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RESEARCH PAPER

Cornutidrymus, an interesting new genus of Papuan Drymini (Hemiptera: Heteroptera: Rhyparochromidae)

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Abstract. *Cornutidrymus* gen. nov. (Hemiptera: Heteroptera: Lygaeoidea: Rhyparochromidae: Rhyparochrominae: Drymini) is described from New Guinea with four new species (*C. elongatus* sp. nov. [type species], *C. acutus* sp. nov., *C. gibbosus* sp. nov. and *C. latus* sp. nov.). The systematic placement and the relationships with the similar genera are discussed. An identification key for the species of the new genus is provided.

Key words. Hemiptera, Heteroptera, Rhyparochromidae, Rhyparochrominae, key to species, new genus, new species, New Guinea, Australian Region

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Introduction

As several authors have already stated, the huge island of New Guinea, located on the Equator and having high mountains dividing it into northern and southern parts, is extremely rich in species, although many of them are still waiting for discovery (e.g., Orr & Kalkman 2013 and Kovács et al. 2021 for Odonata, Vas 2023 for Hymenoptera: Ichneumonidae, Oláh 2012 for Trichoptera, or Shaverdo et al. 2012, 2014, 2018, Riedel et al. 2013, and Gimmel & Leschen 2022 for Coleoptera). This is also the case with true bugs (Heteroptera) as well (e.g., Guilbert 2006, 2021; Chérot et al. 2017; Chérot 2018; Kondorosy et al. 2019, 2024; Chan & Cassis 2020; Konstantinov & Namyatova 2020; Polhemus 2020, 2024a, b; Lis & Lis 2021; Bolshakova & Konstantinov 2022; Castillo et al. 2022; Kóbor & Kondorosy 2022; Liu et al. 2022; Fan et al. 2023; Yasunaga et al. 2023; Yasunaga 2024; Heiss & Eckelt 2024, 2025a, b; Schmidt & Kondorosy 2024; Salini et al. 2025). Kondorosy et al. (2024) published the checklist of the superfamily Lygaeoidea of the Papuan Subregion and compared its status of knowledge with two closely related superfamilies: Coreoidea and Pyrrhocoroidea. The knowledge about Lygaeoidea is continuously evolving, as shown by some recent publications, e.g. Kóbor (2022), Kóbor & Kondorosy (2022) and Schmidt & Kondorosy (2024).

In the New Guinean Rhyparochromidae fauna, the tribe Ozophorini is currently the most diverse, with 31 species described (29 of which belong to the genus *Bryanellocoris* Slater, 1957). Until 2024, the second most diverse tribe was the globally distributed and species-rich Myodochini, with 11 species. However, with 9 new species described in 2024 (Kondorosy et al. 2024, Schmidt & Kondorosy 2024), the tribe Drymini has risen to second place, with 17 species identified so far. Another six tribes are represented in New Guinea, with 1 (Lilliputocorini) to 6 described species (Rhyparochromini) in each (Kondorosy et al. 2024). However, the authors are aware of several undescribed Lethaeini and Targaremini species (with currently 4 and 2 species known, respectively). In addition to undescribed Lethaeini and Targaremini, several further Drymini species have also been collected in New Guinea from which a new genus represented by four undescribed species is established here.

Recently Lu et al. (2025) published a phylogenomic paper proposing a new systematic division of Lygaeoidea, especially of Rhyparochromidae. Although we agree that some reclassification of the superfamily will be necessary, we consider the proposed changes as premature, especially the splitting of Rhyparochrominae in the way it was done. More evidence is needed before all the necessary changes are proposed and accepted.

Material and methods

The authors examined several museum collections of Lygaeoidea in Europe and borrowed numerous New Guinean specimens. Furthermore, some material was purchased from collectors. Among the studied specimens, we found some undescribed Drymini species clearly related to each other but not belonging to any of the known genera.

For the study, we primarily used a stereoscopic microscope (Olympus SZ-11) with a micrometer eyepiece for measurements, which were taken in the horizontal view of each feature (it is different for the head and pronotum compared to other dorsal parts). The specimens were photographed using a Canon EOS 6D M2 digital camera fitted with a Canon 100 mm EOS EF f/2.8 lens attached to a Canon EF12 II extension tube. Images were processed with Helicon Focus 7.7.5 software at the Rippl-Rónai Museum, Kaposvár, by Bálint Csernák.

We present the labels of the type specimens verbatim and use a slash (/) to divide data on different lines of the same label, and double slashes (//) to separate data on different labels. Our comments are given in square brackets "[ ]". Most labels are printed; in the case of handwritten labels, we marked them as "hw".

The specimens are housed in the following collections:

BPBM Bernice P. Bishop Museum, Honolulu, United States;
EKKH Előd Kondorosy collection, Keszthely, Hungary;
HNHM Hungarian Natural History Museum, Budapest, Hungary;
ISNB Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium;
ZMHB Museum für Naturkunde, Berlin, Germany;
ZSMC Zoologische Staatssammlung, München, Germany.

For morphological terminology, we followed mostly Kment et al. (2016), Tsai et al. (2011), and Tsai & Rédei (2017). Measurements provided in the paper are given in millimetres.

Localities were mapped using the SimpleMappr (Shorthouse 2010) with the following layers: "country", "lakes (blue)", "rivers", "ocean (blue)" and "relief (alternate)" (Fig. 17).

Results and discussion

Cornutidrymus gen. nov.

Type species. *Cornutidrymus elongatus* sp. nov., here designated.

Description. *Head* long, dorsally slightly convex; densely punctate, punctures touching each other; eye prominent, ocelli more or less emergent above head plane, situated slightly posteriad of eyes. Head trichobothria erect, situated on small hump, sometimes similar to a small ocellus. Antenniferous tubercle long, divergent, postocular part of head long, narrowing posteriad. Antenna slender and long, scape surpassing tip of head by more than half length, slightly curved outwards and widening in apical half, other antennomeres cylindrical. Bucculae very short, not reaching antenniferous tubercle, ending posteriad usually in a large, ventrally directed tooth (Figs 9–12).

Pronotum densely punctate, campanulate, with a deep incision at transverse impression, at about middle length; lateral margin entirely very narrowly laminate, widening at humeral angles and ending in a strong latero-posteriad orientated curved spine. Anterior collar broad, well demarcated, punctate, without lateral carina. Surface convex in frontal view, especially anterior lobe; posterior lobe anteromedially broadly impressed. Posterior margin slightly convex anteriad of scutellum, at basal angles of scutellum concave, anteriad of clavus moderately lobate and depressed.

Scutellum elongate, with strong Y-shaped elevation having much longer posterior arm than anterior ones, posterior arm always impunctate.

Hemelytra. Clavus with three regular rows of punctures. Corium densely punctate, usually without larger smooth area. Vein R(+M) emergent, corium laterad of it sloping, vein Cu less emergent, vein M invisible; impunctate exocorium usually not widened posteriad; lateral margin sometimes subparallel but often concave at proximal one-fourth length, distally slightly or strongly convex. Apical margin emergent, straight or slightly wavy, laterad of vein R slightly more curving posteriad. Membrane wrinkled, with four distinct veins, R and M basally invisible, subbasally very close to each other, from there strongly diverging; Cu (third vein from lateral margin) strongly arched, subbasally touching vein A1+2, then strongly diverging from it, in posterior part parallel with A1+2.

Legs slender, rather long, profemur only with anteroventral series of 6–15 tiny teeth in apical one-fifth, one of them larger but not longer than width of protibia in basal half. Tibiae straight, slender, protibia widening in apical one-fourth. Tarsi long, tarsomere I longer than II–III together.

Thoracic venter. Evaporatorium of metathoracic scent gland efferent system small (Fig. 13), reaching neither posterior one-third nor lateral half of metepisternum except of narrow anterior margin of mesosternal spiracle; ostiolar peritreme short, almost straight, slightly reaching anteriad of ostiole but not posteriad of it; often inconspicuous because of its similarity to surface of evaporatorium. Posterior margin of mesepimeron laterally curved anteriad while posterior margin of metepimeron laterally curved posteriad (Fig. 13).

Abdomen. Ventrites and spiracles as typical for Drymini: all spiracles situated ventrally, posterior trichobothria of ventrite V approaching each other, located anteriad of spiracle (Sweet 1967). Sutures between ventrites II–III, III–IV and IV–V serrate (Fig. 13). Suture between ventrites IV and V curved anteriorly near lateral margin, but not connected with trichobothrial furrow. Suture between ventrites V and VI also directed slightly anteriad, but reaching lateral margin. Posterolateral angle of segment VII usually produced in a spine of variable length.

Differential diagnosis and systematic position. *Cornutidrymus* gen. nov. belongs to the tribe Drymini based on the position of abdominal trichobothria and spiracles.

Within this extremely variable tribe, which currently comprises 58 genera and 3 additional subgenera (Dellapé & Henry 2024; Kondorosy, unpublished data), certain features are useful for distinguishing the genera. However, sharing these features does not always indicate close relationships among genera.

For *Cornutidrymus*, distinguishing characters include, among others, the evenly narrow lateral margin of the pronotum, the well-developed Y-shaped elevation of the scutellum, the armature of the profemur having only one row of teeth (with the posteroventral row absent), and, most notably, the humeral spine on pronotum and the form of the bucculae (except in one species). Regarding the last two features, no other genus in Drymini is known to possess a tooth-like elongation of the humeral angle of the pronotum; however, in a few genera (especially in *Salaciola* Bergroth, 1906 – see Slater 1986, less in *Entisberus* Distant, 1903 and *Retoka* China, 1935 – see Kondorosy 2008, or *Hirtomydrus* Scudder, 1978 – Scudder 1978, and *Latidrymus* Kondorosy, 2017 – Kondorosy 2017) the posterior end of the lateral margin of the pronotum is acute. While some genera have a pair of tooth-like projections ventrally on the head (*Ibexocoris* Scudder, 1963 – Scudder 1963, *Notochilaster* Breddin, 1907 – see Kondorosy 2006, and some *Sinierus* Distant, 1901 – Kondorosy, unpubl.), those are extensions of the gula, not the bucculae.

Each of the other mentioned features (evenly narrow lateral margin of the pronotum, Y-shaped keel of the scutellum with a long posterior arm, and single series of teeth on the profemur) is diagnostic for multiple genera, but the combination of all the three characters is unique to *Cornutidrymus*. Nevertheless, some genera of Drymini resemble *Cornutidrymus* superficially, such as *Bexiocoris* Scudder, 1969, *Borneodrymus* Kondorosy, 2006, *Chotekia* China, 1935, *Carvalhodrymus* Slater, 1995, *Entisberus*, *Grossander* Slater, 1976, *Ibexocoris*, *Retoka*, and *Salaciola*.

The main differences – in addition to the presence of a humeral spine – between these genera and *Cornutidrymus* are as follows. (Besides of the cited literature, the provided characteristics are also based on the study of the types and other identified specimens.)

Chotekia. Among genera living in nearby regions, this genus from Java is short and plump, and the lateral margin of its pronotum on the hardly separated posterior lobe is swollen between the transverse furrow and the humeral angle, unlike in *Cornutidrymus* where the margin is lamellate on the well separated posterior lobe and ends in a tooth; furthermore, it lacks the proximal half of the inner row of punctures of the clavus.

Borneodrymus, known only from Borneo, lacks spines on the profemur and instead has strong, stiff setae; the postocular part of the head has a swollen lateral margin (Kondorosy 2006).

Grossander. Both its subgenera, distributed from Australia to Myanmar, contain stout species with short appendages and have narrowly lamellate lateral margins of the pronotum which disappears posteriad (Kondorosy & Fábics 2015).

Entisberus and ***Retoka***, distributed in the whole Oriental Region and Australia, share the serrate sutures between abdominal ventrites II–V with *Cornutidrymus*, but their distinctive feature is a strongly arcuate apical margin of the corium, a usually unarmed profemur (in *Entisberus* always), and differently shaped Y-shaped keel on the scutellum (emerging as a central hump) (Kondorosy 2008).

Ibexocoris and ***Bexiocoris***. Among Afrotropical genera, *Ibexocoris* often has an impunctate head but always with long ventral appendages (Scudder 1963). Together with *Bexiocoris* (Scudder 1969), these genera have serrate abdominal sutures only between ventrites II and III.

Carvalhodrymus. This African genus has only one tiny tooth on the profemur (Slater 1995), while it lacks the serrate abdominal sutures, and the punctuation of the head and pronotum are rather sparse.

Salaciola is the most similar genus in many respects, distributed in Africa. Aside from differences in geographical distribution and size (the largest *Salaciola* is not larger than 4.7 mm) (Slater 1994), it is well distinguishable from *Cornutidrymus*. Although species within *Salaciola* differ significantly from each other, they are generally plump with short appendages (antennae and legs). The lateral margin of the pronotum is lamellate, though narrow, and the exocorium widens about its midlength (though often only moderately). The sutures between abdominal ventrites are also different, usually plain, but at least four species (*S. alomaensis* Linnavuori, 1978, *S. caliginosa* Slater, 1989, *S. carayoni* Slater, 1986, and *S. linnavuorii* Slater, 1986) have serrate sutures like those of *Cornutidrymus*. The largest species, *Salaciola acutangula* Slater, 1994, is perhaps the most similar to *Cornutidrymus* because of its spiniform posterior end on the lateral margin of the pronotum (Slater 1986, 1994).

Etymology. The first part of the name originated from Latin "*cornu*", noun (neuter) meaning horn (not only the musical instrument but also horn of ungulates), the second part refers to the genus *Drymus* Fieber, 1860, the type genus of the tribe Drymini. The gender is masculine.

Cornutidrymus elongatus sp. nov.

(Figs 1, 5, 9, 17)

Type locality. Papua New Guinea, Madang Province, Sumkar District, Baiteta, ~145°45′E 05°0′S, ca.100 m a.s.l.

Type material. Holotype: ♀, "Coll.R. Sc. N. B. / Canopy Mission P.N.G. / Madang province / Baleta [=Baiteta] Light T2 / 4.V. 1993. / Leg. Olivier Missa" (ISNB). Paratypes: ♀, "INDONESIA, W. / Papua, Arfak Mts., / 1190 m, Duebei env. // 20 km S of Warmere / Manokwari Distr. / 21.1. – 8.2. 2008 / leg St. Jakl" (EKKH); ♀, "Batanta Isl. / Waylebet [= Wailebet], 500 m / 29.X., sifted // IRIAN JAYA, / Sorong-Prov. / leg. A. Riedel, 1996" (ZSMC).

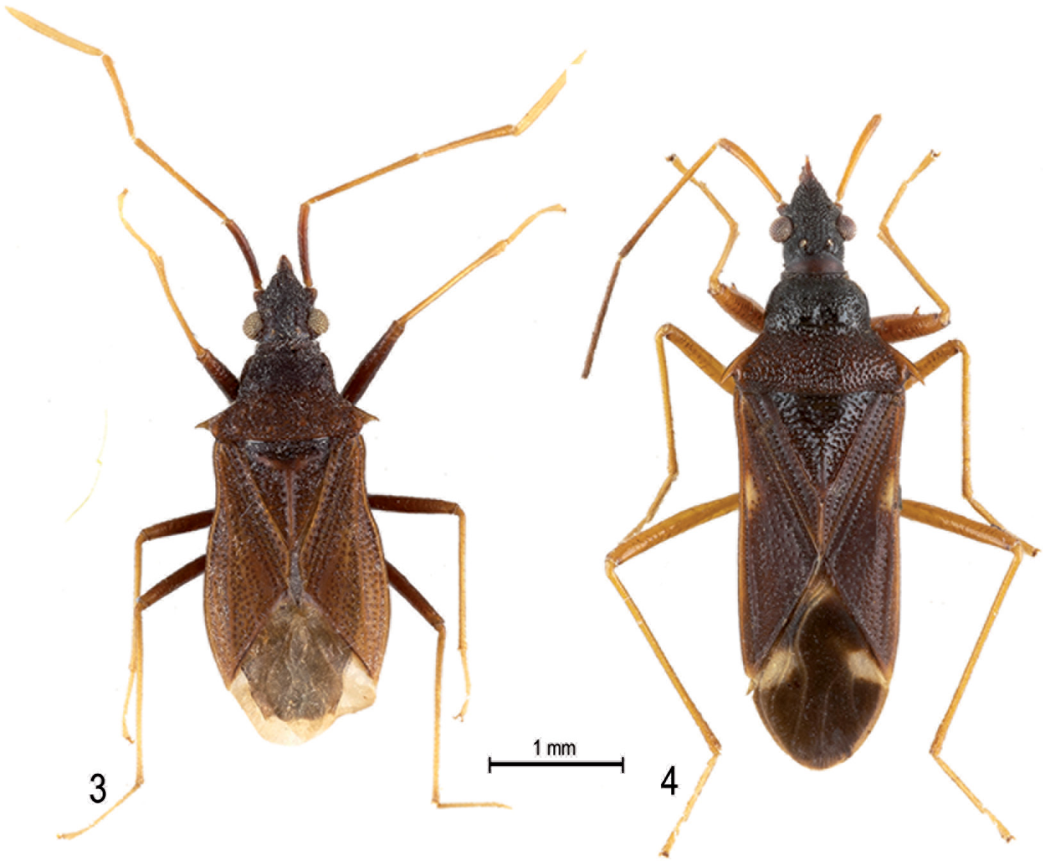
Additional material. There is a picture of a specimen most probably belonging to this species from Lumi (NW Papua New Guinea) available on iNaturalist citizen science website: https://www.inaturalist.org/observations/171512053. The locality of this specimen is illustrated in map (Fig. 17, dot near country border).

Description. ***Colour.*** Head (except reddish brown apex of antenniferous tubercle, clypeus and bucculae), anterior lobe of pronotum and often basal part of scutellum (anteriad of Y-shaped elevation) dark brown. Posterior lobe of pronotum, rest of scutellum, clavus and corium yellowish brown to brown. Humeral angles, lateral margin of pronotum and midline of scutellum yellowish brown. Clavus with fine longitudinal dark brown stripe along the middle row of punctures fading posteriorly. Membrane from yellowish to dark brown with blurred creamy spots at both ends of basal margin. Labium, most of legs and antennae unicolorous yellow or yellowish brown; scape

Figs 1–2. Habitus of *Cornutidrymus* gen. nov. species, dorsal view. 1 – *C. elongatus* sp. nov., ♀ (paratype), 2 – *C. gibbosus* sp. nov., ♀ (holotype).

and femora with darker suffusion (especially profemur), sometimes with tiny dark spots dorsally, claws dark brown, distiflagellum whitish creamy. Thoracic sterna fuscous with pro- and metepimeron paler. Abdomen brown to fuscous, usually paler apically and laterally. Punctures dark brown on entire surface, more conspicuous on the paler parts of scutellum and corium.

Integument. Body largely dull; head, posterior lobe of pronotum, Y-shaped elevation of scutellum and femora sub-shiny, abdomen strongly shining. Most of surface with strong punctures with variable size and density. Head densely and finely punctate except a pair of conspicuous flat, approximately semicircular areas between compound eyes and ocelli. Anterior lobe of pronotum very densely and finely punctate, posterior lobe also covered with dense, but much larger punctures, distance of punctures on both lobes smaller than their diameter. Scutellum also with large, but sparser punctures: on plain areas (distance of punctures similar to their diameter), on anterior arms of the Y-shaped elevation much sparser and completely missing on posterior longitudinal elevation, forming a smooth median keel. Clavus with three evenly located, parallel rows of punctures: one nearest to scutellum with smaller punctures, posteriad turning parallel with claval commissure. Punctuation of corium finer than of scutellum, with two complete rows along vein Cu, rest of corium with equally large usually unordered punctuation except narrow impunctate costal margin. Sternum with similar punctures as hemelytron, punctures on ventral part of collar and proepimeron stronger; mesosternum except impressed



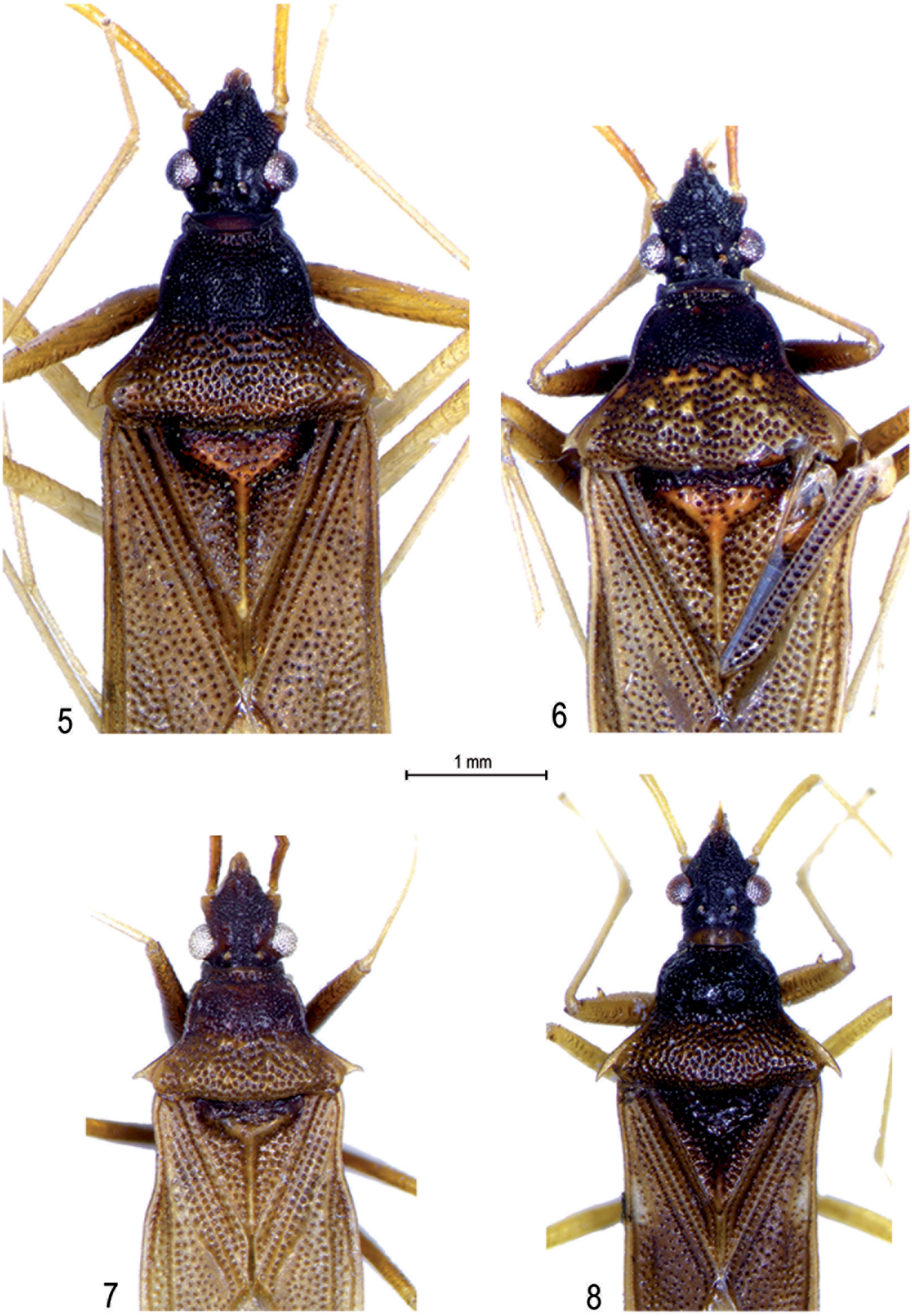
Figs 3–4. Habitus of *Cornutidrymus* gen. nov. species, dorsal view. 3 – *C. latus* sp. nov., ♀ (holotype), 4 – *C. acutus* sp. nov., ♂ (holotype).

and posteriad widened median, metepimeron and emergent lateral part of episterna impunctate. Abdomen finely rugose transversely, punctures only on most lateral parts of ventrites distinct.

Body mostly glabrous. Clypeus with a few strong, erect, whitish setae; head otherwise with hardly visible tiny setae; pronotum with a few hardly visible setae mostly on lateral margin. Antennomeres with dense, short, decumbent setae except scape having sparse, long and erect stiff setae. Femora and tibiae with sparse, erect setae slightly longer than basal diameter of tibiae; apical part of protibia with short decumbent pubescence as well; inner side of tibiae with some stronger stiff erect setae as well. Abdomen shiny, laterally on each ventrite, on posterior two abdominal ventrites and on trichobothrial humps of ventrites III and IV with very fine, dense, decumbent pubescence and few erect setae, medial part of abdomen with a few long setae only.

Structure. Antenniferous tubercles longer than eye, postocular part of head short; ocelli situated at level of posterior margin of eyes almost as far from them than from each other, conspicuously prominent above head (Fig. 9). Antenna long, scape surpassing tip of clypeus by more than three-fourth of its length; labium reaching middle of mesosternum, labiomere I reaching middle of eye. Maxillary plate long, surpassing mandibular plate, anteriorly serrate; ventral margin of bucculae anteriorly semi-circular, somewhat lowering in middle, its posterior end with strong, claw-like ventral spine (Fig. 9), reaching the same height as anterior margin. Humeral spine slightly larger than basal width of tibiae, plate-like, directed latero-posteriad, reaching or slightly surpassing posterior margin of pronotum. Y-shaped keel of scutellum with very long posterior arm, meeting point of arms anteriad of one-fourth length of scutellum; anterior arms punctate, with a fine keel and only moderately broadened. Apical margin of corium slightly wavy, with a tiny angulation at base of vein Cu of membrane and pulled posteriad at apex. Mesosternum dull, median furrow only slightly widening posteriad, submedial parts longer than wide, sub-shining, impunctate; median keel of metasternum low, not branching but fading posteriad. Larger tooth of profemur not much longer than tiny ones, located all in apical half of profemur (5–10 basally from larger tooth and 3–5 apically from it). Abdomen with median keel only on ventrite II, at posterior margin of ventrite III submedially with strong trichobothrial hump. Sutures between abdominal ventrites II–V serrate.

Measurements (holotype female, followed by ranges of 2 female paratypes): Total body length: 7.60, 6.55–7.76; head: length 1.10, 1.12, width 2.18, 2.25, interocular distance 0.53, 0.48–0.50, eye length 0.32, 0.30, length of antenniferous tubercle 0.26, 0.28–0.31; length of antennomeres: I 1.5, 1.33–1.50, II 2.13, 2.13–2.38, III 1.88,



Figs 5–8. *Cornutidrymus* gen. nov. species, dorsal view of head, pronotum and scutellum. 5 – *C. elongatus* sp. nov., ♀ (paratype), 6 – *C. gibbosus* sp. nov., ♀ (holotype), 7 – *C. latus* sp. nov., ♀ (holotype), 8 – *C. acutus* sp. nov., ♂ (holotype).

1.88, IV 1.55, missing; pronotum: length 1.33, 1.38–1.45, maximum width 2.18, 2.25, width at transversal furrow 1.13, 1.13–1.15; scutellum: length 1.38, 1.45, width 1.13, 1.20–1.25; length of claval commissure 0.55, 0.53–0.60. For ratios of measurements see Table 1.

Differential diagnosis. *Cornutidrymus elongatus* sp. nov. is the largest species of the genus; the antenna is the longest in comparison as well (scape at least 1.4 times longer than width of head). *Cornutidrymus elongatus* is unique within the genus in having a darkened membrane. The longitudinal, posterior arm of the Y-shaped keel of the scutellum is the longest within the genus, in the other species posterior arm is at most twice as long as the distance between the meeting point of the arms and the base of the scutellum, whereas in *C. elongatus*, it is more than four times as long. *C. elongatus* has the most spines on the profemur (5–10 are located basally from larger tooth while in the other *Cornutidrymus* species at most 3) and the row of spines reaching almost the middle of the profemur.

Etymology. The specific epithet is Latin adjective *elongatus* (*-a*, *-um*) meaning elongate. It is given in reference to the species' slender body and long antennae.

Distribution. *Cornutidrymus elongatus* sp. nov. is known from Indonesia: Southwest Papua (Papua Barat Daya): Batanta Island and West Papua (Papua Barat) provinces; and Papua New Guinea: Momase Region (Fig. 17).

Cornutidrymus gibbosus, sp. nov.

(Figs 2, 6, 10, 13, 17)

Type locality. Indonesia, Papua Barat (West Papua) Province, Pegunungan Arfak (Arfak Mountains) Regency, Minyambaouw District, Dueibei ~133°53'E 01°06'S, ~1700 m

Type material. Holotype: ♀, "INDONESIA, W. / Papua, Arfak Mts., / 1190 m, Duebei [Dueibei] env. // 20 km S of Warmere [Warmare] / Manokwari Distr. / 21.1. – 8.2. 2008 / leg St. Jakl" (HNHM). Paratype [in bad condition]: ♀, same data (EKKH).

Description. Similar to *C. elongatus*, main differences from it are given below.

Colour. Colouration of body paler (except appendages and venter), pale parts yellowish. Posterior lobe of pronotum paler brown than anterior half; elevations on both lobes paler than base colour. Anterior arms of Y-shaped keel of scutellum reddish brown. Membrane rather unicolorous transparent with yellowish costal margin. Lateral margin of corium lighter than inner areas.

Integument. Body dull, dorsum slightly shining, abdominal venter dull as well. Punctuation like previous species, unordered elevations on posterior lobe of pronotum impunctate. Y-shaped elevation of scutellum with scattered punctures, leaving posterior arm and parts of anterior arms impunctate. Corium impunctate not only on narrow exocorium but in an elongate spot in posterior part of area between vein Cu and medial fracture. Setation also rather similar but pronotum with more and longer fine setae.

Structure. Antenniferous tubercles almost as long as eye, postocular part of head short; ocelli situated at level of posterior margin of eyes much closer to them than to each other, slightly prominent (Fig. 10). Antenna moderately long, scape surpassing tip of clypeus with more than 1.5 times; labium slightly surpassing procoxa, labiomere I reaching middle of eye. Maxillary plate long, surpassing mandibular plate, anteriorly unarmed or with a single tiny tooth; buccula slightly divergent ventrally, anterior margin rounded, not lowering posteriad, at strong posterior spine emergent only above labium (Fig. 10). Anterior lobe of pronotum with two pairs of small elevations: submedially close to collar and on posterior part sublaterally about same distance from lateral margin and transversal furrow; posterior lobe with several tiny humps mostly on submedian area; median on posterior lobe broadly impressed. Humeral spine slightly larger than basal width of tibiae, plate-like, directed more laterad than posteriad, ending far from level of posterior margin of pronotum. Y-shaped keel of scutellum strong, impunctate posterior arm much longer than anterior arms (meeting point at about one-third length), latter ending far from basal or lateral margin of scutellum and strongly widened without a keel, forming almost a slightly emergent triangle. Corium after subbasal narrowed part slightly widening, in area between veins M and Cu leaving a somewhat translucent, elongate impunctate spot. Apical margin of corium nearly straight, slightly pulled posteriad at apex. Mesosternum dull, median furrow only slightly widening posteriad, dull submedial parts wider than long, impunctate except a few punctures on posterior margin; median keel of metasternum not branching, strongly emergent, in lateral view almost semicircularly convex. Larger tooth of profemur nearly as long as basal width of protibia, apically from this 3–5 tiny spines, basally of large tooth but in apical one-third 0–3 tiny spines present. Abdominal ventrite II with strong, III with short basal median keel, posterior margin of ventrite III with a pair of submedian trichobothrial hump. Sutures between abdominal ventrites II–V serrate.

Measurements (holotype female, followed by female paratype): Total body length: 5.58, 5.63; head: length 1.00, 0.88, width 0.85, 0.83, interocular distance 0.48, 0.48, eye length 0.25, 0.25, length of antenniferous tubercle 0.24, 0.22; length of antennomeres: I 0.88, 0.95, II 1.33, 1.40, III 1.10, 1.05, IV missing; pronotum: length 1.35, 1.23, maximum width 2.05, 2.00, width at transversal furrow

Table 1. Ratios of measurements of *Cornutidrymus* species. A1L – scape length, A2L – pedicel length, A3L – basiflagellum length, BL – body length, CL – length of claval commissure, EA – eye–antenna distance, EL – eye length, EW – eye width, HL – head length, HW – head width, ID – interocular distance, PL – pronotum length, PaW – pronotum width at apex, PbW – pronotum width at base, PtW – pronotum width at transverse furrow, SL – scutellum length, SW – scutellum width.

Ratios	*C. elongatus*	*C. gibbosus*	*C. latus*	*C. acutus*
BL : PbW	2.91–3.49	2.72–2.82	2.51	2.75–3.03
HL : HW	1.13–1.18	1.06–1.18	1.07	1.25–1.39
ID : EW	2.00–2.3	2.38–2.40	2.22	2.00–2.22
EL : EA	0.98–1.25	1.06–1.12	1.06	1.36–1.63
A1L : HL	1.18–1.33	0.88–1.09	0.90	0.74–0.85
A2L : A1L	1.42–1.60	1.47–1.51	1.41	1.56–1.88
A2L : A3L	0.79–0.88	0.83–1.33	0.85	0.66–0.82
PbW : PL	1.50–1.68	1.46–1.63	1.81	1.64–1.80
PbW : PtW	1.88–2.05	1.67–1.86	1.81	1.98–2.00
PbW : PaW	3.11–3.33	3.33–3.57	3.26	3.13–3.27
SL : SW	1.16–1.22	1.13–1.17	1.16	1.03–1.08
SL : CL	2.42–2.76	3.50–3.53	2.85	2.11–2.22

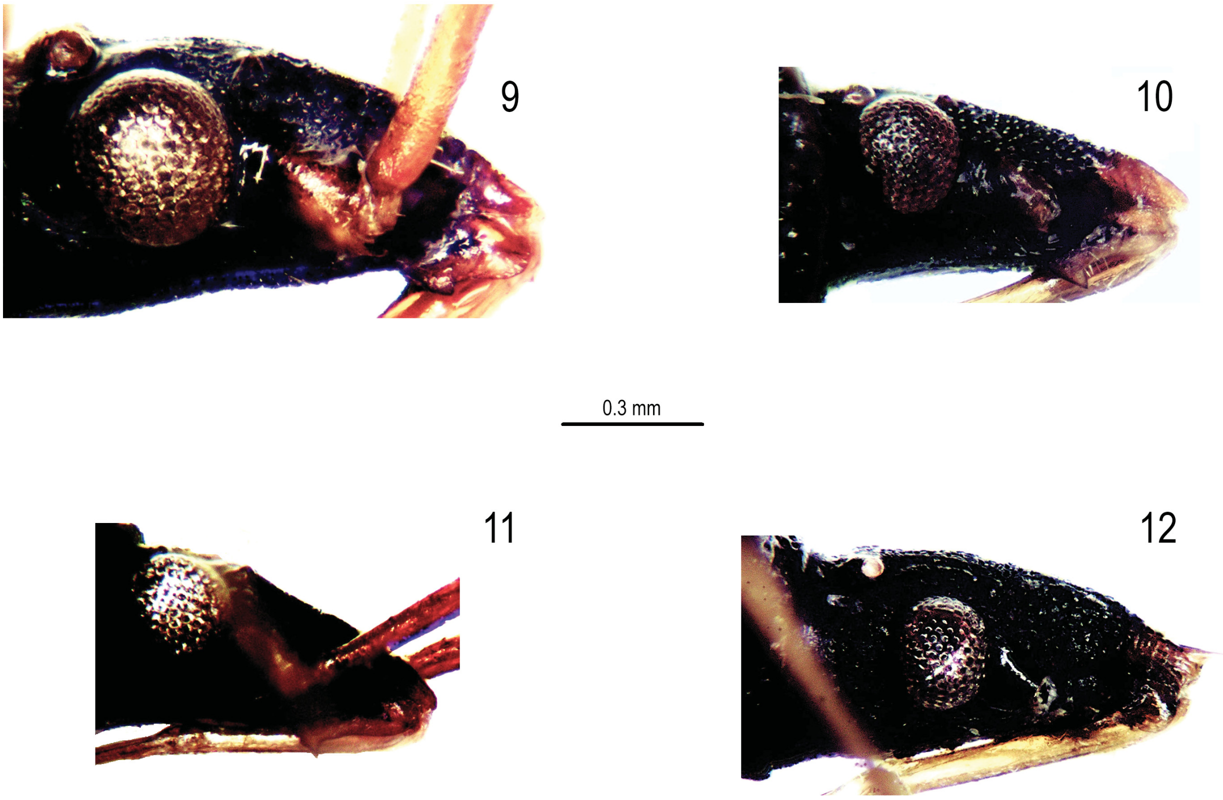


Fig 9–12. Lateral view of the head. 9 – *C. elongatus* sp. nov., 10 – *C. gibbosus* sp. nov., 11 – *C. latus* sp. nov., 12 – *C. acutus* sp. nov.

1.10, 1.15, scutellum: length 1.32, 1.32, width 1.18, 1.18; length of claval commissure 0.38, unmeasurable. For ratios of measurements see Table 1.

Differential diagnosis. The principal diagnostic feature of this species is the rugose pronotum characterized by numerous small elevations which are completely lacking in the other three species. Furthermore, the central area of the Y-shaped elevation of the scutellum is strongly swollen but not in other congeners.

Etymology. The specific name is the Latin adjective *gibbosus* (*-a*, *um*), meaning having hump(s), and referring to the tiny elevations of the pronotum.

Distribution. *Cornutidrymus gibbosus* sp. nov. is known only from Indonesia: West Papua (Papua Barat) province; situated on New Guinea mainland (Fig. 17).

Cornutidrymus latus sp. nov.

(Figs 3, 7, 11, 17)

Type locality. Papua New Guinea, East Sepik Province, Ambunti-Dreikikier District, ~142°27′E 4°33′S, ca. 550 m a.s.l.

Type material. Holotype: ♀, "Zoolog. Museum Berlin. / Fundort: [printed] D. N. Guinea / gef. auf der Regenberg 550 m / Dr. Burgers I. G. / 1 Lygaeid. (I. 334) [hw] / gef. am. [printed] 14.5. 1913., No. 880/1913 [hw]" (ZMHB).

Description. ***Colour*** same as *C. gibbosus* sp. nov. except anterior arms of Y-shaped keel of scutellum yellowish.

Integument. Y-shaped elevation of scutellum completely impunctate. Punctures on clavus and corium about as large as on scutellum, therefore, much larger in diameter than of previous species. A section of corium, approximately parallel to clavus, along vein Cu impunctate at posterior half, similarly to *C. gibbosus* sp. nov.

Setation fairly similar to *C. gibbosus* sp. nov. but pronotum and scutellum with more erect setae, most of them near lateral margins, some on disc of pronotum as well.

Structure. Antenniferous tubercles shorter than eye, postocular part of head short; ocelli situated at level of posterior margin of eyes much closer to them than to each other, slightly prominent. Antenna moderately long, scape surpassing tip of clypeus with less than 1.5 times its length; labium reaching mesocoxae, labiomere I reaching middle of eye. Maxillary plate and bucculae similar to *C. gibbosus* sp. nov. (Fig. 11). Humeral spine of pronotum directed laterad and only slightly posteriad, therefore not reaching posterior margin of pronotum. Y-shaped keel of scutellum strong, impunctate posterior arm much longer than anterior arms (meeting point at about one-third length), anterior arms approaching basal angles of scutellum but rather faded. Exocorium about the same width throughout but lateral margin from base convex than narrowing until proximal one-third, then abruptly and strongly widening almost to broad punctate field between vein R and exocorium. Apical margin of corium almost straight. Mesosternum dull, median furrow only slightly widening posteriad, dull submedial parts wider than long, impunctate; median keel of metasternum full, not branching, slightly emergent. Larger tooth of profemur also slightly shorter than basal width of profemur, apicad from it with 3–5 tiny teeth, basally from large tooth profemur unarmed. Abdominal ventrite II with strong, III with short basal median keel, at posterior margin of ventrite III with a pair of submedian trichobothrial humps. Sutures between abdominal ventrites II–V serrate.

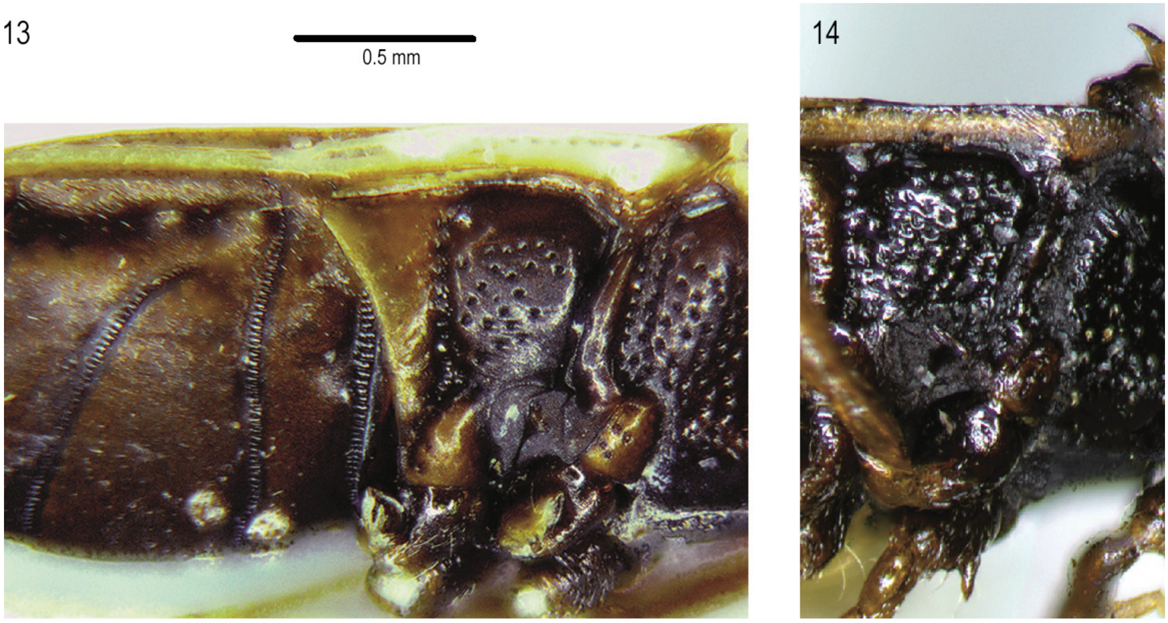


Fig. 13–14. Lateral view of the body. 13 – *C. gibbosus* sp. nov., 14 – *C. acutus* sp. nov.

Measurements (holotype female): Total body length: 4.08; head: length 0.80, width 0.75, interocular distance 0.40, eye length 0.23, length of antenniferous tubercle 0.21; length of antennomeres: I 0.73, II 1.03, III 0.88, IV 0.93, pronotum: length 0.93, maximum width 1.63, width at transversal furrow 0.85, scutellum: length 0.93, width 0.80; length of claval commissure 0.33. For ratios of measurements see Table 1.

Differential diagnosis. The most distinctive feature of *C. latus* sp. nov. is the strongly widened corium, but the erect setae of the head and pronotum are also different from the other species of the genus.

Etymology. The Latin adjective *latus* (*-a, -um*) meaning broad. It refers to the broad body shape resulting from the widened hemelytra.

Distribution. *Cornutidrymus latus* sp. nov. is known only from Papua New Guinea: Momase Region (Fig. 17).

Cornutidrymus acutus sp. nov.

(Figs 4, 8, 12, 14, 15, 16, 17)

Type locality. Indonesia, Highland Papua Province, Pegunungan Bintang Regency (= Star Mountains Regency), Borme District, ~140°25′E 04°24′S, ca.1300 m a.s.l.

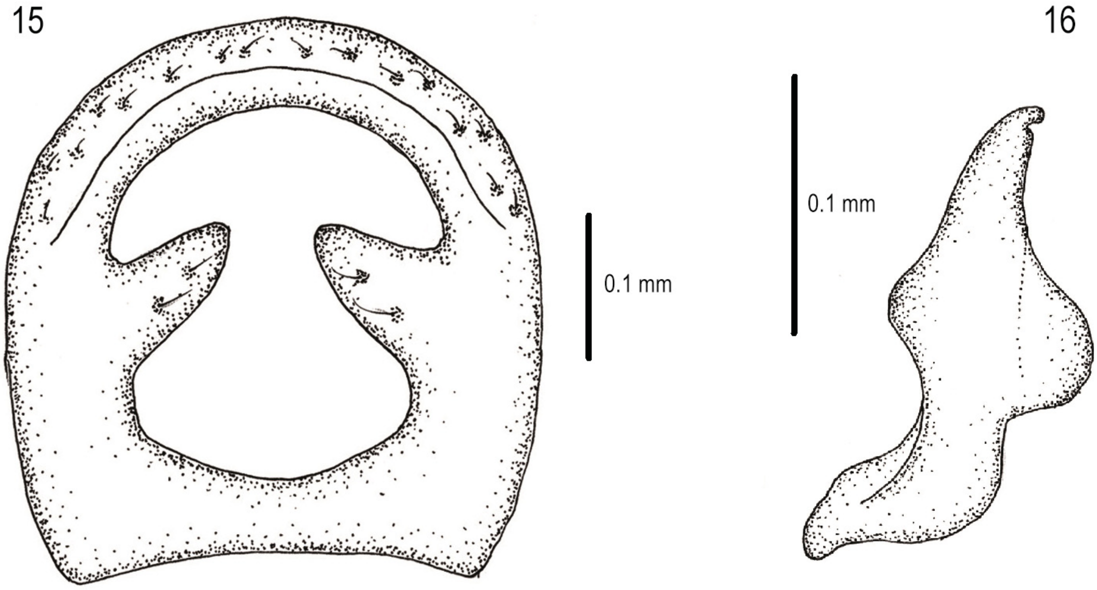
Type material. Holotype: ♂, "Borme, / 1000-1450 m, / 12.-15. VIII. // IRIAN JAYA, / Jayawijaya-Prov. / leg. A. Riedel, 1992" (ZSMC). Paratypes: 2 ♀♀, "Borme, / 1000-1450 m, / 12.-15. VIII. // IRIAN JAYA, / Jayawijaya-Prov. / leg. A. Riedel, 1992" (ZSMC); ♂ (head missing), "NEW GUINEA: NE, / Adelbert Mts: Wanuma / 800-1000m X.27. 1958. // J.L. Gressitt / Light Trap" (BPBM).

Description. ***Colour.*** Head and anterior lobe of pronotum fuscous; scutellum and ventral side of thorax dark brown; apex of clypeus, posterior lobe of pronotum, hemelytron with membrane and abdomen brown; scape and pedicel, labium, femora, tibiae and tarsi, triangular spot between branching veins R and M, exocorium, spots on base of membrane at inner and costal angles, and third spot opposite with costal spot (covering costal spot of other membrane) yellow; basiflagellum slightly darker (distiflagellum missing).

Integument. Most of body with strong and dense punctures, their distance smaller than diameter; head finer punctate, abdomen very finely punctate everywhere; around ocellus, inconspicuous spots on callus of pronotum, humeral angle, pale spot of corium, lateral part of pleura and metepimeron impunctate.

Body mostly bare, head with hardly visible decumbent pubescence, abdomen with dense short decumbent pubescence; antenna with dense decumbent short pubescence and with sparse erect setae, some of them reaching width of antennomeres; femora with sparse semierect setae, some of them reaching basal width of tibiae; tibiae with fine erect short semierect pubescence and very fine stiff erect setae, neither of them reaching basal width of tibiae. Abdomen with short dense, decumbent pubescence.

Structure. Antenniferous tubercle about half as long as eye, postocular part of head much longer, almost as long as eye; ocelli situated far posteriad from eyes but almost two times closer to eyes than to each other, not prominent (Fig. 12). Antenna moderately long, scape surpassing tip of clypeus with less than half of its length; labium reaching mesocoxae, labiomere I almost reaching base of head. Maxillary plate scarcely surpassing mandibular plate, unarmed; bucculae divergent ventrally, very short, semi-circular, elongated posterior part and spine absent (Fig. 12); clypeus produced in acute tooth longer than basal width of tibiae. Humeral spine about same length as spine of clypeus, not broadened to a plate, directed latero-posteriad, surpassing posterior margin of pronotum (Fig. 14). Anterior arms of Y-shaped keel of scutellum less conspicuous than of other species, posterior arm shorter and sparsely punctate. Apical margin of corium straight.



Figs 15–16. Male genitalia of *C. acutus* sp. nov. 15 – pygophore, 16 – paramere.

Mesosternum dull, median furrow strongly widening posteriorly, submedial parts shiny, longer than wide, bordered along inner and outer margin with row of punctures; median keel of metasternum branching in middle, forming a trapezoidal impression. Mesocoxa of male with strong tooth laterally (Fig. 14), missing in females; large tooth of profemur strong, thick, its apex curved anteriad, only 3–5 tiny teeth present on profemur, all apically from the large one. Abdominal ventrites II and III with strongly emergent median keel (between trichobothrial humps as well), which on ventrite IV fading posteriad. Sutures between abdominal ventrites II–IV serrate but between ventrites IV–V normal. Male genitalia (Figs 15–16) similar to most of Drymini (see e.g. Ban 2022, Neimorovets 2024).

Measurements (holotype male, followed by ranges of two female paratypes): Total body length: 5.43, 5.43–5.45; head: length 1.00, 0.98–1.08, width 0.80, 0.78, interocular distance 0.40, 0.40, eye length 0.25, 0.23–0.25, length of antenniferous tubercle 0.15, 0.17–0.18; length of antennomeres: I 0.85, 0.80, II 1.60, 1.25–1.35, III 1.05, 1.03–1.08, IV missing; pronotum: length 1.13, 1.10, maximum width 1.98, 1.80, width at transversal furrow 1.00, 0.90, scutellum: length 1.03, 0.95–1.00, width 1.00, 0.90–0.93; length of claval commissure 0.48, 0.45. For ratios of measurements see Table 1.

Differential diagnosis. *Cornutidrymus acutus* sp. nov. can be distinguished from other species in the genus by several unique features: i) Bucculae are short and lack posterior elongate part and spine (in the other species, the bucculae are elongated posteriad and has a posterior spine). ii) The postocular part of the head is much longer than the antenniferous tubercle (in the other species, it is shorter). iii) The posterior arm of the Y-shaped keel of the scutellum is shorter, approximately 1.7 times the length of the anterior branching (whilst in other species it is at least 2 times longer). iv) Lateral part of the mesosternum is shiny and separated from central part with a row of punctures (in the other species, it is dull and has, at most, a few scattered punctures). v) Median keel of the metasternum branches and connects to the posterior margin, forming a deltoid-shaped depression (in the other species, it is not branching). vi) Suture between the ventrites IV–V is not serrate (in the other species it is serrate).

Etymology. The Latin adjective *acutus* (*-a, -um*) meaning sharp, acute. The new species is named after its clypeus having an acute tip.

Distribution. *Cornutidrymus acutus* sp. nov. is known from Indonesia: Highland Papua (Papua Pegunungan) province; and Papua New Guinea: Momase Region; both of them situated on New Guinea mainland (Fig. 17).

Cornutidrymus sp.

A photograph of a *Cornutidrymus* specimen is available on the iNaturalist citizen science website: https://www.inaturalist.org/observations/153511873. This specimen, found in Lumi, north-west Papua New Guinea, originates from the same locality as one of the previously mentioned specimens of *C. elongatus* sp. nov. However, the specimen on photograph resembles *C. latus* sp. nov. in general habitus but the acute spine on the clypeus is similar to *C. acutus* sp. nov. It likely represents another, still undescribed species.

Key to the species of *Cornutidrymus*

1 Bucculae elongate, posterior end with ventrad directed spine; postocular part of head shorter than antenniferous tubercle; posterior arm of Y-shaped keel of scutellum more than two times longer than part anteriad of branching. 2

– Bucculae short, almost semi-circular, without spine; postocular part of head much longer than antenniferous tubercle; posterior arm of Y-shaped keel of scutellum shorter, only about 1.7 times longer than anteriad

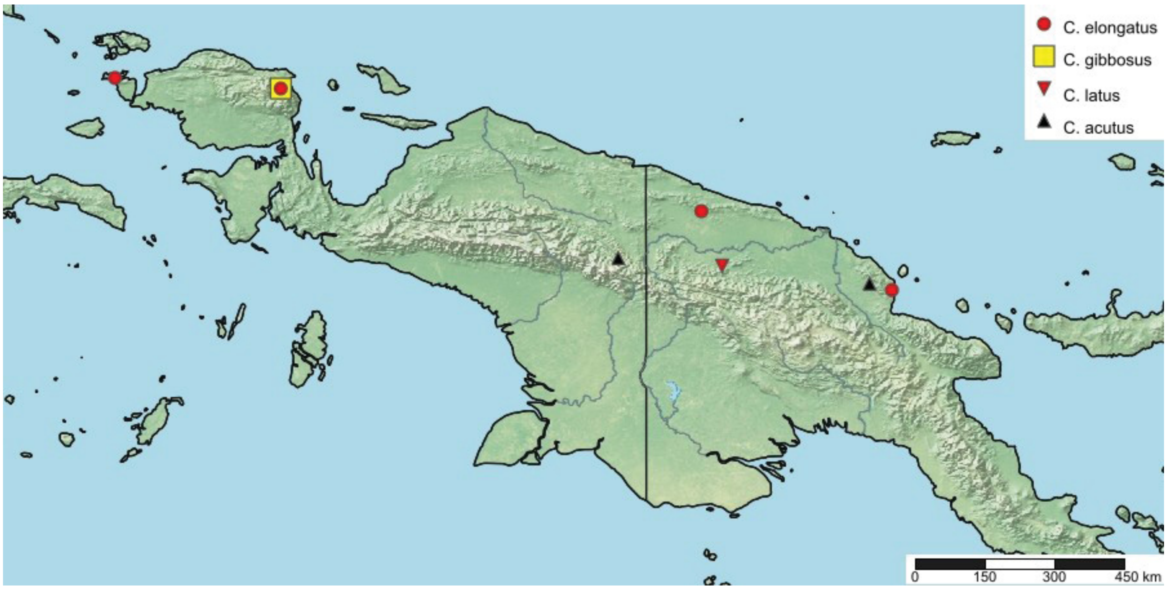


Fig. 17. Distribution of *Cornutidrymus* gen. nov. species.

of branching. .... ***C. acutus*** **sp. nov.**

2 Antennae elongate (scape at least 1.4 times longer than head width); membrane of hemelytron dark. Large species (6.5–7.8 mm). .... ***C. elongatus*** **sp. nov.**

– Antennae shorter (scape about as long as, at most 1.15 times longer than head width); membrane of hemelytron pale. Smaller than 6 mm. 3

3 Pronotum with tiny pale irregular elevations; hemelytra only slightly widened in posterior half. .... ***C. gibbosus*** **sp. nov.**

– Pronotum without conspicuous irregular elevations; hemelytra strongly widened in posterior half. .... ***C. latus*** **sp. nov.**

Summary

Cornutidrymus gen. nov. is a peculiar rhyparochromid genus which seems to be restricted to New Guinea. Because this huge island is one of the least known areas and a biodiversity hotspot, we expect there are further *Cornutidrymus* species awaiting their description – an observation on iNaturalist is probably illustrating one of them. Although the senior author studied several museum collections, all of the newly described *Cornutidrymus* species are represented by one or a few specimens only. It suggests that they are rare or at least hard to collect in nature. Their biology, plants associations or habitat remain unfortunately unknown.

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