

Eight new species of the genus *Carpelimus* Leach, 1819 from Indonesia (Coleoptera: Staphylinidae: Oxytelinae)

Восемь новых видов рода *Carpelimus* Leach, 1819 из Индонезии (Coleoptera: Staphylinidae: Oxytelinae)

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КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Staphylinidae, *Carpelimus*, новые виды, Индонезия.

ABSTRACT: Eight new species of genus *Carpelimus* are described from Indonesia: *Carpelimus (Trogophloeus) moluccanensis*, *Carpelimus (Trogophloeus) ibelensis*, *Carpelimus (Trogophloeus) irianensis*, *Carpelimus (Bucephalinus) jayapurensis*, *Carpelimus (Bucephalinus) filous*, *Carpelimus (Bucephalinus) longifilous*, *Carpelimus (Bucephalinus) tanbaranensis*, *Carpelimus (Bucephalinus) solumus*, **spp.n.**

РЕЗЮМЕ: Описываются восемь новых видов рода *Carpelimus* из Индонезии: *Carpelimus (Trogophloeus) moluccanensis*, *Carpelimus (Trogophloeus) ibelensis*, *Carpelimus (Trogophloeus) irianensis*, *Carpelimus (Bucephalinus) jayapurensis*, *Carpelimus (Bucephalinus) filous*, *Carpelimus (Bucephalinus) longifilous*, *Carpelimus (Bucephalinus) tanbaranensis*, *Carpelimus (Bucephalinus) solumus*, **spp.n.**

Introduction

This study is a continuation of the previous studies on the genus *Carpelimus* for the Oriental biogeographic region [Gildenkov, 2015; 2018, 2019a–c]. Some of the species were described from Western New Guinea; they proved to be more closely related to the species from South Asia than to those from Australia.

This paper is based on the specimens deposited in the following collections: cMG — private collection of M. Gildenkov (Smolensk, Russia); MHNG — Museum d'Histoire Naturelle Geneva (Switzerland); NHMW — Naturhistorisches Museum Wien (Austria); NKME — Naturkundemuseum Erfurt (Germany); SMNS — Staatliches Museum für Naturkunde in Stuttgart (Germany). In the present study, standard methods were used for the

taxonomic research of insects; the preparations were made on an MBS-10 binocular microscope. The genital preparations were processed using 10% KOH and then fixed in euparal. In the descriptions and diagnoses giving the length to width ratio for the head, pronotum, and elytra, the following standard units were used: 7 standard units = 0.1 mm; thus, 1 standard unit constitutes about 0.0143 mm. Photographs were taken with a Canon EOS 5D Mark III camera and a Canon MP-E 65 mm objective using the extended focus technology.

Carpelimus (Trogophloeus) moluccanensis Gildenkov, **sp.n.**

Figs 1, 7–9.

MATERIAL. Holotype, ♂ “INDONESIA, N-Molucca isl. Halmahera, Central Weda Selatan distr. Loleo, S env., Tilopa vill. leg. D. Telnov & K. Greke” “15–18 km SW, Oham, 13.–14. IX.2007, primary lowland forest, UV-Light 150 m, 0°14'46,74"N 127°52'38,19"E” (NKME). Paratypes: 4♂♂, 5♀♀, 9 ex. “INDONESIA, N-Molucca isl. Halmahera, Central Weda Selatan distr. Loleo, S env., Tilopa vill. leg. D. Telnov & K. Greke” “15–18 km SW, Oham, 13.–14. IX.2007, primary lowland forest, UV-Light 150 m, 0°14'46,74"N 127°52'38,19"E” (NKME; cMG — 1♂, 2 ex.); 1♂ “INDONESIA, N-Molucca isl. Halmahera, Central Weda Selatan distr. Loleo vill., S Tilope vill. leg. D. Telnov & K. Greke” “15 km SW Oham, 190m 20.IX.2007, prim. Lowland forest, UV light, 0°14'46,74"N 127°52'38,19"E” (cMG).

DESCRIPTION (holotype). Length 1.8 mm. Overall colouration brown. Entirely dark brown; legs and antennal bases yellow brown, antennae darkened toward apex to brown. Inguent slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 19:26. Neck constriction prominent. Eyes large, convex. Temples well-developed, round, eye diameter in dorsal view about 1.5 times as long as temple length. Head about as wide across eyes as across temples (Fig. 1). Head surface with delicate, fine and dense punctation. Puncture diameter about 1.5 times as small as eye facet.

Distances between punctures significantly smaller than their diameter, interspaces smooth, slightly shining. Antennae rather long, antennal segments 1–3 elongated; segments 4–7 slightly elongated; segments 8–10 about as long as wide; segment 11 elongated, conical. Last 3 segments more massive than others and form loose club (Fig. 1).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins straight from base, then smoothly rounded (Fig. 1). Ratio of pronotum length to its maximum width about 23:29. Surface of pronotum with delicate, fine and very dense punctation. Diameter of punctures about 1.5 times as small as eye facet. Distance between punctures significantly smaller than their diameter, punctures almost merging in central part of disc, interspaces smooth, slightly shining. Pronotal disc with a small, unpaired, oval depression along midline at apex and 2 pairs of distinct, symmetrical depressions: 1 pair of widely crescent-shaped depressions, separated by barely distinct medial ridge, near base and 1 pair in central part of disc, merging across midline to form a single butterfly-shaped depression (Fig. 1).

Ratio of length of elytra to their combined width about 33:37. Scutellum with weak oval depressions (Fig. 1). Surface of elytra with delicate, fine and dense punctation. Puncture diameter about 1.5 times as small as eye facet. Distances between punctures significantly smaller than their diameter, interspaces smooth, slightly shining, punctation similar to that on pronotum, but more uniform.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 7–8).

Female. Sexual dimorphism absent, female morphologically similar to male.

Spermatheca of characteristic structure (Fig. 9).

COMPARATIVE REMARKS. The new species is similar in colouration, body morphology and microsculpture of integument [Gildenkov, 2019a] to *Carpelimus (Trogophloeus) notunus* Gildenkov, 2019 and *C. (T.) vilisus* Gildenkov, 2019. It clearly differs in the structure of the aedeagus (Figs 7–8).

DISTRIBUTION. Indonesia, Maluku Islands.

ETYMOLOGY. Named for its geographical distribution.

Carpelimus (Trogophloeus)
ibelensis Gildenkov, sp.n.

Figs 2, 10–11.

MATERIAL. Holotype, ♂, West Papua "IRIAN JAYA: 22.10.1993 Ob. Ibele-Tal. 2520m ca. 138°47'E 04°06'S, leg. M. Balke (42)" (NHMW).

DESCRIPTION (holotype). Length 1.9 mm. Entirely black; legs and antennae dark brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 18:24. Neck constriction prominent. Eyes rather large, slightly convex. Temples well-developed, round, eye diameter in dorsal view barely exceeds temple length. Head about as wide across eyes as across temples (Fig. 2). Head surface with rather delicate, fine and



Figs 1–3. *Carpelimus (Trogophloeus)* spp., holotypes, males, dorsal view: 1 — *C. moluccanensis*, sp.n.; 2 — *C. ibelensis*, sp.n.; 3 — *C. irianensis*, sp.n.

Рис. 1–3. *Carpelimus (Trogophloeus)* spp., голотипы, самцы, сверху: 1 — *C. moluccanensis*, sp.n.; 2 — *C. ibelensis*, sp.n.; 3 — *C. irianensis*, sp.n.

dense punctation. Puncture diameter about 2.0 times as small as eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining. Antennae short, antennal segments 1–2 elongated; segment 3 triangular, about as long as wide; segments 4–10 strongly transverse; segment 11 elongated, conical. Last 3 segments more massive than others and form loose club (Fig. 2).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins with small notch at base, then smoothly rounded (Fig. 2). Ratio of pronotum length to its maximum width about 21:27. Surface of pronotum with rather delicate, fine and dense punctation. Puncture diameter about 2.0 times as small as eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining. Pronotal disc with 2 pairs of rather weak, symmetrical depressions: 1 pair of deeper, widely crescent-shaped depressions, separated by medial ridge at base of disc and 1 pair of oval and more shallow depressions in central part of disc (Fig. 2).

Ratio of length of elytra to their combined width about 31:34. Scutellum with weak round depressions (Fig. 2). Surface of elytra with delicate, fine and dense punctation. Puncture diameter about 2.0 times as small as eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 10–11).

Female unknown.

COMPARATIVE REMARKS. The new species is similar to *Carpelimus (Trogophloeus) notumus* Gildenkov, 2019, *C. (T.) plenus* Gildenkov, 2019, and *C. (T.) vilisus* Gildenkov, 2019 in the structure of the aedeagus [Gildenkov, 2019a: 32, Figs 5–6, 8–11]. It can be distinguished by dark colouration, weak depressions in the central part of the pronotal disc and transverse antennal segments 4–10 and clearly differs in the structure of the aedeagus (Figs 10–11).

DISTRIBUTION. Indonesia, Western New Guinea.

ETYMOLOGY. The name of the species is derived from the name of the river, in whose valley it was found.

Carpelimus (Trogophloeus)
irianensis Gildenkov, **sp.n.**

Figs 3, 12–13.

MATERIAL. Holotype, ♂, West Papua “IRIAN JAYA: 1.10.1993 Eme Gebiet Okloma, 1500m” “ca. 139°55'E 04°14'S, leg. M. Balke (28)” (NHMW).

DESCRIPTION (holotype). Length 1.8 mm. Entirely dark brown; legs and antennae brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 17:22. Neck constriction prominent. Eyes rather large, slightly convex. Temples well-developed, round, eye diameter in dorsal view barely exceeds temple length. Head about as wide across eyes as across temples (Fig. 3). Head surface with delicate, fine and very dense punctation. Puncture diameter about 4.0 times as small as eye facet. Distances between punctures significantly smaller than their diameter, individual punctures almost indistinct. Antennae short, antennal segments 1–2 elongated; segment 3 triangular, about as long as wide; segments 4–5 about as long as wide; segments 6–10 transverse; segment 11 elongated, conical. Last 3 segments more massive than others and form loose club (Fig. 3).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins with a small notch at base, then smoothly rounded (Fig. 3). Ratio of pronotum length to its maximum

width about 20:24. Surface of pronotum with delicate, fine and very dense punctation. Puncture diameter about 4.0 times as small as eye facet. Distances between punctures significantly smaller than their diameter, individual punctures in central part of disc almost indistinct. Pronotal disc with 2 pairs of barely distinct, round, symmetrical depressions (Fig. 3).

Ratio of length of elytra to their combined width about 29:31. Scutellum with weak, round depressions (Fig. 3). Surface of elytra with delicate, fine and dense punctation. Puncture diameter about 1.5 times as small as eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 12–13).

Female unknown.

COMPARATIVE REMARKS. The new species is similar to *Carpelimus (Trogophloeus) notumus* Gildenkov, 2019, *C. (T.) plenus* Gildenkov, 2019, *C. (T.) vilisus* Gildenkov, 2019, and *C. (T.) ibelensis* in the structure of the aedeagus [Gildenkov, 2019a: 32, Figs 5–6, 8–11] (see above), but differs from them in the details of aedeagus morphology (Figs 12–13). It is very similar to *Carpelimus (Trogophloeus) sumbaensis* (Scheerpeltz, 1957) in size, body proportions and patterns of depressions on the pronotal disc, but is distinguished by a slightly darker colouration, distinct punctation on the surface of the pronotum and can be clearly distinguished by the structure (Figs 12–13) of the aedeagus [Gildenkov, 2015: 396, Fig. 30: 4–5].

DISTRIBUTION. Indonesia, Western New Guinea.

ETYMOLOGY. Named for its geographical distribution.

Carpelimus (Bucephalinus)
jayapurensis Gildenkov, **sp.n.**

Figs 4, 14–16.

MATERIAL. Holotype, ♂, West Papua “INDONESIA. Irian Jaya Jayapura district Genyem., 50 m NN, IV–V. 1999, leg. M. Balke” (NKME). Paratypes: 1♂, 7♀♀, 2 ex. “INDONESIA. Irian Jaya Jayapura district Genyem., 50 m NN, IV–V. 1999, leg. M. Balke” (NKME); 3♂♂, 3♀♀, 5 ex. “INDONESIA. Irian Jaya Nabire distri., 150 m NN, Cemara River, VIII. 1998, leg. M. Balke” (NKME; cMG — 2♂♂, 1♀, 1 ex.).

DESCRIPTION (holotype). Length 1.8 mm. Overall colouration dark brown. Head, pronotum and elytra dark brown; abdomen black brown; legs and antennal base yellow brown, antennae darkened toward apex to brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 16:23. Neck constriction prominent. Eyes large, convex. Temples well-developed, round, eye diameter in dorsal view about 2.0 times as long as temple length. Head widest across eyes (Fig. 4). Head surface with rather delicate, fine and dense punctation. Puncture diameter about 2.0 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces smooth, slightly shining. Antennae rather short, antennal segments 1–3 elongated; segments 4–5 slightly elongated; segments 6–7 about as long as wide; segments 8–10 transverse; segment 11 elongated, conical. Last 3 segments more massive than others and form loose club (Fig. 4).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins straight from base, then smoothly rounded (Fig. 4). Ratio of pronotum length to its maximum width about 20:27. Surface of pronotum with rather distinct, large and dense punctation. Puncture diameter near lateral margins almost 1.5 times as large as eye facet, puncture

diameter in central part of disc about 1.5 times as small as eye diameter. Distances between punctures significantly smaller than their diameter, interspaces smooth, slightly shining. Pronotal disc with 1 unpaired oval depression along midline near apex and 2 pairs of prominent, symmetrical depressions: 1 pair of narrowly crescent-shaped depressions, separated by medial ridge, near base of disc and 1 pair of rather deep and oval depressions in central part of disc, merging together with their bases across midline to form a single butterfly-shaped depression (Fig. 4).

Ratio of length of elytra to their combined width about 31:35. Scutellum with weak round depressions (Fig. 4). Elytral surface with delicate, fine and dense punctation. Puncture diameter about 1.5 times as small as eye facet. Distances between punctures significantly smaller than their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 14–15).

Female. Sexual dimorphism absent, female morphologically similar to male.

Spermatheca of characteristic structure (Fig. 16).

COMPARATIVE REMARKS. The new species is similar to *Carpelimus (Bucephalinus) curvus* Gildenkov, 2014a described from Taiwan [Gildenkov, 2014]. It differs in its geographic distribution, smaller body size, much better developed eyes, larger punctation on the pronotum, especially in the area of the lateral margins, and can be clearly distinguished by the details of the structure (Figs 14–15) of the aedeagus [Gildenkov, 2014a: 234, Fig. 1: 1].

DISTRIBUTION. Indonesia, Western New Guinea.

ETYMOLOGY. Named for its geographical distribution.

Carpelimus (Bucephalinus)
filous Gildenkov, **sp.n.**

Figs 5, 17–19.

MATERIAL. Holotype, ♂, West Papua "INDONESIA. Irian Jaya Jayapura district Genyem., 50 m NN, IV–V. 1999, leg. M. Balke" (NKME). Paratypes: 1♂ "INDONESIA. Irian Jaya Nabire distr., 150 m NN, Cemara River, VIII. 1998, leg. M. Balke" (NKME); 3♂♂, 4♀♀ "INDONESIA. Irian Jaya Jayapura district Genyem., 50 m NN, IV–V. 1999, leg. M. Balke" (NKME; cMG — 2♂♂).

DESCRIPTION (holotype). Length 2.5 mm. Entirely black; legs and antennae dark brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 21:32. Neck constriction prominent. Eyes large, convex, occupying almost entire lateral sides of head, temples barely developed (Fig. 5). Head surface with very delicate, extremely fine and dense punctation. Puncture diameter more than 7 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces slightly shagreened, separate punctures in some places difficult to distinguish. Antennae long, with lengths of all antennal segments noticeably or significantly longer than their width (Fig. 5).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins straight from base, then smoothly



Figs 4–6. *Carpelimus (Bucephalinus)* spp., holotypes, males, dorsal view: 4 — *Carpelimus jayapurensis*, **sp.n.**; 5 — *Carpelimus filous*, **sp.n.**; 6 — *Carpelimus longifilous*, **sp.n.**

Рис. 4–6. *Carpelimus (Bucephalinus)* spp., голотипы, самцы, сверху: 4 — *Carpelimus jayapurensis*, **sp.n.**; 5 — *Carpelimus filous*, **sp.n.**; 6 — *Carpelimus longifilous*, **sp.n.**



Figs 7–19. Genitalia of *Carpelimus*: 7–9 — *C. moluccanensis*, sp.n.; 10–11 — *C. ibelensis*, sp.n.; 12–13 — *C. irianensis*, sp.n.; 14–16 — *C. jayapurensis*, sp.n.; 17–19 — *C. filous*, sp.n.; 7, 10, 12, 14, 17 — aedeagus, ventral view (holotypes); 8, 11, 13, 15, 18 — aedeagus, lateral view (holotypes); 9, 16, 19 — spermatheca (paratypes). Scale bar: 0.25 mm.

Рис. 7–19. Гениталии *Carpelimus*: 7–9 — *C. moluccanensis*, sp.n.; 10–11 — *C. ibelensis*, sp.n.; 12–13 — *C. irianensis*, sp.n.; 14–16 — *C. jayapurensis*, sp.n.; 17–19 — *C. filous*, sp.n.; 7, 10, 12, 14, 17 — эдеагус, снизу (голотипы); 8, 11, 13, 15, 18 — эдеагус, сбоку (голотип); 9, 16, 19 — сперматека (паратипы). Масштаб: 0,25 мм.

rounded (Fig. 5). Ratio of pronotum length to its maximum width about 27:34. Surface of pronotum with very delicate, extremely fine and dense punctation, similar to that on head, but more distinct. Puncture diameter more than 7 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces smooth, slightly shining. Pronotal disc with 1 barely noticeable oval flattening along midline at apex and 2 pairs of rather pronounced, symmetrical depressions: 1 pair of narrowly crescent-shaped depressions, merging across pronotal midline to form a single round, deep depression near disc base and 1 pair of longitudinal, bean-shaped depressions, with slightly diverging apices, on either side of midline in central part of disc (Fig. 5).

Ratio of length of elytra to their combined width about 43:48. Scutellum with weak, round depressions (Fig. 5). Surface of elytra with delicate, fine and dense punctation. Puncture diameter about 5 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 17–18).

Female. Sexual dimorphism absent, female morphologically similar to male.



Figs 20–21. *Carpelimus* spp., dorsal view: 20 — *Carpelimus (Bucephalinus) tanbaranensis*, **sp.n.**, paratype, female; 21 — *Carpelimus (Bucephalinus) solumus*, **sp.n.**, holotype, male.

Рис. 20–21. *Carpelimus* spp., сверху: 20 — *Carpelimus (Bucephalinus) tanbaranensis*, **sp.n.**, *solumus* паратип, самка; 21 — *Carpelimus (Bucephalinus) solumus*, **sp.n.**, голотип, самец.

Spermatheca of characteristic structure (Fig. 19).

COMPARATIVE REMARKS. The new species is similar to *Carpelimus (Bucephalinus) chagosanus* (Bernhauer, 1922) in colouration, size and body morphology, but it can be clearly distinguished by the structure of the aedeagus, especially by long, characteristically curved parameres. The new species is also similar to *C. (B.) longifilous* (see below), but differs in a smaller body size and in the details of aedeagus morphology (Figs 17–18).

DISTRIBUTION. Indonesia, Western New Guinea.

ETYMOLOGY. From Latin “filo” (thread, stretch into a thread); the name refers to the structure of parameres; they are long and thin at their apices.

Carpelimus (Bucephalinus)
longifilous Gildenkov, **sp.n.**

Figs 6, 22–24.

MATERIAL. Holotype, ♂ “S Sulawesi Prov., 400 m 20km NE Sabbang 2.28.56S 120.12.00 E 5.–7.Jul 2001, Bolm lgt.” (SMNS). Paratypes: 2♂♂, 5♀♀, 3 ex. “S Sulawesi Prov., 400 m 20km NE Sabbang 2.28.56S 120.12.00 E 5.–7.Jul 2001, Bolm lgt.” (SMNS; cMG — 1♂, 1 ex.).

DESCRIPTION (holotype). Length 3.0 mm. Entirely black; legs and antennae dark brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 25:38. Neck constriction prominent. Eyes large, convex, occupying almost entire lateral sides of head, temples barely developed (Fig. 6). Head surface with very delicate, extremely fine and dense punctation. Puncture diameter more than 5 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces slightly shagreened, separate punctures in some places difficult to distinguish. Antennae rather long, with lengths of all antennal segments exceeding their width (Fig. 6).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins straight from base, then smoothly rounded (Fig. 6). Ratio of pronotum length to its maximum width about 32:40. Surface of pronotum with delicate, extremely fine and dense punctation; punctation similar to that on head, but more distinct. Puncture diameter more than 5 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces smooth, slightly shining. Pronotal disc with 1 barely noticeable narrow unpaired depression along midline at apex and 2 pairs of symmetrical depressions: 1 pair near disc base, merging across midline to form a rather deep diamond-shaped pit and 1 pair of rather weak, longitudinal, bean-shaped depressions, with slightly diverging apices, on either side of midline in central part of disc (Fig. 6).

Ratio of length of elytra to their combined width about 53:56. Scutellum with weak, round depressions (Fig. 6). Surface of elytra with delicate, fine and dense punctation. Puncture diameter about 4 times as small as eye diameter. Distances between punctures about equal to their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 22–23).

Female. Sexual dimorphism absent, female morphologically similar to male.

Spermatheca of characteristic structure (Fig. 24).

COMPARATIVE REMARKS. The new species is similar to *C. (B.) chagosanus* in colouration, size and body morphology, but can be clearly distinguished by aedeagus morphology, especially by long, characteristically curved

parameres. The new species is also similar to *C. (B.) filous* (see above), but differs in a larger body size and the details of aedeagus morphology (Figs 22–23).

DISTRIBUTION. Indonesia, Sulawesi Island.

ETYMOLOGY. From Latin “filo” (thread, stretch into a thread) and “longi” (long, lengthy); the name refers to the morphology of parameres; they are long and thin at their apices.

Carpelimus (Bucephalinus)
tanbaranensis Gildenkov, **sp.n.**

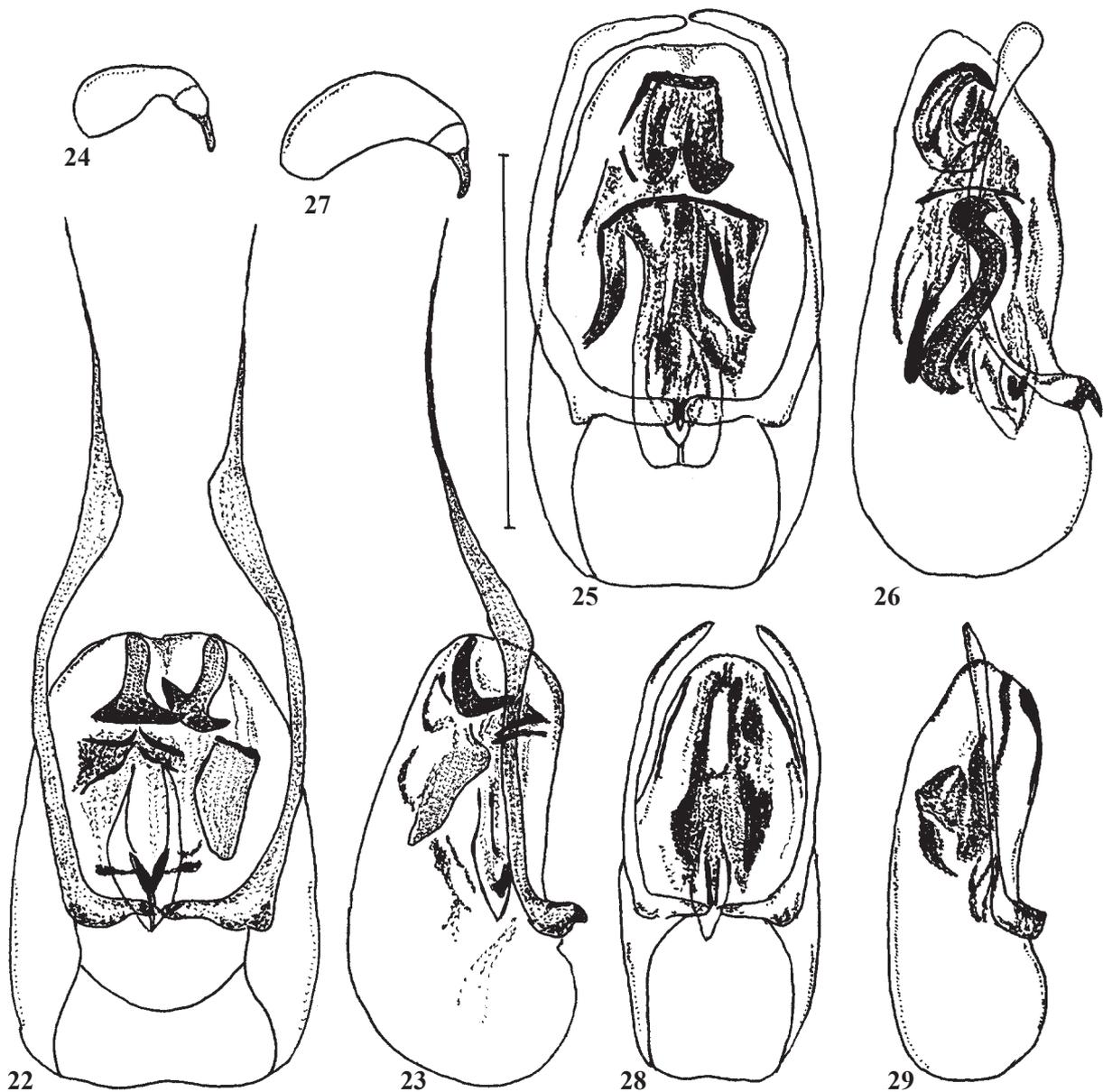
Figs 20, 25–27.

MATERIAL. Holotype, ♂ (partially obliterated, the head is missing) “C Sulawesi Prov., 50m, 6km E Tambarana, 120.28.06E 1.11.15S, Bolm lgt. 9.–11July 1999” (SMNS). Paratypes: 9♀♀ “C

Sulawesi Prov., 50m, 6km E Tambarana, 120.28.06E 1.11.15S, Bolm lgt. 9.–11July 1999” (SMNS; cMG — 2♀♀).

DESCRIPTION. The only known male (holotype) lacks the head (it was apparently lost during storage or primary mounting), and the description is therefore based on the female paratype (Fig. 20) that has colouration and micro-sculpture matching those on the comparable body parts of the holotype. Length about 2.7 mm. Overall colouration brown. Entirely brown, head slightly darker than pronotum and elytra; legs and antennae light brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 21:32. Neck constriction promi-



Figs 22–29. Genitalia of *Carpelimus*: 22–24 — *C. longifilous*, **sp.n.**; 25–27 — *C. tanbaranensis*, **sp.n.**; 28–29 — *C. solumus*, **sp.n.**; 22, 25, 28 — aedeagus, ventral view (holotypes); 23, 26, 29 — aedeagus, lateral view (holotypes); 24, 27 — spermatheca (paratypes). Scale bar: 0.25 mm.

Рис. 22–29. Гениталии *Carpelimus*: 22–24 — *C. longifilous*, **sp.n.**; 25–27 — *C. tanbaranensis*, **sp.n.**; 28–29 — *C. solumus*, **sp.n.**; 22, 25, 28 — эдеагус, снизу (голотип); 23, 26, 29 — эдеагус, сбоку (голотипы); 24, 27 — сперматека (паратипы). Масштаб: 0,25 мм.

ment. Eyes large, convex, temples well-developed, round, eye diameter in dorsal view about 2.0 times as long as temple length. Head widest across eyes (Fig. 20). Head surface with very delicate, extremely fine and dense punctation. Puncture diameter about 5 times as small as eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining. Antennae long, with length of all antennal segments noticeably or significantly exceeding their width (Fig. 20).

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins smoothly rounded (Fig. 20). Ratio of pronotum length to its maximum width about 27:34 (25:33 in holotype). Surface of pronotum with very delicate, extremely fine and dense punctation. Puncture diameter about 5 times as small as eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining. Pronotal disc with 1 weak oval depression along midline at apex and 2 pairs of rather well-developed, symmetrical depressions: 1 pair of widely crescent-shaped depressions separated by low medial ridge, near disc base and 1 pair of longitudinal, bean-shaped depressions, with slightly diverging apices, on either side of midline in central part of disc (Fig. 20).

Ratio of length of elytra to their combined length about 43:48 (43:44 in holotype). Scutellum with weak, longitudinal depressions (Fig. 20). Surface of elytra with very delicate, fine and dense punctation. Puncture diameter about 4 times as small as eye facet. Distances between punctures approximately equal to their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 25–26).

Female. Sexual dimorphism absent, female morphologically similar to male.

Spermatheca of characteristic structure (Fig. 27).

COMPARATIVE REMARKS. The new species is similar in colouration, size, body morphology and integument microsculpture to *Carpelimus (Bucephalinus) assingi* Gildenkov, 2014, but differs in having a finer punctation on the elytra and in the structure of the spermatheca and can be clearly distinguished by the structure (Figs 25–26) of the aedeagus [Gildenkov, 2014b: 186, Fig. 1: 1–2].

DISTRIBUTION. Indonesia, Sulawesi Island.

ETYMOLOGY. Named for its geographical distribution.

Carpelimus (Bucephalinus)
solumus Gildenkov, **sp.n.**

Figs 21, 28–29

MATERIAL. Holotype, ♂ “S Sulawesi nr. Bantimurung | 700m, 9–12.V.97 | leg. S. Kurbatov” (MHNG).

DESCRIPTION (holotype). Length 1.7 mm. Entirely dark brown; legs and antennal base yellow brown, antennae darkened toward apex to brown. Integument slightly shining, body with short, light-coloured hairs.

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 17:24. Neck constriction prominent. Eyes of medium size, slightly convex. Temples well-developed, round, eye diameter in dorsal view noticeably longer (but less than 1.5 times as long) than temple length. Head widest across temples (Fig. 21). Head surface with coarse, large and very dense punctation. Punctures umbilicate, their diameter about equal to eye facet. Separate punctures distinct only on vertex, distances between them significantly smaller than their diameter, interspaces shagreened; on remaining surface of head punctures coalescent, forming rather coarse microsculpture (Fig. 21). Antennae rather long, antennal segments 1–3 elongated; segments 4–5 slightly

elongated; segments 6–7 about as long as wide; segments 8–10 slightly transverse; segment 11 elongated, conical. Last 3 segments more massive than others and form loose club.

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins with a barely distinct notch at base, then smoothly rounded (Fig. 21). Ratio of pronotum length to its maximum width about 19:26. Surface of pronotum with coarse, large and very dense punctation. Punctures umbilicate, their diameter about equal to eye facet. Separate punctures indistinct, coalescent, forming rather coarse microsculpture (Fig. 21). Depressions on pronotal disc absent (Fig. 21).

Ratio of length of elytra to their combined width about 29:33. Scutellum with weak rounded depressions (Fig. 21). Surface of elytra with distinct, large and dense punctation. Puncture diameter about 1.5 times as large as eye facet. Distances between punctures much smaller than their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 28–29).

Female unknown.

COMPARATIVE REMARKS. The new species is somewhat similar in punctation patterns to the African *Carpelimus (Bucephalinus) bicyclus* (Fauvel, 1907) and *C. (B.) turneri* Gildenkov, 2012, but can be distinguished by a smaller body size and also differs in geographic distribution and the structure (Figs 28–29) of the aedeagus [Gildenkov, 2015: 376, Fig. 10: 5, 7].

DISTRIBUTION. Indonesia, Sulawesi Island.

ETYMOLOGY. From Latin “solum” (lonely); the name alludes to the fact that the female remains unknown.

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