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**DESCRIPTION OF THE LARVA OF *GILLETIANUS COMATUS*
(SCHMIDT, 1920) (COLEOPTERA: SCARABAEIDAE)**

S. A. Shabalin

Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia. E-mail: oxeconia@mail.ru

Summary. The larva of the genus *Gilletianus* Balthasar, 1933 is described and illustrated for the first time. The larva of *Gilletianus comatus* (Schmidt, 1920) similar to larvae of the genera *Acrossus* Mulsant, 1842 and *Nimbus* Mulsant et Rey, 1870 by have raster with two short, longitudinal parallel palidia. The larva of *Gilletianus comatus* differs from larvae of *Acrossus* and *Nimbus* by a number of setae in the rows in palidia.

Key words: Coleoptera, Scarabaeidae, Aphodiini, *Gilletianus*, larva, Far East Russia.

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Резюме. Впервые описана и проиллюстрирована личинка рода *Gilletianus* Balthasar, 1933. Личинка *Gilletianus comatus* (Schmidt, 1920) сходна с личинками родов *Acrossus* Mulsant, 1842 и *Nimbus* Mulsant et Rey, 1870 по наличию двух продольных рядов шипиков на анальном стерните. Описываемая личинка *Gilletianus comatus* отличается от личинок родов *Acrossus* и *Nimbus* числом крючковатых шипиков в параллельных рядах на анальном стерните.

The genus *Gilletianus* Balthasar, 1933 (type species *Aphodius proclivis* Balthasar, 1933, by monotypy) contains 38 species distributed in Asia and New-Guinean (Král *et al.*, 2014). There 13 species are known in Palaearctic region (Dellacasa *et al.*, 2016). Only one species, *Gilletianus comatus* (Schmidt, 1920), is recorded from Russia. The beetles of *G. comatus* were collected in the valley of Ryazanovka River (Primorskii krai). It was contained in the laboratory and we could examine the morphology of the larvae. In this study, we firstly describe the third larval instar for this species. The morphological terminology follows Böving (1936). All examined material is deposited in Federal Scientific Center of the East Asia Terrestrial Biodiversity Far East Branch of Russian Academy of Sciences. This publication is a continuation of our investigation on the morphology of the dung-beetles larvae of the Russian Far East (Shabalin, 2018a, b; 2019).

DESCRIPTION OF LARVA

***Gilletianus comatus* (Schmidt, 1920)**

Figs 1 – 9

Aphodius (Trichaphodius) comatus Schmidt, 1920: 140. Type locality "Seish (Korea), Tsushima (Japan)".

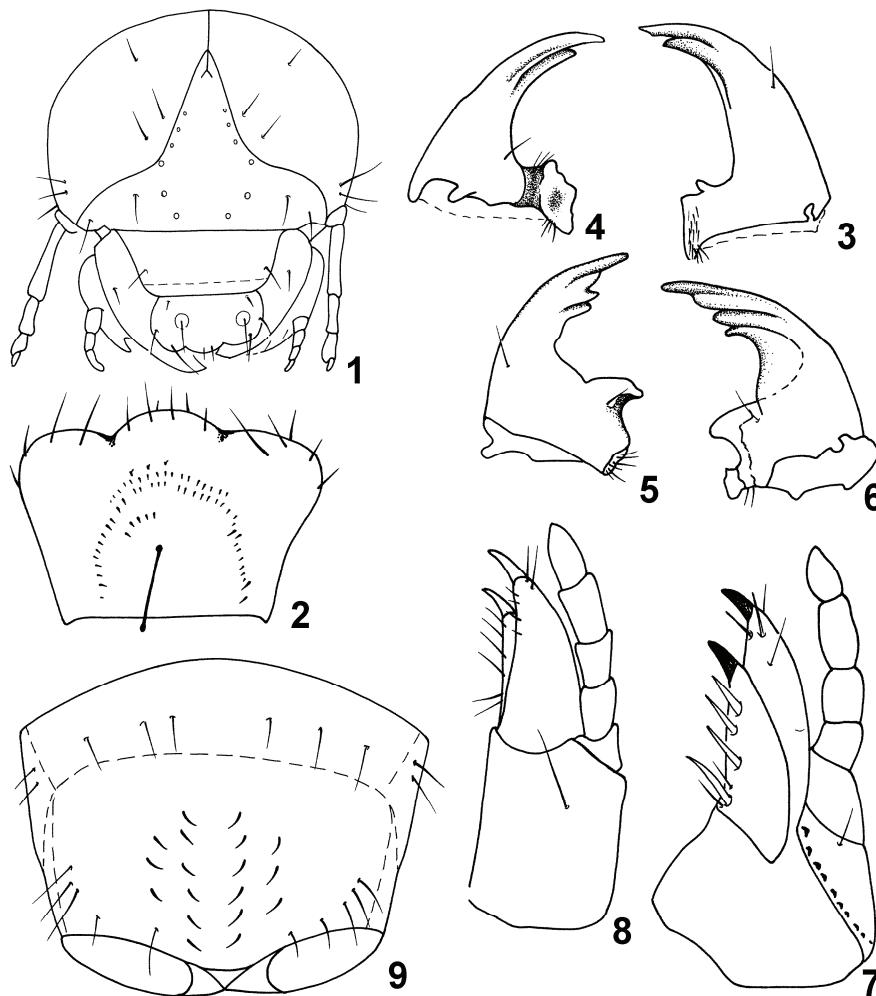
Aphodius (Trichaphodius) comatus: Balthasar, 1964: 169; Nakane, 1960: 25; Berlov, 1989: 395; Kim, 1987: 73.
Aphodius (Gilletianus) comatus: Dellacasa & Dellacasa 2006: 127; Kim, 2012: 114.
Gilletianus comatus: Král, et al., 2014: 122; Dellacasa et al., 2016: 127.
Aphodius (Pharaphodius) chokaiensis Nomura & Nakane, 1951: 40. Type locality: "Mt. Chokai, Uzen, Honshu". Synonymized by Kim, 1987: 72.

MATERIAL. **Russia:** Primorskii krai, valley of Ryazanovka River, 11 third-instar larvae reared from the eggs laid by the beetles collected in cow dung 24.V 2017 by S.A. Shabalin.

DESCRIPTION. Larva of typical C-shape form. Head surface smooth light brown. Medial part of pleural sclerites, apical part of mandibula, and base of frons a bit darker than remaining part of the head capsule. Head width of third-instar larva 1.4mm, length (without clypeus and labrum) 1.1 mm. Epicranial suture is short, narrowly dark, dark brown, slightly convex. Frontal sutures visible, as fine light lines, tortuous. The length of the epicranial suture is about two times shorter than the height of the frons. Each pleural sclerite with 6 setae: 3 dorsoepicranial setae, 3 basiantenal setae. Frons with eight pits depressions about frontal sutures and with four pits in the central part; with pair exterior frontal setae, and pair setae of anterior frontal angle. Ocelli absent. Clypeus trapezoidal, with two of setae laterally. The basal part of the clypeus (2/3 length of clypeus) does not significantly differ in color from the apical. Labrum three-lobed, with pair rounded depressions in a central part; with 2 posterior setae; 2 central setae; and 2 lateral setae, and 6 apical setae (Fig. 1). Corypha with 6 marginal setae. Right and left clithrum being present, its surface thinly sclerotized. Epizygum and zygum absent. Haptomerum with 3 shorten triangle flattened rounded apically sencillae. Plegmatium and proplegmatium absent. Right acantoparia with 4 marginal setae. Left acantoparia with 6 setae. Phoba in laterals parts with 1 setae row, in apical part protophoba with 4 setae row. Pedium rounded, it occupying between one-fourth epipharengial surface. Epitorma narrow, long; its apical part slightly thickened and rounded. Dexiotorma and laeotorma not similar in size and shape; only dexiotorma produced cephalid caudal. Haptolachus complete, but crepis absent. Nesium being present, its surface thinly sclerotized (Fig. 2). Mandibles triangular, asymmetrical. Left mandible slightly longer than right one, its scissorial part wider. Base of mandibles light brown, scissorial and molar part almost black. Right mandible with 1 apical, acute scissorial tooth followed by 1 wide, scissorial blade. Without stridulatory area. Lateral part of right mandible with one setae dorsally. Molar area complex of right mandibula, bilobed, with apical depression, basal molar lobe wide, dorso-longitudinally compressed (Figs 3, 4). Left mandible with 1 apical, acute scissorial tooth and 2 wide scissorial blade. Without stridulatory area. Lateral part of left mandible with one setae dorsally. Molar area complex of left mandibula, bilobed, apical molar lobe with subtriangular shorter teeth, basal molar lobe wide, dorso-longitudinally compressed (Figs 5, 6). A well developed brush of bristles at base of both right and left molar parts. Maxillae symmetrical. Ventral side of stipes with one long basal seta; dorsal side with one row of 10 conical stridulatory teeth, and with one longer distal seta. Palpifer dorsally without stridulatory teeth. Maxillary palp 4-segmented. Ventral side of galea with median longitudinal row of shorten setae. Dorsal side of galea with 4 long setae apically; uncus with well development apical tooth. Dorsal side of lacinia with row of 4 long thick setae, and two narrow setae, ventral side with 6 long thick setae basally. Uncus of with well development apical tooth (Figs 7, 8). The first antenna segment is the longest, one and a half times longer the second antenna segment. The second antenna segment is slightly longer than third antenna segment. The third antenna segment shorten than first and second antennae segments and carries a sensory appendage. Fourth antenna segment shorter than the third four times. Claw rather short, practically cylindrical in basal half, with two setae strong basally.

Lateral abdominal extension with 2 setae. Each fold of abdominal tergites carries a line of setae. Raster with two short, longitudinal parallel palidia, surrounded on the sides by scattered setae. Each palidium with 6 caudomesally directed, spine-like hamate setae (Fig. 9).

NOTES. The larva of *Gilletianus comatus* is similar to larva of the genera *Acrossus* and *Nimbus* (Krell, 1997) in present of raster with two short, longitudinal parallel palidia, but differs in number of setae in the row in palidia.



Figs 1–9. Third-instar larva of *Gilletianus comatus* (Schmidt, 1920): 1 – head capsula; 2 – epipharynx; 3 – right mandible (dorsal view); 4 – right mandible (ventral view); 5 – left mandible (dorsal view); 6 – left mandible (ventral view); 7 – maxilla (dorsal view); 8 – maxilla (ventral view); 9 – anal sternite.

DISTRIBUTION. Russia (Primorskii krai), North Korea (Hamgyeongnam-do, Hwanghaenam-do, Gangwon-do, Gyeonggi-do), South Korea (Gangwon-do, Gyeonggi-do, Chungcheongbuk-do, Chungcheongnam-do, Jeollabuk-do, Gyeongsangnam-do, Jeollanam-do, Jeju-do), China (Jilin, Liaoning, Fujian), Japan (Honshu, Izu, Tsushima).

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