

## Description of two new subgenera of *Trichotichnus*, with new brachypterous species from New Guinea and Sumatra (Coleoptera: Carabidae), and notes on three previously described species

### Описание двух новых подродов *Trichotichnus* с новыми короткокрылыми видами из Новой Гвинеи и Суматры (Coleoptera: Carabidae), и замечания о трёх ранее описанных видах

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KEY WORDS: Coleoptera, Carabidae, Harpalini, *Trichotichnus*, *Lecanomerus*, Papua New Guinea, Australia, Indonesia, Sumatra, new subgenera, new species, new substitute name, new combination.

КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Carabidae, Harpalini, *Trichotichnus*, *Lecanomerus*, Папуа Новая Гвинея, Австралия, Индонезия, Суматра, новые подроды, новые виды, новое замещающее название, новая комбинация.

ABSTRACT. Within the genus *Trichotichnus* Morawitz, 1863, two new subgenera are described: *Neotichnus* **subgen.n.** with *T. bellorum* **sp.n.** (type species) and *T. riedeli* **sp.n.**, both from Papua New Guinea, and *Allotichnus* **subgen.n.** with a single species, *T. beroni* **sp.n.**, from Sumatra (Indonesia). All three described species are obligatory brachypterous and apparently with very restricted distribution. The distinctive features of new subgenera are discussed, and a modified key to seven subgenera of *Trichotichnus* is provided. *Trichotichnus shunichii* Ito, 2021, which was described from Vietnam without subgeneric affiliation, is included in the subgenus *Iridessus* Bates, 1883. *Trichotichnus* (s. str.) *dmitryi* Kataev, Liang et Wrase, **nom.n.** is proposed for the primary homonym *T.* (s. str.) *fedorenkoi* Kataev, Liang et Wrase, 2022, non *T.* (*Amaroschesis*) *fedorenkoi* Kataev et Ito, 1999. *Trichotichnus maculipennis* Baehr, 1997, which was described from Australia, is transferred to the genus *Lecanomerus* Chaudoir, 1850, **comb.n.**

РЕЗЮМЕ. В роде *Trichotichnus* Morawitz, 1863 описано два новых подрода: *Neotichnus* **subgen.n.** с двумя новыми видами, *T. bellorum* **sp.n.** (типовой вид) и *T. riedeli* **sp.n.**, из Папуа Новой Гвинеи и *Allotichnus* **subgen.n.** с единственным видом *T. beroni* **sp.n.** из Суматы (Индонезия). Все три описанных вида облигатно короткокрылые и очевидно имеют очень ограниченное распространение. Обсуждаются

отличительные признаки новых подродов и составлена новая таблица для определения семи подродов *Trichotichnus*. *Trichotichnus shunichii* Ito, 2021, описанный из Вьетнама без отнесения к какому-либо подроду, включен в подрод *Iridessus* Bates, 1883. Для первичного омонима *T.* (s. str.) *fedorenkoi* Kataev, Liang et Wrase, 2022, non *T.* (*Amaroschesis*) *fedorenkoi* Kataev et Ito, 1999, предложено новое замещающее название *T.* (s. str.) *dmitryi* Kataev, Liang et Wrase, **nom.n.** *Trichotichnus maculipennis* Baehr, 1997, описанный из Австралии, перенесен в род *Lecanomerus* Chaudoir, 1850, **comb.n.**

#### Introduction

The genus *Trichotichnus* Morawitz, 1863 comprises more than 260 species distributed mostly in the South East Palaearctic and the Oriental region to New Guinea, with several species occurring in Australia, Europe, Eastern North America and one species in East Africa (Ethiopia). Due to the large number of species and the variability of many characters, the taxonomy of the genus has not yet been sufficiently developed. The distinctive features and composition of *Trichotichnus* was recently discussed in one of my previous paper Kataev [2020], where the genus was divided into five subgenera: *Iridessus* Bates, 1883, *Parairidessus* Kataev, 2020, *Trichotichnus* s. str., *Amaroschesis* Tschitschérine, 1897 and *Botchrus* Jedlic-

ka 1935, however, the subgeneric affiliation of many species from New Guinea and Australia, in particular described by Darlington [1968], is still unclear. According to the studied material, most of the New Guinean species belong to *Bottchrus*, though some of them have less deep fronto-ocular furrows or demonstrate characteristics somewhat intermediate between *Bottchrus* and *Harpaloxenus* Schaubberger, 1933 or even *Lampetes* Andrewes, 1940 (for example, mottled abdominal sternites and punctate elytral intervals). Perhaps at least *Harpaloxenus* should also be included into *Trichotichnus* as another subgenus [Noonan, 1985; Ito, 1996; Lorenz, 2005], but this taxon requires revision and special consideration, since it is clearly not monophyletic and represents a combined group.

While working with collections from the Sunda Islands and New Guinea, some peculiar brachypterous specimens of *Trichotichnus* were examined from mountains of Sumatra and Papua New Guinea, which differed markedly from other representatives of this genus. A more careful study showed that they belong not only to new species, but should also be assigned to two new subgenera. Their description is the purpose of this paper. Some notes are made on three species described previously.

The following abbreviations are used for the depositories of the specimens examined: NMNHS — National Museum of Natural History, Sofia, Bulgaria; UVM — University of Vermont, USA; ZIN — Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia; ZSM — Zoologische Staatssammlung München, Germany.

Standard methods were applied for treating the material. Measurements were made under the stereomicroscope LOMO MBS-10 using an ocular-micrometer and were taken as follows: body length, measured from the anterior margin of the clypeus to the elytral apex; maximum width of head (HWmax), measured as the maximum linear distance across the head, including the eyes; minimum width of head (HWmin), measured as the minimum linear distance across the head, in this case corresponding to the neck constriction just behind the eyes; length of pronotum (PL), measured along its median line; length of elytra (EL), measured from the basal border in the scutellar region to the apex of the sutural angle; maximum width of pronotum (PWmax) and of elytra (EW), both measured at their broadest points; minimum widths of pronotum (PWmin-ap and PWmin-bas), measured between apical angles and at its narrowest points near the hind angles, respectively; length and width of metepisterna, measured along their inner and anterior margins, respectively. The aedeagi with inverted internal sac and female genitalia were examined in glycerin and then embedded in Euparal. Drawings were prepared by using an ocular grid (10x10 squares) attached to the abovementioned stereomicroscope. Most photographs were taken with a Canon EOS 6 D camera with a Canon MP-E 65 mm objective lens, and subsequently processed using the Helicon Focus 6 software and optimized with Photoshop® CS2.

The label text of the type material is cited as originally given; a forward slash (/) indicates the end of each line.

## Results

### Genus *Trichotichnus* Morawitz, 1863

#### KEY TO SUBGENERA OF *TRICHOTICHNUS*

(modified from Kataev [2020]; references to figures in this paper are omitted)

1. Fronto-ocular furrows deep throughout, reaching inner margin of eyes and continuing into deep supraorbital furrows behind fusion; anterior part of supraorbital furrows before fusion shallower than its posterior part behind fusion and usually more or less isolated from it. Fronto-clypeal suture deepened, fused laterally with fronto-ocular furrows. Ligular sclerite narrow, not widened at apex, more or less parallel-sided or moderately narrowed apically. Paraglossa moderately wide or somewhat narrow, rounded apically, separated from ligular sclerite by narrow notch ..... *Bottchrus*
- Fronto-ocular furrows shallow, at most deepened only at clypeus, reaching or not reaching supraorbital furrows, occasionally only slightly visible; supraorbital furrows similar along entire length, not interrupted. Fronto-clypeal suture superficial or slightly deepened. Ligular sclerite narrow or widened at apex. Paraglossa wide or rather narrow, separated from ligular sclerite by narrow or wide notch ..... 2
2. Paraglossae narrow, notch between them and ligular sclerite wide, about as wide as each paraglossa apically. Ligular sclerite widened at apex or almost parallel-sided ..... 3
- Paraglossae wider, notch between them and ligular sclerite narrow, much narrower than each paraglossa apically. Ligular sclerite not widened at apex, at most with outer angles slightly protruded laterally ..... 5
3. Pronotal lateral margins without setigerous pore; border of basal margin present only laterally and vaguely defined. Last visible abdominal sternite with one pair of marginal setigerous pores in male and female .....  
..... *Allotichnus* **subgen.n.**
- Pronotal lateral margins with one or several setigerous pores; basal margin distinctly bordered along entire length. Last visible abdominal sternite with one or two pairs of marginal setigerous pores in male and with two pairs in female ..... 4
4. Metepisternum slightly narrowed posteriorly, its anterior margin longer than inner margin. Species from mainland China ..... *Amaroschesis*
- Metepisternum markedly narrowed posteriorly, its anterior margin not longer than inner margin. Species from China and other countries ..... *Trichotichnus* s. str.
5. Elytral marginal umbilicate series continuous, consisting of 24–34 setigerous pores. Ligular sclerite markedly narrowed to apex ..... *Parairidessus*
- Elytral marginal umbilicate series consisting of 14–20 setigerous pores, with a gap at middle or, less often, without it. Ligular sclerite almost parallel-sided or slightly narrowed before apex ..... 6
6. Pronotal sides sinuate basally; basal margin not bordered. Head large (HWmax/PWmax more than 0.7). Microsculpture on elytral intervals distinct throughout, consisting of short or moderately long transverse meshes. Prosteronum glabrous. Elytral interval 3 without setigerous pore. Metepisternum short, its anterior margin longer than or equal to inner margin ..... *Neotichnus* **subgen.n.**
- Pronotal sides rounded or almost straightly converging basally, not sinuate; basal margin distinctly bordered.

Head smaller (HWmax/PWmax less than 0.7). In most species, microsculpture on elytral intervals fine, consisting of transverse lines or indistinct, prosternum with fine short setae, elytra with a discal setigerous pore on interval 3, and metepisternum elongate, its anterior margin markedly shorter than inner margin ..... *Iridessus*

#### Subgenus *Neotichnus* Kataev, **subgen.n.**

Type species: *Trichotichnus (Neotichnus) bellorum* Kataev, **sp.n.**

**DIAGNOSIS.** The adults of this subgenus are recognizable by combination of the following distinctive characters: head large and thick, with fronto-ocular furrows indistinct or shallow and short; ligular sclerite not widened apically; paraglossae wide, separated from ligular sclerite by narrow notch; pronotal basal margin not bordered; elytral intervals impunctate, with distinct short or moderately long transverse meshes; interval 3 without discal pore; prosternum glabrous; metepisternum not longer than wide; and wings reduced to small scales.

**DESCRIPTION.** Body slightly smaller than average for the genus (6.9–7.3 mm), with comparatively large and thick head and short legs. Coloration of body brown to black, not iridescent on dorsum and not mottled on abdominal sternites. Fronto-clypeal suture superficial or slightly impressed. Fronto-ocular furrows indistinct or shallow and short, not reaching supraorbital furrows. Supraorbital pore markedly removed from supraorbital furrow. Eyes comparatively small and weakly convex, markedly separated from buccal fissure ventrally. Genae glabrous. Mentum and submentum fused. Ligular sclerite not widened apically and with outer angles not protruded laterally, with two ventral setae at apical margin not distant from lateral margins. Paraglossa wide, rounded apically, separated from ligular sclerite by narrow notch (much narrower than paraglossa apically). Pronotal sides more or less sinuate basally, basal angles well defined, at most only blunted at tip, basal margin not bordered. Elytral intervals impunctate, with distinct microsculpture, consisting of short or moderately long transverse meshes, interval 3 without discal pore, parascutellar (abbreviate) striole short, lateral groove flat throughout or with elongate convexity along this groove apically, marginal umbilicate series with or without a gap at middle, consisting of 14–17 setigerous pores. Thoracic sternites, including prosternum, glabrous. Metepisternum short, not longer than wide, slightly or moderately narrowed posteriorly. Protibia not sulcate. Pro- and mesofemur with no more than four setae along lower margin. Metafemur with two setae at posterior margin. Tarsi dorsally glabrous. Abdominal sternites glabrous, without extra setae and fine pubescence.

**ETYMOLOGY.** The subgenus name is a combination of the Greek *neo* meaning “new”, and a part of the name of the carabid taxon *Trichotichnus*.

**COMPOSITION AND DISTRIBUTION.** The new subgenus includes two new species from Papua New Guinea.

**REMARKS.** The adults of this subgenus are most similar in the general habitus with a cordate pronotum and in the short metepisternum to those of *Amaroschesis* and the *leptopus* group of *Trichotichnus* s. str., but distinctly differ from them in having the wide paraglossae, the unbordered basal pronotal margin and the glabrous prosternum. Based on the structure of paraglossae and ligular sclerite, *Neotichnus subgen.n.* is apparently more closely related to the less specialized subgenera *Iridessus* and *Parairidessus*, which have these characters in plesiomorphic condition (paraglossae wide and ligular sclerite not widened apically). The narrow paraglossae and ligular sclerite, widened at apex, which are present in *Amaroschesis* and *Trichotichnus* s. str., are clearly apomorphic features [Kataev, 2020]. In the unbordered basal pronotal margin, the

new subgenus also differs from both *Iridessus* and *Parairidessus*. The species of *Parairidessus* and most species of *Iridessus* are also distinct from the new subgenus in having the prosternum with fine short setae, the elytra with a discal setigerous pore on the interval 3, and the metepisternum elongate, its inner margin markedly longer than anterior margin [discal pore is occasionally absent and metepisternum is wider than long only in *T. (Iridessus) tonklii* Kirschenhofer, 1992 from the Himalaya]. The subgenus *Parairidessus* is distinguished from *Neotichnus subgen.n.* by a larger number of setigerous pores (24–34) of the elytral umbilicate series, and the most species of the subgenus *Iridessus* is distinct from *Neotichnus subgen.n.* in the finer or indistinct dorsal microsculpture on the elytral intervals. It is worth noting that elytral microsculpture in most species of the genus *Trichotichnus* consists of the fine transverse lines or indistinct, but this character is variable within the genus; in some Chinese *Amaroschesis*, for example *T. oblongus* (Tschitschérine, 1906), *T. modestus* (Tschitschérine, 1906) and *T. obtusicollis* Schaubberger, 1936, and in the Indian *T. (Parairidessus) perforatus* Kataev, 2020, the elytral microsculpture is very distinct, consisting of short transverse meshes. Among *Iridessus*, somewhat distinct moderately long transverse meshes are present in the Oriental *T. parvus* Ito, 2001 and *T. malayanus* Ito, 2001.

In the general habitus and short fronto-ocular furrows, the species of *Neotichnus subgen.n.* are somewhat similar to *Trichotichnus* (s. str.) *tolgae* Baehr, 1990, which was described from a single female found in Australia (Queensland). According to the original description [Baehr, 1990], this species is obviously unrelated to any New Guinean and Australian species. Unfortunately, the original description does not include the information about its ligular sclerite and paraglossae, but in any case *T. tolgae*, like most species of the nominotypical subgenus, well differs from both species of *Neotichnus subgen.n.* in having the pronotal base distinctly bordered along entire length, the elytral interval 3 with a discal setigerous pore, the prosternum, metasternum and basal abdominal sternite medially with short pubescence, and the wings fully developed. The taxonomic position of *T. tolgae* needs further study.

Like *Neotichnus subgen.n.*, the monobasic genus *Lyter* Darlington, 1968 from New Guinea is characterized by the glabrous prosternum and the elytra without discal pore on the interval 3; in addition, its pronotal margin is vaguely defined and present only laterally. This genus, however, is readily distinguished from *Neotichnus subgen.n.* in many characters including the ligula with two ventral setae distant from apical margin and situated before preapical constriction of ligula, the pro- and mesofemora along lower margin and metafemora ventrally along the posterior margin with numerous setae, the adhesive vestiture on the male pro- and mesotarsi not arranged in two rows and the metepisternum elongate.

Pronotum without or with indistinct basal border is characteristic of many *Harpaloxenus*, but the species of the latter taxon differ in having the ventral side mottled, with fine setae at least on the prosternum and on the abdominal sternites medially, the elytra on the lateral intervals distinctly densely punctate, the other intervals more finely punctate, the mentum and submentum completely separated, the metepisternum much longer than wide, etc.

The species of the subgenus *Botchrus* with unbordered basal margin of pronotum, for example brachypterous *T. newtoni* Kataev, 2016 from the Philippines, differ in the deeper fronto-ocular furrows.

Interestingly, the species of *Neotichnus subgen.n.* as well as a single species of the described below *Allotichnus*

**subgen.n.** are very similar in appearance to the small brachypterous species of the subgenus *Bottchrus* and even to those of the *irvinei* group of the genus *Chydaeus* Chaudoir, 1854 and *Nornalupia* Kataev, 2002 [see, for example, Kataev, Schmidt, 2002, 2017; Kataev, 2003, 2016], though the latter two genera belong to the subtribe Anisodactylina. This resemblance is a good example of parallel evolution under similar environmental conditions. Notice that two species of the Australian genus *Nornalupia*, like the two species of *Neotichnus subgen.n.*, differ markedly from each other in punctuation on the head and pronotum [Kataev, 2007].

*Trichotichnus (Neotichnus) bellorum* Kataev, **sp.n.**  
Figs 1–10, 31.

**MATERIAL.** Holotype: ♂, “Papua New Guinea / Wau–Mt. Missim / Apr. 2–3.1982 / Coll. R. & J. Bell / 1980–2000 m” (UVM). Paratype: ♂, “Papua New Guinea / Wau — Mt. Missim / Mar. 26–28.1982 / Coll. R.T. Bell / 1950 m” (ZSM).

**DESCRIPTION (male).** Body length 6.9–7.3 mm. Habitus as in Fig. 1.

Dorsal side of body dark brown, moderately shiny, not iridescent, with labrum, narrow pronotal and elytral lateral margins reddish brown; ventral side reddish dark brown,



Figs 1–3. *Trichotichnus (Neotichnus) bellorum* **sp.n.**: 1 — general habitus, dorsal view; 2 — fore-body, lateral view; 3 — elytral base; *a.s.* — additional striole, *p.s.s.* — parascutellar striole. Scale bars: 1.0 mm.

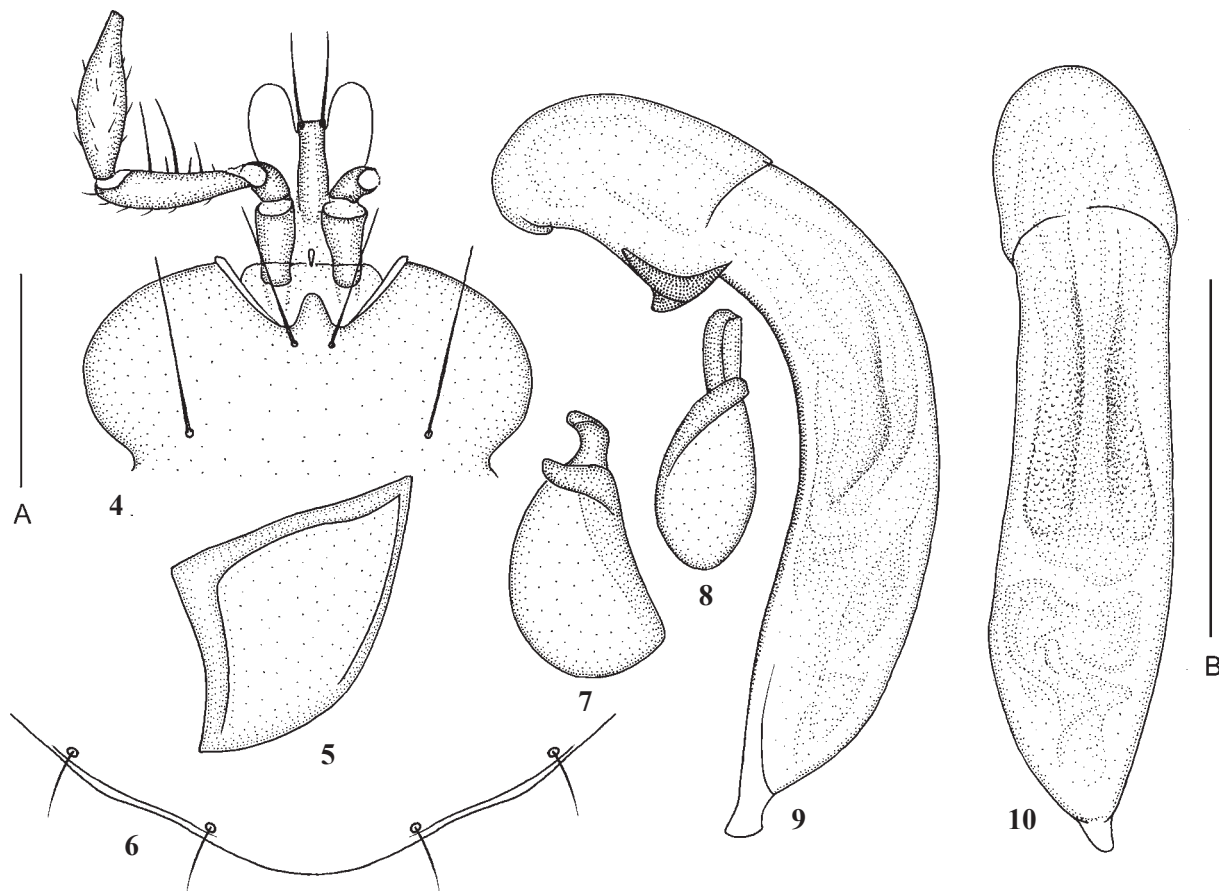
Рис. 1–3. *Trichotichnus (Neotichnus) bellorum* **sp.n.**: 1 — внешний вид, сверху; 2 — голова и грудь, сбоку; 3 — основание надкрылий; *a.s.* — дополнительная бороздка, *p.s.s.* — прищитковая бороздка. Масштаб: 1,0 мм.

elytral epipleurae reddish brown. Palpi, antennae and legs yellowish brown.

Head large, in lateral view (Fig. 2) almost as thick as prothorax, in dorsal view a little narrower than pronotum (HWmax/PWmax 0.75–0.76, HWmin/PWmax 0.62–0.63), very finely micropunctate on frons and vertex. Eyes small and weakly convex (HWmax/HWmin 1.20–1.21), in lateral view oval, separated from buccal fissure ventrally by distance about half diameter of eye. Genae glabrous. Tempora slightly oblique, almost flat, glabrous. Fronto-clypeal suture fine, shallow, slightly angulate medially. Frontal foveae wide oval, shallow. Fronto-ocular furrows very short and indistinct. Supraorbital furrows very narrow, touching upper edge of eye, not widened posteriorly. Supraorbital setigerous pores small, situated behind level of posterior edge of eye and removed from supraorbital furrows by distance greater than diameter of eye. Labrum moderately concave anteriorly. Clypeus slightly convex, arcuately emarginate along anterior margin, with a pair of setigerous pores each located at anterior angle. Mentum (Fig. 4) completely fused with submentum, with prominent median tooth; epilobes very narrow; submentum with one pair of long setae. Ligular sclerite narrow, almost parallel-sided, truncate at apex, with one pair of ventroapical setae; ventroapical setigerous pores attaching lateral margins of ligular sclerite. Paraglossae wide, rounded apically, markedly longer than ligular sclerite and separated from it by very narrow notches.

Penultimate labial palpomere about as long as ultimate palpomere, with two long and three or four short setae on anterior (inner margin). Left mandible sharply bent apically, with a tip in frontal view narrow, subtruncate. Dorsal microsculpture very distinct throughout, consisting of more or less isodiametric meshes. Antennae pubescent from half of antennomere 3, short, not reaching pronotal basal edge, with antennomeres 5–8 wide, about 1.4–1.5 times as long as wide. Basal antennomere almost as long as antennomere 3.

Pronotum moderately transverse (PWmax/PL 1.38–1.41), widest at end of anterior third, approximately equally narrowed apically and basally (PWmax/PWmin-bas 1.32–1.33; PWmax/PWmin-ap 1.32–1.34), with one lateral seta inserted before widest point. Sides rounded anteriorly, sinuate in basal quarter; lateral bead very narrow throughout, reaching basal margin. Apical margin moderately emarginate, almost straight in middle portion, very narrowly bordered laterally. Apical angles acutangular, blunted at tip, slightly protruded ahead, without setae. Basal margin slightly rounded in middle portion, oblique laterally, not bordered, about as long as apical margin and markedly shorter than base of elytra between humeral angles. Basal angles obtuse, slightly blunted at tip. Disc rather convex, strongly sloping to apical angles. Lateral gutters narrow in apical two-thirds, slightly widened in basal third, reaching basal pronotal edge. Basal foveae small, elongate, vaguely outlined; area between them and lateral pronotal edge flattened; pronotal base not



Figs 4–10. *Trichotichnus (Neotichnus) bellorum* sp.n.: 4 — labium; 5 — left metepisternum; 6 — apex of male last abdominal sternite; 7 — left paramere; 8 — right paramere; 9–10 — median lobe of aedeagus; 4–6 — ventral view; 7–9 — lateral view; 10 — dorsal view. Scale bars: A = 0.5 mm (4–6), B = 1.0 mm (7–10).

Рис. 4–10. *Trichotichnus (Neotichnus) bellorum* sp.n.: 4 — нижняя губа; 5 — левый метэпистерн; 6 — вершина последнего брюшного стернита; 7 — левая параметра; 8 — правая параметра; 9–10 — срединная лопасть эдегуса; 4–6 — снизу; 7–9 — сбоку; 10 — сверху. Масштаб: A = 0,5 мм (4–6), B = 1,0 мм (7–10).

depressed medially. Median line superficial, short, not reaching apical and basal margins. Anterior transverse depression very shallow or indistinct. Surface very finely and indistinctly punctate laterobasally. Microsculpture present throughout, slightly finer than that on head, consisting of isodiametric meshes along margins and of short transverse meshes in middle.

Elytra convex, steeply declined to apex, oval (EL/EW 1.27–1.30; EL/PL 2.24–2.29; EW/PWmax 1.25–1.27), widest behind middle; sides almost rectilinearly diverging before middle. Humeri prominent, angulate, without denticle at tip. Subapical sinuation very shallow, indistinct. Sutural angle narrowly rounded at tip. Basal edge almost evenly arched, forming an almost right or slightly obtuse angle (internal humeral angle) with lateral margin. Striae fine, slightly crenulate, slightly impressed along entire length; striae 5–7 not reaching anteriorly basal edge. Intervals slightly convex, moderately narrowed apically, impunctate. Parascutellar (abbreviate) striole very short or absent (Fig. 3); basal setigerous pore present, comparatively large, slightly distant from basal elytral edge; interval 2 with very short additional striole basally. Interval 3 without discal setigerous pore. Lateral groove flat throughout or with short elongate convexity along this groove apically forming a short additional interval. Marginal umbilicate series without distinct gap at middle, consisting of 15–17 setigerous pores. Microsculpture on intervals distinct, consisting of almost isodiametric meshes basally and of short transverse meshes on remaining surface.

Wings reduced to small scales.

Thoracic sternites, including prosternum, impunctate and glabrous. Prosternal process with moderately long setae at apex. Metepisternum (Fig. 5) markedly wider than long, slightly narrowed posteriorly.

Legs relatively short. Metacoxae with an additional posteromedial seta. Pro- and mesofemora with 3–4 setae along lower margin. Metafemur ventrally with two setae at posterior margin and without setae at anterior margin; no seta on anterior margin preapically. Protibia on dorsal side without longitudinal sulcus, with three preapical spines (one or two distant spines stouter than other) on outer margin. Tarsi glabrous dorsally; tarsomere 5 with two pairs of ventrolateral setae. Metatarsus short, much shorter than HWmin, with tarsomeres 2–4 short, markedly widened distally; metatarsomere 1 moderately widened distally, slightly shorter than metatarsomeres 2 and 3 combined; metatarsomeres 1–4 sparsely setose ventrally. Protarsomeres 1–4 and mesotarsomeres 2–4 (in male) widened and with adhesive biseriate scales ventrally, comparatively short; mesotarsomere 1 slightly shorter than mesotarsomeres 2 and 3 combined.

Abdominal sternites without additional setae; last visible abdominal sternite (VII) (in male) rounded at apex, with two pairs of marginal setae (these setae not distant from margin) (Fig. 6).

Parameres (Figs 7–8) medium sized. Median lobe of aedeagus (Figs 9–10) in lateral view arcuate along dorsal side, with ventral margin slightly convex behind middle, and with apex forming a small oblique capitulum; terminal lamella in dorsal view short and very narrow, narrowed posteriorly. Apical orifice shifted to left, wide apically. Internal sac without spines, with two parallel spiny patches basally (well visible in dorsal view).

ETYMOLOGY. Named after the collectors of this new species, Ross and Joyce Bell, the famous American coleopterologists who made a significant contribution to the morphology and taxonomy of beetles, especially Rhysodidae.

COMPARISON. Within the subgenus, *T. bellorum* sp.n. is easily recognizable by the impunctate head and pronotum. See also the “Comparison” section under *T. riedeli* Kataev, sp.n.

DISTRIBUTION (Fig. 31). Found in the southeastern part of Papua New Guinea, Morobe Province, on the Mount Missim, at altitudes of about 1500–2000 m.

*Trichotichnus (Neotichnus) riedeli* Kataev, sp.n.

Figs 11–16, 31.

MATERIAL. Holotype: ♀, “Papua N. G. / Morobe Prov. / leg. A. Riedel”, “ca. 10 km S Garaina, / Saureri, 1800–2150 m, / 26.III.1998” (ZSM).

DESCRIPTION (female). Body length 7.3 mm. Habitus as in Fig. 11.

Head and pronotum black, with labrum, wide pronotal medioapical and mediobasal margins and very narrow lateral margins brown; elytra brown, with brownish yellow sutural intervals; thoracic and ventral sternites blackish brown. Palpi, antennae and legs yellowish brown.

Head large, in lateral view (Fig. 12) almost as thick as prothorax, in dorsal view a little narrower than pronotum (HWmax/PWmax 0.77, HWmin/PWmax 0.64), somewhat coarsely punctate on frons and vertex. Eyes small and weakly convex (HWmax/HWmin 1.20), in lateral view oval, separated from buccal fissure ventrally by distance about diameter of eye. Genae glabrous. Tempora oblique, almost flat, glabrous. Frontoclypeal suture fine, shallow, slightly angulate medially. Frontal foveae small and shallow. Fronto-ocular furrows present, very shallow, reaching about half distance to eye. Supraorbital furrows very narrow, touching upper edge of eye, not widened posteriorly. Supraorbital setigerous pores comparatively large, situated behind level of posterior edge of eye and removed from supraorbital furrows by distance about diameter of eye. Labrum moderately concave anteriorly. Clypeus slightly convex medially, arcuately emarginate along anterior margin, with a pair of setigerous pores each located at anterior angle. Mentum (Fig. 14) fused with submentum (traces of suture recognizable medially), with prominent acute median tooth; epilobes very narrow; submentum with one pair of long setae. Ligular sclerite wide, not widened apically, with truncate apex and with one pair of ventroapical setae; ventroapical setigerous pores attaching lateral margins of ligular sclerite. Paraglossae wide, angularly rounded apically, slightly longer than ligular sclerite and separated from it by very narrow notches. Penultimate labial palpomere about as long as ultimate palpomere, with two longer and one shorter setae on anterior (inner) margin. Left mandible sharply bent apically, with a tip in frontal view narrow, slightly blunted. Dorsal microsculpture distinct throughout, consisting of more or less isodiametric meshes. Antennae pubescent from half of antennomere 3, short, slightly not reaching pronotal basal edge, with antennomeres 5–8 wide, about 1.4 times as long as wide. Basal antennomere almost as long as antennomere 3.

Pronotum slightly transverse (PWmax/PL 1.23), widest at end of anterior third, a little more strongly narrowed apically than basally (PWmax/PWmin-bas 1.26; PWmax/PWmin-ap 1.39), with one lateral seta inserted before widest point. Sides rounded anteriorly, sinuate in basal quarter; lateral bead very narrow, scarcely widened before basal angles, reaching basal margin. Apical margin almost straight, very narrowly and finely bordered throughout. Apical angles rounded at tip, only scarcely protruded ahead, without setae. Basal margin widely rounded in middle portion, oblique laterally, not bordered, slightly longer than apical margin and markedly shorter than base of elytra between humeral angles. Basal angles obtuse, slightly blunted at tip. Disc rather convex, strongly sloping to apical angles and laterally. Lateral gutters narrow, moderately widened in basal quarter, reaching basal pronotal edge and forming basally comparatively

narrow laterobasal depression. Basal foveae small and very shallow, indistinct; area between narrow laterobasal depressions convex. Median line superficial, short, not reaching apical and basal margins. Anterior transverse depression very shallow, indistinct. Surface comparatively coarsely and densely punctate throughout. Microsculpture present throughout, consisting of short transverse meshes.

Elytra convex, steeply declined to apex, oval (EL/EW 1.40; EL/PL 2.09; EW/PWmax 1.22), widest at middle; sides very slightly sinuate before middle. Humeri prominent, angulate,

with a tiny acute denticle at tip visible when viewed from behind. Subapical situation very shallow. Sutural angle rounded at tip. Basal edge almost evenly arched, forming a slightly obtuse angle (internal humeral angle) with lateral margin. Striae slightly crenulate, slightly impressed along entire length; reaching anteriorly basal edge. Intervals weakly convex, moderately narrowed apically, impunctate. Parascutellar (abbreviate) striole short (Fig. 13); basal setigerous pore present, comparatively large, slightly distant from basal elytral edge. Interval 3 without discal setigerous pore. Lateral groove anteriorly flat, posteriorly with elongate



Figs 11–13. *Trichotichnus (Neotichnus) riedeli* sp.n.: 11 — general habitus, dorsal view; 12 — fore body, lateral view; 13 — elytral base. Scale bars: 1.0 mm.

Рис. 11–13. *Trichotichnus (Neotichnus) riedeli* sp.n.: 11 — общий вид, сверху; 12 — голова и грудь, сбоку; 13 — основание надкрылий. Масштаб: 1,0 mm.

convexity along this groove forming an additional interval. Marginal umbilicate series with a gap at middle, consisting of 6 setigerous pores in basal group and of 8 pores in apical group. Microsculpture on intervals distinct throughout, consisting of moderately long transverse meshes.

Wings highly reduced.

Thoracic sternites, including prosternum glabrous. Prosternal process with moderately long setae at apex. Prosternum, proepisterna, epipleura of pronotum (prohypomera), mesosternum laterally and metepisterna coarsely and sparsely punctate. Metepisternum (Fig. 15) short, about as wide as long, moderately narrowed posteriorly.

Legs relatively short. Metacoxae without posteromedial setigerous pore. Profemur with one seta and mesofemur with two setae along lower margin. Metafemur ventrally with two setae at posterior margin and without setae at anterior margin; one short preapical seta on anterior margin. Protibia on dorsal side without longitudinal sulcus, with three (in female) preapical spines on outer margin. Tarsi short, glabrous dorsally; tarsomere 5 with two pairs of ventro-lateral setae; metatarsus much shorter than HWmin. Pro-, meso- and metatarsomeres 2–4 (in female) very short, markedly widened distally; meso- and metatarsomere 1 moderately widened distally, shorter than corresponding tarsomeres 2 and 3 combined; metatarsomeres 1–4 sparsely setose ventrally.

Abdominal sternites without additional setae; last visible abdominal sternite (VII) (in female) angularly rounded at apex, with two pairs of marginal setae (these setae not distant from margin) (Fig. 16).

ETYMOLOGY. Named after the famous entomologist Alexander Riedel (Karlsruhe), the collector of this new species.

COMPARISON. This new species distinctly differs from *T. bellorum* sp.n., as well as from most other congeners, in the head and pronotum coarsely punctate. In addition, it differs from the former species in having the metacoxa without a posteromedial setigerous pore, the metepisternum slightly narrower, the head with more distinct fronto-ocular furrows, the more elongate pronotum with apical angles rounded at

tip, only scarcely protruded ahead, the humeri with a tiny acute denticle at tip, and the pro- and mesofemora on the inner margin with one and two setae, respectively.

In the habitus and the elytra without discal pore, *T. riedeli* sp.n. is similar to some members of *Chydaeus* (subtribe Anisodactylina), however, if males are excluded, their females distinctly differs from the new species at least in having the paraglossae narrow, removed distally from the ligular sclerite, and the pronotal basal margin distinctly bordered.

DISTRIBUTION (Fig. 31). The single specimen of this new species was collected in the southeastern part of Papua New Guinea, Morobe Province, in 10 km south of Garaina (Saureri), at an altitude of about 1800–2150 m, about 100 km southeast of the locality of *T. bellorum* sp.n.

REMARKS. Though only one female is available, this species is very dissimilar to other species and easily recognizable based on its external characters.

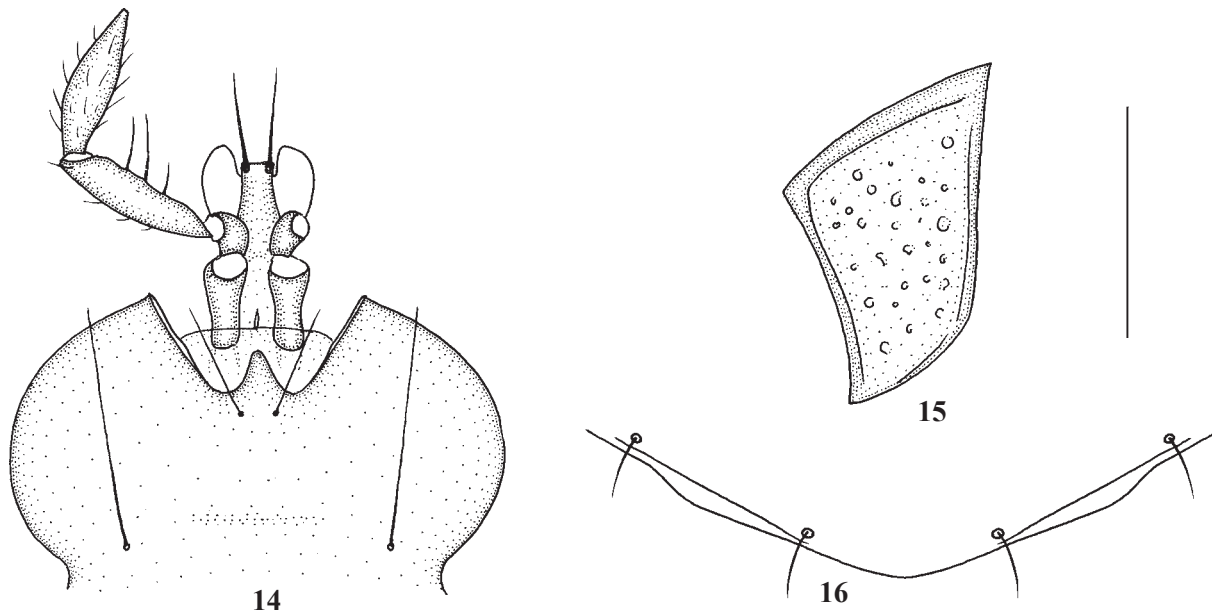
The female genitalia of *T. riedeli* sp.n. were not examined because they were not found inside the abdomen. They may have been lost during the preparation and mounting of the specimen.

#### Subgenus *Allotichnus* Kataev, subgen.n.

Type species: *Trichotichnus (Allotichnus) beroni* Kataev, sp.n.

DIAGNOSIS. The adults of this subgenus are recognizable by combination of the following distinctive characters: head very large and thick, with fronto-ocular furrows vaguely defined; ligular sclerite widened apically; paraglossae narrow, separated from ligular sclerite by wide notch; pronotal sides without lateral seta; basal margin with incomplete border; elytral intervals impunctate, with distinct moderately long transverse meshes; interval 3 without discal pore; prosternum with setae; metepisternum wider than long; wings reduced to small scales; last visible abdominal sternite of both sexes with one pair of marginal setae.

DESCRIPTION. Body smaller than average for the genus (5.2–5.5 mm), with very large and thick head and short legs. Coloration of body brown, not iridescent on dorsum and not



Figs 14–16. *Trichotichnus (Neotichnus) riedeli* sp.n.: 14 — labium; 15 — left metepisternum; 16 — apex of female last abdominal sternite. Scale bar: 0.5 mm.

Рис. 14–16. *Trichotichnus (Neotichnus) riedeli* sp.n.: 14 — нижняя губа; 15 — левый метэпистерн; 16 — вершина последнего брюшного стернита самки. Масштаб: 0,5 мм.



mottled on abdominal sternites. Fronto-clypeal suture shallow. Fronto-ocular furrows short, vaguely defined. Supraorbital pore markedly removed from supraorbital furrow. Eyes weakly convex, markedly separated from buccal fissure ventrally. Genae glabrous. Mentum and submentum fused. Ligular sclerite markedly widened apically, with two ventral setae at apical margin slightly distant from lateral margins. Paraglossae narrow, separated from ligular sclerite by wide notch (about as wide as paraglossae apically). Pronotal sides without lateral seta, sinuate basally, basal angles well defined, basal margin vaguely bordered laterally. Elytral intervals impunctate, with distinct microsculpture consisting of moderately long transverse meshes, interval 3 without discal pore, parascutellar striole short, lateral groove flat throughout, marginal umbilicate series with a gap at middle, consisting of 12–15 setigerous pores. Prosternum with scattered fine and short setae. Metepisternum wider than long. Protibia not sulcate. Pro- and mesofemur with one or two setae along lower margin; metafemur with two setae at posterior margin. Tarsi dorsally glabrous. Abdominal sternites glabrous, without extra setae; last visible abdominal sternite of male and female with one pair of marginal setae.

**ETYMOLOGY.** The subgenus name is a combination of the Greek *allo* meaning “other, different”, and a part of the name of the carabid taxon *Trichotichnus*.

**COMPOSITION AND DISTRIBUTION.** This new subgenus includes only *Trichotichnus beroni* **sp.n.** from Sumatra (Indonesia).

**REMARKS.** Though the single member of this new subgenus is similar to species of *Neotichnus* **subgen.n.** in general habitus and some distinctive structural characters (for example, short metepisternum, vaguely defined fronto-ocular furrows, completely fused mentum and submentum, elytra without discal pore), in my opinion, these subgenera, are not closely related since their resemblance is apparently convergent and based on adaptation to similar environmental conditions. The two subgenera are significantly distinguished from each other by the structure of the ligular sclerite and paraglossae, and based on this character, *Allotichnus* **subgen.n.** is more similar and obviously more related to *Trichotichnus* s. str. and *Amaroschesis*. The subgenera *Allotichnus* **subgen.n.** and *Amaroschesis* are particularly similar in having a transverse metepisternum, though this character appears to have arisen independently in these taxa, which are most likely descended from different ancestors with an elongate metepisternum and fully developed wings. Two characters of *Allotichnus* **subgen.n.** (the absence of setigerous pore on the pronotal lateral margins and the presence of one pair of marginal setigerous pores on the last visible abdominal sternite of male and female) are very rare among harpalines and are probably unique within *Trichotichnus*; they should be treated as apomorphies for this subgenus. In the harpalines, the pronotum without lateral setigerous pore is known among *Chydaeus*, for example in the Chinese *Ch. aetosus* Kataev et Kavanaugh, 2012; one pair of marginal setigerous pores on the last visible abdominal sternite of female occurs, for example in *Allocinopus* Broun, 1903 and in



Figs 17–20. *Trichotichnus (Allotichnus) beroni* **sp.n.**: 17, 19 — general habitus, dorsal and lateral views; 18 — head and pronotum; 20 — elytral base. Scale bars: 1.0 mm.

Рис. 17–20. *Trichotichnus (Allotichnus) beroni* **sp.n.**: 17, 19 — общий вид, сверху и сбоку; 18 — голова и переднеспинка; 20 — основание надкрылий. Масштаб: 1,0 мм.

many species of *Hyphaereon* MacLeay, 1825. All known species of *Trichotichnus* s. str. and *Amaroschesis* also differ from the single species of this new subgenus in larger body size, with length of more than 6.0 mm.

Since the distinctive features of this taxon are very unusual for *Trichotichnus*, further studies may show the need to treat it as a separate genus.

*Trichotichnus (Allotichnus) beroni* Kataev, **sp.n.**

Figs 17–31.

**MATERIAL.** Holotype: ♂, "Indonesia, Sumatra, Mt. Kerinci / Nat. Park Kerinci — Seblat / Rhododendron forest, 3000–3100 m, / 25.V.1994, P. Beron et V. Beshkov leg." (NMNHS). Paratype: ♀, same data as holotype (NMNHS).

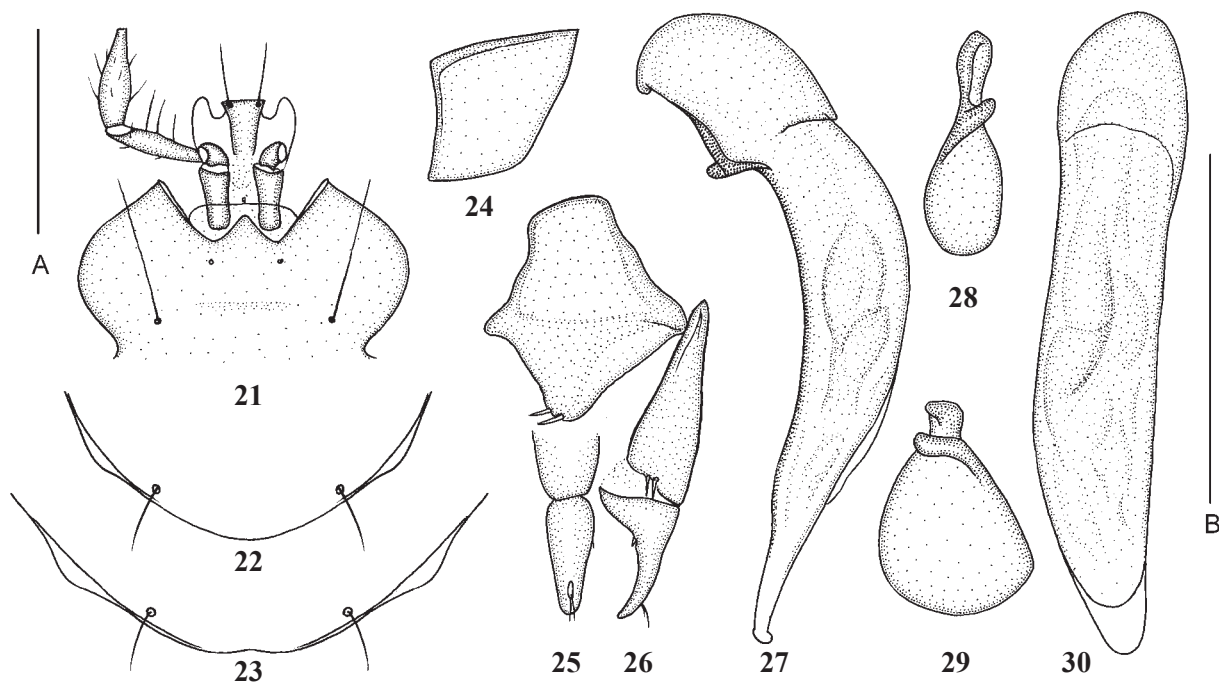
**DESCRIPTION.** Body length 5.2–5.5 mm. Habitus as in Figs 17, 20.

Body brown, with a blackish tint, moderately shiny, not iridescent. Legs blackish brown; palpi and antennae brownish yellow, antennomeres 2–11 partly infuscate.

Head large, in lateral view (Fig. 20) almost as thick as prothorax, in dorsal view (Fig. 18) only slightly narrower than pronotum (HWmax/PWmax 0.84–0.88; HWmin/PWmax 0.74–0.75), impunctate, with small oval depression on frons. Eyes medium sized, weakly convex (HWmax/HWmin 1.13–1.19), in lateral view wide oval, separated from buccal fissure ventrally by distance about half diameter of eye. Genae glabrous. Tempora short, oblique, almost flat, glabrous. Fronto-clypeal suture distinct, shallow, almost straight. Frontal foveae wide, shallow. Fronto-ocular furrows very short and vaguely defined. Supraorbital furrows slightly widened posteriorly. Supraorbital setigerous pores comparatively large, situated slightly behind level of posterior edge of eye and removed from supraorbital furrows by distance slightly less than diameter of eye. Labral apex very weakly concave, almost straight. Clypeus

somewhat flat, slightly emarginate along anterior margin, with a pair of setigerous pores each located at anterior angle. Mentum (Fig. 21) completely fused with submentum, with prominent acute median tooth; epilobes very narrow; submentum with one pair of setigerous pores. Ligular sclerite markedly widened apically, with truncate apex and with one pair of ventroapical setae; ventroapical setigerous pores slightly distant from lateral margins of ligular sclerite. Paraglossae narrow apically, slightly longer than ligular sclerite and separated from it by wide (about as wide as paraglossa apically) notches. Penultimate labial palpomere about as long as ultimate palpomere, with two longer and one shorter setae on anterior (inner) margin. Left mandible not elongate, bent apically, with a tip in frontal view narrow, slightly blunted. Dorsal microsculpture distinct throughout, consisting of more or less isodiametric meshes. Antennae pubescent from half of antennomere 3, reaching pronotal basal edge, with antennomeres 5–8 moderately wide, about 1.5 times as long as wide. Basal antennomere slightly longer than antennomere 3.

Pronotum moderately transverse (PWmax/PL 1.27–1.30), widest at end of anterior quarter, approximately equally narrowed apically and basally (PWmax/PWmin-bas 1.27–1.28; PWmax/PWmin-ap 1.21–1.25), without lateral seta. Sides rounded anteriorly, almost straightly converging behind widest point and slightly sinuate in basal quarter; lateral bead very narrow throughout, reaching basal margin. Apical margin almost straight, very narrowly and finely bordered. Apical angles acutangular, blunted at tip, almost not protruded ahead, without setae. Basal margin more or less straight, about as long as apical margin and markedly shorter than base of elytra between humeral angles, vaguely bordered at a short distance near basal angles. Basal angles obtuse, very narrowly rounded at tip. Disc moderately convex, strongly sloping to



Figs 21–30. *Trichotichnus (Allotichnus) beroni* sp.n.: 21 — labium; 22–23 — apex of last abdominal sternite (22 — female, 23 — male); 24 — left metepisternum; 25–26 — female genitalia; 27, 30 — median lobe of aedeagus; 28 — right paramere; 29 — left paramere; 21–24, 26 — ventral view; 25, 27–29 — lateral; 30 — dorsal view. Scale bars: A = 0.5 mm (21–26), B = 1.0 mm (27–30).

Рис. 21–30. *Trichotichnus (Allotichnus) beroni* sp.n.: 21 — нижняя губа; 22–23 — вершина последнего брюшного стернита (22 — самка, 23 — самец); 24 — левый метэпистерн; 25–26 — гениталии самки; 27, 30 — срединная лопасть эдеагуса; 28 — правая парамера; 29 — левая парамера; 21–24, 26 — снизу; 25, 27–29 — сбоку; 30 — сверху. Масштаб: A = 0,5 мм (21–26), B = 1,0 мм (27–30).

apical angles. Lateral gutters narrow apically, slightly widened behind widest point forming basally narrow lateral depressions and fused near basal margin with basal foveae. Basal foveae flat, vaguely outlined; area between them and lateral pronotal edge shallowly depressed; pronotal base flattened medially. Median line fine, not reaching apical margin and vaguely reaching basal margin. Anterior transverse depression wide. Surface basally and in lateral depressions very gently wrinkled. Microsculpture present throughout, distinct, consisting of short transverse meshes.

Elytra moderately convex, slightly flattened on disc along suture and evenly declined to apex, elongate oval (EL/EW 1.45–1.52; EL/PL 2.41–2.57; EW/PWmax 1.30–1.31), widest at middle; sides sinuate before middle. Humeri prominent, angularly rounded, with a tiny acute denticle at tip (in female more distinct than in male). Subapical sinuation shallow. Sutural angle rounded or blunted at tip. Basal edge arched laterally, forming an obtuse angle (internal humeral angle) with lateral margin. Striae fine, crenulate, mostly superficial, slightly impressed apically; striae 6 and 7 not reaching anteriorly basal edge. Intervals somewhat flat, slightly more convex and narrowed apically, impunctate. Stria 1 interrupted basally. Parascutellar (abbreviate) striole short, connected with apical part of stria 1; basal setigerous pore present, comparatively large, slightly distant from basal elytral edge (Fig. 19). Interval 3 without discal setigerous pore. Lateral groove deepened, slightly widened before elytral preapical sinuation, without convexity apically. Marginal umbilicate series interrupted at middle, consisting of 5–7 setigerous pores in basal group and of 7–8 pores in apical group. Microsculpture on intervals distinct throughout, consisting of moderately long transverse meshes.

Wings reduced to small scales.

Thoracic sternites, including prosternum impunctate, prosternum with scattered, very short and fine, barely visible setae. Prosternal process with very short setae, without long setae. Metepisternum (Fig. 24) markedly wider than long, moderately narrowed posteriorly.

Legs relatively short. Metacoxae without additional posteromedial seta. Pro- and mesofemur with one or two setae along lower margin. Metafemur ventrally with two setae at

posterior margin and without setae at anterior margin; one short preapical seta on anterior margin. Protibia on dorsal side without longitudinal sulcus, with two or three preapical spines on outer margin. Tarsi glabrous dorsally; tarsomere 5 with two pairs of ventro-lateral setae. Metatarsus short, much shorter than HWmin, with tarsomeres 2–4 markedly widened distally; metatarsomere 1 moderately widened distally, slightly shorter than metatarsomeres 2 and 3 combined; metatarsomeres 1–4 sparsely setose ventrally. Protarsomeres 1–4 and mesotarsomeres 2–4 in male widened and with adhesive biseriate scales ventrally, comparatively short; mesotarsomere 1 short, slightly longer than mesotarsomere 2 and markedly shorter than mesotarsomeres 2 and 3 combined.

Abdominal sternites without additional setae; last visible abdominal sternite (VII) in male (Fig. 23) slightly concave at apex, in female (Fig. 22) rounded, in both sexes with one pair of marginal setae (these setae not distant from margin).

Female genitalia (Figs 25–26): laterotergite with two strong setae mesoapically; gonosubcoxite elongate, markedly widened apically, with two strong setae on apical margin; gonocoxite with relatively wide base, curved, strongly narrowed apically, about 0.6 times as long as gonosubcoxite, with a short strong seta (spine) on ventral outer edge and with a fine short seta on dorsal outer edge.

Parameres (Figs 28–29) medium sized. Median lobe of aedeagus (Figs 27, 30) slender, in lateral view arcuate along dorsal side basally and almost straight apically, with ventral margin rather convex preapically, and with apex forming a small oblique capitulum protruded dorsally; terminal lamella in dorsal view wide, slightly longer than wide, rounded at sides and apically. Apical orifice in dorsal position, wide apically. Internal sac without spines.

ETYMOLOGY. Named after one of the collectors of this new species, Petar Beron (Sofia), the famous zoologist who made a great contribution to acarology, arachnology, biospeleology, parasitology and zoogeography.

COMPARISON. By its distinctive features, this new species is isolated not only from all the New Guinean *Trichotichnus*, but also from all other congeners and can be identified by a pronotum without a lateral setigerous pore and

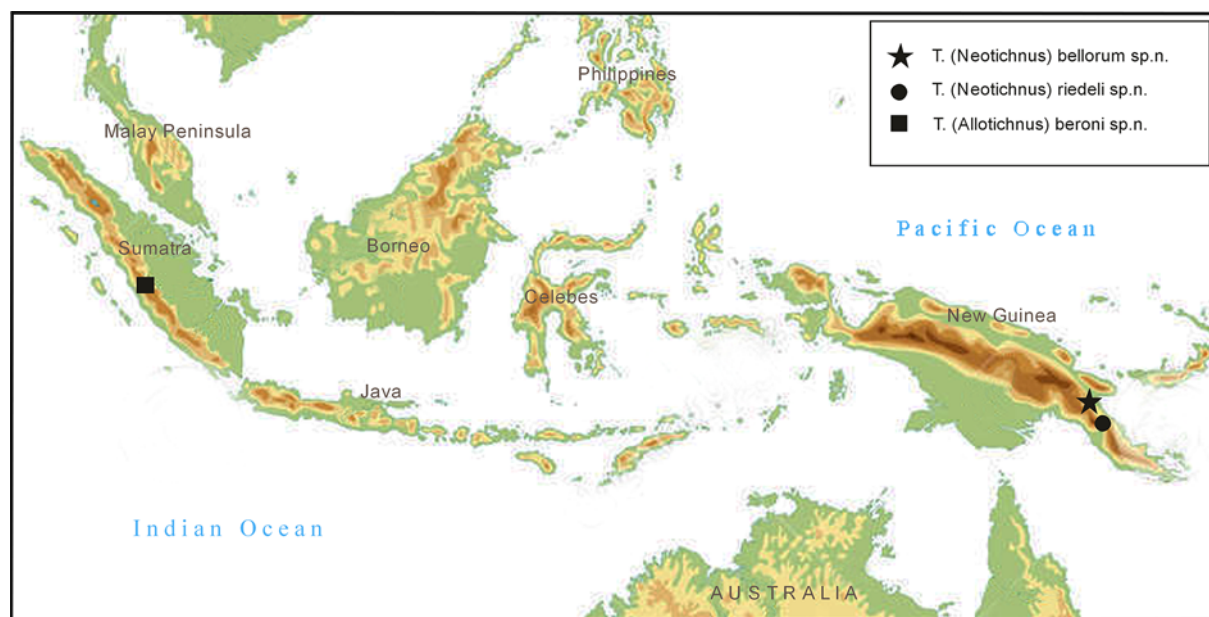


Fig. 31. Map with localities of *Trichotichnus* spp.

Рис. 31. Карта с местами находок *Trichotichnus* spp.

by the presence of only one pair of setigerous pores on the apex of the last abdominal sternite of female.

The Australian *T. tolgae*, which has a somewhat similar habitus and short fronto-ocular furrows, is distinctly different from *T. beroni* **sp.n.** in a larger body (length about 7.5 mm) and in having the pronotum with a lateral seta and with a basal margin distinctly bordered along entire length, the elytral interval 3 with a discal setigerous pore, the metasternum and basal abdominal sternite medially with short pubescence, the wings fully developed and the last abdominal sternite of female with two pairs of setae.

**DISTRIBUTION** (Fig. 31). This new species was found in West Sumatra, Indonesia, on the Mount Kerinci (Kerinci Seblat National Park), at an altitude of about 3000–3100 m in a rhododendron forest.

### Notes on three previously described species of *Trichotichnus*

#### *Trichotichnus (Iridessus) shunichii* Ito, 2021

*Trichotichnus shunichii* Ito, 2021: 68.

**MATERIAL EXAMINED.** N Vietnam, Thai Nguyen Prov., 40 km Thai Nguyen, 300 m, 19.XII.1962, O. Kabakov leg. (ZIN).

**REMARKS.** Described from a single male from Mt. Tam Dao, Vinh Phu Province, Northern Vietnam, without subgeneric affiliation as somewhat similar to *Trichotichnus (Parairidessus) saluki* Kataev, 2020. Though *T. shunichii* is rather peculiar in some morphological features (for example, its body comparatively large, length about 10–11 mm, ventral surface, including prosternum and abdominal sternites glabrous, not finely ciliate, lateral elytral groove with elongate convexity along this groove apically, last abdominal sternite of male with one pair of marginal setigerous pores, and median lobe serrate on ventral surface preapically), it possesses all distinctive characters of *Iridessus* (ligular sclerite narrow, almost parallel-sided, paraglossae wide, almost not separated from ligular sclerite and elytral umbilicate series consisting of about 20 setigerous pores) and may be included in this subgenus. Like many *Iridessus*, *T. shunichii* also has a pronotum with rounded sides and rounded basal angles and an aedeagus with an apical orifice shifted to the left side and with groups of small spines (spiny patches) in the internal sac. The degree of prosternal pubescence in *Iridessus* is rather variable.

#### *Trichotichnus* (s. str.) *dmitryi* Kataev, Liang et Wrase, **nom.n.**

**REMARKS.** This species name is proposed for the primary homonym *Trichotichnus* (s. str.) *fedorenkoi* Kataev, Liang et Wrase, 2022, non *Trichotichnus (Amaroschesis) fedorenkoi* Kataev et Ito, 1999 [Kataev, Ito, 1999; Kataev et al., 2022]. It is based on the given name of Dmitry N. Fedorenko (Moscow).

#### *Lecanomerus maculipennis* (Baehr, 1997), **comb.n.**

*Trichotichnus maculipennis* Baehr, 1997: 132.

**MATERIAL EXAMINED.** Paratype: ♂, “Cairns: N. Qld / Kamerunga at M.V.L., 17: July: 1972 A. & M. Walford-Huggins 6368 / Walford-Huggins Collection Carnegie Museum Accession 35338” (ZSM).

**REMARKS.** This species was described from three males and one female collected in Queensland (Australia) within the genus *Trichotichnus*, but all its distinctive features including the long and evenly curved mandibles, characteristic color pattern of elytra and a spongy vestiture on the male pro- and mesotarsi indicate that it belongs to the pelmatelline genus *Lecanomerus* Chaudoir, 1850.

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### References

- Baehr M. 1990. Two new species of *Trichotichnus* Morawitz from North Queensland (Coleoptera: Carabidae: Harpalina) // Mem. Queensl. Mus. Vol.28. No.2. P.383–388.
- Baehr M. 1997. A new species of *Trichotichnus* Morawitz from northern Australia (Insecta, Coleoptera, Carabidae, Harpalinae) // Spixiana. Vol.20. No.2. P.131–135.
- Darlington P.J., Jr. 1968. The carabid beetles of New Guinea. Part. III. Harpalinae (continued): Perigonini to Pseudomorhini // Bull. Mus. Comp. Zool. Vol.137. No.1. P.1–253.
- Ito N. 1996. Asian species of the subgenus *Harpaloxenus* of the genus *Trichotichnus* (Coleoptera, Carabidae, Harpalini) // Jpn. J. syst. Ent. Vol.2. No.2. P.207–218.
- Ito N. 2021. Two new species and new records of the Harpaline genus *Trichotichnus* (Coleoptera, Carabidae) from Vietnam // Elytra, N.S. Vol.11 (Supplement). P.67–75.
- Kataev B.M. 2003. A new genus and species of the subtribe Anisodactylina from South-Western Australia (Coleoptera: Carabidae: Harpalini) // Acta Zool. Academ. Sci. Hung. Vol.48. No.3. [2002]. P.173–179.
- Kataev B.M. 2007. A new species of the genus *Normalupia* from the Stirling Nature Park, Western Australia (Coleoptera: Carabidae: Harpalini) // Zoosyst. Rossica. Vol.16. No.1. P.33–36.
- Kataev B.M. 2016. On taxonomic status of *Bottchrus*, with a description of a new brachypterous species of the genus *Trichotichnus* (Coleoptera: Carabidae) from the Philippines // Zootaxa. Vol.4061. No.1. P.68–76. <http://doi.org/10.11646/zootaxa.4061.1.7>
- Kataev B.M. 2020. Description of a new subgenus of *Trichotichnus* (Coleoptera: Carabidae), with two new species from the Western Ghats (India), and remarks on other subgenera // Zoosyst. Rossica. Vol.29. No.2. P.172–194. <https://doi.org/10.31610/zsr/2020.29.2.172>
- Kataev B.M., Ito N. 1999. Eighth new species of the subgenus *Amaroschesis* of the genus *Trichotichnus* from China with a redescription of *T. (Amaroschesis) oreas* (Coleoptera: Carabidae: Harpalini) // A. Zamotajlov, R. Sciaky (eds.). Advances in Carabidology (Papers Dedicated to the Memory of Prof. Oleg L. Kryzhanovskij). Krasnodar: Muiso Publishers. P.369–392.
- Kataev B.M., Liang H., Wrase D.W. 2022. New data on carabid beetles of *Trichotichnus* s. str. (Coleoptera: Carabidae) of Yunnan (China) and adjacent areas, with description of six new species and two new subspecies // Zootaxa. Vol.5159. No.3. P. 301–353. <https://doi.org/10.11646/zootaxa.5159.3.1>
- Kataev B.M., Schmidt J. 2002. Contribution to knowledge of *Chydaeus* Chaudoir, 1854: Revision of the *Chydaeus bedeli* (Tschitschérine, 1897), *Chydaeus irvinei* (Andrewes, 1930), and *Chydaeus semenowi* (Tschitschérine, 1898) species groups from the Himalaya and China (Coleoptera, Carabidae, Harpalini) // Coleoptera, Schwanfelder Coleopterologische Mitteilungen. Bd.5 [2001]. S.389–425.
- Kataev B.M., Schmidt J. 2017. Brachypterous ground beetles of the *Trichotichnus* subgenus *Bottchrus* Jedlička (Coleoptera, Carabidae) from the Himalaya, with description of fifteen new species // Zootaxa. Vol.4323. No.3. P. 301–358. <https://doi.org/10.11646/zootaxa.4323.3.1>
- Lorenz W. 2005. A systematic list of extant ground beetles of the world (Coleoptera “Geadephaga”: Trachypachidae and Carabidae incl. Paussinae, Cicindelinae, Rhysodinae). 2nd Edition. Tutzing: W. Lorenz. 530 pp.
- Noonan G.R. 1985. Classification and names of the Selenophori group (Coleoptera: Carabidae: Harpalini) and of nine genera and subgenera placed in incertae sedis within Harpalina // Milwaukee Public Museum, Contributions in Biology and Geology. No.64. P.1–92.