

## Review of the *Thinodromus circulus* species group (Coleoptera: Staphylinidae: Oxytelinae)

György MAKRANCZY

Department of Zoology, Hungarian Natural History Museum, H-1088 Budapest, Baross utca 13, Hungary;  
e-mail: makranczy@zoo.nhmus.hu

**Abstract.** The *Thinodromus circulus* species group is revised and five species are recognized within it. Lectotypes are designated for *Trogophloeus circulus* Bernhauer, 1922, *T. chagosanus* Bernhauer, 1922, *T. palustris* Bernhauer, 1922 and *T. arcitenens* Fauvel, 1905; *Thinodromus velutinus* (Sharp, 1887), comb. nov., is transferred from *Carpelimus* Leach, 1819. The transferred species is illustrated with SEM images, the others by colour photographs of external morphology. Male and female genitalia plus terminalia of the Neotropical species are illustrated with line drawings; male characters of the Old World taxa facilitating species recognition are figured.

**Key words.** Coleoptera, Staphylinidae, Oxytelinae, *Thinodromus*, taxonomy, new species, Neotropical Region, Old World oceanic islands

### Introduction

A prerequisite for a type review of the New World species of the genus *Carpelimus* Leach, 1819 is the correction of the generic placement of certain previously described taxa. The present article is one of several intended to treat these misplaced taxa. *Thinodromus* Kraatz, 1857 is a poorly known genus with great morphological diversity and given this, it is preferred to manage this diversity using species groups rather than subgenera or genera, which may be subject to numerous further changes and re-evaluations (MAKRANCZY 2006). The group of species treated herein exhibits a number of character states that are transitional between *Thinodromus* and *Carpelimus*, perhaps still more closely allied to the former. It can also be suspected that *Thinodromus*, in the current sense, is an assemblage of more ancient taxa, and *Carpelimus* (or other currently separate genera, like *Trogactus* Sharp, 1887) are younger, very successful (quite speciose) lineages that arose from some of these ancestors. This is definitely a question that will at one point require re-examination of the hypothesized phylogenetic relationships between the involved groups. For the time being, however, *Thinodromus* is treated in the sense established by HERMAN (1970).

The most important diagnostic feature of *Thinodromus* is the five-segmented tarsus with the basal three articles strongly compressed. It appears that members of the *T. circulus* species group (as defined herein) have their basal two tarsomeres completely fused (Figs 5, 13 and 18): while they retain two separate rings of apical setae, a membranous connection between them can no longer be observed. Males possess sternite IX, but their aedeagi are of the *Carpelimus* type: dorsoventrally flattened, with slender parameres and setae (one each) on them. They also differ considerably in their internal sclerites from those *Thinodromus* species where these were critically examined, therefore the homologies and nomenclature established by the author in previous articles (MAKRANCZY 2009, 2013) cannot be applied. Besides the genital traits, the five species are united by their eyes (in lateral view), which are concave on the postero-ventral side to a variable extent. Unlike most other *Thinodromus*, the antennae do not seem to differ significantly between male and female.

The three species from Old World oceanic islands share the most peculiar genitalic features, as well as the somewhat reduced tarsal segmentation with the Neotropical taxa. Given the insufficient knowledge of the *Thinodromus* diversity in the Old World, their inclusion in this group must be tentative; they are discussed and illustrated here to facilitate their recognition. The material available was inappropriate to critically study the female genital features, so the treatments here are mostly confined to the primary sexual traits of the males. It is expected that when better known (and with perhaps more species described) the Old World taxa around *T. palustris* Bernhauer, 1922 will appear distinct enough to be set aside in a group of their own, but the present author considers formal naming of a *T. palustris* species group premature; meanwhile, it can certainly be regarded as a species complex.

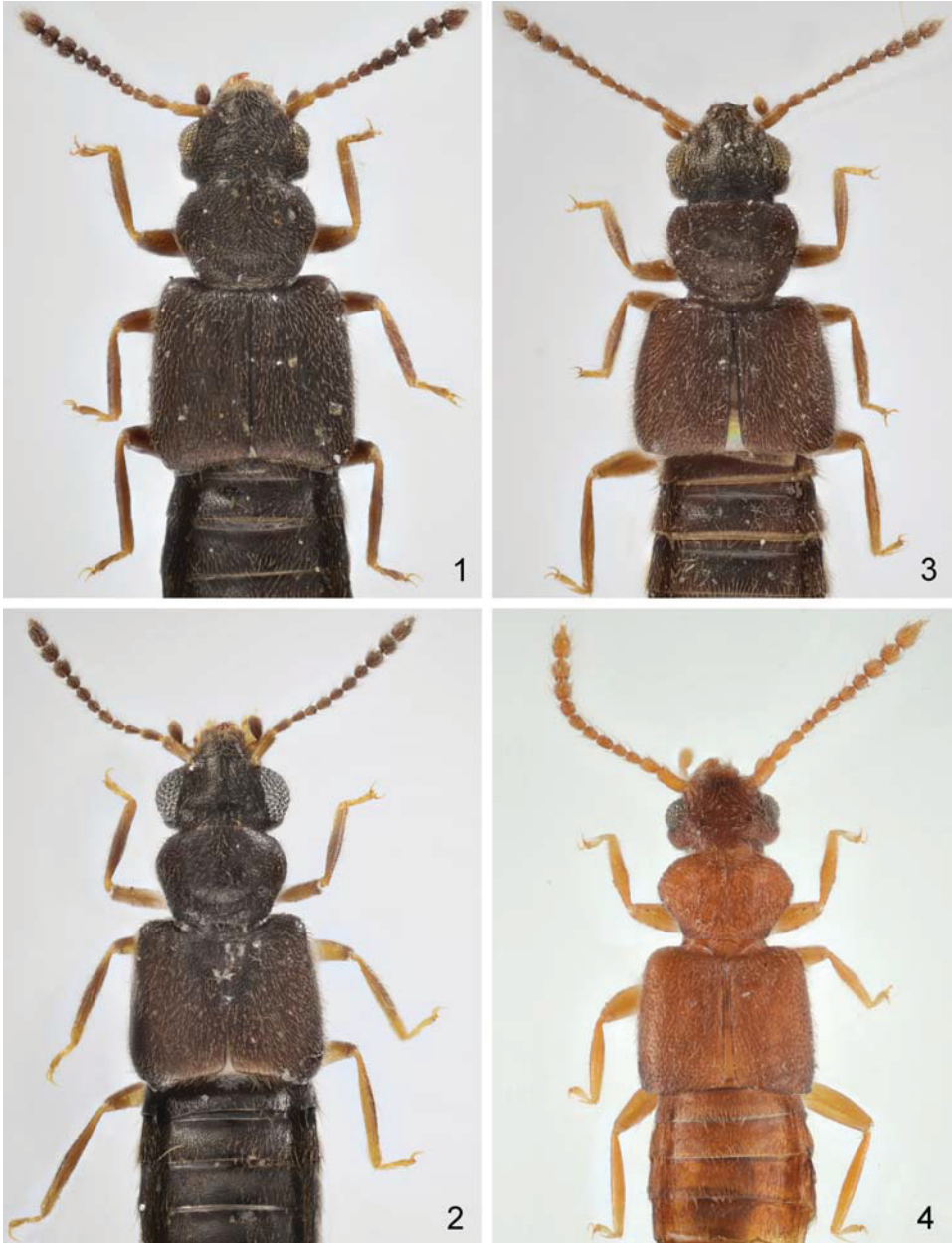
## Material and methods

Material from the following sources were used:

- BMNH The Natural History Museum, London, United Kingdom;
- BPBM Bernice P. Bishop Museum, Honolulu, Hawaii, USA;
- FMNH Field Museum of Natural History, Chicago, IL, USA;
- HNHM Hungarian Natural History Museum, Budapest, Hungary;
- ISNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium;
- MRAC Musée Royal de l'Afrique Centrale, Tervuren, Belgium;
- NHMW Naturhistorisches Museum Wien, Wien, Austria.

When exact label data are listed, '\ ' separates labels and ';' separates lines. Texts within brackets '[' ]' are explanatory and were not included on the original labels. An effort was made to supplement locality data with geographical coordinates.

Measurements are defined as follows: HW = head width including eyes; TW = head width at temples; PW = maximum width of pronotum; SW = approximate width of shoulders; MW = maximum width of elytra; AW = maximum width of abdomen; HL = head length at midline from front margin of clypeus to the neck; EL = eye length; TL = temple length; PL = length of pronotum at mid-line; SL = length of elytron from shoulder; SC = length of elytron from hind apex of scutellum; FB = forebody length (combined length of head, pronotum and elytra); BL = approximate body length. All measured from dorsal view.



Figs 1–4. Forebodies of *Thinodromus* species. 1 – *T. circulus* (Bernhauer, 1922); 2 – *T. chagosanus* (Bernhauer, 1922); 3 – *T. palustris* (Bernhauer, 1922); 4 – *T. arcitenens* (Fauvel, 1905).

For descriptions and measurements a Leica MZ 12.5 stereoscopic microscope was used. For the line drawings, structures were dissected and permanently mounted in Euparal on plastic cards and pinned with the specimens. Genitalia were prepared as detailed in MAKRANCZY (2006). Details of illustration methods are also discussed in the latter article. Drawings were done using a Jenalab (Carl Zeiss, Jena) compound microscope and drawing tube (camera lucida). SEM images were taken using uncoated specimens with a Hitachi S-2600 N scanning electron microscope. For colour habitus photography a Nikon D4 camera with Mitutoyo Planapo 10× ELDW lens was used and layers composed with ZereneStacker.

## Taxonomy

### *Thinodromus circulus* (Bernhauer, 1922)

(Figs 1, 5–10, 21–22, 32)

*Trogophloeus circulus* Bernhauer, 1922a: 3 (original description).

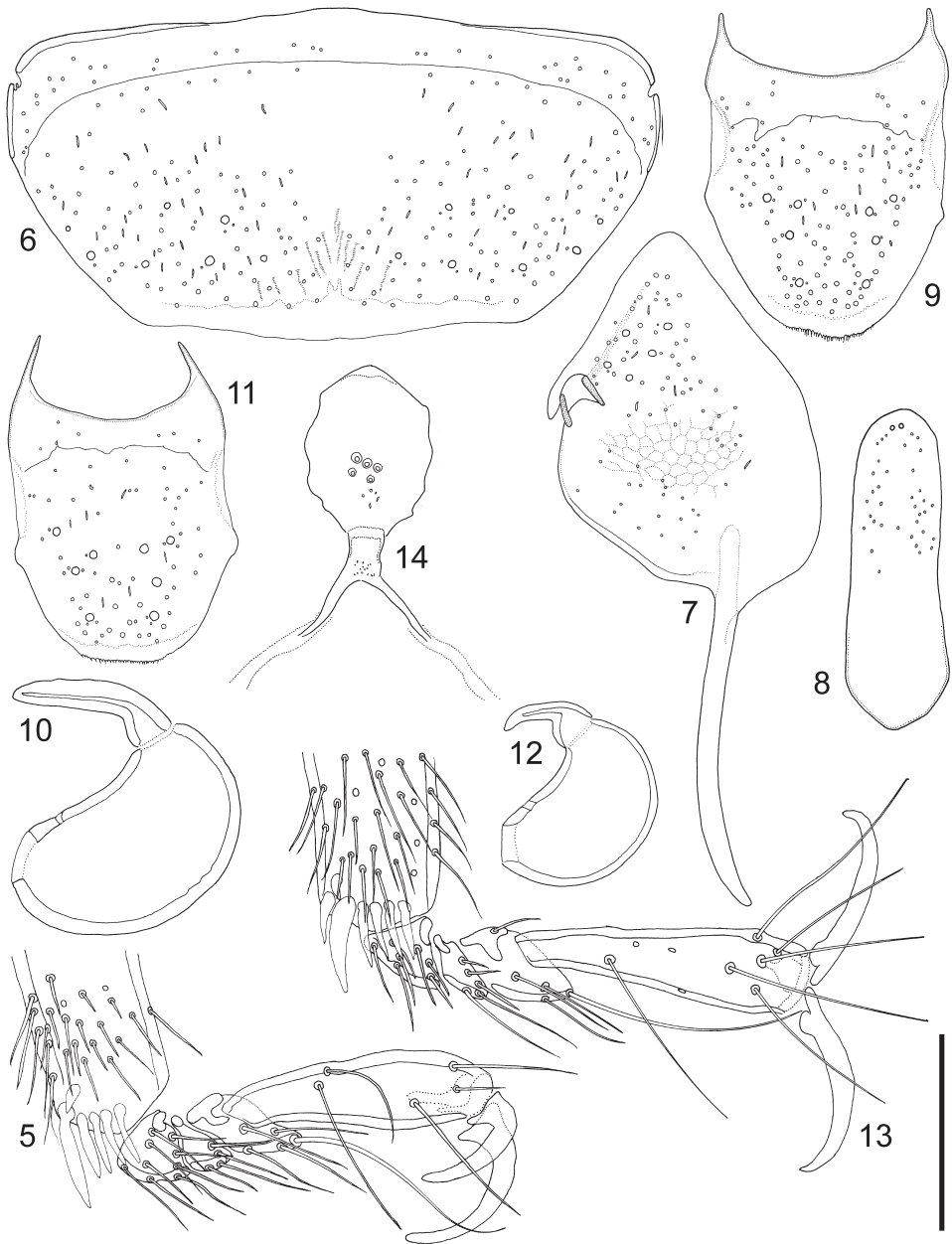
*Trogophloeus (Carpalimus) circulus*: SCHEERPELTZ (1933): 1081 (catalogue).

*Thinodromus circulus*: HERMAN (1970): 387 (catalogue), HERMAN (2001): 1765 (catalogue).

**Type locality.** Bolivia, Cochabamba, Yuracares, approx. 15°56'S, 65°30'W.

**Type material examined.** LECTOTYPE (here designated): ♂, 'Yuracaris, Bolivien; A. Fauvel determ. [label cut in two] \ circulus; Bernh.; Typus. \ circulus Fauv.; i.l. Mus. Hamburg \ Chicago NHMus; M. Bernhauer; Collection \ Lectotypus; Trogophloeus; circulus Bernhauer; des. Makranczy, 2013 \ Thinodromus; circulus (Bernhauer); det. Makranczy, 2013' (FMNH). PARALECTOTYPES: 3 ♂♂ 1 ♀ 'Yuracaris; Bolivie \ circulus; Fvl. \ Coll. et det A. Fauvel; R.I.Sc.N.B. 17.479 \ Paralectotypus; Trogophloeus; circulus Bernhauer; des. Makranczy, 2013 \ Thinodromus; circulus (Bernhauer); det. Makranczy, 2001' (ISNB, 1 ♂ in HHNM).

**Redescription.** *Measurements* (in mm, n = 5): HW = 0.40 (0.39–0.42); TW = 0.395 (0.39–0.41); PW = 0.44 (0.43–0.45); SW = 0.54 (0.52–0.56); AW = 0.59 (0.56–0.63); HL = 0.26 (0.24–0.27); EL = 0.12 (0.12–0.13); TL = 0.07 (0.06–0.07); PL = 0.33 (0.32–0.35); SL = 0.59 (0.57–0.60); SC = 0.56 (0.54–0.57); FB = 1.21 (1.16–1.26); BL = 2.24 (2.17–2.31). *Lustre and colour.* Body medium dull, especially head and pronotum, due to surface sculpture, with only tiny glittery spots; rest of body more lustrous. Head, pronotum and abdomen very dark brown. Elytra just a little bit lighter, dark brown with some reddish tint. Antennae dark brown but basal 1/3 conspicuously lighter, light brown, even yellowish at base. Legs and mouthparts medium to dark brown but tarsi and tibiae (especially both ends) often lighter than femora. *Shape and sculpture.* Forebody as in Fig. 1. Head quite transverse, with large eyes and well developed, bulging temples nearing half the size of eyes. Neck delineated only by different, alveolate microsculpture, but without transversal groove. Antennae rather short, antennomeres slightly transverse: antennomeres 4 and 5 1.00–1.06× and 1.03–1.08× broader than long, respectively, antennomeres 9 and 10 1.30–1.38 and 1.60–1.70× broader than long, respectively. Pronotum rather transverse, strongly obtuse-angled anterior corners superficially appear somewhat rounded but still marked. Posterior half of pronotal sides quite straight, even feebly concave; posterior corners obtuse-angled and rounded. Horseshoe-shaped impression slightly marked except posterior/median part where rather impressed; slight lateral depressions connected by it. Middle of disc bearing pair of shallow depressions. Slight (thin) marginal bead (mostly lateral) observable only in slightly lateral view. Elytra combined imperceptibly broader than long, gently dilated toward apex, with a pair



Figs 5–14. 5–10 – *Thinodromus circulus* (Bernhauer, 1922) (5 – mesotarsus; 6 – male sternite VIII; 7 – male tergite IX; 8 – male sternite IX; 9 – male tergite X; 10 – spermatheca); 11–12 – *T. velutinus* (Sharp, 1887) (11 – tergite X; 12 – spermatheca); 13–14 – *T. chagosanus* (Bernhauer, 1922) (13 – mesotarsus; 14 – platelike armature in hypopharynx). Scale bar: 0.06 mm for 14; 0.07 mm for 5, 13; 0.1 mm for 10–12; 0.12 mm for 8–9; 0.14 mm for 6–7.

of small, oval, slightly elongate impressions behind scutellum and extending posteriorly in longitudinal impressions, connected to somewhat depressed centre of elytral disc. Posterior elytral margin (slightly oblique) with very thin bead and in outer 1/3 with small membranous lobe protruding. Apex of abdominal tergite VII with palisade fringe. *Punctuation and microsculpture*. Head and pronotum densely but not too deeply punctured, yet appearance dominated by acinose microsculpture; puncture interspaces on average smaller than puncture diameters. Punctuation denser near the edges than at centre of discs. Epistomal suture barely marked by transversal strigulate microsculpture. Elytral punctures only slightly larger in size but interspaces much larger and with more conspicuous microsculpture only apparent at the scutellar area, otherwise quite indistinct. Consequently, elytral surface more lustrous, even a little more than abdomen bearing strong coriaceous/imbricate microsculpture (with isodiametric or slightly transverse cells) giving a greasy lustre. Abdominal punctures tiny and scattered. *Pubescence*. Body setation fine, short and medium dense and equal sized on head and pronotum, a little longer and less dense on elytra. Longer hairs only on abdomen, especially apices of segments; otherwise elytral and abdominal setation with approximately the same density. *Primary and secondary sexual features*. Male sternite VIII as in Fig. 6, male tergite IX as in Fig. 7, male sternite IX as in Fig. 8; tergite VIII (Fig. 21) and tergite X (Fig. 9) seemingly not different between sexes. Aedeagus as in Fig. 22. Spermatheca as in Fig. 10, female ringstructure as in Fig. 32.

**Differential diagnosis.** This species is distinguishable from *T. velutinus* by its less conspicuously strong punctuation of the head and pronotum. These two Neotropical species differ from the rest of the treated taxa by the less elongate antennae (mid-antennal segments more or less isodiametric or transverse, never elongate).

**Distribution.** This species is known only from its type locality in Bolivia.

**Remarks.** A short series of specimens are the only material available of this species and no further data survived. The series was first studied by Albert Fauvel, but had remained undescribed by him. Finally, a year after Fauvel's death, Max Bernhauer published an article with Fauvel's names, validating these taxon names. BERNHAUER (1922a) gave no further information on how this material came to him. The lectotype is chosen to fix the interpretation of this taxon.

### *Thinodromus velutinus* (Sharp, 1887) comb. nov.

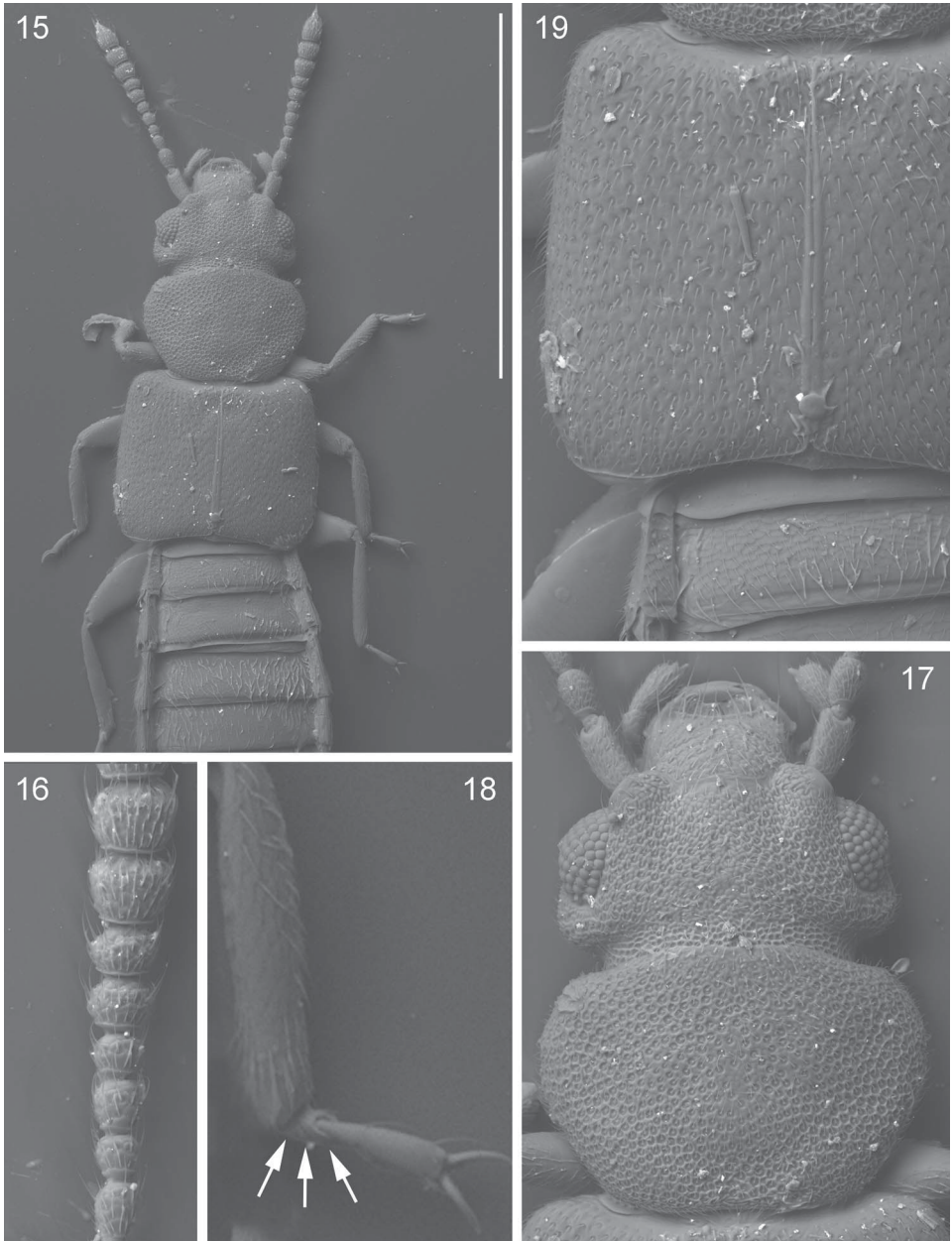
(Figs 11–12, 15–20, 31)

*Trogophloeus velutinus* Sharp, 1887: 700 (original description), BERNHAUER & SCHUBERT (1911): 105 (catalogue).  
*Carpelimus velutinus*: HERMAN (1970): 394 (catalogue), HERMAN (2001): 1709 (catalogue).

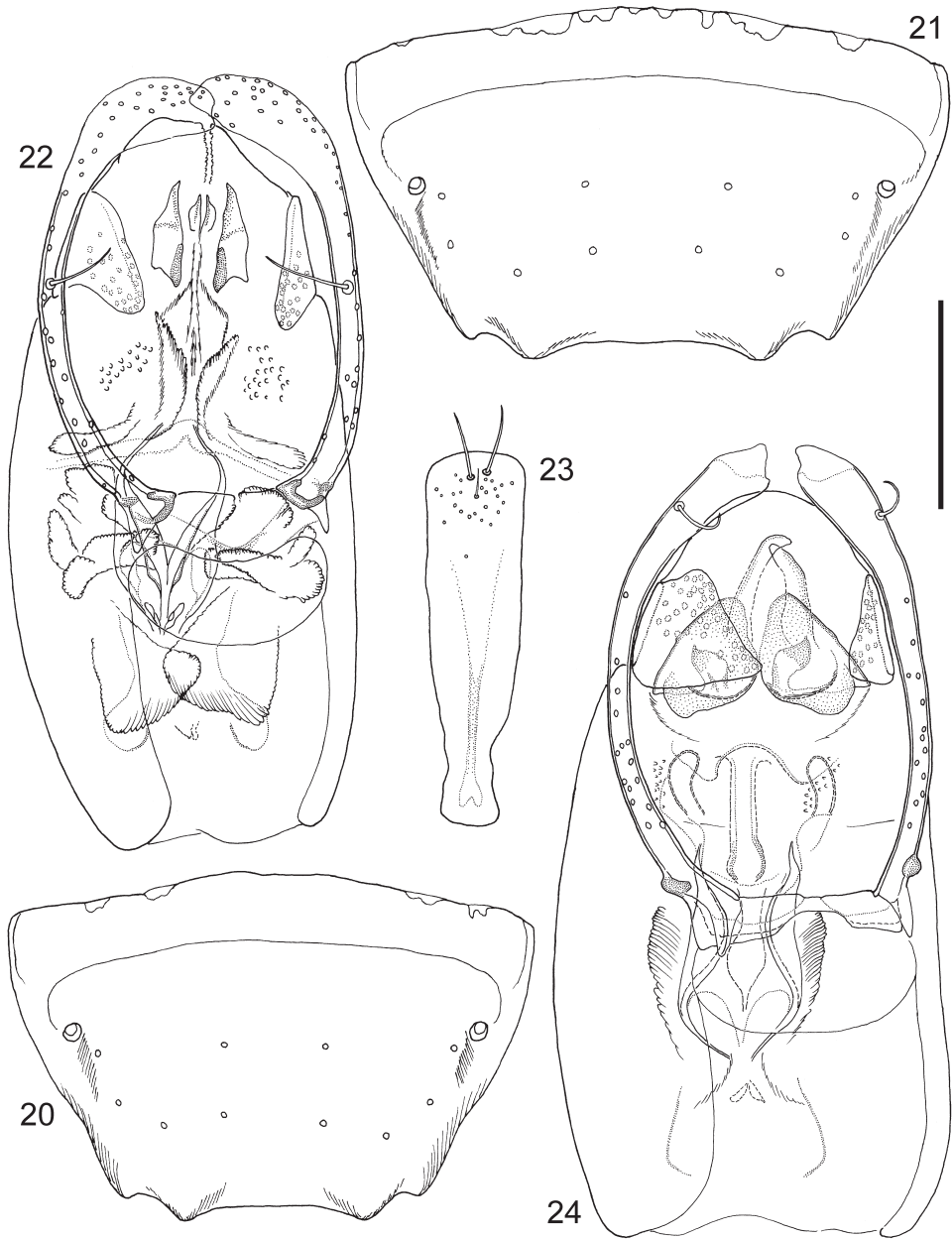
**Type locality.** Panama, Chiriquí, Volcán de Chiriquí [nowadays Barú]. The type locality probably refers to SE slope of the volcano above Boquete, approx. 8°47'40"N 82°26'50"W – 8°49'50"N 82°29'23"W.

**Type material examined.** HOLOTYPE: ♂, glued on mounting card 'Trogophloeus; velutinus. Type; D.S.; V. de Chiriqui.; 4-6000ft. Champion \ Type; Holo- [orange framed disc] \ V. de Chiriqui.; 4,000-6,000 ft.; Champion. \ B.C.A. Col. I. 2.; Trogophloeus; velutinus.; Sharp. \ Sharp Coll.; 1905.-313. \ Holotypus; Trogophloeus; velutinus Sharp; ver. Makranczy, 2012 \ Thinodromus; velutinus (Sharp); det. Makranczy, 2012' (BMNH).





Figs 15–19. *Thinodromus velutinus* (Sharp, 1887), female, SEM. 15 – forebody; 16 – antennomeres 3–10; 17 – head and pronotum; 18 – mesotarsus; 19 – elytron. Scale bar: 0.2 mm for 18; 0.25 mm for 16; 0.4 mm for 17, 19; 1.0 mm for 15.



Figs 20–24. 20 – *Thinodromus velutinus* (Sharp, 1887), tergite VIII; 21–22 – *T. circulus* (Bernhauer, 1922): 21 – tergite VIII, 22 – aedeagus; 23–24 – *T. chagosanus* (Bernhauer, 1922): 23 – male sternite IX, 24 – aedeagus. Scale bar: 0.1 mm for 20–21; 0.15 mm for 22–24.



**Redescription.** *Measurements* (in mm,  $n = 1$ ): HW = 0.37; TW = 0.38; PW = 0.43; SW = 0.46; AW = 0.53; HL = 0.25; EL = 0.115; TL = 0.06; PL = 0.32; SL = 0.47; SC = 0.45; FB = 1.07; BL = 2.12. *Lustre and colour*: Body rather dull, especially head and pronotum, due to strong surface sculpture; rest of body with greasy lustre. Head and pronotum blackish dark brown, almost black. Elytra very dark brown, with very slight reddish tint in places. Abdomen blackish dark brown with slight reddish tint at apices of segments. Antennae reddish medium to dark brown, basal part noticeably lighter than apex. Legs and mouthparts reddish medium to dark brown, tibiae and tarsi somewhat lighter than femora. *Shape and sculpture*: Forebody as in Fig. 15. Head (Fig. 17) quite transverse, with large eyes and well developed, bulging temples approximately half the size of eyes. Neck well delineated (by different, alveolate microsculpture) but without distinct transversal groove. Antennae (Fig. 16) rather short, antennomere 4 as long as broad, antennomere 5  $1.10\times$  longer than broad, antennomeres 9–10  $1.18\text{--}1.21\times$  broader than long. Pronotum strongly transverse, anterior corners broadly but not evenly rounded; corner still feebly marked. Posterior half of sides quite straight, posterior corners rounded and strongly obtuse-angled. Horseshoe-shaped impression slightly marked except posterior/median part where rather impressed; slight lateral depressions connected by it. Middle of disc bearing pair of shallow depressions. Marginal bead on pronotum from dorsal view seems absent, only traces on hind margin. Elytra (Fig. 19) combined slightly broader than long, only gently dilated towards apex, with a pair of small, round impressions posteriad of scutellum; depressed area on elytron somewhat extending towards centre of disc. Posterior elytral margin (slightly oblique) with very thin bead and in outer  $1/3$  with small membranous lobe protruding. Apex of abdominal tergite VII with palisade fringe. *Punctuation and microsculpture*: Head and pronotum with dense, deep, more or less umbilicate punctuation with acinose microsculpture in between; only scattered tiny spots remaining with lustre. Interspaces only a fraction of puncture diameters, punctuation only becoming sparser on middle of discs. Epistomal suture as shiny transversal line with slightly strigulate microsculpture. Elytral punctures smaller and more shallow, quite sparse in comparison, interspaces on average larger than puncture diameters. Surface rather more lustrous, microsculpture between punctures not so strong but noticeable. Abdomen with very small punctures and interspaces with imbricate microsculpture (more or less isodiametric cells) but not strong, so abdomen almost as lustrous as elytra. *Pubescence*: Body setation rather short, dense and equal sized on head and pronotum, a little longer on elytra, slightly less dense, with a few larger hairs at certain spots. Hairs very fine but longer on abdomen, about as dense as on elytra; hairs on apices of segments rather long. *Primary and secondary sexual features*: Female tergite X as in Fig. 11, spermatheca as in Fig. 12, ringstructure as in Fig. 31.

**Differential diagnosis.** *Thinodromus velutinus* is clearly allied to *T. circulus*, but is distinguishable by its strong punctuation of the head and pronotum, and consequent great difference in lustre of head and pronotum compared to elytra and abdomen.

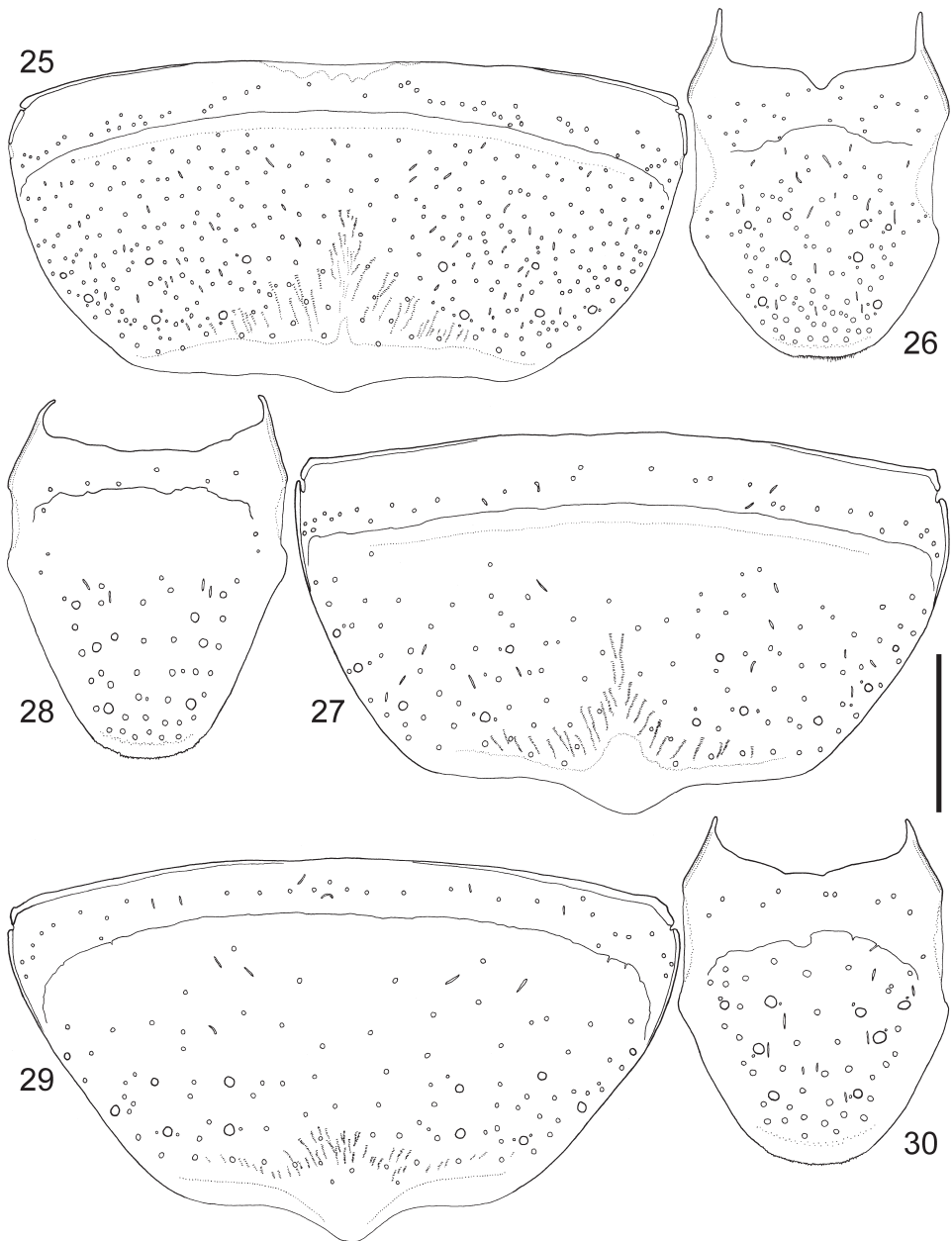
**Distribution.** Known only from the type locality in Panamá.

**Remarks.** The holotype is the only known specimen of this species, there are no additional data about its biology.

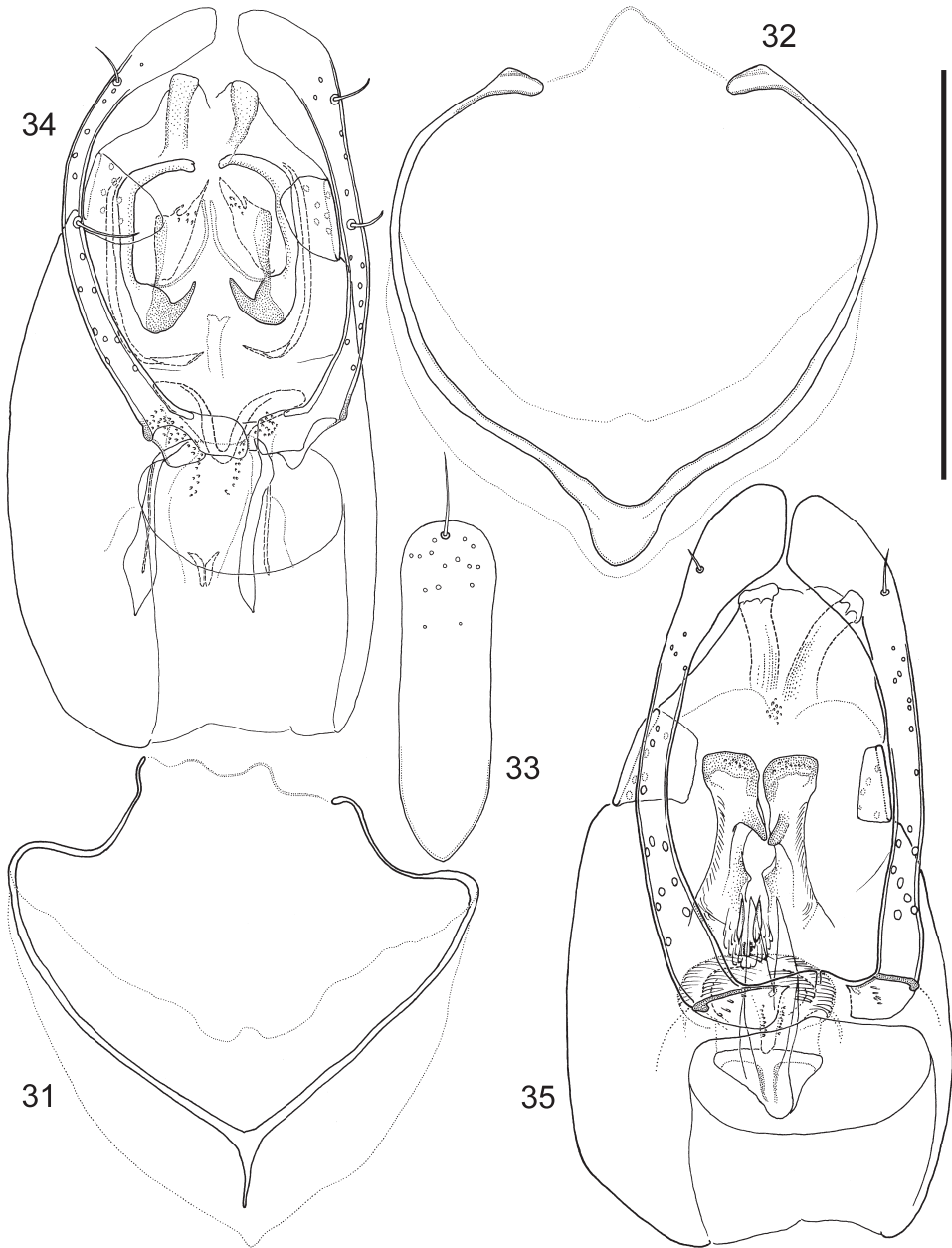
***Thinodromus chagosanus* (Bernhauer, 1922)**

(Figs 2, 13–14, 23–26)

*Trogophloeus* (*Carpalimus*) *chagosanus* Bernhauer, 1922b: 167 (original description), SCHEERPELTZ (1933): 1081 (catalogue).*Thinodromus chagosanus*: HERMAN (1970): 387 (catalogue), HERMAN (2001): 1765 (catalogue).**Type locality.** Chagos Archipelago, Diego Garcia, approx. 7°18'S, 72°24'E.**Type material examined.** LECTOTYPE (here designated): ♂, 'Chagos.; Diego Garcia \ 9.VII.[19]05 \ chagosanus; Bernh.; Cotypus. Scot \ Chicago NHMus; M. Bernhauer; Collection \ Lectotypus; Trogophloeus; chagosanus Bernhauer; des. Makranczy, 2013 \ Thinodromus; chagosanus (Bernhauer); det. Makranczy, 2013' (FMNH).**Other material examined. CHAGOS ARCHIPELAGO:** Diego Garcia, Pointe Marianne, 12.IV.1971, leg. A.M. Hutson (BMNH accession number 1971-346), at light (1 microscopic slide, HNHM). **SEYCHELLES:** Mahé Sud, Anse à la Mouche, 1.–15.VIII.1972, leg. P.L.G. Benoit & J.J. van Mol (Miss. zool. belge aux Séchelles) (2 ♂♂ MRAC, 1 ♂ HNHM).**Redescription. Measurements** (in mm, n = 4): HW = 0.54 (0.51–0.55); TW = 0.48 (0.45–0.49); PW = 0.53 (0.50–0.56); SW = 0.655 (0.62–0.68); AW = 0.735 (0.68–0.76); HL = 0.35 (0.34–0.35); EL = 0.21 (0.21–0.22); TL = 0.04 (0.03–0.04); PL = 0.41 (0.40–0.42); SL = 0.665 (0.65–0.68); SC = 0.62 (0.61–0.63); FB = 1.43 (1.40–1.46); BL = 2.65 (2.60–2.69).**Lustre and colour.** Fine punctation on foreparts and shallow microsculpture of body providing a greasy lustre. Head, pronotum and abdomen brownish black, elytra very dark brown, sometimes slightly reddish apical edge and outer posterior corners often a little darker, black. Legs medium brown, apices of femora and middle of tibiae darker, blackish. Mouthparts and antennae dark brown, latter with first segment often lighter. **Shape and sculpture.** Forebody as in Fig. 2. Head transverse, eyes very large, occupying sides of head, temples marked but very small, length insignificant compared to that of eye. Neck delineated only by different, alveolate microsculpture, but without transversal groove. Antennae slightly elongate, antennomeres 4 and 5 1.05–1.08× and 1.31–1.35× longer than broad, antennomere 9 1.00–1.04× longer than broad, antennomere 10 approximately as long as broad. Pronotum rather transverse, strongly obtuse-angled anterior corners superficially appear somewhat rounded but still marked. Posterior half of pronotal sides quite straight, even feebly concave; posterior corners obtuse-angled and rounded. Horseshoe-shaped impression slightly marked except posterior/median part where rather impressed; slight lateral depressions connected by it. Middle of disc bearing pair of shallow depressions. Slight (thin) marginal bead (mostly lateral) of pronotum observable only in sublateral view. Elytra combined imperceptibly broader than long, gently dilated towards apex, with a pair of small, oval, slightly elongate impressions behind scutellum and extending posteriorly in longitudinal impressions, connecting to somewhat depressed centre of elytral disc. Posterior elytral margin (slightly oblique) with very thin bead and in outer 1/3 with small membranous lobe protruding. Apex of abdominal tergite VII with palisade fringe. **Punctation and microsculpture.** Head and pronotum punctation rather fine, but deep and quite dense, mixed in with colliculate microsculpture; interspaces only a fraction of puncture diameters. Epistomal suture marked as a less punctate/sculptured area, with trace of transversal strigulate microsculpture. Punctation less deep and dense on ridges, e.g. outside/along roundish depressions at centre of pronotal disc. Microsculpture more rough and scabrous in depressions and near posterior pronotal corners, on pronotum generally stronger on sides than centre of disc. Elytra with slightly larger punctures, but also larger interspaces



Figs 25–30. 25–26 – *Thinodromus chagosanus* (Bernhauer, 1922): 25 – male sternite VIII, 26 – male tergite X. 27–28 – *T. palustris* (Bernhauer, 1922): 27 – male sternite VIII, 28 – male tergite X. 29–30 – *T. arcitenens* (Fauvel, 1905): 29 – male sternite VIII, 30 – male tergite X. Scale bar: 0.07 mm for 30; 0.08 mm for 28–29; 0.1 mm for 26–27; 0.11 mm for 25.



Figs 31–35. 31 – *Thinodromus velutinus* (Sharp, 1887), female ringstructure. 32 – *T. circulus* (Bernhauer, 1922), female ringstructure. 33–34 – *T. palustris* (Bernhauer, 1922): 33 – male sternite IX, 34 – aedeagus. 35 – *T. arcitenens* (Fauvel, 1905), aedeagus. Scale bar: 0.1 mm for 31; 0.12 mm for 32, 35; 0.15 mm for 33; 0.2 mm for 34.

with less distinct microsculpture so appearing a little more lustrous. Abdomen with scattered, fine but distinct punctures, slightly imbricate or coriaceous microsculpture with isodiametric cells and a rather greasy lustre. *Pubescence*. Body setation short, fine, but rather dense, hair sizes vary more on abdomen, apices of segments with longer hairs. *Primary and secondary sexual features*. Male sternite VIII as in Fig. 25, male sternite IX as in Fig. 23, male tergite X as in Fig. 26, aedeagus as in Fig. 24.

**Differential diagnosis.** *Thinodromus chagosanus* appears to be the only species in this species group with small (barely marked) temples.

**Distribution.** Known from the Seychelles and the Chagos Archipelago, therefore likely to be widespread across tropical islands of the Old World.

**Remarks.** The plate-like armature in the hypopharynx illustrated in MAKRANCZY (2006: 60, Fig. 42) is erroneously captioned as *T. chagosanus*, while in fact it belongs to *T. thoracicus* Gildenkov, 2000 (full taxonomic treatment in MAKRANCZY 2009), the correct one for *T. chagosanus* is in Fig. 14. It must be noted that the two are of the same general structure but of slightly different shape. It is also remarkable that *T. thoracicus* has rather similar habitus (MAKRANCZY 2006: 88, Fig. 115) to that of *T. arcitenens* (treated below). Of numerous existing syntypes in depositories, the lectotype is a male with clear genital traits and chosen to fix the interpretation of this species.

### *Thinodromus palustris* (Bernhauer, 1922)

(Figs 3, 27–28, 33–34)

*Trogophloeus* (*Carpalimus*) *palustris* Bernhauer, 1922b: 167 (original description), SCHEERPELTZ (1933): 1082 (catalogue).

*Thinodromus palustris*: HERMAN (1970): 387 (catalogue), HERMAN (2001): 1772 (catalogue).

**Type locality.** Seychelles, Mahé, approx. 4°38'S, 55°27'E.

**Type material examined.** LECTOTYPE (here designated): ♂, [on mounting card:] 81 \ Mahe, 1908-9; Seychelles Exp. \ palustris; Bernh.; Cotypus \ Chicago NHMus; M. Bernhauer; Collection \ Lectotypus; Trogophloeus; palustris Bernhauer; des. Makranczy, 2013 \ Thinodromus; palustris (Bernhauer); det. Makranczy, 2013<sup>2</sup> (FMNH).

**Other material examined.** PALAU ISLANDS: Babelthuaup I., Ngjwal, 7°33'18"N, 134°37'59", 20.V.1957, leg. C.W. Sabrosky, at light (2 ♂♂ 3 ♀♀ BPBM, 1 ♂ 1 ♀ HNHM, 1 ♀ NHMW); Babelthuaup I., Ngaremlengui, 7°31'12"N, 134°30'04", 1.VI.1957, leg. C.W. Sabrosky, at light (1 ♂ BPBM).

**Redescription.** *Measurements* (in mm, n = 8): HW = 0.44 (0.41–0.47); TW = 0.43 (0.39–0.46); PW = 0.465 (0.42–0.48); SW = 0.56 (0.53–0.59); AW = 0.63 (0.57–0.66); HL = 0.31 (0.28–0.33); EL = 0.155 (0.14–0.17); TL = 0.07 (0.06–0.07); PL = 0.35 (0.33–0.37); SL = 0.55 (0.52–0.58); SC = 0.52 (0.50–0.55); FB = 1.25 (1.18–1.33); BL = 2.40 (2.28–2.62).

*Lustre and colour.* Slightly dull due to not so strong but rather dense punctation of the foreparts. Head very dark brown, pronotum and elytra dark brown with reddish tint (pronotal marginal bead darker), abdomen blackish dark brown (basal part of tergites behind basal ridge darker). Mouthparts, legs, antennae reddish medium to dark brown, first antennomere often a little lighter. *Shape and sculpture.* Forebody as in Fig. 3. Head transverse, eyes rather large, temples slightly bulging, almost reaching 1/2 eye length. Neck delineated primarily by different, alveolate microsculpture, but with a trace of a transversal groove. Antennae moderately elongate, antennomeres 4 and 5 1.40–1.46× and 1.63–1.80× longer than broad, respectively, antennomere 9 1.03–1.05× longer than broad while antennomere 10 just imper-



ceptibly broader than long. Pronotum less transverse than in the other species, only about 1/3 broader than long. Pronotal sides arcuate, more strongly at 1/4 length (the broadest point), posteriorly only slightly arcuate, almost straight; posterior corners obtuse-angled and broadly rounded, inconspicuous. Horseshoe-shaped impression rather wide, strongly impressed, connected to slight anterolateral depressions. Middle of disc bearing pair of roundish, slightly connected depressed areas slightly connected. Pronotal marginal bead thin (marked also by blackish line), observable on sides and posterior margin. Elytra combined almost 1/3 broader than long, gently dilated and slightly arcuate towards apex, Behind scutellum with a pair of small, rounded impressions connected to longitudinally elongate depressed areas along suture. Posterior elytral margin (slightly oblique) with very thin marginal bead and in outer 1/3 with small membranous lobe protruding. Apex of abdominal tergite VII with palisade fringe. *Punctuation and microsculpture.* Punctuation on head and pronotum strong, interspaces only a fraction of puncture diameters. On head epistomal suture marked by somewhat shinier surface, smaller and more sparse punctures. Elytral punctuation also strong, 1.5× stronger than on pronotum, interspaces also only a fraction of puncture diameters, therefore microsculpture on forebody not very apparent, but pronotal sides, scutellar area on elytra and depressions have more conspicuous and scabrous microsculpture. Abdominal punctures strong and rather dense, slightly less strong on apices of segments; traces of imbricate microsculpture but not very prominent. *Pubescence.* Body setation short, fine, but rather dense, hair sizes vary more on abdomen, apices of segments with longer hairs. Setae on elytra appear particularly dense. *Primary and secondary sexual features.* Male sternite VIII as in Fig. 27, male sternite IX as in Fig. 33, male tergite X as in Fig. 28, aedeagus as in Fig. 34.

**Differential diagnosis.** *Thinodromus palustris* is distinguishable from the other discussed species by its abdomen with unusually strong punctuation, similar in density and depth to elytral punctuation. Eye margin posteriorly appears conspicuously shiny (unsculptured) partly because of its widening remarkably on the hind part above the dorsal longitudinal midline of eye – such a shiny eye margin is present in the other species, but mostly very thin and not widened.

**Distribution.** This species seems to be widespread across tropical islands of the Old World.

**Remarks.** The type locality of *T. palustris* is Mahé Island, the main island of the Seychelles. The geographical distance from Palau Island is enormous, yet the internal sclerites of the aedeagi are identical between the two samples, leaving little doubt about their conspecificity. SCOTT (1922) notes that the original material came from ‘the lower levels in the Seychelles’. Of numerous existing syntypes in depositories, the lectotype is a male with clear genital traits and chosen to fix the interpretation of this species.

### *Thinodromus arcitenens* (Fauvel, 1907)

(Figs 4, 29–30, 35)

*Trogophloeus* (*Thinodromus*) *arcitenens* Fauvel, 1905: 78 (original description), BERNHAUER & SCHUBERT (1911): 94 (catalogue).

*Thinodromus arcitenens*: HERMAN (1970): 387 (catalogue), HERMAN (2001): 1761 (catalogue).

**Type locality.** Indonesia, W-Java, Kota Bogor, 6°36'S, 106°48'E.

**Type material examined.** LECTOTYPE (here designated): ♂, ‘Buitenzorg; 2-3 [II-III. 1904] (Java) [leg. K. Kraepelin & J.C. Koningsberger] \ arcitenens; Fvl. \ Coll. et det A. Fauvel; R.I.Sc.N.B. 17.479 \ Lectotypus; *Trogophloeus*; *arcitenens* Fauvel; des. Makranczy, 2013 \ *Thinodromus*; *arcitenens* (Fauvel); det. Makranczy, 2013’ (ISNB).

**Redescription.** *Measurements* (in mm, n = 1): HW = 0.35; TW = 0.34; PW = 0.41; SW = 0.45; AW = 0.51; HL = 0.25; EL = 0.10; TL = 0.06; PL = 0.29; SL = 0.46; SC = 0.44; FB = 1.04; BL = 1.96. *Lustre and colour.* Body with moderate lustre; fine but dense punctation and/or more or less distinct microsculpture on all body parts providing uniformly greasy lustre. On head epistomal suture as a dark transversal line and two dark spots on vertex near neck mark remnants of ocelli, otherwise reddish medium brown, mouthparts, antennae, legs and pronotum light brown, latter with fine darker edges. Elytra and abdomen medium brown with some reddish tint; basal ridge of tergites marked by a darker line. *Shape and sculpture.* Forebody as in Fig. 4. Head rather transverse, well developed bulging temples more than half the length of eye. Neck delineated by a very slight and indistinct groove, more apparent by change of microsculpture to more alveolate. Antennae rather elongate, antennomeres 4 and 5 approximately 1.30× and 1.45× longer than broad, respectively; article 9 just imperceptibly longer than broad, antennomere 10 as long as broad. Pronotum very transverse, even more accentuated by arcuate lateral margin weakly rounded at 1/3 length, much less rounded than side anteriad. In posterior half pronotal sides gently concave: anterior corners so strongly obtuse-angled that they are hard to observe, posterior corners weakly rounded, more prominent and protruding than in the other species. Middle of disc with a pair of large, confluent impressions (with slight, gently oblique longitudinal ridges running outside of it), posteriorly with a similarly strongly impressed horse-shoe-shaped impression more of a transverse oval shape very close to posterior pronotal margin, anteriorly connected to more shallow impressions behind anterior corners. Fine marginal bead of pronotum observable on lateral and hind margins, laterally also marked by darker colour. Elytra combined 1/5–1/6× broader than long, gently dilated towards apex, with a pair of small, slightly oval impressions continuing posteriorly in shallow longitudinal depressed areas along suture. Posterior elytral margin (slightly oblique) with very thin bead and in outer half with thin membranous, protruding lobe. Apex of abdominal tergite VII with palisade fringe. *Punctation and microsculpture.* Head and pronotum with indistinct coriaceous microsculpture, finely, moderately densely punctate yet interspaces (almost the size of puncture diameters) significant, giving the surface a moderate lustre. Around pronotal hind corners, temples and in depressions (e.g. along ridge from supra-antennal tubercles) microsculpture can be dense and more rough, scabrous. Elytral punctures slightly larger, yet interspaces also proportionally larger, so lustre not differing from that of head and pronotum, in spite of indistinct coriaceous microsculpture. Abdomen with isodiametric, slightly imbricate or coriaceous microsculpture, a little more rough behind basal ridges. Punctation very scattered, punctures insignificant. *Pubescence.* Body setation short, fine and medium dense, setae on abdomen especially near apices of segments only slightly longer. *Primary and secondary sexual features.* Male sternite VIII as in Fig. 29, male tergite X as in Fig. 30, aedeagus as in Fig. 35.

**Differential diagnosis.** *Thinodromus arcitenens* is distinguishable from the other here discussed species by its pronotal shape. None of the other species have such weakly rounded arcuate pronotal sides at 1/3 their length.

**Distribution.** The species is still only known from its original type material from Java.

**Remarks.** The light (yellowish-reddish) colours of the single male specimen may be partly due to its old age. There possibly exists other syntypes (of unknown whereabouts), the lectotype chosen is the only specimen (male) known to the present writer and designated to fix the interpretation of this species.

## Acknowledgements

The author is indebted to Harald Schillhammer (NHMW) for his help with the colour habitus images and James H. Boone (FMNH) for supplying type specimen photos. Further curators are thanked for making available types and specimens under their care: Didier Drugmand (ISNB), Martin Brendell (BMNH), Marc De Meyer (MRAC), Phil Parrillo (FMNH) and Al Samuelson (BPBM).

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