

## Revision of the genus *Podagricomela* Heikertinger, 1924 (Coleoptera: Chrysomelidae: Alticinae)

## Ревизия рода *Podagricomela* Heikertinger, 1924 (Coleoptera: Chrysomelidae: Alticinae)

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KEY WORDS. Chrysomelidae, Alticinae, *Podagricomela*, key.

КЛЮЧЕВЫЕ СЛОВА. Chrysomelidae, Alticinae, *Podagricomela*, определитель.

ABSTRACT. A key to genus is given. 5 species are described as new to science: *P. grossa* (Nepal), *P. decempunctata* (N. India), *P. taiwana* (Taiwan), *P. sordida*, *P. vietnamica* (Vietnam). New name, *P. cheni* is proposed for *P. geminata* Chen & Zia because of homonymy.

РЕЗЮМЕ. Приводится ключ для определения рода. 5 видов описаны как новые для науки: *P. grossa* (Непал), *P. decempunctata* (Сев. Индия), *P. taiwana* (Тайвань), *P. sordida*, *P. vietnamica* (Вьетнам). Новое имя, *P. cheni* предложено для *P. geminata* Chen & Zia в связи с гомонимией.

Oriental genus *Podagricomela* Heikertinger, 1924 is very poorly studied. A monograph of Oriental Alticinae [Scherer, 1969] includes only 2 species, Gressitt and Kimoto [1963] indicated for China 4 species. In the last years a few new species were described from the Himalayas [Medvedev, 1993, 1997; Medvedev & Sprecher, 1997], China [Chen & Zia, 1966; Wang, 1990] and the Philippines [Medvedev, 1996]. Because of this we propose a revision of this genus with description of 5 new species. Types of many species were studied.

The following abbreviations are used for depositary places: LM — author's collection, Moscow; MD — Museo Civico di Storia Naturale "G. Doria", Genova; TARI — Taiwan Agriculture Research Institute, Taipei.

ACKNOWLEDGEMENTS. I am grateful to Dr. M. Brancucci (Naturhistorisches Museum, Basel), Dr. D. Furth, United States National Museum, Washington), Dr. R. Poggi (Museo Civico di Storia Naturale "G. Doria", Genova) for possibility to study type material under their care.

1(16) Body not metallic.

2(3) Upperside red fulvous, each elytron with 5 black spots. Frontal grooves interrupted in middle. Antennal segments 8–10 as long as wide, segment 1 as long as segments 9 and 10 together. Elytra with interspaces of rows practically flat. Aedeagus (Fig. 12) with simple underside. Length 3.2 mm ..... *P. decempunctata*, sp.n.

3(2) Elytra unicolor. Frontal sutures not interrupted in middle (Figs. 1, 3).

4(13) Upperside unicolor.

5(12) Upperside fulvous or red fulvous.

6(9) Elytral interspaces costate or distinctly convex.

7(8) Elytral interspaces costate. Legs fulvous. Length 3.5 mm.

Species from Vietnam ..... *P. costipennis* Chen, 1934

8(7) Elytral interspaces distinctly convex, but not costate.

Legs black. Aedeagus — Fig. 13. Length 3.3–3.5 mm.

Species from the Himalayas .....

..... *P. nigripes* L. Medvedev, 1993

9(6) Elytral interspaces flat. Species from China and Taiwan.

10(11) Head and legs dark piceous. Aedeagus — Fig. 14.

Length 4–5 mm. Species from China .....

..... *P. shirahatai* (Chujo), 1957

11(10) All body including head and legs dark red fulvous,

only antennal segments 4–11 black. Length 4.2 mm.

Species from Taiwan ..... *P. taiwana*, sp.n.

12(5) Upperside dark piceous to almost black. Preapical antennal

segments as long as wide. Aedeagus — Fig. 15. Length

2.7–3.1 mm. Species from Vietnam ..... *P. sordida*, sp.n.

13(4) Upperside bicolor.

14(15) Prothorax black, elytra fulvous. Head usually dark

with fulvous vertex. Underside fulvous with darkened

legs. Preapical antennal segments distinctly elongate.

Interspaces of elytral rows feebly convex. Aedeagus —

Fig. 16. Length 3–3.7 mm. Species from China and

Taiwan ..... *P. nigricollis* Chen, 1934

15(14) Prothorax red, elytra black. Head, underside and legs

red. Interspaces of elytral rows flat or feebly convex.

Aedeagus — Fig. 17. Length 4 mm. Species from the

Philippines ..... *P. nigripennis* L. Medvedev, 1996

16(1) Body at least partly metallic.

17(22) Elytral rows not quite regular, more or less geminate

(Fig. 9). Preapical antennal segments moderately widened,

a little longer than wide. Body rounded or short

ovate. Prothorax with strong dense punctures. Elytral

interspaces flat. Body red or fulvous with entirely metallic

elytra. Frontal grooves not connected in middle (Fig. 8).

18(19) Body large, 4.5 mm. Elytra violaceous, antennae,

prothorax and scutellum fulvous. Species from the Hima-

layas ..... *P. grossa*, sp.n.

19(18) Body smaller, 3.5–4.2 mm. Elytra blue, prothorax red,

scutellum piceous.

- 20(21) Antennae fulvous. Aedeagus (Fig. 18) with underside uneven, ridged laterally, longitudinally concave in apical part. Length 4.1–4.2 mm. Species from Burma and Sumatra ..... *P. geminatum* (Jacoby, 1884)
- 21(20) Antennae dark with fulvous basal segments. Aedeagus (Fig. 19) with underside not ridged laterally, with feeble round impression before apex. Length 3.5–4.1 mm. Species from China and Laos ..... *P. cheni*, nom.n.
- 22(17) Elytral rows regular.
- 23(30) Prothorax red or fulvous.
- 24(27) Elytra metallic with red or fulvous apex. Interspaces of elytral rows flat. Preapical antennal segments elongate.
- 25(26) Elytra blue or violaceous. Interspaces of elytral rows finely, but distinctly punctate and broad, about 4–6 times as wide as diameter of punctures in rows, which are comparatively small. Prescutellar row includes about 20 punctures. Frontal grooves interrupted in middle (Fig. 2). Aedeagus — Fig. 20. Length 3.8–4.5 mm. Species from south-east continental Asia and Indonesia ..... *P. striatipenne* (Jacoby, 1884)
- 26(25) Elytra dark green-blue. Interspaces of rows indistinctly punctate, much more narrow than in preceding species, about 2–3 times as wide as diameter of punctures in rows, which are comparatively large and deep. Prescutellar row includes only about 10 punctures. Aedeagus (Fig. 21) with feebly elevated basal triangle on underside, in lateral view without hump on underside. Length 3.6–4.0 mm. Species from the Philippines ... *P. philippina* L. Medvedev, 1996
- 27(24) Elytra entirely metallic. Frontal grooves interrupted in middle (Fig. 4).
- 28(29) Head, antennae, underside, legs and pygidium fulvous. Frontal grooves feeble. Aedeagus (Fig. 22) subtruncate on apex, longitudinally grooved on underside. Body larger, 3.9–4.3 mm. Species from the Philippines and Kalimantan ..... *P. bakeri* L. Medvedev, 1996
- 29(28) Head fulvous, antennae black with fulvous basal segments, underside and legs black, pygidium fulvous with black apex. Body smaller, length 2.4–3 mm. Species from China and Laos ..... *P. parva* Chen & Zia, 1966
- 30(23) Upperside entirely metallic.
- 31(36) Underside fulvous or red fulvous.
- 32(33) Frontal grooves interrupted in middle. Underside dark red fulvous with metallic reflection. Upperside bronze, antennae black with fulvous basal segments, legs dark red to piceous. Body short ovate, preapical antennal segments almost twice as long as wide. Spermatheca — Fig. 10. Length 3.8 mm, breadth 2.8 mm. Thailand ..... *P. sp. A*
- 33(32) Frontal grooves not interrupted in middle (Fig. 7). Underside and legs fulvous. Species from China.
- 34(35) Head fulvous, upperside metallic green, antennae black with fulvous basal segments. Body elongate ovate. Prothorax rather strongly and densely punctate. Aedeagus with very distinct apical subquadrate tip (Fig. 23). Length 2.8–3.5 mm ..... *P. weisei* Heikertinger, 1924
- 35(34) Head and upperside purplish cupreous, antennae entirely fulvous. Body rounded ovate. Prothorax finely punctate with medium impunctate line. Aedeagus without apical protuberance (Fig. 24). Length 3.2 mm ..... *P. cuprea* Wang, 1990
- 36(31) Underside metallic or black.
- 37(40) Species from the Himalayas. Body entirely metallic blue, only basal antennal segments fulvous. Frontal grooves not interrupted in middle.
- 38(39) Body short ovate, about 1.3 times as long as wide, strongly punctate. Preapical antennal segments about twice as long as wide. Length 4.3 mm (4.0 mm without head), breadth 3.0 mm, height 2.2 mm ..... *P. metallica* L. Medvedev, 1997
- 39(38) Body elongate ovate, about 1.5 times as long as wide, moderately convex. Preapical antennal segments about 1.5 times as long as wide. Aedeagus with characteristic elevation on the middle part of underside (Fig. 25). Length 3.4–3.6 mm (3.2–3.4 mm without head), breadth 2.2–2.3 mm, height 1.7 mm ..... *P. viridicyanea* L. Medvedev & Sprecher, 1997
- 40(37) Species from China and Vietnam.
- 41(44) Frontal grooves sharp and not interrupted in middle (Figs. 5, 6). Species from China.
- 42(43) Body elongate ovate. Metallic blue, legs black with metallic sheen (knees dark red). Length about 4 mm .... *P. cyanea* Chen, 1939
- 43(42) Body short ovate. Metallic green, legs black with fulvous tibiae and tarsi. Last abdominal sternite of male with deep round groove in middle (Fig. 11). Aedeagus strongly humped beneath (Fig. 26). Length 3 mm ..... *P. flavitibialis* Wang, 1990
- 44(41) Frontal grooves very feebly and broadly interrupted in middle. Preapical antennal segments twice as long as wide. Body short ovate, metallic blue with black underside. Aedeagus — Fig. 27. Length 3.9 mm, breadth 3.2 mm, Species from Vietnam ..... *P. vietnamica*, sp.n.

*Podagricomela decempunctata* sp.n.

Fig. 12.

MATERIAL. Holotype (♂): India, Darjeeling, ex Staudinger (LM).

DESCRIPTION. Fulvous, 5 apical antennal segments piceous, each elytron with 5 black, more or less rounded black spots: one on humerus, another near scutellum, two in middle and the last one on apical slope.

Body short ovate, moderately convex. Head impunctate, shining. Frontal grooves interrupted in middle, interantennal space concave and not very broad, clypeus triangular and flat. Antennae reach humerus, segments 2–5 subequal, 6 more short, 7–11 widened, 8–10 as long as wide, 11 elongate, as long as 9 and 10 together. Prothorax convex, shining, distinctly, but sparsely punctate. Elytra 1.2 times as long as wide, with regular rows of punctures, more feeble on apical slope, interspaces flat, shining and impunctate. Anterior tarsi with segment 1 widened in male. Last abdominal sternite of male without distinct median lobe, but with impressed punctured line before apex in middle part. Aedeagus (Fig. 12) with triangular apex and simple underside. Length 3.2 mm.

DIAGNOSIS. Differs well from all species of the genus with black-spotted elytra.

*Podagricomela costipennis* Chen, 1934

DISTRIBUTION. North Vietnam (That-Khe), only type is known, but I had no possibility to study it. Species seems to be very near to *P. nigripes* L. Medv., 1993.

*Podagricomela nigripes* L. Medvedev, 1993

DISTRIBUTION. Bhutan, North India. Type series was studied.

*Podagricomela shirahatai* (Chujo, 1957)

*Clitea shirahatai* Chujo, 1957

**DISTRIBUTION.** China: Shansi, Hunan, Shensi, Szechuan. Type was studied.

**ECOLOGY.** Feeding on *Zanthoxylon simulans*.

*Podagricomela taiwana*, sp.n.

**MATERIAL.** Holotype (♀): Taiwan, Mt. Rara-San, Taihoku-syu, 26. V. 1934, leg. M. Chujo (TARI).

**DESCRIPTION.** Body dark red fulvous, antennae except 3 basal segments black.

Head impunctate, shining. Frontal grooves not interrupted in middle. Interantennal space more than twice as broad as antennal insertion, frontal tubercles small, transverse, not limited on outside, divided with broad space. Antennae with moderately thickened 6–11 segments, segment 3 distinctly longer than 2 and scarcely longer than 4. Prothorax twice as broad as long, lateral margins rounded, fore angles acute, surface finely punctate, with convexity along side margins. Elytra with quite regular rows, interspaces broad, flat or very feebly convex, with dense fine punctures, outermost interspace distinctly convex. Length 4.2 mm, width 2.9 mm.

*Podagricomela sordida*, sp.n.

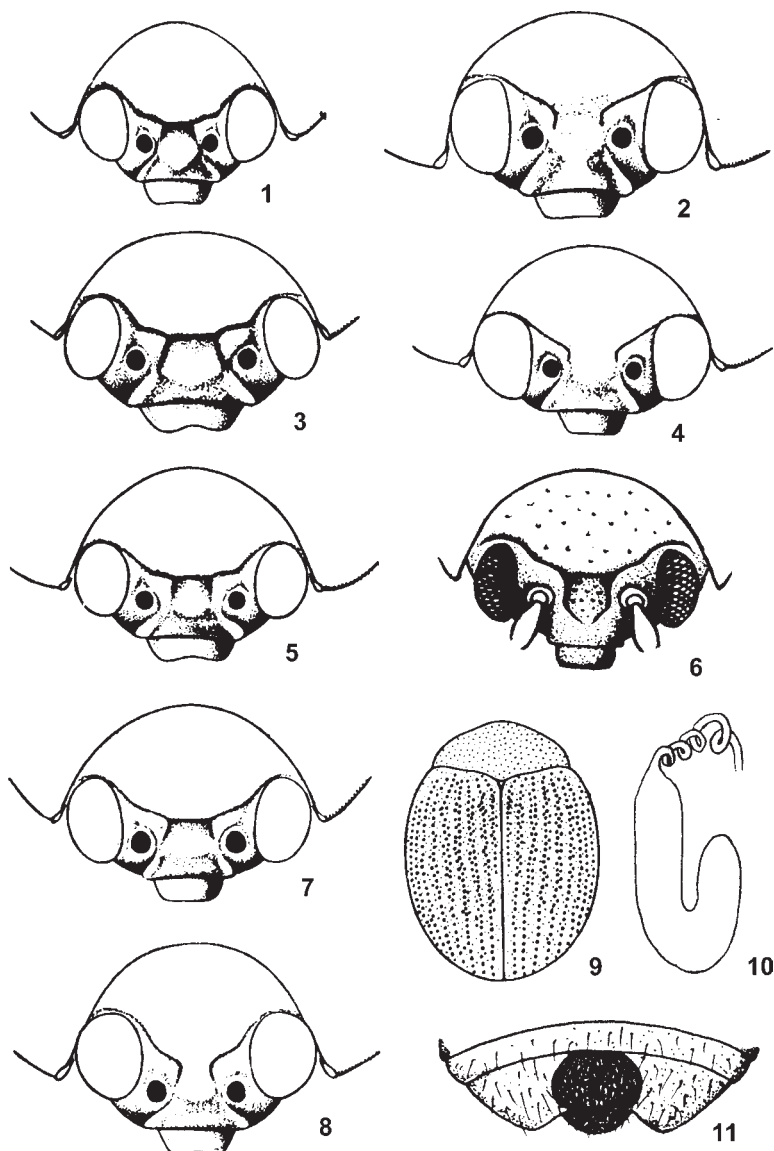
Fig. 15.

**MATERIAL.** Holotype (♂): North Vietnam, mountains NW Qui-Chau, 7. III. 1962, leg. O. Kabakov (LM).

Paratype: same locality, 1 ♂ (LM).

**DESCRIPTION.** Head and underside red brown, prothorax and elytra piceous black, antennae red flavous with darkened apical segments.

Body rounded, strongly convex. Head with fine, but rather unequal punctures, dimension between antennal bases equal to length of 1<sup>st</sup> antennal segment. Frontal tubercles small, triangular, widely separated from each other. Frontal grooves deep and sharp, interrupted in middle, with impression. Antennae short, 5–11 segments widened, segment 3 as long as 2, but more slender, segment 4 shorter than 3, segments 7–10 as wide as long, 11 only a little longer than 10. Prothorax rounded laterally, with distinct anterior angles, densely and largely punctured, interstices with very fine dense punctures. Elytra 1.1 times as long as wide, with regular rows, punctures of rows scarcely larger than on prothorax, interspaces flat with sparse moderately fine and very fine punctures. Prosternal process roughly punctured, longitudinally channeled, anterior coxal cavities not quite close. Last abdominal sternite of male with rounded groove. Segment 1 of anterior tarsi widened in male. Aedeagus (Fig. 15) with rounded-truncate apex, underside feebly impressed basally and before apex. Length 2.7–3.1 mm, breadth 2.0–2.2 mm.



Figs. 1–8. Head capsule (after Chen & Zia), 9 — punctures of upperside, 10 — spermatheca, 11 — last abdominal sternite (after Wang): 1 — *nigricollis*, 2 — *striatipenne*, 3 — *shirabatai*, 4 — *parva*, 5 — *cyanea*, 6, 11 — *flavitibialis*, 7 — *weisei*, 8, 9 — *cheni*, 10 — P. sp. A.

Рис. 1–8. Головная капсула (по Chen & Zia), 9 — пунктировка верха, 10 — сперматека, 11 — последний сегмент брюшка (по Wang).

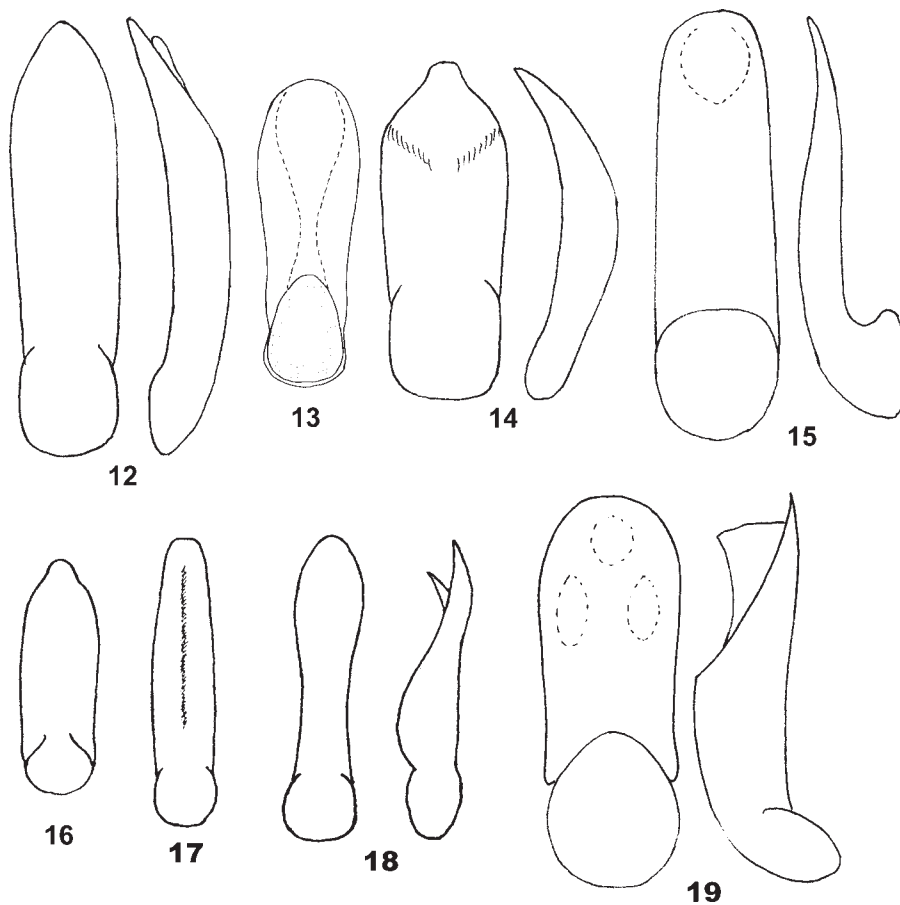
*Podagricomela nigricollis* Chen, 1934

**DISTRIBUTION.** China: Hubei, Kiangsi, Chekiang, Fukien, Kwangtung, Hunan, Szechuan, Yunnan, Kwangsi. I have not seen type, but a few specimens compared by Gressitt with type were studied.

**ECOLOGY.** Feeding on Citrus.

*Podagricomela nigripennis* L. Medvedev, 1996

**DISTRIBUTION.** Philippines: Luzon (Mt. Banahao). Type was studied.



Figs. 12–19. Aedeagus, ventral and lateral: 12 — *decempunctata*, 13 — *nigripes*, 14 — *shirabatai*, 15 — *sordida*, 16 — *nigricollis*, 17 — *nigripennis*, 18 — *geminatum*, 19 — *cheni*.

Рис. 12–19. Эдеагус снизу и сбоку.

*Podagricomela grossa*, **sp.n.**

**MATERIAL.** Holotype (♀): east Nepal, Gandaki, 2 km N Pokhara, 30 .VII. 1995, leg. O. Gorbunov (LM).

**DESCRIPTION.** Body, including antennae and scutellum, fulvous, elytra violaceous.

Short ovate, strongly convex. Head impunctate, frontal grooves sharp and straight, distinctly interrupted in middle, frontal tubercles small, poorly delimited on outside. Interantennal space very broad, compared with a length of the first antennal segments. Clypeus short, transverse. Antennae reach base of elytra, segments 2–4 subequal, 5–11 feebly thickened, 6–10 about 1.2–1.5 times as long as wide, segment 11 only a little longer than 10. Prothorax densely punctate except lateral area, interspaces smooth and shining. Elytra 1.1 times as long as wide, humerus feebly elevated, elytral rows confused and partly geminate, especially in middle of disc, punctures of rows much larger than on prothorax. Interspaces flat, finely punctate; outermost interspace convex. Length 4.5 mm, breadth 3.2 mm, height 2.6 mm.

**DIAGNOSIS.** This species is very near to *P. geminatum* Jac. and *P. cheni* nom.n., but body is much larger and more convex, elytra violaceous and scutellum fulvous.

*Podagricomela geminatum* (Jacoby, 1884), **comb.n.**

*Sphaeroderma geminatum* Jacoby, 1884

**DISTRIBUTION.** Burma, Sumatra, Nias. Type was studied. **REMARKS.** A specimen from Burma (Bhamo, MD) determined by Jacoby is identical with a type from Sumatra.

*Podagricomela cheni*, **nom.n.**

*Podagricomela geminata* Chen & Zia, 1966 (nec *P. geminatum* Jacoby, 1884)

**DISTRIBUTION.** China (Yunnan), Laos (Louangprobang). Type is unknown for me, but specimens from Laos corresponds well to original description.

*Podagricomela striatipenne* (Jacoby, 1884)

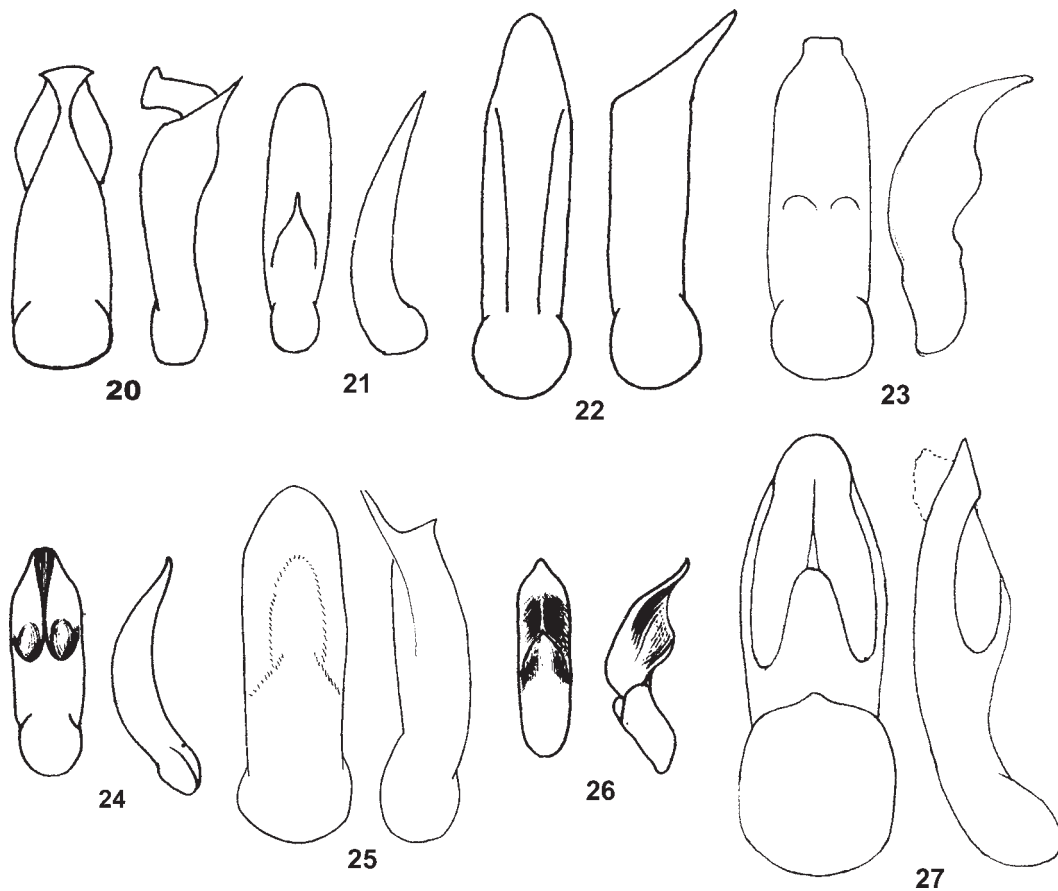
*Podagricomela apicipennis* (Jacoby, 1905)

**DISTRIBUTION.** China (Yunnan, Hainan), Vietnam, Thailand, Nepal, Malacca, Burma (Tenasserim), Sumatra, Nias. Types of both species were studied.

**ECOLOGY.** Species is very usual in South Vietnam on *Clausena excavata* (Rutaceae).

*Podagricomela philippina* L. Medvedev, 1996

**DISTRIBUTION.** Philippines: Luzon (Baguio). Type series was studied.



Figs. 20–27. Aedeagus, ventral and lateral: 20 — *striatipenne*, 21 — *philippina*, 22 — *bakeri*, 23 — *weisei*, 24 — *cuprea*, 25 — *viridicyanea*, 26 — *flavitibialis*, 27 — *vietnamica*.

Рис. 20–27. Эдеагус снизу и сбоку.

*Podagricomela bakeri* L. Medvedev, 1996

DISTRIBUTION. Philippines: Palawan (P. Princess), Kalimantan (Sandakan, Is. Banguay). Type series was studied.

*Podagricomela parva* Chen & Zia, 1966

DISTRIBUTION. China: Yunnan, Laos: Loungprabang. Type is unknown to me, but female from Laos corresponds quite perfect to original description, being only a little larger.

*Podagricomela* sp. A

MATERIAL. Thailand, Khao Sok, 12.XI.1995, leg. M. Mostovsky, 1 ♀ (LM).

REMARKS. It seems to be a new species, but material is not enough for description.

*Podagricomela weisei* Heikertinger, 1924

DISTRIBUTION. China: Shantung, Kiangsu, Kiangsi, Hunan, Szechuan, Ganssu, Fukien, Kwangtung, Hopeh, Kwangsi, Chekiang, Shansi. Type was studied.

ECOLOGY. Feeding on *Citrus* and *Poncirus trifoveata*.

*Podagricomela cuprea* Wang, 1990

DISTRIBUTION. China: Gansu, Szechuan. This species is unknown for me.

ECOLOGY. On *Zanthoxylon simulans*.

*Podagricomela metallica* L. Medvedev, 1997

DISTRIBUTION. North India: Darjeeling. Type was studied.

*Podagricomela viridicyanea* Medvedev & Sprecher, 1997

DISTRIBUTION. West Nepal: Gandaki. Type series was studied.

*Podagricomela cyanea* Chen, 1939

DISTRIBUTION. China: Kiangsu. This species is unknown for me.

*Podagricomela flavitibialis* Wang, 1990

DISTRIBUTION. China: Gansu, Shansi. This species is unknown for me.

*Podagricomela vietnamica*, **sp.n.**

Fig. 27.

MATERIAL. Holotype (♂): South Vietnam, prov. Gialai-Contum, Buon-Loi, 40 km N Ankhe, 700 m, 25. XI–4. XII. 1978, leg. L. Medvedev.

DESCRIPTION. Metallic blue, underside and legs black, antennae piceous with fulvous basal segments.

Body short ovate.

Head finely punctate on clypeus and frons, more distinctly on vertex, frontal grooves poorly developed and broadly interrupted in middle, interantennal space as broad as a length of the first antennal segment. Antennae reach anterior quarter of elytra, segments 2 and 4 short, 3 more long, 5–11 slightly widened, elongate, about twice as long as wide, segment 11 only a little longer than 10. Prothorax with dense strong punctures, interspaces smooth and shining, mostly not larger than punctures. Elytra with regular rows of punctures, disappearing on apical slope, interspaces broad, flat, finely punctate. Segment 1 of anterior tarsi widened in male. Aedeagus (Fig. 27) with obtuse apex and complicate sculpture on underside, including elevated middle part of base, prolonged anteriorly as a ridge, lateral ridges and deep longitudinal impressions on each side. Length 3.9 mm, breadth 3.2 mm.

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