915) **n. comb.**

(Figs 5, 6, 11, 12, 37–48, 52, 57–64)

Luperus (Calomicrus) millingeni Pic, 1915: 18. (Type locality: Arabie, El Hajaz).
Calomicrus millingeni (Pic): Wilcox 1973: 518; Medvedev 1997: 322.
Calomicrus (Nymphius) millingeni (Pic): Medvedev 1996: 250.
Nymphius millingeni (Pic): Beenen 2010: 485; Bezděk 2012*a*: 426.
Lyperodes [sic!] *artificiosus* Peyerimhoff, 1931: 111. (Type locality: Tassili occidental, Tin-Tahart). **n. syn.**
Luperodes artificiosus Peyerimhoff: Wilcox 1973: 525; Beenen 2010: 479.
Nymphius artificiosus (Peyerimhoff): Bezděk 2012*b*: 396.
Calomicrus (Nymphius) friedmani Lopatin, 2002: 379. (Type locality: Israel, Bor Hemet). **n. syn.**
Calomicrus friedmani Lopatin: Chikatunov *et al*. 2006: 309.
Nymphius friedmani (Lopatin): Beenen 2010: 485.



Figs 37–48: *Chikatunolepta millingeni* (Pic), details: (37) male abdomen, ventral view; (38) male abdomen, caudal view; (39) male abdomen, lateral view; (40) sternite VIII; (41) spermatheca; (42) bursa sclerite; (43) gonocoxae; (44) male mesotibia, dorsal view; (45) male mesotibia, lateral view; (46) aedeagus, dorsal view; (47) aedeagus, lateral view; (48) aedeagus, ventral view. Scale bars: 0.25 mm for Figs 40, 43; 0.2 mm for Fig. 41; 0.1 mm for Fig. 42; 0.5 mm for Figs 37–39 and 44–48.

Main diagnostic characters: *Male* (Fig. 5). Abdomen modified as follows: ventrite I moderately elevated, II with long pyramidal process directed obliquely anteriorly, III with long narrow subparallel process with sharp bent apex, IV with raised posterior margin; middle parts of ventrites I, II and IV covered with long pale setae (Figs 37–39). Protarsomere I subpentagonal. Mesotibiae widely rounded in apical half, without subapical lamela, mesotarsomere I enlarged (Figs 44, 45).

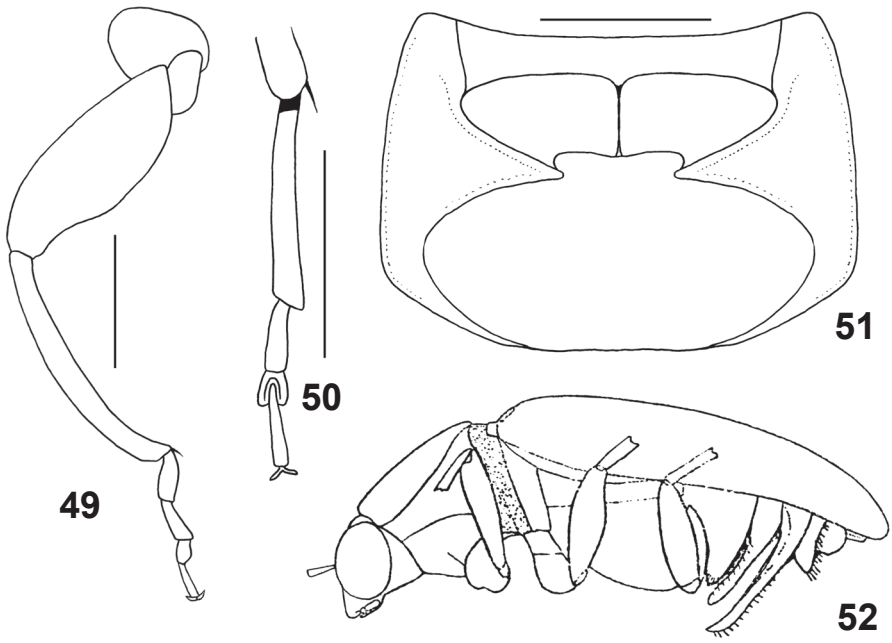
Female (Fig. 6). Spermatheca with apical part of cornu as long as basal part, appendix longer than apical part of cornu (Fig. 41).

Syntype of *Luperus millingeni* (examined, Figs 57–59): ♂ **Saudi Arabia:** El Hajaz [= Saudi Arabia, Hejaz region], Millingen (MNHN).

Holotype of *Calomicrus friedmani* (examined, Figs 60–64): ♂ **Israel:** Bor Hemet, 19.iv.2001, L. Friedman (TAUI).

Other material examined: Yemen: 2♂, Lawdar, NE of Adan, 1145 m, 22.x.2005, P. Kabátek (JBCB). **Oman:** 2♂, Taqah env., 270–350 m, 18–21.ix.2003, R. Červenka (JBCB); 1♂ 6♀, Darbaat, 18–21.ix.2003, R. Červenka (JBCB); 1♂, Dhofar, Jabal Samhán, 15 km W of Jufa, 27.ix.2011, J. Voříšek (JBCB).

Distribution: Algeria (Peyerimhoff 1931), Israel (Lopatin 2002; Chikatunov *et al*. 2006), Oman (Medvedev 1996, 1997; present study), Saudi Arabia (Medvedev 1996, 1997), Yemen (Bezděk 2012; present study).



Figs 49–52: *Chikatunolepta emir* (Lopatin) (49–51) and *Chikatunolepta millingeni* (Pic) (52): (49) male mid leg in ventral view; (50) metatarsus; (51) prosternum; (52) drawing of *Luperodes artificiosus* (Peyerimhoff) (reproduced from Peyerimhoff 1931). Scale bars 0.5 mm.

Comparison: *Chikatunolepta millingeni* is very similar to *Ch. emir*. The males of both species can be distinguished by the structure of abdominal appendages (see Comparison under *Ch. emir*). The females are indistinguishable in habitus.

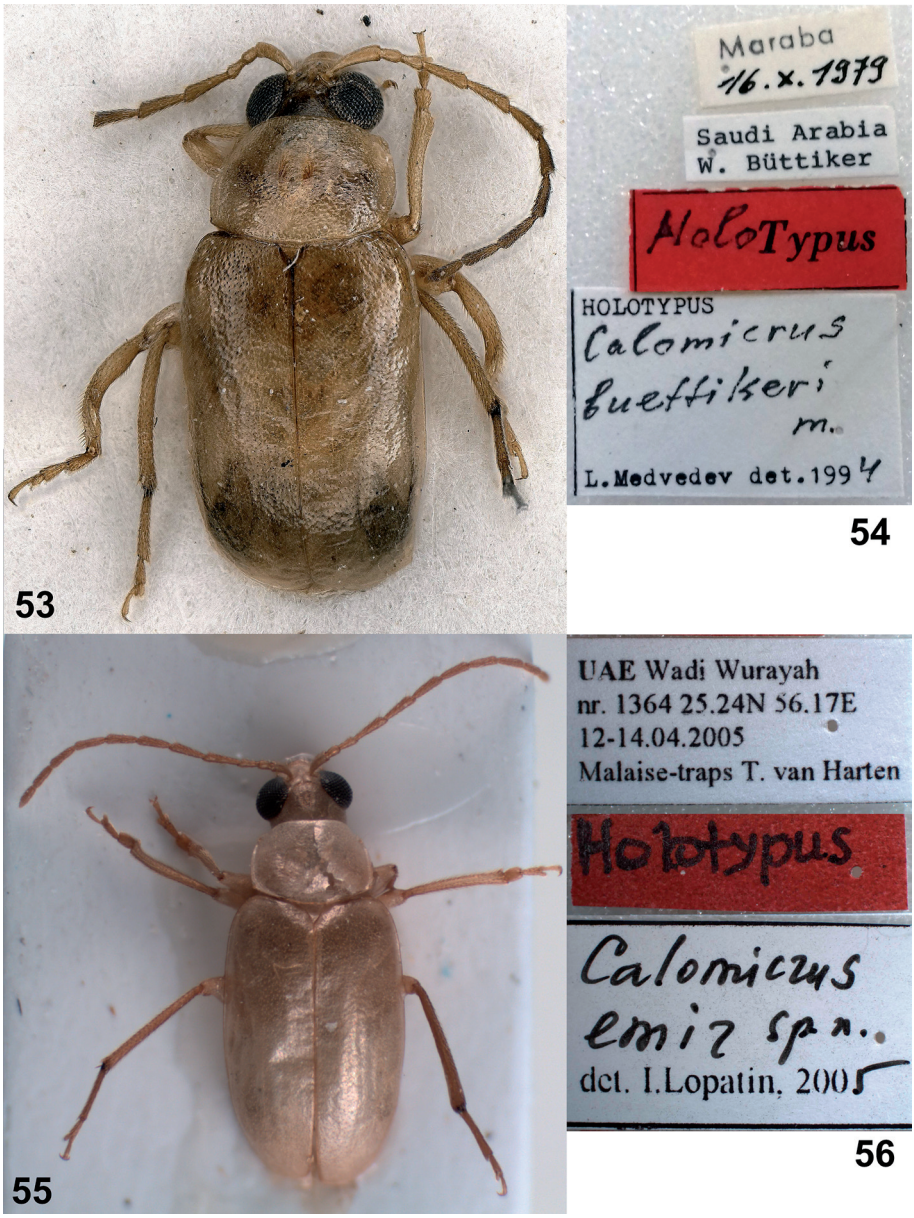
Comments: The primary type specimens of *Calomicrus friedmani* and *Luperus millingeni* were examined and compared. The holotype of *Luperodes artificiosus* was not studied but the description is provided with the drawing of a very characteristic structure of the abdomen (Fig. 52). In sum, I consider all three taxa conspecific and I synonymize *Calomicrus friedmani* and *Lyperodes artificiosus* with *Chikatunolepta millingeni*.

Lopatin (2002), when describing *Calomicrus friedmani*, apparently did not examine type specimens of *C. millingeni* and *C. buettikeri*, and used only the description and drawings from Medvedev (1996) where the abdomina drawings are interchanged. Lopatin (2002) compared *Calomicrus friedmani* with the correct mid tibia of *C. buettikeri*, but the drawing of the abdomen pertains in fact to *C. millingeni*. Due to this confusion Lopatin (2002) was unable to compare his specimen correctly with related species and described it as new species, although it was conspecific with *C. millingeni*. The same mistake renders the identification key in Lopatin (2006) unusable.

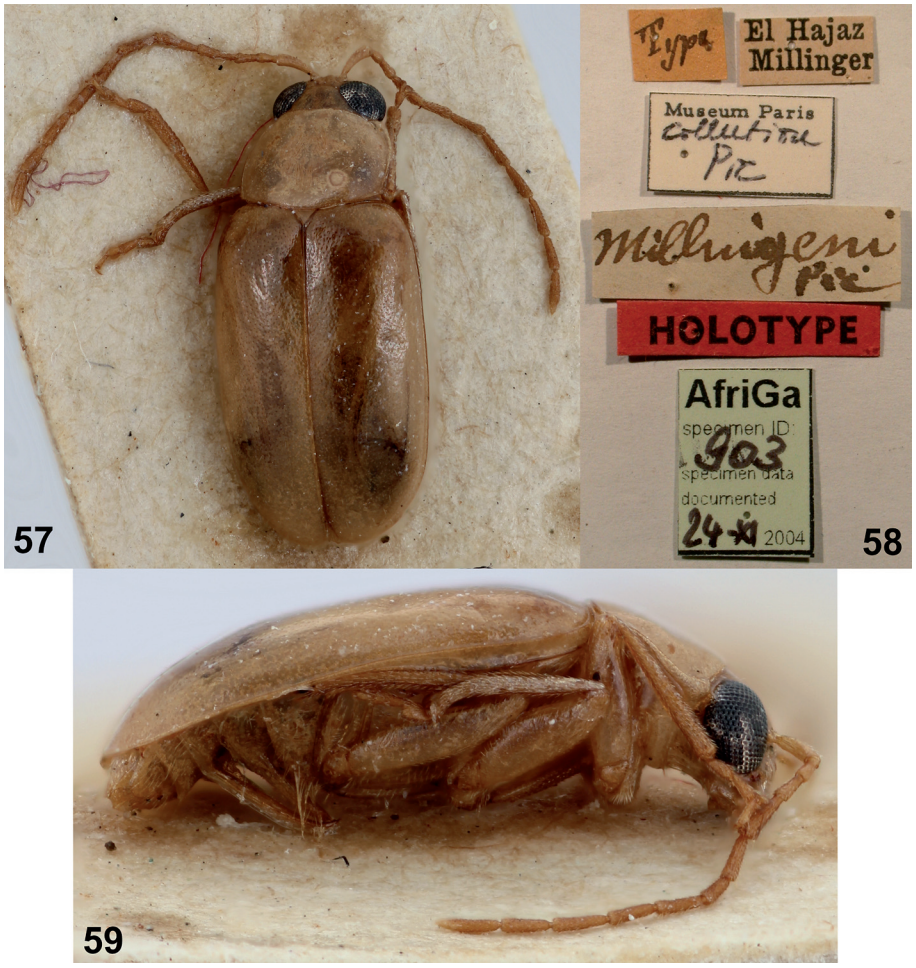
DISCUSSION

So called Monoleptites group of genera within the Galerucinae includes some species-rich genera, for example *Metrioidea* Fairmaire, 1881, *Candezea* Chapuis, 1879, or, particularly, *Monolepta* Chevrolat, 1836, which badly need a modern taxonomical revision. In the past, many of described species were placed in *Monolepta*, which currently includes 715 species and six subspecies worldwide (Nie *et al.* 2017; Bezděk, pers. data). In about last 30 years, Monoleptites were intensively studied in the Afrotropical Region, which led to the revision of most of the *Monolepta* species, description of six new genera and revision of several related genera (Wagner 2017*a*, *b*). In the species-rich Oriental Region only several genera were revised (Hazmi & Wagner 2010*a*–*c*, 2013). Occasionally, the fauna of smaller regions or islands was also taxonomically assessed, e.g. the genus *Metrioidea* Fairmaire, 1881 from New Caledonia (Beenen 2008, 2013, 2017), the Monoleptites from Taiwan (Lee 2018, 2020) or from southern Vietnam (Nguyen & Gómez-Zurita 2017). The Afrotropical, Oriental and eastern Palaearctic regions are treated as areas with a high supraspecific diversity of Monoleptites (Lee 2020). Future comprehensive efforts are, however, necessary to study the taxonomy of Monoleptites in these biogeographical regions and to continue revising material from the better known Afrotropical Region.

Almost all specimens of *Chikatunolepta* were collected in the Arabian Peninsula with two exceptions. The holotype of *Calomicrus friedmani* was captured in Israel and the holotype of *Luperodes artificiosus* in Algeria. The record from Israel is well connected with the Arabian Peninsula. The distribution of the genus covers

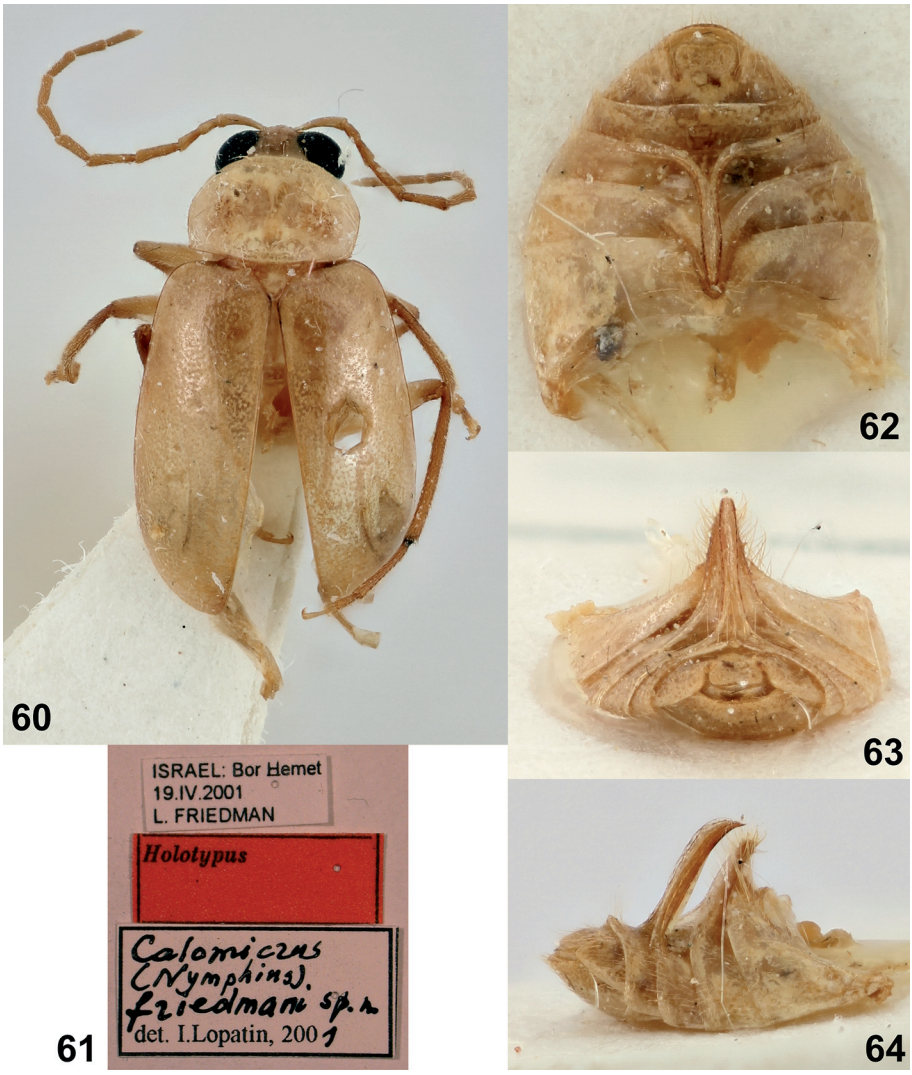


Figs 53–56: Holotypes and their labels: (53, 54) *Chikatunolepta buettikeri* (Medvedev); (55, 56) *Chikatunolepta emir* (Lopatin).



Figs 57–59: Syntype of *Chikatunolepta millingeni* (Pic): (57) dorsal view; (58) labels; (59) lateral view.

the regions of the Arabian Peninsula and Levant along seashores (United Arab Emirates, Oman, Yemen, Saudi Arabian regions along Red Sea, Israel). The record from southern Algeria is far away from all other localities; however, I consider the type locality of *Luperodes artificiosus* correct and I expect that *Chikatunolepta millingeni* will be found also in other northern African countries. The Saharo-Arabian chorotype is well known in the Chrysomelidae, e.g. Clytrini (Bezděk & Regalin 2015) or Alticini (Biondi & D'Alessandro 2006).



Figs 60–64: *Chikatunolepta millingeni* (Pic) (holotype of *Calomicrus friedmani* Lopatin): (60) dorsal view; (61) labels; (62) abdomen; (63) abdomen in caudal view; (64) abdomen in lateral view.

ACKNOWLEDGEMENTS

I would like to thank Lukáš Sekerka and Jiří Hájek (NMPC), Antoine Mantilleri (MNHN), Matthias Borer (NHMB), Laibale Friedman (TAUI) and Alexey G. Moseyko (ZIN) for giving me the opportunity to study the type specimens in their care. The study of Maurice Pic's type specimens in Muséum National d'Historie Naturelle, Paris, was supported by the Synthesys Project FR-TAF-3479 *Taxonomical status of varieties described by Maurice Pic in Palaearctic Clytrini (Coleoptera: Chrysomelidae)*, financed by the European Community – Research Infrastructure Action under the Seventh Framework Programme.

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