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New and poor known species of tiger-beetles from south-eastern Asia (Coleoptera: Carabidae: Cicindelinae)

Новый и мало известные виды жуков-скакунов из юго-восточной Азии (Coleoptera: Carabidae: Cicindelinae)

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KEY WORDS: Coleoptera, Cicindelinae, *Naviauxella*, *Eugrapha*, *Thopeutica*, *Protocollyris*, *Isocollyris*, *Pachycollyris*, south-eastern Asia, new species, new records.

КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Cicindelinae, *Naviauxella*, *Eugrapha*, *Thopeutica*, *Protocollyris*, *Isocollyris*, *Pachycollyris*, юго-восточная Азия, новый вид, новые находки.

ABSTRACT: *Neocollyris (Pachycollyris) singaporica* sp.n. is described from Singapore. New data about distribution of several rare and poor known tiger beetles from south-eastern Asia are given.

РЕЗЮМЕ: Описан новый для науки вид *Neocollyris (Pachycollyris) singaporica* sp.n. из Сингапура. Приводятся данные о новых находках некоторых редких и мало известных видах жуков-скакунов из юго-восточной Азии.

Tiger-beetles of south-eastern Asia are very interesting group of insects. According to Pearson & Cassola [1992], this region is inhabited by one of the most rich cicindelid faunas. A number of studies [Wiesner, 1986; Acciavatti & Pearson, 1989; Cassola, 1987, 1991; Naviaux, 1991, 1994, 1995a,b, 1996, 1999; Sawada & Wiesner, 1999a,b; Wiesner, 1999; Matalin & Cassola, 2000] is devoted to the taxonomy, ecology and behaviour of SE-Asian cicindelids. New data about distribution of several rare and poor known asiatic tiger-beetles are presented hereinafter. One species is described as a new to science.

The studied material is kept in the Zoological Institute of Russian Academy of Science, St.-Petersburg (ZISP) and Smithsonian Institute, Washington, USA (SI), as well as in private collections of Sergei Kazantsev (SK), Pavel Udovichenko (PU) and Sergei Churkin (SCh), all from Moscow, Russia and Igor Belousov & Ilya Kabak (IB & IK), both from St.-Petersburg, Russia.

Naviauxella labiosa Naviaux, 1996
Figs. 1–6.

MATERIAL. 1♀, "Vietnam, 25 km SW Buenmethuot (Ban Me Thuot), trop. forest, 29.IV.1986" (SK).

NOTES. This species was described by Naviaux [1996] after a single female only. The female examined was collected in 58 km away from the type locality. This specimen is smaller — total length (without labrum) is 6.9 mm (7.8 in holotype). Moreover, it has more reduced white elytral pattern. On the left elytra medial fascia is represented by two (Fig. 2), while on the right elytra — only by one very small dots. The shape of female genitalia is presented here for the first time. Posterior margin of sternum 8 with one seta, apices truncated, with three stout, short setae, lateral margin with ten long setae (Fig. 4). Syntergum 9&10 oval, with five-six long setae apically and 24–26 long setae laterally (Fig. 3). Bases of second gonapophyses asetose, ventral notch on second gonocoxa with five setae. Bursa copulatrix small, rounded, oviduct sclerite sickle-shaped (Figs. 5–6). Up to now, males are unknown.

Cylindera (Eugrapha) biprolongata (W.Horn, 1924)
Figs. 7, 9.

MATERIAL. 1♀, "China, Yunnan, Jinghong, bank of Mekong river, 550 m, 20.IV.1957, leg. D. Panfilov" (ZISP).

NOTES. Up to now this species was known from Laos and Thailand only [Horn, 1924; Acciavatti, Pearson, 1989; Naviaux, 1991; Wiesner, 1992, 1999]. New locality is the most northern one. This species is well distinguished from the closest *C. (E.) venosa* Kollar, 1836 by the sharp of labrum (Figs. 7–8) and white elytral pattern (Figs. 9–10).

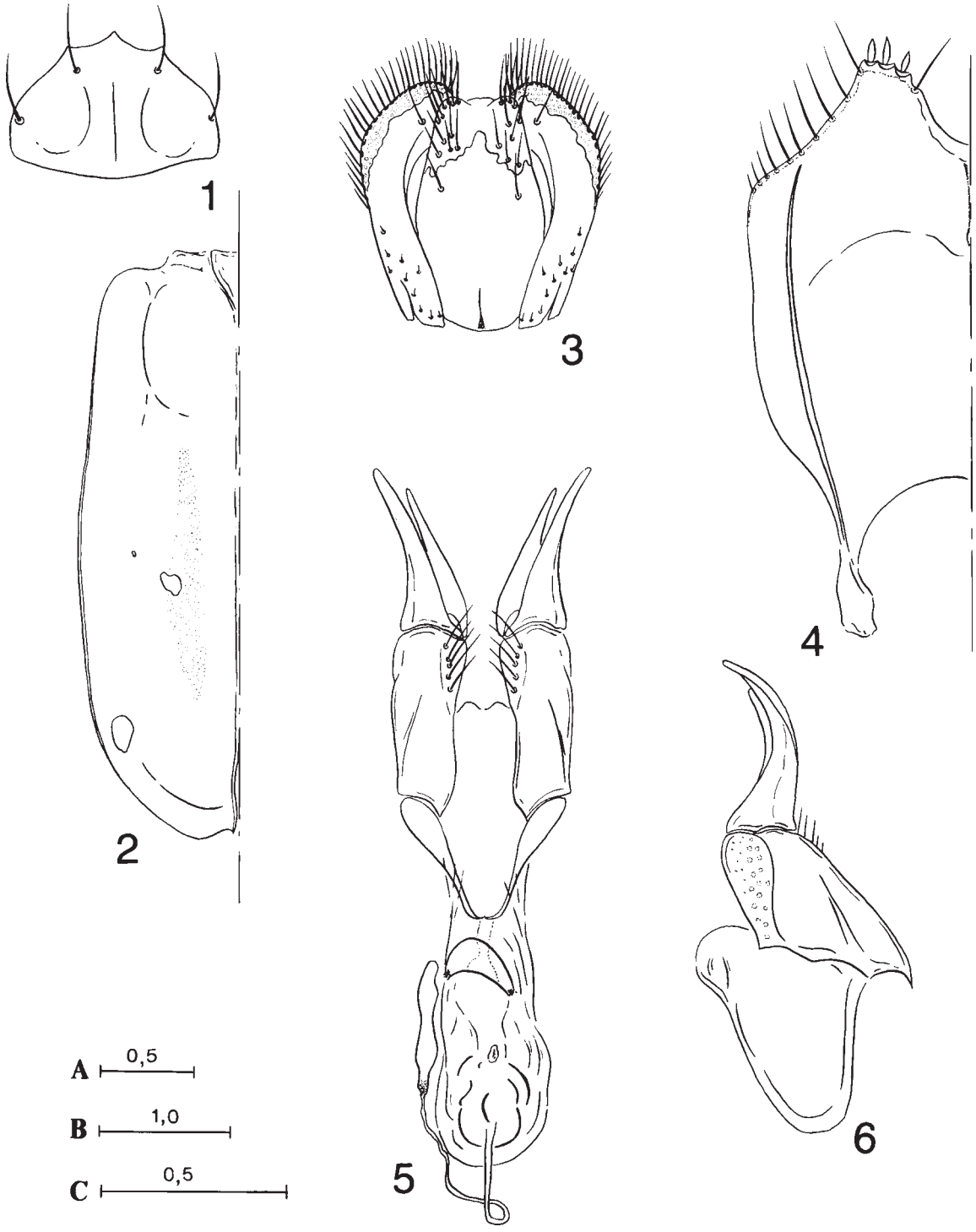
Jansenia plagatima Acciavatti & Pearson, 1989

MATERIAL. 1 ♀, "SE India, Madras, env. Manapakkam, 15-22.08.1999, leg. S. Saluk" (SCh).

NOTES. This species was described from Salem District of Indian state Tamil Nadu after a large series. Only single addition specimen was known from the Palkonda Hills in south of state Andhra Pradesh [Acciavatti & Pearson, 1989]. A new locality is placed between two mentioned above.

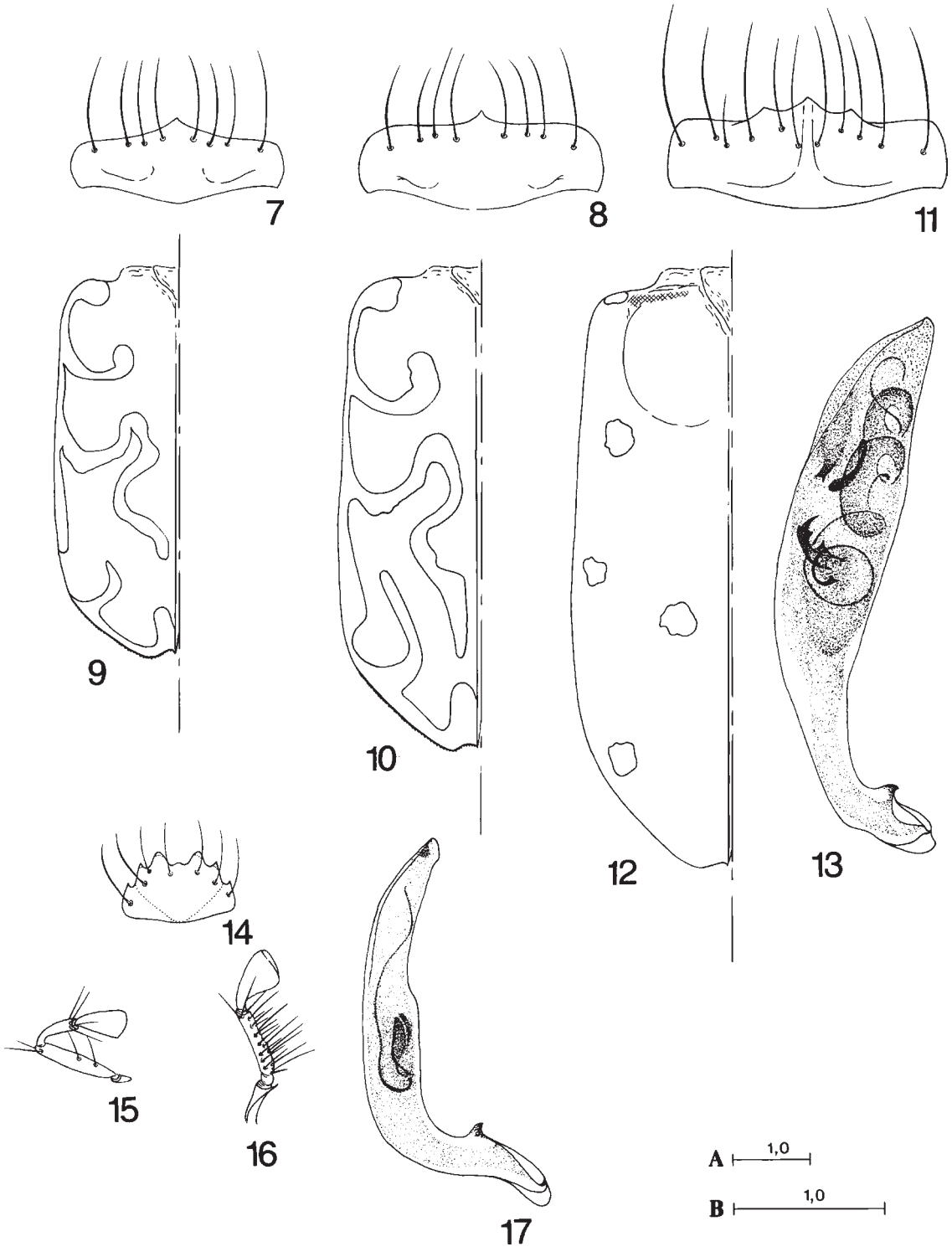
Thopeutica (s. str.) *sphaericollis* (W.Horn, 1931)
Figs. 11–13.

MATERIAL. 1 ♂, "Indonesia, West Irian, Nabive reg., Wangaav vill., 1–2.02.1995, leg. V. Tuzov" (PU).



Figs. 1–6. *Naviauxella labiosa* Naviaux, ♀: 1 — labrum; 2 — left elytra; 3 — syntergum 9&10, dorsal view; 4 — sternum 8, left half, ventral view; 5 — 2nd gonapophyses and gonocoxa, ventral view; 6 — 2nd gonapophyses and gonocoxa, lateral view. Scale bars: A — 0.5 mm (1); B — 1 mm (2); C — 0.5 mm (3–6).

Рис. 1–6. *Naviauxella labiosa* Naviaux, ♀: 1 — верхняя губа; 2 — левое надкрылье; 3 –9&10 синтергит, вид сверху; 4 — 8-й стернит, левая половина, вид снизу; 5 — вторые гонапофизы и гонококсы, вид снизу; 6 — вторые гонапофизы и гонококсы, вид сбоку. Масштаб: A — 0,5 мм (1); B — 1 мм (2); C — 0,5 мм (3–6).



Figs. 7–10. *Cylindera (Eugrapha) biprolongata* (W.Horn), ♀ (7, 9), *Cylindera (Eugrapha) venosa* Kollar, ♀ (8, 10), *Thopeutica* (s. str.) *sphaericollis* (W.Horn), ♂ (11–13) and *Neocollyris (Isocollyris) sichuanensis* Naviaux, ♂ (14–17): 7, 8, 11, 14 — labrum; 9, 10, 12 — left elytra; 13, 17 — aedeagus, lateral view; 15 — left maxillar palpi; 16 — left labial palpi. Scale bars: A — 1.0 mm (9–10, 12); B — 1.0 mm (7–8, 11, 13–17).

Рис. 7–10. *Cylindera (Eugrapha) biprolongata* (W.Horn), ♀ (7, 9), *Cylindera (Eugrapha) venosa* Kollar, ♀ (8, 10), *Thopeutica* (s. str.) *sphaericollis* (W.Horn), ♂ (11–13) and *Neocollyris (Isocollyris) sichuanensis* Naviaux, ♂ (14–17): 7, 8, 11, 14 — верхняя губа; 9, 10, 12 — левое надкрылье; 13, 17 — эдеагус, вид сбоку; 15 — левый нижнечелюстной щупик; 16 — левый нижнегубной щупик. Масштаб: A — 1,0 мм (9–10, 12); B — 1,0 мм (7–8, 11, 13–17).

NOTES. Up to now only a single male of this species was known from type locality — Macassar, Celebes (Sulawesi Selatan) [Horn, 1931; Kibby, 1985; Cassola, 1991]. New record is a very strange and doubtful. Perhaps it is a mislabelling only. On the other hand, distribution area of *T. sphaericollis* may be more expanded — similarly to other members of the genus *Thopeutica* Chaudoir, 1861inhabiting not only Sulawesi, but also Philippines [Wiesner, 1992; Cassola, 2000]. It should be noted, that the male examined is very similar to the type specimen in size (11.5 mm), shape of labrum (Fig. 11) and elytral pattern (Fig. 13) [Horn, 1931, 1938; Cassola, 1991].

Collyris gigas Lesne, 1901

MATERIAL. 1 ♀, "Yunnan, Puwen, 900m, 8.V.1957, leg. D. Panfilov" (ZISP).

NOTES. Earlier, this species was known from Laos and Thailand only [Horn, 1926; Wiesner, 1992; Naviaux, 1995b]. New locality is the most northern one.

Protocollyris grossepunctata W.Horn, 1935

MATERIAL. 1 ♂, "China, Jiangxi, Jinggang Shan, 700−1000 m, 25−31.V.1998, leg. S. Kazantsev" (SK).

NOTES. To date, this species was known from northern Vietnam only [Horn, 1935; Wiesner, 1992; Naviaux, 1994]. New locality is situated so far on the north-east.

Neocollyris (Leptocollyris) rosea Naviaux, 1995

MATERIAL. 1 ♂, "Yunnan, Xiaohai, S Jinghong, 600m, 28.V.1957, leg. D. Panfilov" (ZISP).

NOTES. This species was described from Chiang Mai province of Thailand [Naviaux, 1995a]. New locality is the most northern one. From closest related *N. (L.) subtilis* (Chaudoir, 1863) well distinguished by the more graceful habitus, aedeagus shape and purple bands in the posterior elytral margin. Moreover, the studied specimen had relatively long subsutural purple band in the contrast to beetles from Thailand.

Neocollyris (Isocollyris) aureofusca Bates, 1889

MATERIAL. 1 ♂ 1 ♀, "China, Jiangxi, Jinggang Shan, 700−1000 m, 25−31.V.1998, leg. S. Kazantsev" (SK).

NOTES. Earlier, this species was known from central China — Hubei, Sichuan and Guizhou provinces [Bates, 1889; Wiesner, 1992; Naviaux, 1994]. New locality is the most eastern one. The closest species — *N. (I.) rugosior* (W. Horn, 1896) inhabits Jiangxi and Fujian provinces of China, but it is well distinguished from *N. (I.) aureofusca* by the body coloration and the smaller labrum with very wide medial tooth.

Neocollyris (Isocollyris) sichuanensis Naviaux, 1994
Figs. 14–17.

MATERIAL. 1 ♂, "China, Sichuan, E slope of Mt. "4977", W Lijipin vill., SSW Shimian (Nunchan) vill., 2000 m, 2.VII.2000, leg. I. Belousov & I. Kabak" (IB & IK).

NOTES. This species was described by Naviaux [1994] by a single female only. Length of the male collected is 10.3 mm (without labrum). The shape of its labrum (Fig. 14), labial (Fig. 15) and maxillar palpi (Fig. 16) and aedeagus (Fig. 17) are presented for the first time. There are thin, long flagellum and U-shaped sclerite in the internal sac of aedeagus. It should be noted, that *N. (I.) fulgida* Naviaux, 1999 (Burma), *N. (I.) loochooensis* (Kano, 1929) (Ryu-Kyu and Taiwan), *N. (I.) mannheimsi* (Mandl, 1954) (China: Fujian) and *N. (I.) modica* Naviaux, 1994 (northern Vietnam) are the closest with *N. (I.) sichuanensis*. The shape of apex of aedeagus supports this point of view well.

Neocollyris (Pachycollyris) singaporica Matalin, **sp.n.**
Figs. 18–26.

MATERIAL. Holotype: ♀, "Singapore, Bukit Timah, prim. forest, 50−70 m, 6.VI.1995, leg. S. Kazatshev" (SI).

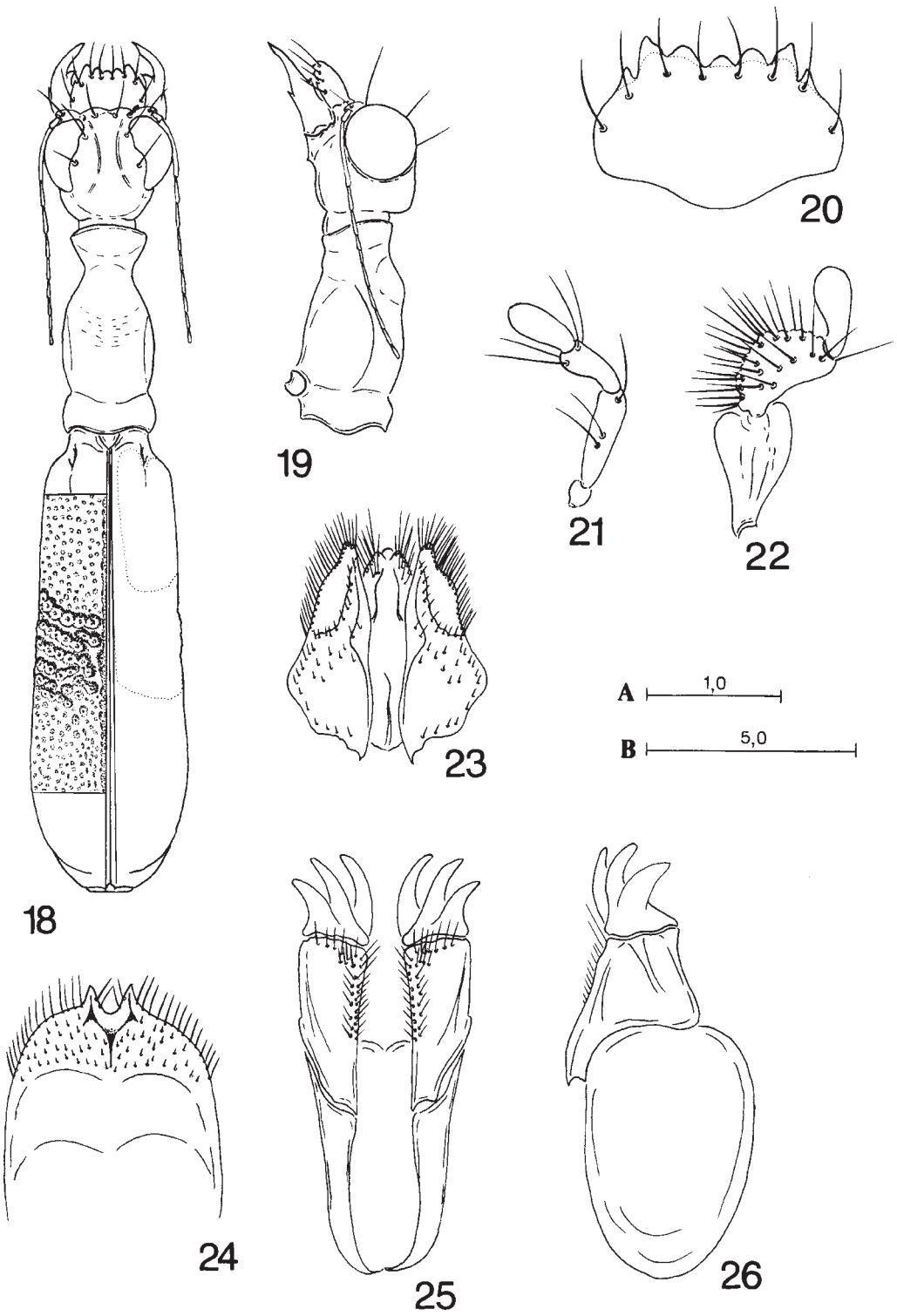
DIAGNOSIS. Head black, with reddish-brown frons, middle of clypeus and anterior edge of genae; vertex very dilated. Interocular excavations subparallel, long and shallow. Labrum black with sharply concave anterior edge; labial palpi with oval apical joint. Antennae relatively long, not projected to the base of pronotum. Pronotum reddish-brown with violet reflections, sharply concave laterally, with distinct hump in the anterior part. Tarsus and base of tibia dark brown, violet lustral; femur and apex of tibia reddish-brown. Elytral disc black, violet lustral, except chocolate-brown shoulders and reddish-brown apical half. Elytra graceful dilated apically, with very coarse sculpture medially. Posterior margin of sternum 8 with two setae. Syntergum 9&10 dilated basally. Base and inner margin of second gonapophyses regular pubescence.

DESCRIPTION. Length without labrum is 15.5 mm (Fig. 18). Head black with light violet lustre; frons, middle of clypeus and anterior edge of genae reddish-brown; vertex very dilated in the lateral view. Eyes large, supraorbital area smooth, with two long this setae (Figs. 18–19). Interocular excavations subparallel, long and shallow. Labrum black with violet reflections, except reddish-brown teeth; transversal, 1.45 times as wide as long, with sharply concave of the anterior edge and eight submarginal setae (Fig. 20). Mandibles reddish-brown, darker basally. Maxillar palpi black (Fig. 21), labial palpi reddish-brown with dark oval apical joint (Fig. 22). Antennae black with violet lustre except yellowish apical part of 3th and 4th antennomeres; relatively long, but not projected to the base of pronotum; scape with a single long seta on top, apical half of 5th and all 6–11th antennomeres finely pubescence.

Pronotum reddish-brown with violet reflections on the top; relatively long, 2.3 times as long as wide; with sharply concave lateral edge in apical third (Fig. 18) and a distinct hump in the anterior part (Fig. 19). Surface glabrous, smooth with a few fine wrinkles in the anterior third of disc; hind sulcus deep; midline very thin, indistinct. Proepisternum black with light violet tinge, pubescence by the sparse long white soft hairs basally and behind the hind sulcus. Prothorax reddish-brown, meso- and metathorax black with distinct violet reflections; pro- and mesothorax with long white soft hairs, metathorax laterally pubescens by the short white semierect hairs. Coxa, tibia except apical part and tarsus dark brown with violet reflections; troxanter, femur and apex of tibia reddish-brown.

Elytral base, narrow basal subsutural area and middle of elytral disc black with violet lustre; humeral area chocolate-brown, apical half reddish-brown. Elytra 2.8 times as long as wide, graceful dilated in the apical third; its sculpture very coarse in the middle, with large, deep punctures, which are confluent in the four transversal, slightly banded furrows (Fig. 18). Abdominal sternites reddish-brown.

Posterior margin of sternum 8 with two setae, apices thorn-formed, lateral edge with 14 long setae (Fig. 24). Syntergum 9&10 dilated in the basal third, with 16 long setae



Figs. 18–26. *Neocollyris (Pachycollyris) singaporica* sp.n., ♂, holotype: 18 — habitus, dorsal view; 19 — head and pronotum, lateral view; 20 — labrum; 21 — right maxillar palpi; 22 — right labial palpi; 23 — syntergum 9&10, dorsal view; 24 — sternum 8, apical half, ventral view; 25 — 2nd gonapophyses and gonocoxa, ventral view; 26 — 2nd gonapophyses and gonocoxa, lateral view. Scale bar: A — 1.0 mm (20–26); B — 5.0 mm (18–19).

Figs. 18–26. *Neocollyris (Pachycollyris) singaporica* sp.n., ♂, голотип: 18 — габитус, вид сверху; 19 — голова и переднеспинка, вид сбоку; 20 — верхняя губа; 21 — правый нижнечелюстной щупик; 22 — правый нижнегубной щупик; 23 — 9&10 синтергит, вид сверху; 24 — 8-й стернит, вершинная половина, вид снизу; 25 — вторые гонапофизы и гонококсы, вид сризу; 26 — вторые гонапофизы и гонококсы, вид сбоку. Масштаб: A — 1,0 мм (20–26); B — 5,0 мм (18–19).

apically and 26 long setae laterally (Fig. 23). Base and inner margin of second gonapophyses regular pubescence (Figs. 25–26).

ETYMOLOGY. Name of new species derives from its type area (Singapore).

REMARKS. *Neocollyris (Pachycollyris) singaporica* sp.n. is more related to *N. (P.) purpurea* (W. Horn, 1895) and *N. (P.) bipartita* (Fleutiaux, 1897). All these species have the obviously concave anterior edge of labrum and oval apical joint of labial palpi. The new species is well distinguished from *N. (P.) purpurea* by the smooth surface of pronotum, elytral coloration and sculpture as well as by the smaller size. It is easily recognised from *N. (P.) bipartita* by more concave anterior edge of the labrum, shorter antennae, sharp pronotum, elytral sculpture and coloration.

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