

***Taeniodera rakovici* sp. nov., a new species from the *Taeniodera nigricollis* species group (Coleoptera: Scarabaeidae: Cetoniinae)**

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Taxonomy, new species, new records, Coleoptera, Scarabaeidae, Cetoniinae, Taenioderini, *Taeniodera nigricollis* species group, Oriental Region, Palaearctic Region

Abstract. *Taeniodera rakovici* sp. nov. from Laos is described and illustrated. The new species is compared with its three most closely related congeners belonging to the *Taeniodera nigricollis* species group, which contains the following species, *Taeniodera nigricollis* Janson, 1881 from northeastern India; *Taeniodera miksici* Krajčák, 2010 from China, Vietnam and Laos and *Taeniodera viridula* Nijima & Matsumura, 1923 from Taiwan. Habitus images of both sexes and some colour variations of all four species are provided, including illustration of male aedeagi. A differential diagnosis is also provided for several other closely related species occurring in the same region. *Macroma nigricolor* Kano, 1931 is withdrawn from synonymy with *Taeniodera nigricollis* (Janson, 1881) and newly synonymised with *Taeniodera viridula* (Nijima & Matsumura, 1923).

INTRODUCTION

The genus *Taeniodera* Burmeister, 1842 is by far largest genus of flower beetles in tribe Taenioderini. Ninety one currently recognised species and 11 subspecies are attributed to this genus. Nearly all the species are distributed in the Oriental Region, several species in transition zone between the Oriental and Palearctic regions. The largest diversity of species can be found in the Greater Sunda Islands (Indonesia).

This study concentrates in species imitating *Taeniodera nigricollis* Janson, 1888 occurring in Assam, Meghalaya, Nagaland and Arunachal Pradesh (India). Two other species which look very similar *Taeniodera viridula* Nijima & Matsumura, 1923, which is endemic to Taiwan and *Taeniodera miksici* Krajčák, 2010 which has a much larger distribution encompassing the northern parts of Vietnam and Laos and the southern parts of continental China and Hainan Island.

A rather large number of specimens of *Taeniodera* Burmeister, 1842 from the aforementioned species group were collected in several different altitudes of Mount Phu Pane in the northeastern part of Laos. Specimens from lower slopes of the mountain (1000-1600 m) belong to *Taeniodera miksici* Krajčák, 2010. A few specimens in the same group have been collected close to the top of the mountain, at approximately 1800 m. Examination of several males and females from high altitude revealed that this population is not conspecific with the populations flying in lower altitudes and the species can be classified as a new for science. It is the first case when two different species in this group cohabit together in one locality. But it is the second case in flower beetles with two different species imitating

each other in this mountain, one in lower altitudes, the second flying near the top of the mountain. This same situation occurs in the genus *Macronotops* Krikken, 1977, with one widely distributed species occurring in lower altitudes of Mount Phu Pane, and the second from the top of the mountain. The new species of this highland *Taeniodera* Burmeister, 1842 is described and compared with its closest congeners in the taxonomical part of this article.

MATERIAL AND METHODS

The following codens of institutional and private collections are used in the text:

BMNH British Museum Natural History, London, England;
MKCP Milan Krajčák, private collection, Plzeň, Czech Republic;
MNHN Muséum National d'Histoire Naturelle, Paris, France;
NMPC National Museum, Praha, Czech Republic;
RCCP Radek Červenka, private collection, Praha, Czech Republic;
RMNH Rijksmuseum van Natuurlijke Historie, Leiden, Nederland;
SJCP Stanislav Jákl, private collection, Praha, Czech Republic;
ZMHB Museum für Naturkunde, Leibniz-Gemeinschaft, Berlin, Germany.

Specimens of the newly described species are provided with red and yellow printed labels, red for HOLOTYPE, yellow for PARATYPE. Each holotype and paratype label is provided with sex symbol, number of paratype (in paratype label) and the words „St. Jákl det. 2025.“ Label data are cited for the material examined, individual labels are indicated by a double slash (/), individual lines by a single slash (/).

RESULTS

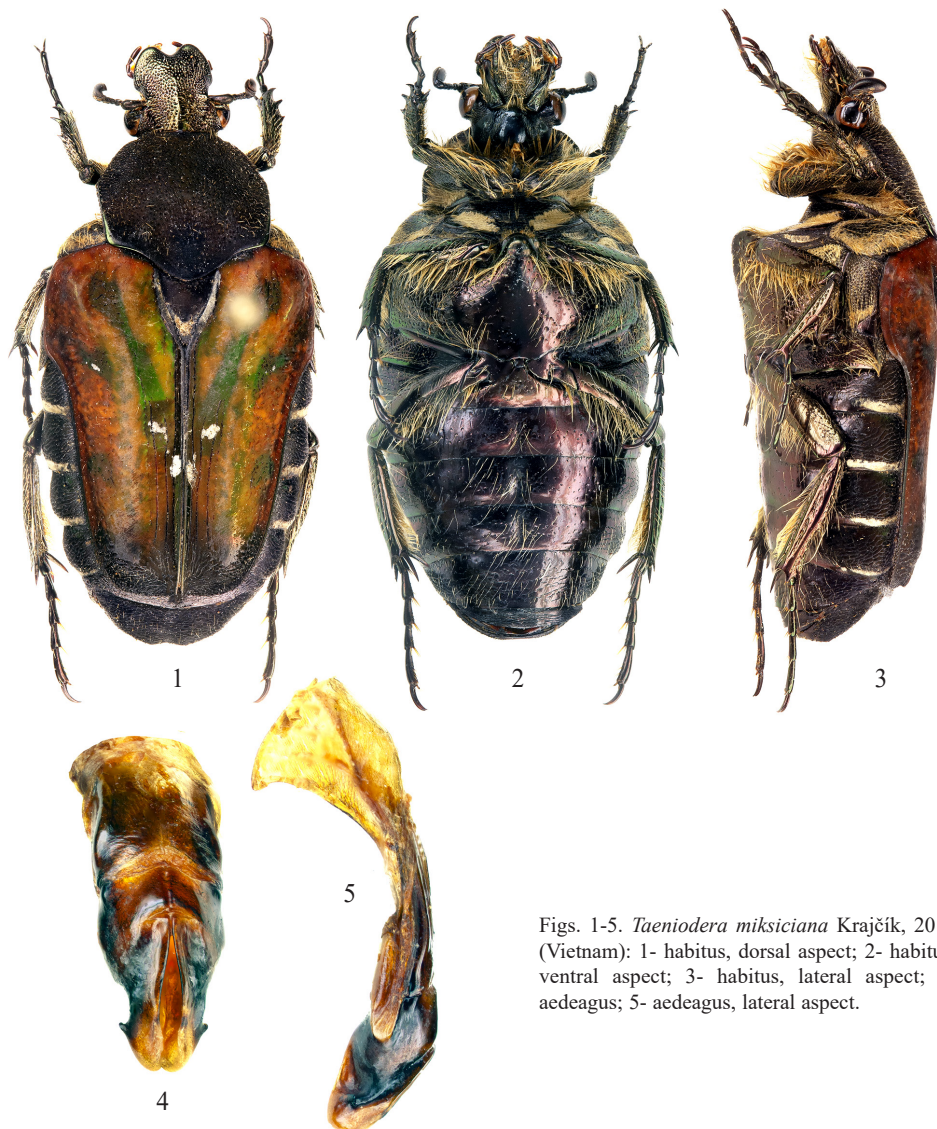
Genus *Taeniodera* Burmeister, 1842

Carolina Thomson, 1880; Type species *Macronota annae* Wallace, 1867 (= *Taeniodera malabariensis malabariensis* Gory & Percheron, 1833 (by original designation); Mikšič, 1976 (= *Taeniodera* Burmeister, 1842).
Melinospila Kraatz, 1890; Type species *Macronota flavomaculata* Gory & Percheron, 1833 (by original designation); Mikšič, 1976 (= *Taeniodera* Burmeister, 1842).
Polydomia Thomson, 1880; Type species *Macronota marmorata* Wallace, 1867 (by original designation); Mikšič, 1976 (= *Taeniodera* Burmeister, 1842).
Ataenia Schoch, 1895 (not *Ataenia* Thomson, 1877); Type species *Macronota biplagiata* Gory & Percheron, 1833 [= *Taeniodera haemastica haemastica* (Perty, 1831)]; [by subsequent designation of Arrow (1910)]; Kraatz, 1898 (= *Carolina* Thomson, 1880).

Type species: *Macronota monacha* Gory & Percheron, 1833 (by subsequent designation of Ruiz, 1897).

Taeniodera miksici Krajčák, 2010 (Figs. 1-23)

Taeniodera miksici Krajčák, 2010: 4, figs. 2-4 (original description); Krajčák 2011: 62, fig. 10 (Cetoniidae of China, holotype male, N. Vietnam, Mts. Manson); Bezděk in Löbl I. & Löbl D. 2016: 403 (palaeartic catalogue).
Taeniodera nigricollis (Janson, 1881): Mikšič 1976: 56 (key), : 106, fig. 19b (male parameres, monograph); Sakai & Nagai 1998: 347, pl. 131, figs. 1536-1 (male, N. Vietnam, Tam Dao), 1536-2 (female, N. Vietnam, Tam Dao); Antoine 1998: 72, figs. 17-18 (metatibia of male and female, male parameres).

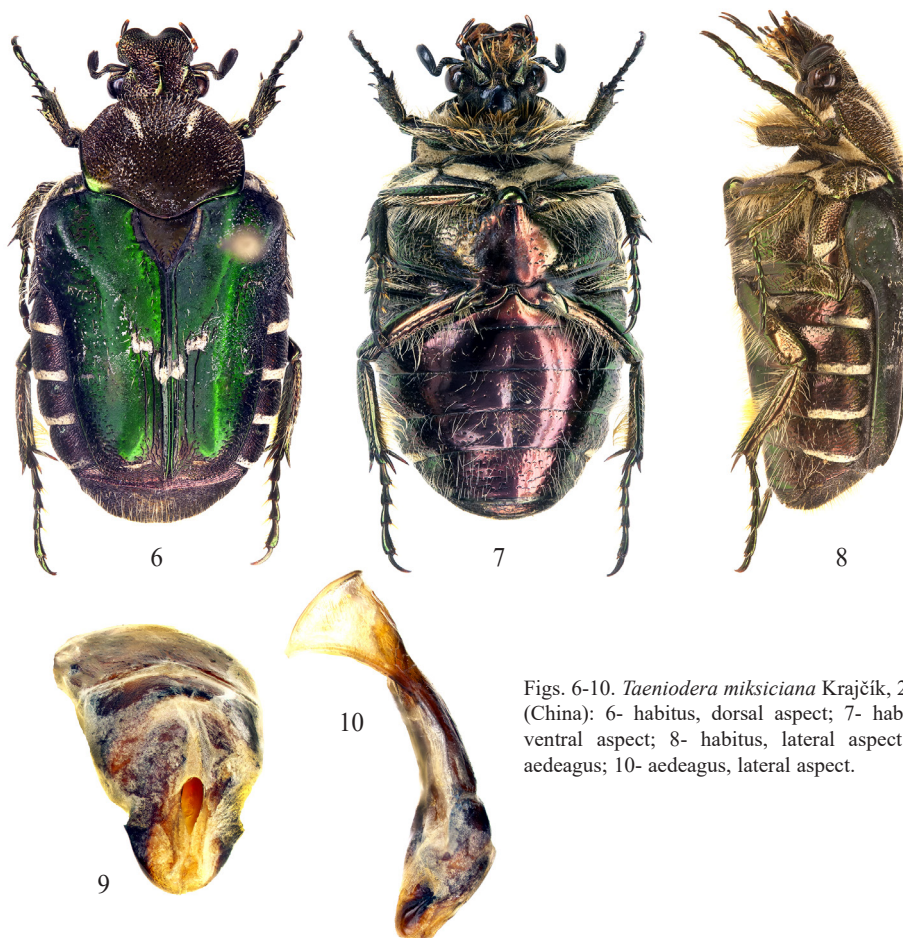


Figs. 1-5. *Taeniodera miksiciana* Krajčák, 2010 (Vietnam): 1- habitus, dorsal aspect; 2- habitus, ventral aspect; 3- habitus, lateral aspect; 4- aedeagus; 5- aedeagus, lateral aspect.

Type locality. „Tonkin, Montes Manson“ (= North Vietnam, Mt. Mau Son, Lang Son).

Type material. Holotype (♂) (BMNH, ex MKCP), paratypes 13 ♂♂, 8 ♀♀, (BMNH, MNHN, ZMHB, RCCP, RMNH, SJCP).

Additional examined material: 5 ♂♂, 2 ♀♀ (SJCP) labelled: N VIETNAM, 21°27'N 105°39'E / 70 km NW of Hanoi, Tam Dao / 3.-7.6. 1996, 900-1200 m / P. Spáčil leg; 3 ♂♂, 3 ♀♀ (SJCP) labelled: N VIET NAM (Tonkin) / pr., Hoang Lin Son/ SA PA 11.-15.V.1990 / Vít Kubáň leg; 1 ♂, 1 ♀ (SJCP) labelled: N. VIETNAM 900m / TamDao 13.-24. / 5. 1989 A. Olexa; 3 ♂♂, 2 ♀♀ (SJCP) labelled: N VIETNAM / Tam Dao / IV. 2021 / local collector leg;



Figs. 6-10. *Taeniodera miksiciana* Krajččík, 2010 (China): 6- habitus, dorsal aspect; 7- habitus, ventral aspect; 8- habitus, lateral aspect; 9- aedeagus; 10- aedeagus, lateral aspect.

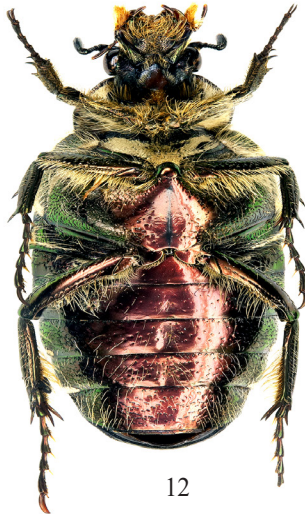
6 ♂♂, 1 ♀ (SJCP) labelled: CHINA, Guangxi Prov., Laibin City / Changdong County, Jin Xiu county / Pingban vill., 20.VII. 2015 / N 24°6'13,68" E 110°10'72,32" / Jinteng Zhao leg, on flowers; 1 ♂, 2 ♀♀ (SJCP) labelled: CHINA, HAINAN I., Ledong County / Mt. Jianfengling, 19.IV.- 21.V.2014 / Jianfeng Zhen, 900-1200 m / Bin Liu leg; 4 ♂♂, 5 ♀♀ (SJCP) labelled: CHINA, Hainan Island / Mt. Jianfengling, Main peak / Jianfeng township / Ledong Li Autonomous County / 7.-22.VI. 2018, 1412 m / 18°43'0,85"N 108°52'17,74"E / P. Viktora lgt; 1 ♀ (SJCP) labelled: CHINA, Fujian Prov. / Longyan, Vi. 2021 / MT. MEIHUASHAN / local collector leg; 8 ♂♂, 5 ♀♀ (SJCP) labelled: NE LAOS, Huaphanne Pr. / MT. PHU PANE, 1050- 1600 m / Ban Saluei vill. env., V. 2012 / St. Jákl et local collectors leg.

Distribution. South China: Guangxi, Fujian, Hainan; North Vietnam; Northeastern Laos.

Note. This species has been known for a long time, but it was incorrectly and continuously attributed to *Taeniodera nigricollis* Janson, 1881 by most authors until Krajččík (2010) who first noticed that the species distinctly differs from its congener described from the northeastern part of India.



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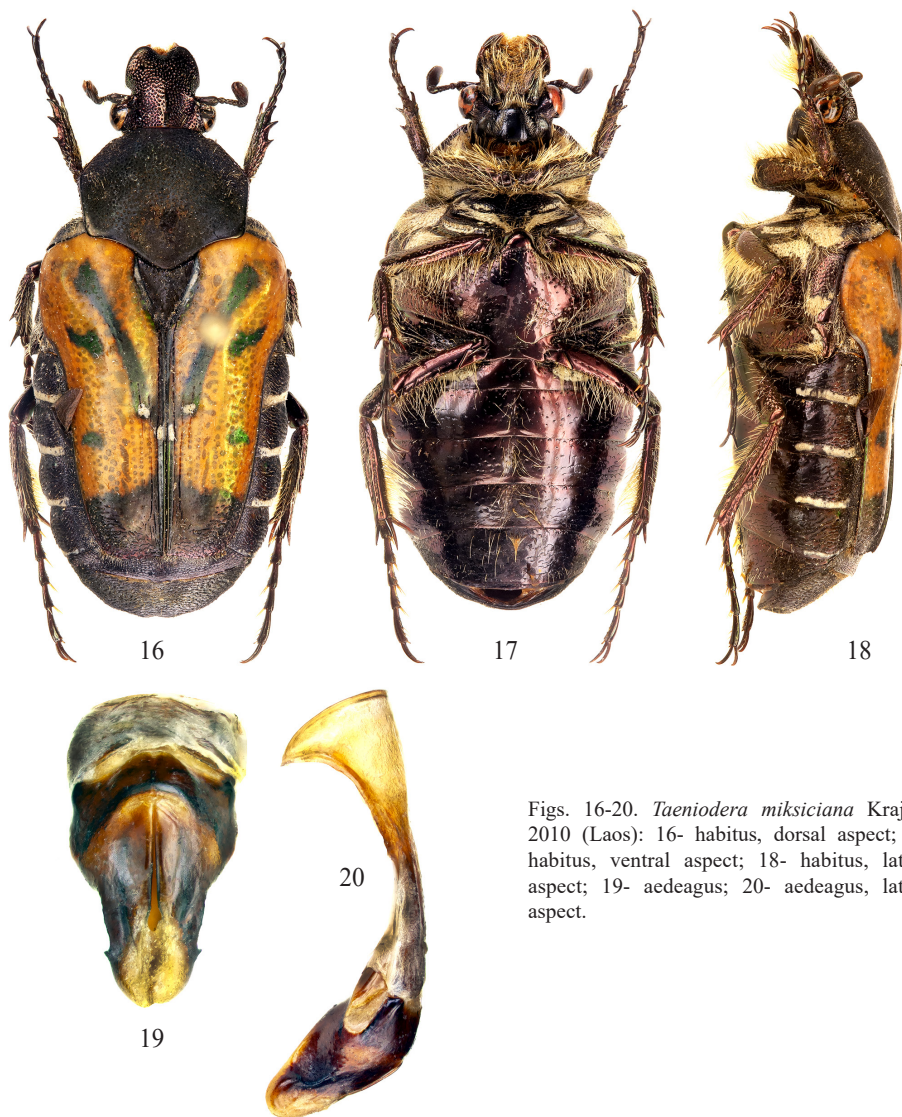


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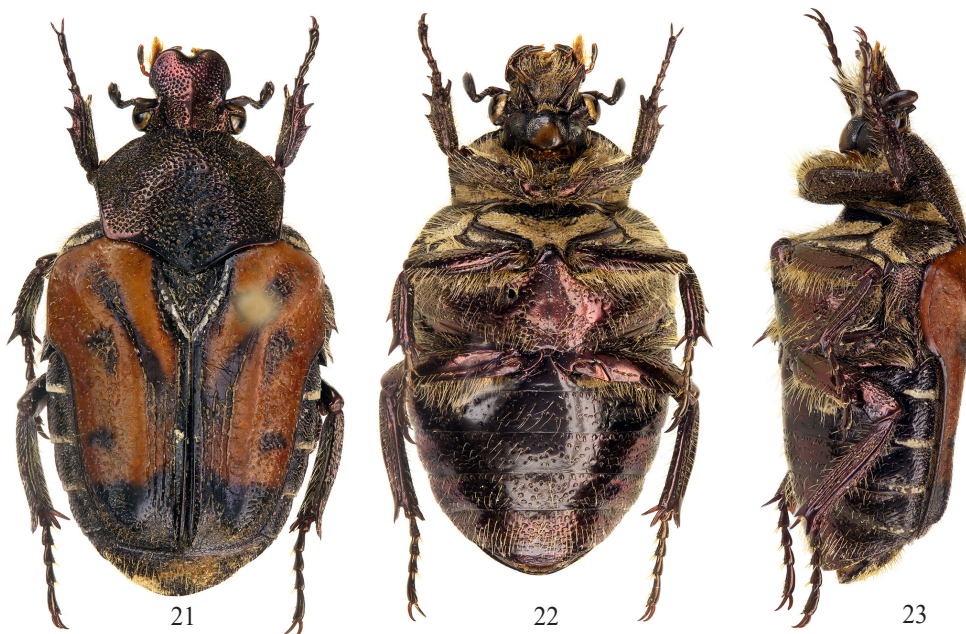


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Figs. 11-15. *Taeniodera miksicihana* Krajčák, 2010 (China): 11- habitus, dorsal aspect; 12- habitus, ventral aspect; 13- habitus, lateral aspect; 14- aedeagus; 15- aedeagus, lateral aspect.



Figs. 16-20. *Taeniodera miksiciana* Krajčák, 2010 (Laos): 16- habitus, dorsal aspect; 17- habitus, ventral aspect; 18- habitus, lateral aspect; 19- aedeagus; 20- aedeagus, lateral aspect.



Figs. 21-23. *Taeniodera miksiciana* Krajčák, 2010 (Laos, female): 21- habitus, dorsal aspect; 22- habitus, ventral aspect; 23- habitus, lateral aspect.

***Taeniodera nigricollis* (Janson, 1881)**
(Figs. 24-31)

Macronota nigricollis Janson, 1881: 604 (original description); Arrow 1910: 42 (key), : 51 (monograph); Schenkling 1921: 140 (catalogue); Paulian 1960: 15 (151) (Indochina); Krajčák 1998: 94 (catalogue).

Coelodera nigricollis (Janson): Paulian 1960: 15 (151) (Indochina).

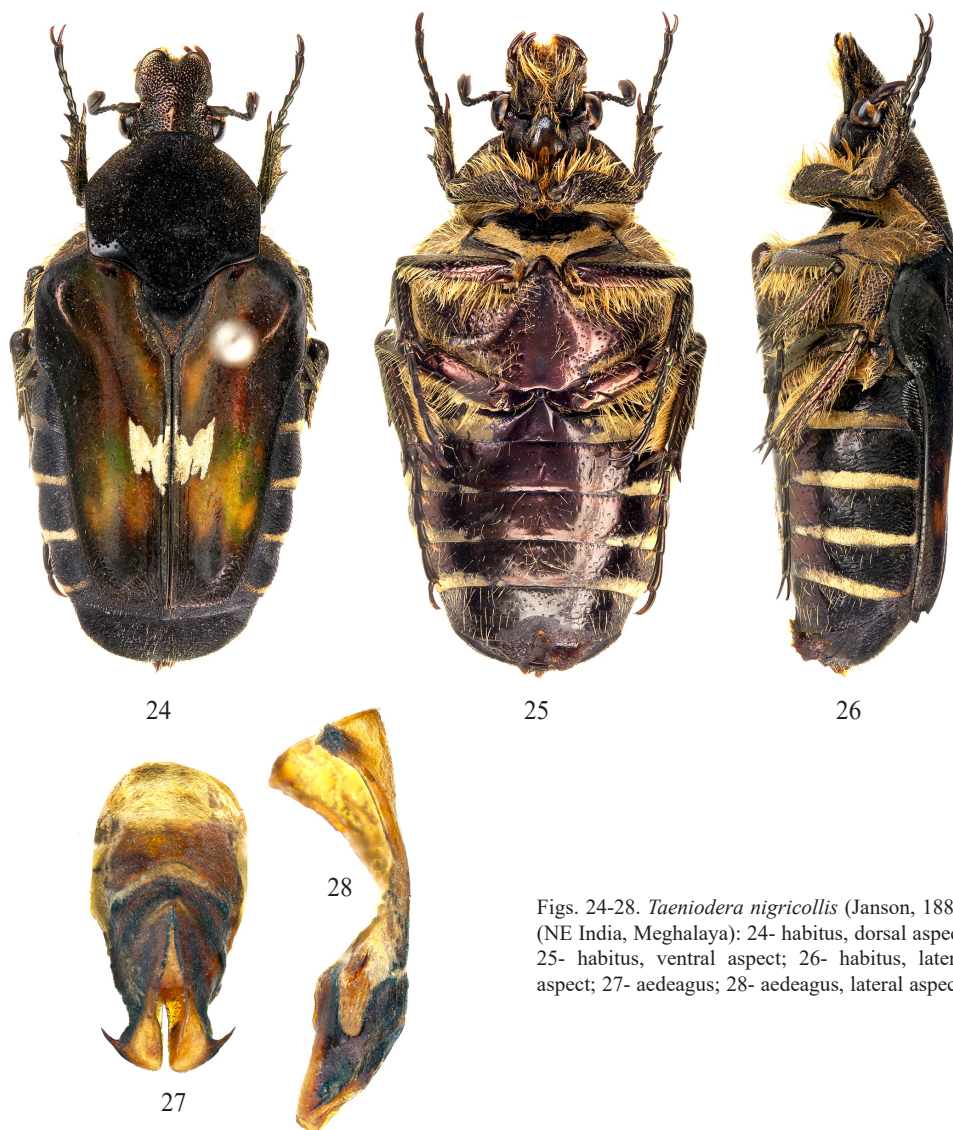
Taeniodera nigricollis (Janson): Krajčák 1998: 94 (catalogue); Krajčák 2010: 5, fig. 5 (Cetoniidae of China, male parameres).

Type locality. „Assam, Cherrapoongee“ (= NE India, Meghalaya, East Khasi Hills, Cherrapunjee).

Type material. Holotype (♀) (RMNH).

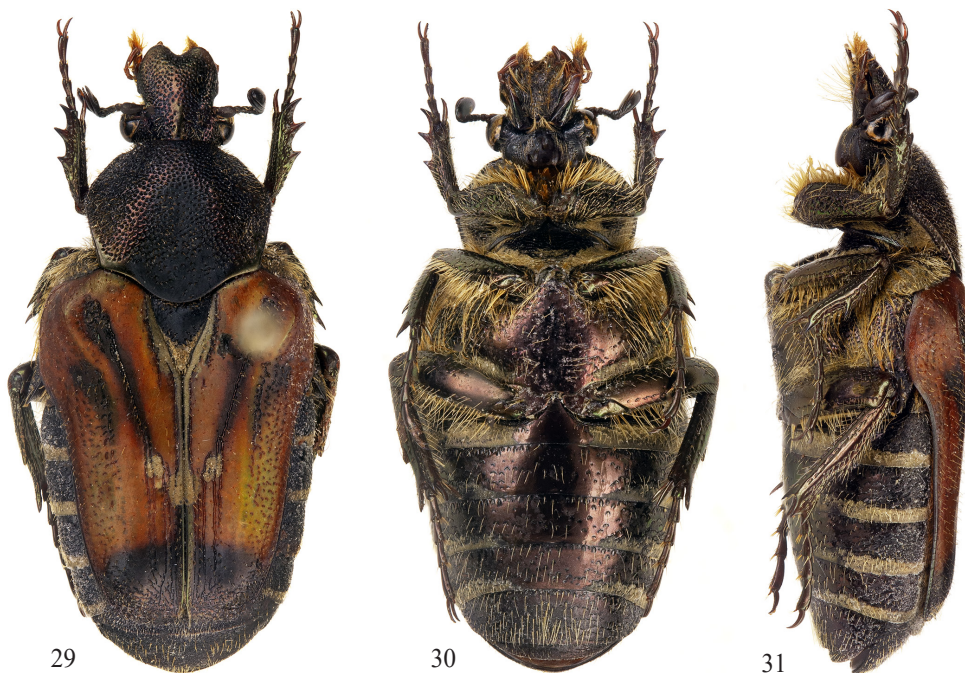
Additional examined material: 2 ♂♂, 9 ♀♀ (SJCP) labelled: NE INDIA, MEGHALAYA; 1999 / 3 km E of Tura; 500-1150 m / 25°30'N 90°14'E; 1.-8.V. / Zd. Košťál lgt; 1 ♂ (SJCP) labelled: NE India, Assam prov., 21.5. / 5 km N of UMRANGSO, 1999 / L. Dembický + P. Pacholátko lgt; 2 ♀♀ (SJCP) labelled: NE INDIA, Arunachal Pr. / Lower Dibang Valley Distr. / rd Tiwarigaon - Mayudia / 1500-2000 m, 28.-29.V. / 2019, St. Jákl leg; 2 ♀♀ (SJCP) labelled: NE INDIA, Arunachal / Pradesh, Lower Dibang / Valley, Hunli Reg. / CHATANI env., 1150 m / 19.VII. 2023; 2 ♀♀ (SJCP) labelled: NE INDIA, Arunachal Pr. / NAMDAPHA WILDLIFE / SANCTUARY, Deban / env., 250-450 m / 27°29'N 96°2'E, 18.- / 26.V. 2022, St. Jákl leg.

Distribution. Northeastern India: Meghalaya, Assam, Nagaland and Arunachal Pradesh States; Myanmar: Ruby Mines.



Figs. 24-28. *Taeniodera nigricollis* (Janson, 1881)
(NE India, Meghalaya): 24- habitus, dorsal aspect;
25- habitus, ventral aspect; 26- habitus, lateral
aspect; 27- aedeagus; 28- aedeagus, lateral aspect.

Note. Distribution of this species in Myanmar (Arrow, 1910) is questionable. Specimens which I have from Shan State and Chin Hills belong to different, probably undescribed species.



Figs. 29-31. *Taeniodera nigricollis* (Janson, 1881) (female) (NE India, Meghalaya): 29- habitus, dorsal aspect; 30- habitus, ventral aspect; 31- habitus, lateral aspect.

***Taeniodera rakovici* sp. nov.**
(Figs. 32-39)

Type locality. Northeastern Laos, Huaphanne Province, Mount Phu Pane, Ban Saluei village vicinity, 1800 m alt.

Type material. Holotype (♂) (SJCP) labelled: NE LAOS, Huaphanne Pr. / MT. PHU PANE, 1800 m / Ban Saluei vill. env. / 10.-22.V. 2011 / St. Jákl leg. Paratypes: (Nos. 1-2 ♂♂, 3-5 ♀♀ (SJCP) labelled: same as holotype.

Description of holotype. Head black with metallic reflection, pronotum dark brown to black with greenish tinge, elytra reddish with few minute black maculae and very reduced white ornament. Body size 16.5 mm (excluding pygidium).

Head. Coloration black, with rather strong metallic reflection. Glabrous and elevated middle line running throughout total length of frons and posterior part of clypeus. Punctuation dense, diameters of punctures much larger than interspaces in both halves. Diameters of punctures in clypeus smaller than in frons. Apex of clypeus deeply incised. Antennae dark brown to nearly black, pedicle darker than antennal club.

Pronotum. Very dark brown with plum to olive tinge. Pronotal sides with moderately dense striolation, pronotal disc with simple, moderately large punctures. Pronotal punctuation distinctly sparser than in head, specially punctuation in pronotal disc. Lateral margins with low border. White ornament and setation absent.

Scutellum. Velvety black, glabrous, impunctate, in apex and base with several short striolate lines. Lateral sides covered with white ornament.

Elytra. Coloration light reddish, elytral disc with mild golden reflection. Each elytron with typical black band usually running approximately between humeral calli and middle part of sutural ridge only fragmentally developed. Other irregularly shaped black macula between humeral callus and lateral margin in anterior half of each elytron. Apical calli and part of elytral apex blackish. White ornament present only in apical end of fragmentally running black band and small part of sutural ridge. Punctuation sparse, several fine punctures present in lateral ridge and anterior part of elytral disc. Few striolate lines present beside humeral calli. Elytral apex and apical calli striolated. Each elytron with shallow, longitudinally running striolate lines in posterior half of elytron. Setation completely absent.

Pygidium. Black, opaque. Setation and ornament missing. Moderately dense, deep and uniformly distributed striolation present throughout total length.

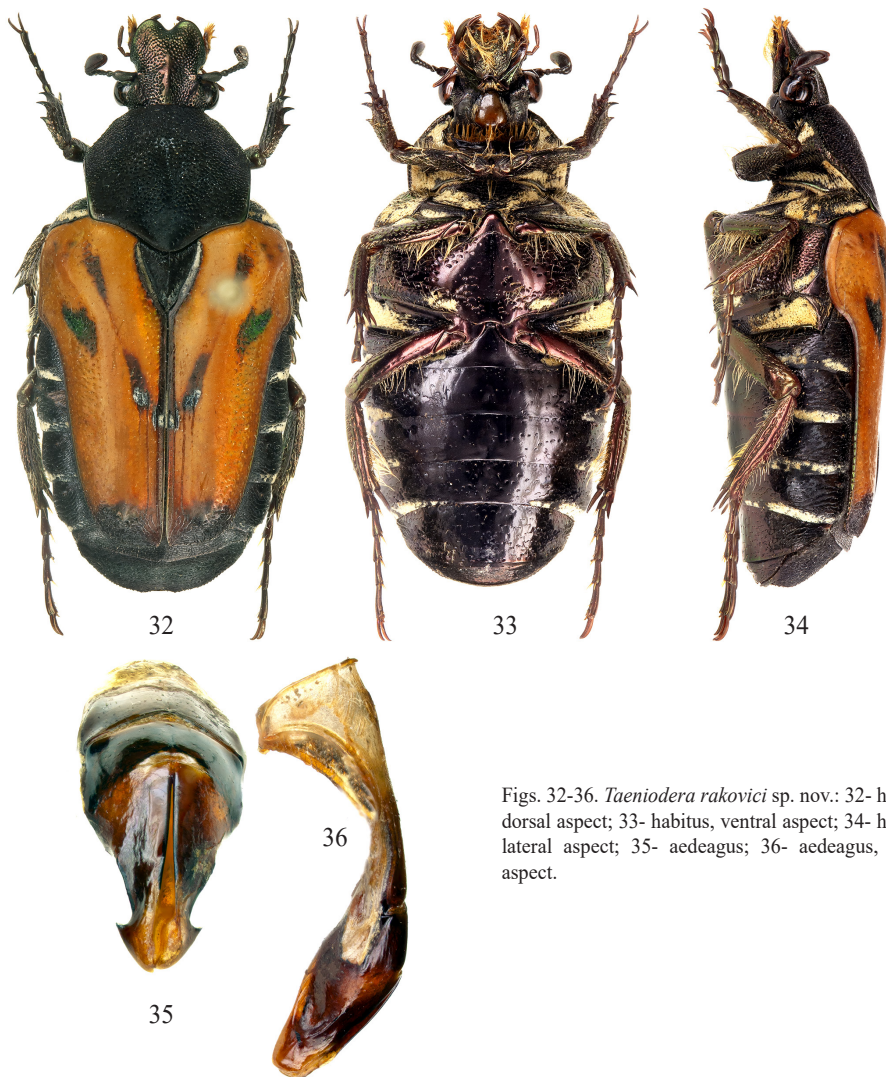
Ventrum. Abdomen black, with mild dark plum reflection. Metasternum black, with strong purpureous luster. Prosternum and mentum blackish. Abdominal segments 2-4 with shallow impression. Posterior margins of ventrites 1-4 with white transversally running vittae in lateral sides. Metacoxa with broad cover of white ornament bearing moderately long white setation. Second piece of white ornament and cover of setae placed in posterior margin of metasternum, beside metasternal disc. Small pieces of white ornament and setae also in posterior margins of mesepimerons and metepimerons. Mesometasternal process small, narrowing from transversal groove to its obtusely rounded apex. Prosternum and mentum with numerous pieces of irregularly shaped white ornament bearing whitish setation.

Legs. Moderately long, dark brownish. Upper sides with mild bronze luster. Reflection in ventral sides of legs more stronger, bronze to purpureously colored. Protibia tridentate, teeth approximately equidistant. Meso- and metatibia with carina in posterior half. Metatibia with whitish setation in inner side. Spurs of meso- and metatibia straight or only very slightly curved.

Genitalia. Male parameres rather sharply narrowing to apex, shortly in front of apex with moderately large and sharp hook (Figs. 35-36).

Variability. Size of paratypes 16.5-17.0 mm (excluding pygidium). Coloration of elytra lighter, golden/green reflection stronger than in holotype. Composition of elytral pattern similar. In all other characters identical or nearly identical to holotype.

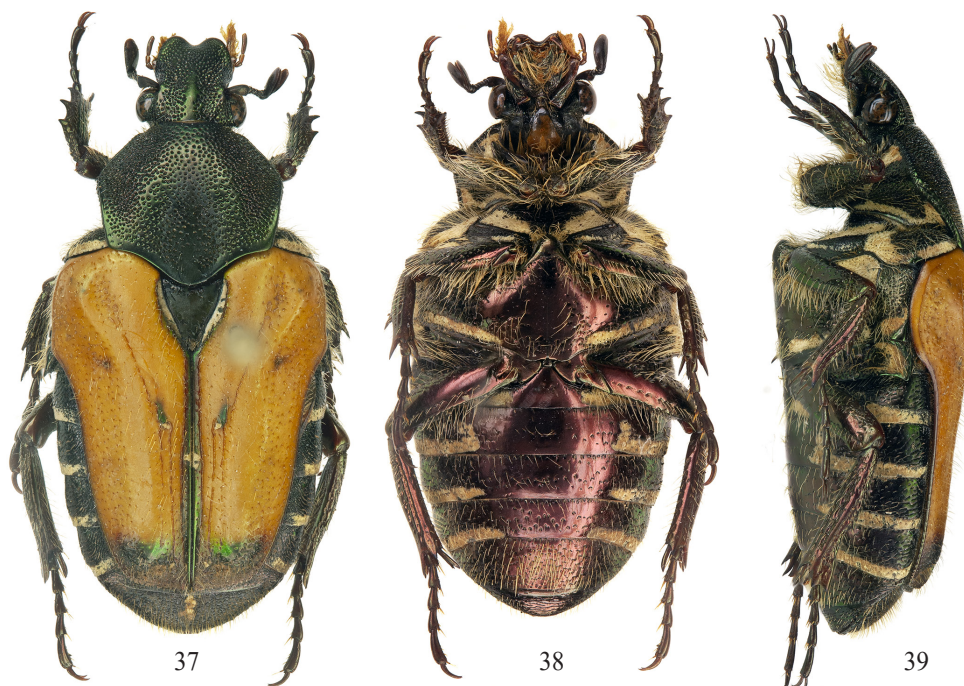
Sexual dimorphism. Size of the three known females 14.5-15.5 mm (excluding pygidium). Similarly as in many other representatives of *Taeniodera* Burmeister, 1842 sexual dimorphism is strongly expressed. The shape of body shorter and robuster than in males. Subhumeral emargination of elytra distinctly sharper. Elytra nearly without black maculae (vittae) and also nearly without white ornament. Punctuation of head and pronotum denser, specially punctuation in pronotum rugose with much larger, deeper and denser diameters of punctures. Elytral punctuation also rather sparse, but more expressed than in males. Ventral side with arched abdomen, its setation, punctuation and white ornament slightly more abundant. Legs shorter and slightly more robust. Protibia wider and shorter, tridentate as in males. Pronotum and elytra in females setose, coloration of setae yellowish.



Figs. 32-36. *Taeniodera rakovici* sp. nov.: 32- habitus, dorsal aspect; 33- habitus, ventral aspect; 34- habitus, lateral aspect; 35- aedeagus; 36- aedeagus, lateral aspect.

Differential diagnosis. The newly described species cohabits in same mountain, although probably in different altitudes with *Taeniodera miksici* Krajčik, 2010. Males can be distinguished by the following characters:

I. Head and pronotum dark brown with olive tinge in pronotum and metallic reflection in head in the newly described species, but with black, opaque head and pronotum in *Taeniodera miksici* Krajčik, 2010; II. Elytra reddish with rather strong metallic to golden reflection in the newly described species but, darker, brownish elytra without reflection in its congener; III. Blackened parts of elytra reduced, white ornament in elytra very reduced in new species,



Figs. 37-39. *Taeniodera rakovici* sp. nov. (female): 37- habitus, dorsal aspect; 38- habitus, ventral aspect; 39- habitus, lateral aspect.

but more expressed in its congener; IV. Black part of elytral apex narrow, covering only apical calli and apical margin in new species but distinctly broader in historically described species; V. male parameres distinctly different (Figs.). Separation of females seems to be more difficult, but all three females of the newly described species nearly miss blackened parts in elytra and nearly miss white, elytral ornament, which are rather abundant in females of *Taeniodera miksici* Krajčák, 2010. Also blackened elytral apex is much narrower than in females of its congener. Striation of elytral, lateral ridge and striation of elytral disc in the newly described species distinctly sparser than in its congener, specially striation of elytral disc shallow and fine, but deep and more expressed in historically described species.

From other representatives of similar looking *Taeniodera* Burmeister, 1842, the newly described species can be separated by the complex of following characters: head black with strong metallic to golden reflection; pronotum dark brownish to dark olive with greenish to metallic tinge; pronotal white ornament absent; pronotal and elytral setation completely missing in males; coloration of elytra reddish with moderately strong metallic reflection; scutellum with wrinkles near apex and base and with sides covered by white ornament; blackened parts of elytra and white, elytral ornament very reduced; blackened part of elytral apex very narrow, covering only apical calli and apical margin; elytral punctuation and striation shallow and sparse; abdomen in males with shallow impression in ventrites 2-4; posterior margins of first four abdominal segments, large part of procoxa, small macula in

posterior margin of metasternum, parts of prosternum and mentum and posterior part of mes- and metepimerons with cover of white ornament and setae; protibia tridentate in both sexes; teeth of protibia equidistant in both sexes; parameres of males sharply narrowing to apex, shortly in front of apex with sharply developed hook, which is heading backward.

Etymology. The name of the species is dedicated to the late Miloslav Rakovič, the worldwide specialist on Scarabaeidae: Aphodiinae.

Distribution. Northeastern Laos: Huaphanne Province, Mt. Phu Pane, 1800 m.

Note. The author of this article examined one pair of *Taeniodera* Burmeister collected in Shan State in Myanmar. That species is very close to *Taeniodera rakovici* new species, but due to insufficient material and the very different region where they were collected, I did not include specimens in the type series.

***Taeniodera viridula* (Nijima & Matsumura, 1923)**
(Figs. 40-47)

Macronota viridula Nijima & Matsumura, 1923: 149 (in Japanese), : 232 (in English), taf.I., fig. 6-7 (habitat male) [original description]; Kano 1931: 134 (new record for Formosa); Sawada 1949: 70 (= *Macronota nigricollis* Janson, 1881).

Macronota nigricollis Janson: Kano, 1931: 134 (new record for Formosa).

Taeniodera nigricollis viridula (Nijima & Matsumura): Mikšič, 1976: 56 (key), : 108 (monograph); Krajčák 1998: 94 (catalogue); Sakai & Nagai, 1998: 347, pl. 131, figs. 1536-3 (male, Taiwan), 1536-4 (male, Taiwan), 1536-5 (male, Taiwan), 1536-6 (male, Taiwan), 1536-7 (female, Taiwan) [iconography].

Taeniodera viridula (Nijima & Matsumura): Antoine, 1998: 71, figs. 15-16 (metatibia of male and female, parameres of male, valid species); Bezděk in Löbl I. & Löbl D. 2016: 404 (palaeartic catalogue).

Macronota nigricolor Kano, 1931: 133, fig. 5 (original description); Sawada, 1949: 70 (= *Macronota nigricollis* Janson, 1881). Type locality. Formosa, Horisha. Type material. Holotype male; **syn. nov.**

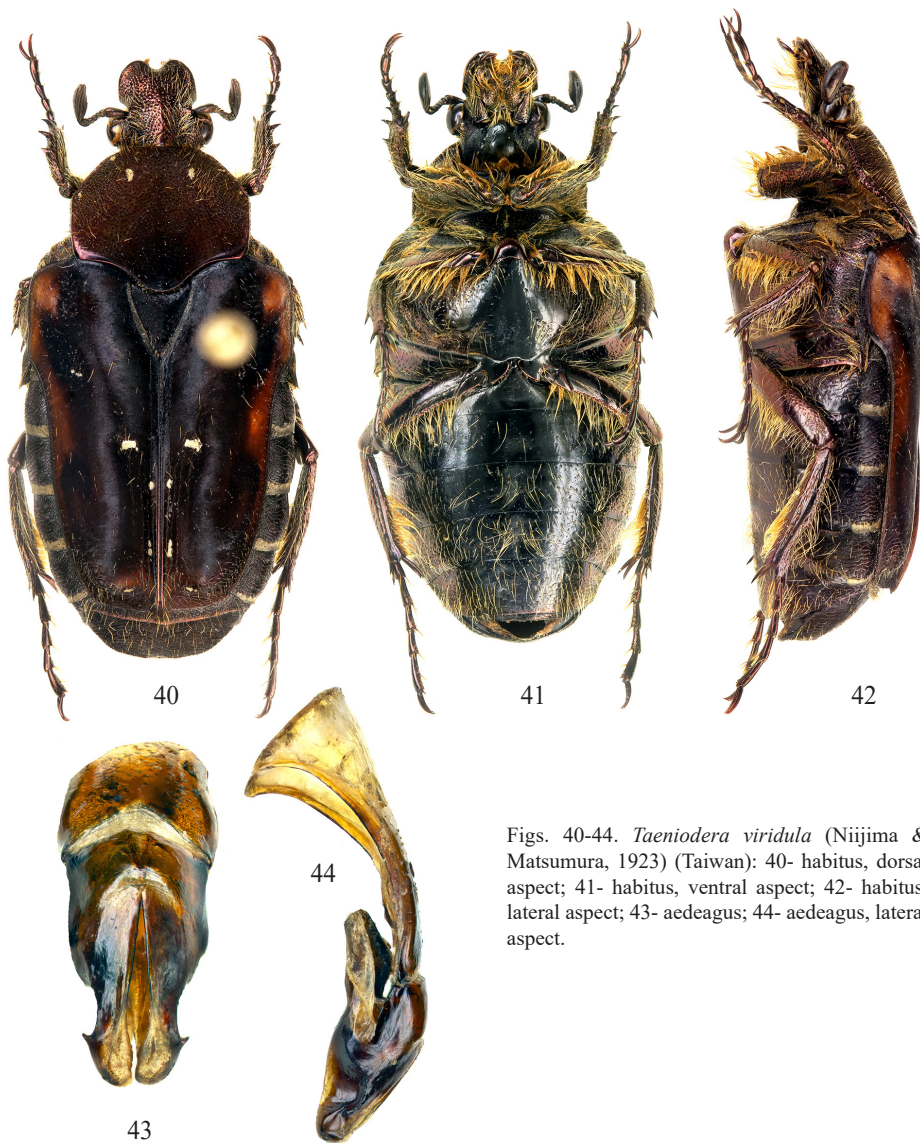
Type locality. „Formosa, Taihei“ (= Taiwan, Taihei).

Type material. Holotype (♂). Type not traced.

Additional examined material: 1 ♂, 1 ♀ (SJCP) labelled: Mt. Eli / Formosa-China / VIII. 57; 1 ♂, 1 ♀ (SJCP) labelled: Wushai / C. Formosa / V. 1960; 1 ♂, 2 ♀♀ (SJCP) labelled: Puli-Formose / China - IV. 59; 1 ♂ (SJCP) labelled: Taiwan; 2 ♀♀ (SJCP) labelled: FORMOSA (TCHAJ-WAN) / Hsinchu County, 18.V.2014 / NEIWAN, Jianshi environs, 650 m / 24°43'20,112"N 121°12'21,978"E / Jaroslav DALIHOD leg; 1 ♀ (SJCP) labelled: FORMOSA (TCHAJ-WAN) / Nantou County / WUSHE, 24.04 - 27.04.2011 / Jaroslav DALIHOD leg; 1 ♀ (SJCP) labelled: FORMOSA (TAIWAN) / Kaohsiung / PAOLAI, 14.5.1995 / H. Nara leg; 2 ♀♀ (SJCP) labelled: Taiwan, 5.1984 / Guardaushan / H. Kobayasshi lgt.

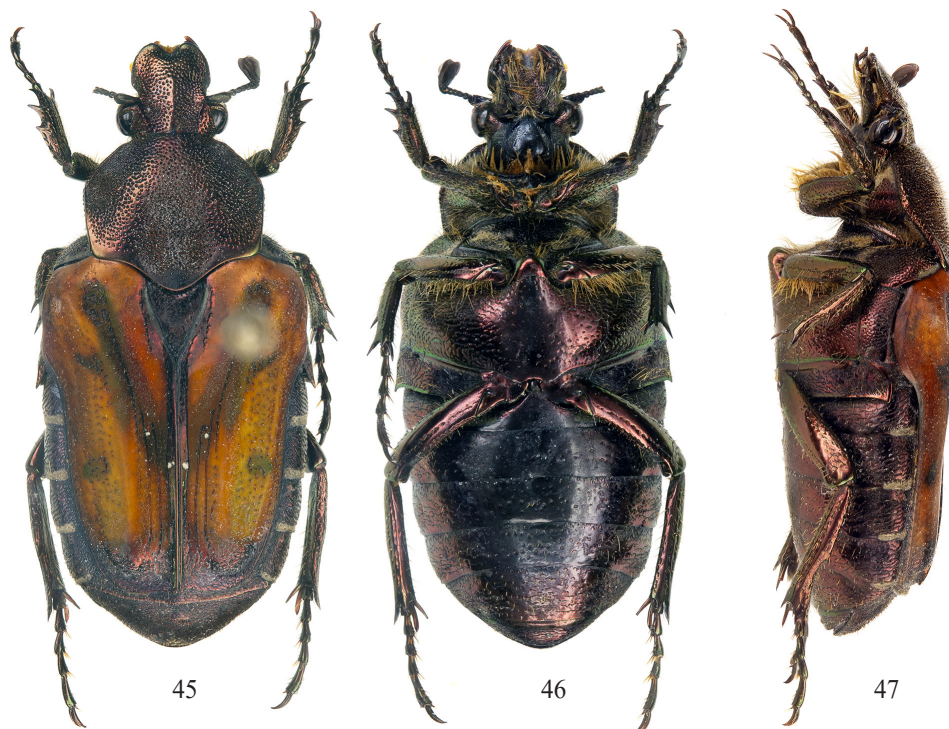
Distribution. Taiwan.

Note. Krajčák (2010) split *Taeniodera nigricollis* (Janson, 1881) into two species and described *Taeniodera miksici* Krajčák, 2010. *Macroma nigricolor* Kano, 1931 was synonymised by Sawada (1949) with *Macroma nigricollis* (Janson, 1881). Here I withdraw the species described by Kano from synonymy with *Taeniodera nigricollis* (Janson, 1881)



Figs. 40-44. *Taeniodera viridula* (Nijima & Matsumura, 1923) (Taiwan): 40- habitus, dorsal aspect; 41- habitus, ventral aspect; 42- habitus, lateral aspect; 43- aedeagus; 44- aedeagus, lateral aspect.

and synonymise it with *Taeniodera viridula* Nijima & Matsumura, 1923. *Macroma nigricolor* Kano, 1931 was described based on one melanistic male, a rather common variation of Taiwanese species.



Figs. 45-47. *Taeniodera viridula* (Nijijima & Matsumura, 1923) (female) (Taiwan): 45- habitus, dorsal aspect; 46- habitus, ventral aspect; 47- habitus, lateral aspect.

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REFERENCES

- ANTOINE P. 1998: Quelques espèces nouvelles ou peu connues de la famille des Cetoniidae VI. *Coléoptères* 4(6):65-84.
- ARROW G. J. 1910: Coleoptera Lamellicornia (Cetoniinae and Dynastinae). In: *Fauna of British India 1*. London: Taylor & Francis, 2 pl., 322pp.
- BEZDĚK A. 2016: Subfamily Cetoniinae. In: LÖBL I. & LÖBL D. (eds.): *Catalogue of Palaearctic Coleoptera. Volume 3. Scarabaeoidea-Scirtoidea-Dascilloidea-Buprestoidea-Byrrhoidea. Revised and Updated Edition*. Stenstrup: Brill, 983 pp.
- JANSON O. E. 1881: Notices of new or little known CETONIIDAE. No. 7. *Cistula Entomologica* 2: 603-611.
- KANO T. 1931: Some new or unrecorded Cetonid-beetles from Fotrmsa. *Annotiones Zoologicae Japonenses* 13(2): 127-134.
- KRAJČÍK M. 1998: *Cetoniidae of the world, Catalogue-Part I. Zlatohlávkovití světa. Katalog - Část I*. Most: Krajččík [published privately by the author].
- KRAJČÍK M. 2010: Two new species of the genus *Taeniodera* Burmeister from SE Asia. (Coleoptera, Scarabaeidae, Cetoniinae). *ANIMMA.X* 35 : 1-7.

- KRAJČÍK M. 2011: Illustrated catalogue of Cetoniinae, Trichiinae and Valginae of China. (Coleoptera, Cetoniidae). *ANIMMA.X (supplement)* 1: 113 pp.
- MIKŠIČ R. 1976: *Monographie der Cetoniinae der palaearctischen und orientalischen Region. Coleoptera: Lamellicornia. Band 2. Systematischer Teil: Gymnetini Teil.* Zagreb: Graficki zavod Hrvatske, 444 pp.
- NIJIMA Y. & KINOSHITA E. 1923: Die Untersuchung über japanische Melolonthiden II. Melolonthiden Japan und ihre Verbreitung. *Res. Bull. Coll. Agr. Hokkaido Imp. Univ., Sapporo, Japan*, 7 pls., 253 pp.
- PAULIAN R. 1960: Coléoptères Scarabéides de l'Indochine II Rutelines et Cétonides). *Annales de la Société Entomologique de France* 130: 1-47.
- SAKAI K. & NAGAI S. 1998: The Cetoniinae beetles of the World. Pp. 1-6 + 7-150 unpag. [pls. 1-144] + 151 – 421 + 3 unpag. In: FUJITA H. (ed.): *Mushi-Sha's iconographic series of insects* 3. Tokyo: Mushi-Sha, 2 unpag. + 342 + 5 unpag. (in Japanese and English).
- SAWADA H. 1949: Notes on some Formosan lamellicorn - beetles of the Cetoniinae and Trichiinae. *Transactions of the Kansai Entomological Society* 14: 70-72.
- SCHENKLING H. 1921: Scarabaeidae, Cetoniinae. In: JUNK W. & SCHENKLING S. (eds.). *Coleopterum Catalogue, Pars 72.* Berlin: W. Junk, 431 pp.

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