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The Old World species of *Thinodromus* KRAATZ, 1857 morphologically resembling the former *Apocellagria* CAMERON, 1920 (Coleoptera: Staphylinidae: Oxytelinae)

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Abstract

An assemblage of *Thinodromus* species in the Afrotropical and Oriental Regions (including some adjacent Palaearctic areas) is reviewed. These taxa were associated with the former genus *Apocellagria* CAMERON, 1920 and all exhibit some features unusual for *Thinodromus*, but apparently are not very closely related with each other. Alongside nine named species six are described as new: *Thinodromus aequatorialis* sp.n. (South Sudan: Eastern Equatoria), *T. boukali* sp.n. (India: Kerala), *T. immolatus* sp.n. (China: Yunnan), *T. jaechi* sp.n. (Ethiopia: SNNPR), *T. minglueni* sp.n. (Laos: Houaphan) and *T. zuluanus* sp.n. (South Africa: KwaZulu-Natal). Lectotypes are designated for *Apocellagria amplipennis* CAMERON, 1941, *A. indica* CAMERON, 1920, *A. tenuicornis* CAMERON, 1930, *Trogophloeus assamensis* CAMERON, 1930, *T. fuscipalpis* FAUVEL, 1904, *T. pubicollis* CAMERON, 1920 and *T. singularis* FAUVEL, 1907. Habitus of most species, including all the new ones are illustrated by colour photos; important features are also shown on SEM images; male and female genitalia plus terminalia are depicted by line drawings.

Key words: Coleoptera, Staphylinidae, Oxytelinae, *Thinodromus*, taxonomy, lectotypes, new species, Palaearctic Region, Oriental Region, Afrotropical Region.

Introduction

The genus *Thinodromus* KRAATZ, 1857 comprises a number of unusually looking species. This is especially so in the tropics, and the proper knowledge of this diversity is essential for drawing correct conclusions on the phylogeny and establishing lasting and sustainable nomenclature. In the present contribution, a strange and in itself diverse assemblage of species is reviewed that had one thing in common throughout their taxonomic history: they were associated with the name *Apocellagria* CAMERON, 1920, eventually synonymized with *Thinodromus* for a broader, more stable concept of that genus (MAKRANCZY 2006). *Apocellagria* was applied inconsistently for various taxa possessing rather slender bodies, constricted abdominal bases and often a midline keel (or trace of it) on the basal tergites. In order to provide a better understanding, some of the yet unnamed but obviously related species are described here.

Although the superficial appearances of these species are most alike, they have rather significantly different genitalia and terminalia – these two are presently considered to carry most valuable phylogenetic information. The traditional concept of the genus *Thinodromus* has been challenged by the discovery of species with four tarsomeres (MAKRANCZY 2014) and this foreshadows a troubled separation from the very speciose *Carpelimus* LEACH, 1819. All these difficulties emphasize the need for a better mapping of the morphological diversity of *Thinodromus* – one cornerstone of this issue is a thorough review of all the unusual forms of the '*Apocellagria* type', hopefully supplied with the present contribution. The type species of *Apocellagria* (*A. indica* CAMERON, 1920) and its closest relative (*A. tenuicornis* CAMERON, 1930) occur in India; another group with bilobed parameres is known from China to Laos and the Malay Peninsula). An array of taxa in the Himalayas and China has some similarity in appearance to the true '*Apocellagria*', but their genital features place them with the less extreme

Thinodromus species; they are only partly dealt with here, concentrating on those taxa that were under '*Apocellagria*' at one point or another in their taxonomic history. An isolated group of species inhabits eastern and southern Africa; although they strongly resemble the Oriental '*Apocellagria*', their placement in *Thinodromus* is likewise justified.

In lack of a comprehensive phylogenetic hypothesis for the world diversity of *Thinodromus* it is somewhat premature to speculate about the possible division into groups and phylogenetic placement of the species treated herein. This article demonstrates that while *Thinodromus indicus* and *T. tenuicornis* (the two true '*Apocellagria*' species) indeed possess some unusual features (bilobed parameres and an almost fully formed paraproct in female tergite IX) their male genitalia perfectly fit with the nomenclature established for internal sclerites of the aedeagus (MAKRANCZY 2009, 2013) and it is rather the other group with bilobed parameres that really stands out as different – currently comprising three species: *T. assamensis*, (CAMERON, 1930), *T. schillhammeri* MAKRANCZY, 2006 and *T. immolatus* (described below). Unfortunately two of these species are still poorly known. *Thinodromus assamensis* is based on two type specimens in very poor condition (females without recognizable genitalia), and the holotype of *T. schillhammeri* is a male but no other specimens from the type locality are known. Thus we cannot know how many species are involved. For the rest of the species, the deviations of the here treated taxa from other *Thinodromus* species are mostly confined to their external appearance, similarities to '*Apocellagria*' in one way or another, and they do not seem to form natural or monophyletic groups.

Material and methods

Revision of the relevant type material took place mostly between 2000 and 2002; the 17 years passed made it necessary to re-examine several type specimens more recently. During this long time a lot of additional (and in part newly collected) material was screened which raised the number of species significantly.

Specimens examined are deposited in the following collections:

Coll. Gildenkov	private collection of Mikhail Gildenkov (Smolensk, Russia)
Coll. Janák	private collection of Jiří Janák (Rtyně nad Bílinou, Czechia)
Coll. Schülke	private collection of Michael Schülke (Berlin, Germany) (part of ZMHB)
BMNH	Natural History Museum (London, United Kingdom)
CASC	Department of Entomology, California Academy of Sciences (San Francisco, USA)
FMNH	Field Museum of Natural History (Chicago, USA)
HNHM	Hungarian Natural History Museum (Budapest, Hungary)
ISNB	Institut Royal des Sciences Naturelles de Belgique (Brussels, Belgium)
MHNG	Muséum d'histoire naturelle, Genève (Switzerland)
MNHP	Muséum national d'histoire naturelle (Paris, France)
MRAC	Musée royal de l'Afrique centrale (Tervuren, Belgium)
MZLU	Museum of Zoology, Lund University (Lund, Sweden)
NMPC	National Museum (Natural History) (Prague, Czechia)
NMW	Naturhistorisches Museum Wien (Vienna, Austria)
TMSA	Ditsong National Museum of Natural History (formerly Transvaal Museum) (Pretoria, South Africa)
ZMHB	Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung (Berlin, Germany)

Label data for types are listed verbatim, a backslash (\) separates labels, and a semicolon (;) separates lines. Text within square brackets ([…]) is explanatory and is not part of the original label text.

Thinodromus assamensis, *T. tenuicornis* and *T. pubicollis* (CAMERON, 1930) were collected by S.N. Chatterjee (1924) in "Assam, Naga Hills", the first from 9000 ft. (= 2743 m), the other two from 6000 ft. (= 1829 m) elevation, also marked as being from "Kampison". An effort was made

to supplement "Kampison" with geographical coordinates, using old map sheets, various gazetteers as well as modern internet resources like GoogleEarth. However, exact locations of the type localities of these three species could not be traced, and it is not even entirely clear, whether they are to be attributed to Nagaland or Manipur. In any case, these three species were definitely not collected in present-day Assam State. "Naga Hills" might refer to the Naga Hills District, a district of the former Assam Province of British India, nowadays entirely part of the Nagaland State (https://en.wikipedia.org/wiki/Naga_Hills_District,_British_India). Or, "Naga Hills" might refer to the Naga Hills mountain range (https://en.wikipedia.org/wiki/Naga_Hills), considered to be almost entirely within Nagaland, but extending slightly into northern Manipur. However, one subspecies of Odonata (*Rhinocypha perforata beatifica* FRASER, 1927) was described from "Nungba, in the Naga Hills, Assam, 8th April 1924". It was collected exactly one day before *T. tenuicornis* was found, and the collector may indeed have been S.N. Chatterjee or one of his companions. Remarkably, a village named Kambiron (which might refer to "Kampison") is found very close to Nungba. Nungba, although inhabited by a Naga tribe, lies not in the Naga Hills (despite the note "Nungba, in the Naga Hills"), but further south in Manipur State. If the elevation data on the locality labels of the types are correct, Kambiron can be excluded as the type locality of *T. tenuicornis* and *T. pubicollis* because there are no higher mountains in the immediate surroundings. In the Naga Hills mountain range there are not many places with mountain streams at an elevation of 2700 m. However, Dzükou Valley [approx. 25°33'7"N 94°3'46"E], near Mt. Japfü (or Japvo), famous for its natural beauty, stretching on both sides of the Nagaland/Manipur border, would be a suitable area for such streams.

Two illustrations of the aedeagus in ventral view are provided: one showing the tegmen (phallobase plus parameres), and the second showing the silhouette of the median lobe with all internal sclerites.

The terminology of internal sclerites of aedeagi follows MAKRANCZY (2009, 2013): BA = basal sclerites, BM = basomedial sclerites, ML = medial lamellae, MA = medioapical sclerites, AC = apical copulatory sclerite. Measurements are defined as follows: HW = head width with 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 from front margin of clypeus to the beginning of neck at middle-line; EL = eye length; TL = length of temple; PL = length of pronotum in the midline; SL = length of elytra from shoulder; SC = length of elytra from hind apex of scutellum; FB = forebody length (combined length of head, pronotum and elytra); BL = approximate body length. All measured from dorsal view. For descriptions and measurements a Leica MZ 12.5 stereoscopic microscope was used. For the line drawings permanent preparations were made in Euparal mounting medium on plastic cards pinned with the specimens. The genital preparation techniques are detailed in MAKRANCZY (2006). Drawing was done with a Jenalab (Carl Zeiss, Jena) compound microscope and drawing tube (camera lucida). For the colour habitus photographs a Nikon D4 camera with Mitutoyo PlanApo 5x/10x ELDW lens was used and layers combined with ZereneStacker.

Thinodromus indicus (CAMERON, 1920)

(Figs. 1–3, 7, 13, 17–18, 24–25, 51–52, 71–73)

Apocellagria indica CAMERON 1920: 144.
Apocellagria indica: CAMERON 1930: 202, pl. II fig. 6., HERMAN 1970: 389, 2001: 1498.
Thinodromus indicus: MAKRANCZY 2006: 86, 108.

TYPE MATERIAL: **Lectotype** (here designated), sex unknown (undissected): "Type [red margined disc, curator label] \ H. L. Andrewes; [INDIA] Nilgiri Hills [approx. 11°25.0'N 76°30.5'E] \ Type; Apocellagria; indica; Dr. Cameron \ M. Cameron.; Bequest.; B.M. 1955-147. \ Lectotypus; Apocellagria; indica Cameron; des. Makranczy, 2000 \ Thinodromus; indicus (Cameron); det. Makranczy, 2011" (BMNH). **Paralectotypes** (14 exs.): same data as

lectotype (3 ♂♂, 1 ♀, 6 exs., BMNH; 1 ex., Coll. Jarrige (MNHP); 1 ♀, FMNH; 1 ♂, SEMC; 1 ♀, Coll. Rambousek (NMPC)).

REDESCRIPTION: Measurements (in mm, n = 7): HW = 0.46 (0.45–0.50); TW = 0.42 (0.40–0.45); PW = 0.47 (0.46–0.48); SW = 0.64 (0.74–0.81); MW = 0.76 (0.73–0.81); AW = 0.65 (0.60–0.68); HL = 0.38 (0.36–0.39); EL = 0.16 (0.155–0.17); TL = 0.12 (0.10–0.13); PL = 0.45 (0.44–0.47); SL = 0.71 (0.69–0.73); SC = 0.67 (0.65–0.69); FB = 1.62 (1.58–1.67); BL = 2.96 (2.78–3.16). Lustre and colour: Habitus as in Fig. 7. Mostly with greasy lustre, head and most of pronotum strongly punctate, forebody with short setation. Head and pronotum reddish medium to dark brown, epistomal suture and spots at former ocelli blackish, elytra reddish dark brown as well as abdomen except segment II to base of IV yellowish medium brown. Legs reddish medium brown, bases of femora and of tibiae lighter, yellowish. Mouthparts and antennomeres 1–3 yellowish medium brown, then darkening, apical half dark brown. Shape and sculpture: Head rather narrow and almost parallel-sided, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of weak longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc with small longitudinal impression. Temples on anterior 3/4 straight (slightly convergent behind) then narrowly rounded. Antennae elongate, articles 4–5 about 2.5 × longer than broad (male), 2.0–2.1 × longer than broad (female), articles 9–10 1.18–1.25 × longer than broad (male), 1.07–1.20 × longer than broad (female), last article about 1.5 × penultimate. Neck (Fig. 13) separated by thin groove, conspicuous mostly by its different, transverse coriaceous microsculpture. Pronotum rather heart-shaped and convex, only very slightly transverse, sides strongly concave in posterior half (depressed at 1/4 before base), broadly rounded in anterior half. Posterior edge with thin marginal bead. Strong transverse impression before base extending anteriorly into parallel longitudinal impressions (U-shaped). Elytra (Fig. 17) moderately convex, shoulders well developed and narrowly rounded, sides slightly arched, suture with wider marginal bead, also on very oblique apical edge, rather thin, before outer corners with very narrow membranous lobe (spanning 1/3 of apical breadth). Apical edge strongly bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with very shallow impression in anterior 1/3 of disc. Abdomen rather constricted at base (Fig. 18), tergite II with smaller midline keel behind basal ridge, tergite III with strong, sharp midline keel in depression behind basal ridge, tergite IV with smaller keel. Abdomen widest at apex of segment V, tergites II–V with strong transverse impressions behind basal ridges, only interrupted by the midline keel. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with broad palisade fringe on apex 1.5–1.8 × as broad medially than laterally, very gently arched (concave). Punctation and microsculpture: Head with coarse and dense punctures on interspaces (average 0.8 × puncture diameter) coriaceous microsculpture apparent giving it greasy lustre. Clypeus shallowly punctate and microsculptured, epistomal sulcus as transverse, darker line. Pronotum on middle of disc with similar punctation except punctures more dense (especially posteriorly) but towards sides and anterior edge punctures much smaller and interspaces more smooth (albeit with traces of microsculpture); posterior edge of pronotum bearing punctures mixed with scabrous microsculpture. Elytra with fine and moderately dense punctures, interspaces more or less smooth and with weak microsculpture. Abdominal tergites with fine punctures behind basal ridges, punctures posteriorly finer and with only traces of microsculpture. Pubescence on body mostly medium dense, rather short, thin, semi-depressed; pronotal midline free of pubescence. Abdominal sides with several dark and long bristles. Strong, dark bristles situated at inner bases of supraantennal prominences and on edges of vertex behind eyes. pronotum with two dark bristles on anterior edge of pronotum and a pair slightly inside from the middles of lateral edges. Femora and tibiae with fine, short setation, mid-tibial spurs very short. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 24, tergite IX as in Fig. 71, sternite IX as in Fig. 72, tergite X as in Fig. 25, aedeagus, frontal view with parameres as in Fig. 1, median lobe with internal

sclerites (in the same view) as in Fig. 2, paramere in lateral view as in Fig. 3. Female: tergite IX as in Fig. 73, ringstructure as in Fig. 51, spermatheca as in Fig. 52.

DISTRIBUTION AND BIONOMICS: This species is known only from its type material, Nilgiri Hills (India: Tamil Nadu, Kerala or Karnataka). Precise locality data are unknown and nothing is recorded of its habitat.

COMMENT: The type series is soiled by an unknown type of whitish glue that makes it almost impossible to photograph specimens properly; also a great percentage of the specimens were either teneral or dissected to small bits; therefore the number of measured specimens is way below the number of specimens actually examined.

Thinodromus tenuicornis (CAMERON, 1930)

(Figs. 4–6, 8, 19–20, 26–27, 74–75, 137)

Apocellagria tenuicornis CAMERON 1930: 203.
Apocellagria tenuicornis: HERMAN 1970: 389, 2001: 1498.

TYPE MATERIAL: **Lectotype** ♂ (here designated): "Type [red margined disc, curator label] \ Stream; Shingle \ [INDIA] Naga Hills 6000'; Assam. Kampison \ S. N. Chatterjee.; 9. IV. 1924 \ Apocellagria; tenuicornis; Type [in maroon] Cam \ M. Cameron.; Bequest.; B.M. 1955-147 \ Lectotypus; Apocellagria; tenuicornis Cameron; des. Makranczy, 2000 \ Thinodromus; tenuicornis (Cameron); det. Makranczy, 2011" (BMNH).

REDESCRIPTION: Measurements (in mm, n = 1): HW = 0.46; TW = 0.42; PW = 0.48; SW = 0.63; MW = 0.75; AW = 0.62; HL = 0.35; EL = 0.165; TL = 0.105; PL = 0.47; SL = 0.73; SC = 0.69; FB = 1.69; BL = 3.40. Lustre and colour: Habitus as in Fig. 8. Body surface partly rather shiny (impunctate areas), partly dull (strongly sculptured and punctured parts). Dominant body colour reddish medium brown (head, pronotum, elytra and tergites IV–VII, tergites II–III yellowish light brown, with dark line at basal ridges and midline keel. Legs reddish medium brown with tarsi, apices of tibiae and bases of femora lighter. Mouthparts light brown, antennae medium to light brown, darkening from articles 1–9, last two segments conspicuously light, yellowish. Shape and sculpture: Head rather short and narrow, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes. Temples almost straight. Antennae very elongate, articles 4–5 about 2.6–2.8 × longer than broad (male), antennomeres shortening from article 7, articles 9–10 1.8–1.9 × longer than broad (male), last article about 1.5 × penultimate. Neck (Fig. 137) separated by thin groove, conspicuous mostly by its transverse coriaceous microsculpture. Pronotum rather heart-shaped and convex, only very slightly transverse, sides strongly concave in posterior half (depressed at 1/4 before base), broadly rounded in anterior half. Strong transverse impression before base makes basal edge look deflexed. Elytra (Fig. 19) rather convex, shoulders well developed and narrowly rounded, sides arched, suture with marginal bead, also on apical edge, before outer corners with small and narrow membranous lobe (spanning less than 1/3 of apical breadth). Apical edge rather straight, slightly oblique, strongly bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with very shallow oblique impression between middle of suture and shoulder. Abdomen rather constricted at base (Fig. 20), tergites II–IV with strong midline keel in basal half, only a trace of this on tergite V. Abdomen widest at apex of segment IV, tergites II–V with strong transverse impressions behind basal ridges, only interrupted by the midline keel. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with palisade fringe 2 × as wide in middle than at sides, gently arched in middle (concave). Punctation and microsculpture: Head with strong, dense and medium deep punctation (very small interspaces at dense parts), interspaces larger and shiny near middle of vertex and towards supraantennal tubercles. Clypeus with the same punctation as vertex, epistomal sulcus as shinier transverse wrinkle (also marked as darker line). Widely along midline of pronotum with the same type of punctation as on head (with a more shallowly punctate stripe in longitudinal midline), but sides (like two large

protuberances) mostly free of this punctation and shiny. Punctation and sculpture strongest in posterior 1/4, this part completely dull, posterior edge with thin marginal bead. Punctation on elytra sparse and shallow, making this the shiniest part of body; punctures small, interspaces larger than diameters. Abdomen with similar punctation to that of elytra, except with microsculpture between punctures and impressed tergite bases often shinier. Pubescence on body mostly medium dense, rather short, thin, semi-depressed; pronotal midline free of pubescence. Abdominal sides with several dark and long bristles. Strong, dark bristles at inner bases of supraantennal prominences and on edges of vertex behind eyes; pronotum with two darker bristles on anterior edge of pronotum and a pair slightly inside from the middles of lateral edges. Tergites with a pair of strong, dark setae near posterior corners. Femora and tibiae with fine, short setation, mid-tibial spurs very short. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 26, tergite IX as in Fig. 74, sternite IX as in Fig. 75, tergite X as in Fig. 27, aedeagus, frontal view with parameres as in Fig. 4, median lobe with internal sclerites (in the same view) as in Fig. 5, paramere in lateral view as in Fig. 6. Female unknown.

DISTRIBUTION AND BIONOMICS: This species is only known from its single type specimen collected almost 100 years ago in NE India.

The only record of its habitat is "stream shingle", but it is possible that some vegetable debris is involved that often accumulates over gravelly spots situated in between rocks in/at streams.

COMMENT: This species is without doubt the closest known relative of *Thinodromus indicus* because of their very similar aedeagi.

Thinodromus assamensis (CAMERON, 1930)

(Figs. 30–31, 36–38, 45–46, 61–62, 65–66, 83–84, 111–112)

Trogophloeus (*Thinodromus*) *assamensis* CAMERON 1930: 181, pl. II fig. 4.
Apocellagria assamensis: CAMERON 1941: 147.
Thinodromus assamensis: HERMAN 1970: 387, 2001: 1763.

TYPE MATERIAL: **Lectotype** ♀ (here designated): "Type [red margined disc, curator label] \ [INDIA] Naga Hills; Assam (8); 9000' \ T.; assamensis; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ f* \ Lectotypus; Trogophloeus; assamensis Cameron; des. Makranczy, 2000 \ Thinodromus; assamensis (Cameron); det. Makranczy, 2011" (BMNH). **Paralectotype** (1 ex.): same data as lectotype (1 ♀, BMNH).

ADDITIONAL MATERIAL EXAMINED:

LAOS: Luang Nam Tha, ca. 20 km SE Muang Sing, 950 m, 21°07'50"N 101°16'00"E, 12.–13.VI.1996, leg. H. Schillhammer (25) (1 ♂, 1 ♀, NMW).

REDESCRIPTION: Measurements (in mm, n = 2): HW = 0.73 (0.72–0.74); TW = 0.65 (0.65–0.65); PW = 0.72 (0.70–0.73); SW = 1.08 (1.07–1.09); MW = 1.24 (1.23–1.25); AW = 1.00 (0.99–1.00); HL = 0.50 (0.49–0.50); EL = 0.24 (0.23–0.24); TL = 0.13 (0.12–0.13); PL = 0.65 (0.64–0.65); SL = 1.15 (1.12–1.17); SC = 1.10 (1.07–1.12); FB = 2.34 (2.32–2.36); BL = 4.37 (4.36–4.38). Lustre and colour: Body with greasy lustre due to dense punctation and microsculpture on most surfaces. Body blackish dark brown, legs and mouthparts dark brown, only bases of femora occasionally lighter, reddish. Antennae blackish dark brown, but terminal article sometimes slightly lighter, dark brown. Shape and sculpture: Head rather short, transverse but insignificantly wider than pronotum, eyes bulging, temples almost straight (strongly convergent) in anterior 2/3 then broadly rounded, supraantennal tubercles stronger developed than in related species but anteriorly not reaching much beyond front edge of eyes; a pair of strong longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc somewhat elevated, convex. Antennae (Figs. 111–112) very elongate, articles 4–5 2.7–2.9 × longer than broad (male), 2.1–2.3 × longer than broad (female), articles 9–10 2.0–2.2 × longer than broad (male), 1.5–1.8 × longer than broad (female), last article about 1.5 × penultimate.

Neck (Figs. 61–62) separated by thin groove, also by its different, transverse coriaceous microsculpture. Pronotum convex and somewhat transverse, sides imperceptibly concave in posterior 3/5 (almost straight). Sides strongly rounded in anterior 2/5, as well as anterior edge. Posterior edge with thin marginal bead. Strong transverse impression before base extending anteriorly into longitudinal impressions (U-shaped anteriorly with outward curving arms). Elytra (Fig. 65) moderately convex, shoulders somewhat narrowly rounded anterior side almost perpendicular to body axis in dorsal view, sides slightly arched, suture with marginal bead, also on very oblique apical edge, rather thin, before outer corners with narrow membranous lobe (spanning 1/3 of apical breadth). Apical edge strongly bent towards ventral side. Apical edge strongly bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen rather constricted at base (Fig. 66), tergite II with only a slight hump, no trace of midline keel, tergite III with strong but blunt midline keel, tergite IV with a slight and blunt midline keel, tergite V with only a trace of a blunt keel. Abdomen widest at apices of segments IV–V, most tergites with transverse impressions behind basal ridges, only interrupted by the midline keel. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with moderately fine palisade fringe on apex 1.3 × as broad medially than laterally, very gently arched (concave). Punctation and microsculpture: Punctation on head so fine that almost invisible, moderately dense and intermixed with fine transverse coriaceous microsculpture. Clypeus rather finely punctate, not too dense, somewhat uneven sized punctures, only traces of coriaceous microsculpture, epistomal sulcus as elevated sharp ridge. Pronotum with very fine and moderately dense punctation on shiny surface in middle of disc to most of anterior half; behind U-shaped impression to both sides and posteriorly bearing rough punctation mixed with scabrous surface. Elytra with moderately dense, very shallow punctation, indiscrete puncture borders, interspaces about 1.5 × puncture diameter; microsculpture almost absent, surface rather shiny. Abdomen with tiny and rather dense punctures similar to those on anterior pronotum, mixed with very fine, transverse coriaceous microsculpture. Pubescence on body mostly short, thin, semi-erect or erect and rather dense, with a few dark and very long bristles, many on side of abdomen. On head with a pair of bristles at inner bases of supraantennal prominences, and another on edges of vertex behind eyes. strong, dark bristles approximately at (rounded) anterior pronotal corners, a pair of strong bristles around middles of sides (at widest point) and another also at 1/2 pronotal length in arms of U-shaped impression. Femora and tibiae with fine, short setation, mid-tibial spurs moderately long and not strong. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 30, tergite IX as in Fig. 83, sternite IX as in Fig. 84, tergite X as in Fig. 31, aedeagus, frontal view with parameres as in Fig. 36, median lobe with internal sclerites (in the same view) as in Fig. 37, paramere in lateral view as in Fig. 38. Female: segments IX–X with ringstructure as in Fig. 45, spermatheca as in Fig. 46.

DISTRIBUTION AND BIONOMICS: If the identification of the non-type material is correct, this species is known from NE India and northern Laos.

The Laos specimens were most likely collected from litter accumulated at branches in a stream.

COMMENT: The original description was based on two females, and internally they are in such decayed condition that no diagnostic genital structure could be found. Externally the two specimens (on which the present treatment is exclusively based) from N-Laos were very carefully compared with the types, but since we don't know how many closely related species may be involved, this identification has to be taken with some caution. The taxonomic history of this species is even more confusing than those of the others: it was described as a *Trogophloeus* (in the then subgenus *Thinodromus*), subsequently placed by the describer himself in his earlier erected genus *Apocellagria* together with another species (CAMERON 1941), then moved to *Thinodromus* by HERMAN (1970, 2001) while still maintaining *Apocellagria* as a valid genus.

Thinodromus schillhammeri MAKRANCZY, 2006

(Figs. 32–33, 39, 41–42, 47–48, 67–68, 85–86, 101)

Thinodromus schillhammeri MAKRANCZY 2006: 112.

TYPE MATERIAL: **Holotype** ♂: "CHINA: Yünnan, Xishuangbanna [Dai Autonomous Prefecture, Mengla Co.]; [along road Menglun - Mengyang, Wushiwu He river] ca. 10km NW Menglun [21°58'N 101°12'E]; 7.11[XI].1999, ca. 700m; leg. Jäch, et al. [H. Schönmann, M. Wang & Y. Wei] (CWBS 359) [river flowing through primary forest in steep valley] \ Thinodromus; schillhammeri sp. n.; det. Makranczy, 2005 \ Holotypus; Thinodromus; schillhammeri; Gy. Makranczy, 2005" [author's labelling on paratypes similar and not repeated]" (NMW). **Paratypes** (5 exs.): "CHINA, NW-Hunan 1993; Wulingyuan, N Dayong; Suoxiyu [29°21'25"N 110°31'10"E], 31.10[X]., 400m; leg. Schillhammer (5) [large river, in wide shallow gravel bed, furcated into 2–5 m wide arms, fine to medium sandstone gravel, very little limestone, partly with algae, no riparian vegetation]" (2 exs., NMW); "CHINA: Sichuan, 8.6[VI].1996; ca. 14km N Ya'an City; [near] rd. to Shangli, 800m [30°04′N 103°01′E]; leg. Ji & Wang (CWBS 221) [river with large rocks, some of them partly moss-covered, flowing through secondary forest]" (1 ex., NMW; 1 ex., SEMC; 1 ex., FMNH). [Coordinates in the original description were included by error and all are corrected here with data from the collectors]. The three remaining paratypes from Laos (Luang Nam Tha, ca. 20 km SE Muang Sing, 950 m, 21°07'50"N 101°16'00"E, 12.–13.VI.1996, leg. H. Schillhammer (25) (1 ♀, NMW; 1 ♀, BMNH; 1 ♀, MHNG) are now considered to belong to a different species (see below, under *T. immolatus*).

ADDITIONAL MATERIAL EXAMINED:

THAILAND: "THAILAND: Khao Yai NP [north of headquarters, near watchtower, 14°22'53"N 101°19'34"E, 660 m], 14.11[XI].[19]88, leg. [M.A.] Jäch (5) [small stream, slowly flowing, ca. 1–2 m wide, through dense forest]" (1 ♀, NMW; 1 ♀, MHNG).

REDESCRIPTION: Measurements (in mm, n = 8): HW = 0.65 (0.62–0.68); TW = 0.59 (0.57–0.62); PW = 0.63 (0.59–0.65); SW = 0.90 (0.88–0.94); MW = 1.02 (1.00–1.05); AW = 0.93 (0.90–0.97); HL = 0.43 (0.42–0.43); EL = 0.22 (0.21–0.23); TL = 0.12 (0.10–0.13); PL = 0.57 (0.54–0.59); SL = 1.00 (0.97–1.06); SC = 0.96 (0.93–1.02); FB = 2.04 (2.00–2.08); BL = 3.77 (3.54–3.97). Lustre and colour: Habitus as in Fig. 120 in MAKRANCZY (2006). Partly lustrous due to elytra plus part of pronotum weakly punctate and abdomen sculptured and punctate only basally. Body almost black, legs, mouthparts and antennae blackish dark brown, only bases of femora occasionally lighter, reddish. Shape and sculpture: Head rather short but slightly wider than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc somewhat elevated, convex but with a tiny longitudinal impression in midline. Temples very broadly rounded, almost evenly arched. Antennae slightly elongate, articles 4–5 1.5–1.6 × longer than broad (male), 1.2–1.3 × longer than broad (female), articles 9–10 1.1–1.2 × longer than broad (male), 1.0–1.1 × longer than broad (female), last article about 1.6 × penultimate. Neck (Fig. 101) separated by thin groove, conspicuous mostly by its different, transverse coriaceous microsculpture. Pronotum convex and only slightly transverse, sides concave in posterior half. Sides strongly rounded in anterior half, as well as anterior edge. Posterior edge with thin marginal bead. Strong transverse impression before base extending anteriorly towards sides plus a pair of parallel longitudinal impressions on middle of disc. Elytra (Fig. 67) moderately convex, shoulders well developed and narrowly rounded, anterior side perpendicular to body axis in dorsal view (making it look almost right-angled), sides slightly arched, suture with wider marginal bead, also on very oblique apical edge, rather thin, before outer corners with small membranous lobe (spanning 1/3 of apical breadth). Apical edge strongly bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow impression in the anterior 1/3 of disc. Abdomen rather constricted at base (Fig. 68), tergite II convex and punctate/sculptured (no trace of midline keel), tergite III with a stronger keel in midline and two slight elevations laterally, bordering impressed areas, tergite IV with a slight and blunt midline keel. Abdomen widest at apex of segment V, tergites II–V with strong transverse impressions behind basal ridges, only interrupted by the midline keel. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with medium wide palisade fringe on apex, only slightly broader medially than laterally, very gently arched (concave). Punctation and micro-

sculpture: Head with deep and rather dense punctures, interspaces on average 2/3–1/2 puncture diameter; punctures more loose on elevated parts, transverse coriaceous microsculpture weak, only occasionally apparent on more elevated parts / larger interspaces. Clypeus finely punctate, not dense, traces of strongly transverse microsculpture anteriorly; epistomal sulcus as shinier impunctate (transverse) stripe. Contrastingly, pronotum anteriorly shiny, very finely and rather sparsely punctate in anterior 3/5 and middle of disc, average interspaces 1–2 × puncture diameter. Posteriorly and along posterior half of sides punctures much more coarse and dense, interspaces very small, forming a rough, dull surface. Elytra with moderately deep and sparse punctation rather varying in size, interspaces typically range from 1.5–2.0 × puncture diameters, puncture edges obscured; ruggedness only in the impressions behind scutellum, otherwise surface rather shiny. Abdominal tergites smooth except for tergite 2 with rough, deep and dense punctation. Tergite III rather finely and moderately densely punctate behind basal ridge. Scabrous sculpture behind basal ridges on first visible tergites, posteriorly these transverse furrows with less rough sculpture, tergites posteriorly with very fine and scattered punctures, rather smooth and shiny. Pubescence on body mostly rather short, thin and semi-erect, more dense on head and pronotum, sparse on elytra and abdomen; with a few dark and very long bristles, many on side of abdomen. On head with a pair of bristles at inner bases of supraantennal prominences, and another on edges of vertex behind eyes. strong, dark bristles approximately at (rounded) anterior pronotal corners and a pair of strong bristles around middles of sides (at widest point). Femora and tibiae with fine, short setation, mid-tibial spurs not very conspicuous. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 32, tergite IX as in Fig. 85, sternite IX as in Fig. 86, tergite X as in Fig. 33, aedeagus, frontal view with parameres as in Fig. 41, median lobe with internal sclerites (in the same view) as in Fig. 42, paramere in lateral view as in Fig. 39. Female: segments IX–X with ringstructure as in Fig. 47, spermatheca as in Fig. 48.

DISTRIBUTION AND BIONOMICS: The present account revises the distribution range by considering types only from China (Yunnan, Hunan and Sichuan Provinces), but adding two questionably assigned specimens from Thailand (Prachin Buri Prov.).

Paratypes were probably from sand and gravel in between larger rocks in a river, other specimens could have been washed into a net while collecting water beetles.

COMMENT: Since the holotype is the only known male there may be some doubt whether all the female paratypes from the other localities really belong to this species; further collecting must confirm this. The Thailand specimens were initially thought to be a different species, based mostly on a shinier and more convex anterior part of the pronotum; these latter specimens are significant because one female possesses a remnant of the ringstructure (characteristic of most *Thinodromus*), while the paratypes from China do not. However, these paratypes are not from the type locality and some cryptic species may be involved, so for the time being the specimens from Thailand are best assigned to the here treated species until further material becomes available confirming either the range of variability or existence of other species.

***Thinodromus immolatus* sp.n.**

(Figs. 10–11, 34–35, 40, 43–44, 49–50, 87–88)

TYPE LOCALITY: China, Yunnan Province, Dali Bai Autonomous Prefecture, Mão Jiao Shan, 25°55'12"N 100°39'18"E, ca. 2360 m.

TYPE MATERIAL: **Holotype** ♂: "CHINA: Yunnan, Dali Bai Aut. Pref.,; Mão Jiao Shan, W pass 56km NE; Dali, 25°55'12"N, 100°39'18"E,; 2362m, creek valley, washed from; gravel bank, under stones, 4.IX.2009,; leg. M. Schülke (CH09-27) \ Sammlung; M. Schülke; Berlin" (ZMHB). **Paratypes** (17 exs.): same data as holotype (2 ♂♂, 5 ♀♀, 2, Coll. Schülke, 1 ♂, Coll. Gildenkov, 1 ♂, MHNG, 1 ♂, BMNH, 1 ♀, HNHM); Yunnan, Shanzhi env., Jizu Shan, 27°57.7–8'N 100°22.1–23.6'E, 2180–2580 m, 22.–24.VI.2007, leg. J. Hájek & J. Růžička (Ch45-47), sifted

detritus and leaves, dense mixed forest (with dominant *Pinus*, *Quercus* and *Rhododendron*) near stream (1 ♂, 1 ♀, NMW; 1 ♂, 1 ♀, NMPC).

ADDITIONAL MATERIAL EXAMINED (paratypes of *T. schillhammeri*):

LAOS: Luang Nam Tha, ca. 20 km SE Muang Sing, 950 m, 21°07'50"N 101°16'00"E, 12.–13.VI.1996, leg. H. Schillhammer (25) (1 ♀, NMW; 1 ♀, BMNH; 1 ♀, MHNG).

DIFFERENTIAL DIAGNOSIS: In general appearance very similar to *Thinodromus schillhammeri*, significantly differing only in the male genitalia. Other differences include a smaller eye and a more dense and finer elytral punctation in this species, but this latter feature has proved to be rather variable.

DESCRIPTION: Measurements (in mm, n = 10): HW = 0.47 (0.45–0.49); TW = 0.43 (0.41–0.44); PW = 0.50 (0.47–0.51); SW = 0.63 (0.60–0.66); MW = 0.69 (0.65–0.73); AW = 0.67 (0.63–0.73); HL = 0.36 (0.34–0.37); EL = 0.17 (0.16–0.18); TL = 0.08 (0.07–0.09); PL = 0.44 (0.42–0.46); SL = 0.63 (0.60–0.67); SC = 0.60 (0.57–0.64); FB = 1.48 (1.41–1.52); BL = 2.82 (2.73–3.05). Lustre and colour: Habitus as in Figs. 10–11. Partly lustrous due to elytra plus part of pronotum weakly punctate and abdominal segments strongly punctate only basally. Body blackish dark brown, legs, mouthparts and antennae dark brown, only bases of femora occasionally lighter, reddish. Shape and sculpture: Head rather short but slightly wider than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of longitudinal impressions on disc mediad supraantennal protuberances (posterior middle of disc somewhat elevated, convex). Temples very broadly rounded, almost evenly arched. Antennae slightly elongate, articles 4–5 1.4–1.6 × longer than broad (male), 1.2–1.4 × longer than broad (female), articles 9–10 1.3–1.4 × longer than broad (male), 1.1–1.2 × longer than broad (female), last article about 1.6 × penultimate. Neck separated by thin groove, conspicuous mostly by its different, transverse coriaceous microsculpture. Pronotum convex and only slightly transverse, sides concave in posterior half Sides strongly rounded in anterior half, as well as anterior edge. Posterior edge with thin marginal bead. Strong transverse impression before base extending anteriorly towards sides plus a pair of parallel longitudinal impressions on middle of disc. Elytra moderately convex, shoulders well developed and narrowly rounded, anterior side perpendicular to body axis in dorsal view (making it look almost right-angled), sides slightly arched, suture with wider marginal bead, also on very oblique apical edge, rather thin, before outer corners with small membranous lobe (spanning 1/3 of apical breadth). Apical edge strongly bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen rather constricted at base, tergite II convex and punctate/sculptured with only a slight midline keel behind basal ridge, tergite III with a slight bump at the same place, almost imperceivable behind strong sculpture, tergite IV with insignificant keel. Abdomen widest at apices of segments IV–V, tergites II–V with strong transverse impressions behind basal ridges, only interrupted by the midline keel. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with rather thin palisade fringe on apex, slightly broader medially than laterally, very gently arched (concave). Punctation and microsculpture: Head with a pair of small impressions on disc near the bases of supraantennal protuberances (middle of disc feebly elevated), fine and rather sparse punctures anteriorly (interspaces 2–3 × puncture diameter), getting more coarse posteriorly (average interspaces about same as puncture diameters), also meshed with coriaceous microsculpture (getting very strong before neck), rather dull. Clypeus with fine, scattered punctures but (mostly posteriorly) covered with strong, transverse coriaceous microsculpture, epistomal sulcus as fine transverse wrinkle within this microsculpture. Contrastingly, pronotum anteriorly shiny, finely and sparsely punctate. Middle of disc with paired (slightly elongate and oblique) impression, as well as a large and medially deep U-shaped impression before posterior margin. between medial impressions often with shinier elevated stripe and along posterior edge punctures much more coarse and dense, interspaces very small, forming a rough, dull surface. Elytra with rather fine

and moderately sparse punctures, interspaces more or less smooth and with indistinct microsculpture. Abdominal tergites with rough, scabrous sculpture behind basal ridges on first visible tergites, posteriorly these transverse furrows with less rough sculpture, tergites posteriorly with very fine and scattered punctures, rather smooth and shiny. Pubescence on body mostly rather short, thin and semi-erect, more dense on head and pronotum, somewhat more parse on elytra and abdomen; with a few dark and very long bristles, many on side of abdomen. Strong, dark bristles situated at inner bases of supraantennal prominences and on edges of vertex behind eyes. Pronotum with strong pair of rather strong bristles slightly inside from the middles of lateral edges. Femora and tibiae with fine, short setation, mid-tibial spurs not very conspicuous. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 34, tergite IX as in Fig. 87, sternite IX as in Fig. 88, tergite X as in Fig. 35, aedeagus, frontal view with parameres as in Fig. 43, median lobe with internal sclerites (in the same view) as in Fig. 44, paramere in lateral view as in Fig. 40. Female: segments IX–X with ringstructure as in Fig. 49, spermatheca as in Fig. 50.

ETYMOLOGY: Immolatus is the name of the skinchanger dragon in the "Brothers in Arms" book (Dragonlance Saga). Noun in apposition.

DISTRIBUTION AND BIONOMICS: The species is known from China (Yunnan Prov.) and possibly Laos (see below).

It was washed from a gravel bank under stones and sifted from vegetable debris and leaflitter at a stream.

COMMENT: The three females from Laos (= paratypes of *T. schillhammeri*) are slightly teneral and are covered with some greasy substance (obscuring the surface punctation and microsculpture). With the discovery of the here described new species it seems likely that they either belong here or even to a yet unnamed species. For this reason, the distributional record should be considered tentative until a male specimen from N-Laos confirms the identity.

Thinodromus pubicollis (CAMERON, 1930)

(Figs. 14, 23, 69, 89–90, 113–114, 125–127, 147)

Trogophloeus (*Thinodromus*) *pubicollis* CAMERON 1930: 182.
Trogophloeus pubicollis: ABDULLAH & QADRI 1970: 125.
Apocellagria pubicollis: CAMERON 1941: 147, HERMAN 1970: 389, 2001: 1498.

TYPE MATERIAL: **Lectotype** ♂ (here designated): "Type (red margined disc, curator label) \ Stream; Shingle \ Naga Hills (21+); Kampison 6000' \ T. pubicollis; Type Cam \ M. Cameron.; Bequest.; B.M. 1955-147 \ Lectotypus; Trogophloeus; pubicollis Cameron; des. Makranczy, 2000 \ Thinodromus; pubicollis (Cameron); det. Makranczy, 2011" (BMNH).

REDESCRIPTION: Measurements (in mm, n = 1): HW = 0.47; TW = 0.43; PW = 0.56; SW = 0.70; MW = 0.83; AW = 0.70; HL = 0.31; EL = 0.175; TL = 0.05; PL = 0.47; SL = 0.81; SC = 0.77; FB = 1.63; BL = 3.25. Lustre and colour: Body moderately shiny, except for shinier elytra. Dominantly blackish dark brown with occasional reddish tint (e.g. apices of abdominal segments). Pronotum and elytra reddish dark brown, legs reddish medium brown, apices of tibiae lighter, yellowish. Mouthparts and antennae medium brown, latter getting lighter towards apex, apices of antennomeres with more whitish setae, last antennomere rather lighter, yellowish. Shape and sculpture: Head short and comparatively narrow, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes. Temples conspicuous, short but gently rounded. Antennae (Fig. 147) moderately elongate, articles 4–5 1.4–1.5 × longer than broad (male), articles 9–10 1.0–1.05 × broader than long (male), last article about 1.5 × penultimate. Neck (Fig. 14) poorly separated, with a more dense punctation transforming into microsculpture. Pronotum transverse, slightly heart-shaped, sides somewhat concave before base. Sides of disc gently impressed at 1/3 length. Stronger arched depression before base, posterior edge with almost

imperceptibly thin marginal bead. Elytra (Fig. 69) moderately convex, gently widening towards apex, shoulders rounded, sides more curved in posterior half. Apical edge rather straight, oblique. Along suture with thin marginal bead, also on posterior edge bent towards ventral side, marginal bead continuing in epipleural ridge. Posterior edge with small and narrow membranous lobe (spanning less than 1/4 of apical breadth) near outer corners. Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen not so strongly constricted at base (Fig. 23), tergites III–V with midline keel in basal half (tergite II with only traces of it), tergites impressed behind basal ridge (tergite III most strongly), impressions mostly lack punctation and microsculpture. Abdomen widest at apex of segment IV. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with palisade fringe, 2.5–3.0 × wider in middle than sides, gently arched in middle. Punctation and microsculpture: Punctation on head and pronotum very coarse and deep, interspaces usually smaller than 1/2 diameter but shiny, so at sides of pronotal disc at 1/3 length (punctation less dense here) surface appearing shinier. Clypeus with thin anterior rim, more densely punctate than vertex, epistomal sulcus as a slight wrinkle within a wider impunctate transverse stripe. Elytra with medium dense and deep punctation, rather evenly spaced, interspaces 1/2–3/4 × puncture diameter, without microsculpture so surface comparatively shiny. Abdomen with the same type of punctation as elytra, punctures somewhat smaller, interspaces larger, occasional traces of microsculpture. Main body parts with longer, erect, quite evenly sized setae. Head with mostly short and fine setae, most conspicuous and longest on clypeus. Stronger setae near middle of vertex in longitudinal impressions mediad supraantennal tubercles. Pronotum with somewhat longer, semi-erect setae, only occasionally stronger ones (e.g. near middle of sides). Elytra with rather evenly-sized, semi-erect but somewhat less conspicuous setae than those on pronotum. Most of abdominal setation longer, more depressed, more or less evenly sized, only apical setae slightly larger. Femora and tibiae with fine, short setation, mid-tibial spurs weak. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 113, tergite IX as in Fig. 89, sternite IX as in Fig. 90, tergite X as in Fig. 114, aedeagus, frontal view with parameres as in Fig. 125, median lobe with internal sclerites (in the same view) as in Fig. 126, paramere in lateral view as in Fig. 127. Female unknown.

DISTRIBUTION AND BIONOMICS: Known only from one locality in NE India; same habitat data as *T. tenuicornis*.

The record of *T. pubicollis* from Pakistan by ABDULLAH & QADRI (1970) is speculative and almost surely erroneous.

***Thinodromus minglueni* sp.n.**

(Figs. 53–54, 63–64, 81, 91–92, 95–96, 105, 115–116, 128–130, 141–142)

TYPE LOCALITY: Laos: Houaphan Province, a creek between Saleuy and Phou Pan-Gnai, 20º13'07"N 103º59'59"E, ca. 1450 m.

TYPE MATERIAL: **Holotype** ♂: "LAOS: Xamneua State, a creek between Saleui & Ph. Pan, alt. 1453m, 20º13'07"N, 103º59'59"E, 20-23.V.2004, leg. M.-L. Jeng" (NMW). **Paratypes** (3 exs.): Luang Nam Tha, ca. 20 km SE Muang Sing, 950 m, 21°07'50"N 101°16'00"E, 12.–13.VI.1996, leg. H. Schillhammer "(25)", small stream (upper reaches of main Huay Giulom stream), mostly shaded, steep banks, riffle areas, substrate of moderate size, partly primary vegetation, from litter accumulated at branches in the stream (2 ♀♀, NMW; 1 ♂, MHNG).

DIFFERENTIAL DIAGNOSIS: This species is immediately recognizable by its long body setation. Somewhat similar to *Thinodromus pubicollis*, but distinguishable by the different antennae.

DESCRIPTION: Measurements (in mm, n = 4): HW = 0.53 (0.51–0.55); TW = 0.46 (0.44–0.48); PW = 0.59 (0.57–0.60); SW = 0.86 (0.83–0.89); MW = 0.96 (0.92–0.99); AW = 0.83 (0.78–

0.85); HL = 0.37 (0.35–0.38); EL = 0.19 (0.19–0.20); TL = 0.08 (0.07–0.08); PL = 0.54 (0.52–0.55); SL = 0.89 (0.83–0.92); SC = 0.85 (0.79–0.88); FB = 1.84 (1.73–1.88); BL = 3.65 (3.23–3.95). Lustre and colour: Habitus as in Figs. 95–96. Forebody moderately lustrous due to exceptionally long setation and strong but not too dense punctation, latter much weaker on abdomen making this part more shiny. Body blackish dark brown, mouthparts dark brown, legs medium brown except apices of femora and basal half of tibiae darker. Antennae medium brown with apical third dark brown, also apical halves of articles 2–8 giving the antennae a fusiform appearance. Shape and sculpture: Head rather roundish, eyes somewhat bulging, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc slightly elevated, convex. Temples weakly formed, rounded in anterior 1/3 then almost straight (converging). Antennae (Fig. 141) rather elongate (more basally than apically), articles 4–5 2.4–2.5 × longer than broad (male), 2.0–2.1 × longer than broad (female), articles 9–10 1.4–1.5 × longer than broad (male), 1.2–1.3 × longer than broad (female), last article about 1.4–1.5 × penultimate. Neck (Figs. 63–64) separated only by slight constriction. Pronotum transverse, sides arched anteriorly, concave in posterior half. Posterior edge with extremely thin marginal bead. Strong transverse impression before base extending anteriorly towards sides, middle of disc with two shallow longitudinal impressions, posterior edge with almost imperceptibly thin marginal bead. Elytra (Fig. 105) moderately convex, shoulders rounded, sides only slightly arched, suture with marginal bead, very thin on oblique and curved apical edge, before outer corners with membranous lobe (spanning 1/3 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow impression in the anterior 1/3 of disc. Abdomen insignificantly constricted at base (Fig. 142), tergite II with short but sharp midline keel, tergite III with strong and sharp midline keel, tergites IV and V with blunt keels. Laterotergites widened and arched in posterior halves of segments III–IV. Tergite VII with broad palisade fringe at apex, approximately 2 × as broad medially than laterally, very gently concave (angled in middle). Punctation and microsculpture: Punctation on head and pronotum greatly varying in size but generally deep and dense; interspaces less than 1/2 puncture diameter, shiny. Clypeus with punctures of uneven sizes, rather scattered, no microsculpture; epistomal sulcus as elevated shinier (transverse) ridge. Pronotal punctation much more discrete and dense along the posterior edge, middle of pronotal disc with loosened punctation at 1/3–1/2 length of midline, appearing shiny. Elytra with medium dense but rather coarse punctation, evenly spaced, puncture edges not discrete; interspaces slightly less than puncture diameter, without microsculpture, surface appears quite shiny. Abdomen with more dense punctation only behind basal ridges of tergites (mostly laterally), posteriorly only tiny, scattered punctures, without any microsculpture. Pubescence on body extremely long and erect but mostly thin, only a bunch of dark and strong setae, many of these on abdominal sides, 4–5 evenly spaced on elytral sides. On head with a pair of long bristles at inner bases of supraantennal prominences, another at inner sides of eyes and yet another pair near edges of vertex behind eyes. Pronotum with bristles approximately at (rounded) anterior pronotal corners, a pair around widest points of sides, and another similarly long pair slightly inside from lateral margin behind half pronotal length. Femora and tibiae with fine but rather long setation, among them mid-tibial spurs not very conspicuous. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 115, tergite IX as in Fig. 91, sternite IX as in Fig. 92, tergite X as in Fig. 116, aedeagus, frontal view with parameres as in Fig. 128, median lobe with internal sclerites (in the same view) as in Fig. 129, paramere in lateral view as in Fig. 130. Female: tergite IX as in Fig. 81, ringstructure as in Fig. 53, spermatheca as in Fig. 54.

ETYMOLOGY: The species is named after the collector of the holotype, Ming-Luen Jeng, excellent coleopterist from Taiwan, fellow graduate student at the University of Kansas between 1999 and 2005.

DISTRIBUTION AND BIONOMICS: The species is so far only known from two localities in Laos and was collected from vegetable debris accumulated in/at a stream.

COMMENT: This new species is worthy of inclusion in this review, because of possible confusion with *Thinodromus pubicollis*.

Thinodromus fuscipalpis (FAUVEL, 1904)

(Figs. 9, 12, 55–56, 82, 106, 117–118, 131–133, 139–140, 143)

Trogophloeus fuscipalpis FAUVEL 1904: 94.
Trogophloeus (*Thinodromus*) *fuscipalpis*: BERNHAUER & SCHUBERT 1911: 104.
Apocellagria fuscipalpis: HERMAN 1970: 389, 2001: 1768.

TYPE MATERIAL: **Lectotype** ♂ (here designated): "Nuwara Elia [6°58'N 80°46'E]; Ceylan [leg. Eugène Simon] \ fuscipalpis; Fvl. \ Coll. et det. A. Fauvel; Trogophloeus; fuscipalpis Fauv.; R.I.Sc.N.B. 17.479 \ Syntype \ Lectotypus; Trogophloeus; fuscipalpis Fauvel; des. Makranczy, 2010 \ Thinodromus; fuscipalpis Fauvel; det. Makranczy, 2010" (ISNB). **Paralectotype** ♀: same data as lectotype (ISNB) [the two syntypes were originally mounted on the same card/pin].

REDESCRIPTION: Measurements (in mm, n = 2): HW = 0.50 (0.49–0.50); TW = 0.45 (0.43–0.46); PW = 0.55 (0.51–0.525); SW = 0.70 (0.69–0.70); MW = 0.80 (0.79–0.80); AW = 0.69 (0.68–0.69); HL = 0.36 (0.35–0.36); EL = 0.18 (0.17–0.18); TL = 0.055 (0.05–0.06); PL = 0.42 (0.41–0.42); SL = 0.76 (0.75–0.76); SC = 0.73 (0.72–0.73); FB = 1.58 (1.57–1.58); BL = 3.03 (2.95–3.10). Lustre and colour: Habitus as in Figs. 9 and 12. Body rather dull due to strong punctation and moderately dense and long setation. Head blackish dark brown, rest of main body parts slightly reddish medium to dark brown. Legs medium to light brown. Antennae light brown at base but gradually darkening, apical half dark brown. Shape and sculpture: Head rather roundish, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc slightly elevated, convex. Temples weakly formed and short, very gently rounded (converging). Antennae slightly elongate, articles 4–5 1.7–1.8 × longer than broad (male), 1.5–1.6 × longer than broad (female), articles 9–10 1.05–1.10 × longer than broad (male), 1.00–1.05 × longer than broad (female), last article about 1.5 × penultimate. Neck (Figs. 139–140) poorly separated by slight constriction with punctation transforming into transverse coriaceous microsculpture. Pronotum transverse, sides arched anteriorly, concave in posterior half. Posterior edge with extremely thin marginal bead. Strong transverse impression before base extending anteriorly towards sides, middle of disc with two extremely shallow impressions. Elytra (Fig. 106) moderately convex, shoulders rounded, sides only slightly arched, suture with marginal bead, very thin on oblique apical edge, before outer corners with small membranous lobe (spanning 1/4 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with insignificant oblique impression between middle of suture and shoulder. Abdomen only slightly constricted at base (Fig. 143), tergite III with small keel, tergites II and IV with only traces of a midline keel. Abdomen widest at apices of segments IV–V, tergites impressed behind basal ridges (primarily tergite III) and unlike most other related species, laterotergites barely widened and arched in posterior halves of segments II–V. Tergite VII with rather fine palisade fringe on apex 1.5 × as broad medially than laterally, very gently arched (concave). Punctation and microsculpture: Head with deep, rough punctures yet with significant shiny interspaces (0.7–1.0 × puncture diameter) especially in middle of vertex. Clypeus punctate and transversely microsculptured, epistomal sulcus as transverse, somewhat elevated line across impunctate area. Pronotum with even larger punctures and similar portion of shiny interspaces (0.5–1.0 × puncture diameter). Elytra with quite rough and moderately dense punctures, puncture borders indistinct, interspaces about as puncture diameters, fine coriaceous microsculpture apparent on otherwise shiny interspaces. Abdomen with a few scattered punctures behind basal ridges of tergites, posteriorly punctures much finer, evenly spaced. Pubescence on body medium

long, thin, mostly depressed and rather sparse; elytra and abdomen with longer pubescence. On head a pair of bristles at inner bases of supraantennal prominences, another at inner sides of eyes and yet another on edges of vertex behind eyes; strong, dark bristles near anterior pronotal corners and a pair of strong bristles around middles of sides. Femora and tibiae with fine, short setation, mid-tibial spurs thin and rather inconspicuous. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 117, sternite IX as in Fig. 82, tergite X as in Fig. 118, aedeagus, frontal view with parameres as in Fig. 131, median lobe with internal sclerites (in the same view) as in Fig. 132, paramere in lateral view as in Fig. 133. Female: ringstructure as in Fig. 55, spermatheca as in Fig. 56.

DISTRIBUTION AND BIONOMICS: Only known from the type locality in Sri Lanka. Its habitat is not recorded.

COMMENT: This species was not found for more than a century.

Thinodromus amplipennis (CAMERON, 1941)

(Figs. 57–58, 79–80, 97, 100, 102, 107, 119–120, 134–136, 144)

Apocellagria amplipennis CAMERON 1941: 147.
Apocellagria amplipennis: HERMAN 1970: 389, 2001: 1497.

TYPE MATERIAL: **Lectotype** ♀ (here designated): "Type (round disc, curator label) \ [INDIA: West Bengal] Ghum distr.; Rongdong Valley [27°01'N 88°16'E]; v-vi-1931; Dr. Cameron \ A.; amplipennis; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; Apocellagria; amplipennis Cameron; des. Makranczy, 2000 \ Thinodromus; amplipennis (Cameron); det. Makranczy, 2011" (BMNH).

ADDITIONAL MATERIAL EXAMINED:

NEPAL: Kosi, Sankhuwasawa Distr., 2 km E Mangsingma, 1900 m, 27°31'N 87°20'E, 19.IV.1984, leg. I. Löbl & A. Smetana (31A), sieved from very moist moss (1 ♂, 1 ♀, MHNG).

REDESCRIPTION: Measurements (in mm, n = 2): HW = 0.51 (0.50–0.52); TW = 0.46 (0.46–0.46); PW = 0.58 (0.56–0.59); SW = 0.83 (0.82–0.83); MW = 0.72 (0.70–0.74); AW = 0.95 (0.93–0.96); HL = 0.35 (0.34–0.35); EL = 0.19 (0.18–0.19); TL = 0.07 (0.07–0.07); PL = 0.52 (0.51–0.53); SL = 0.95 (0.94–0.96); SC = 0.91 (0.90–0.92); FB = 1.87 (1.87–1.89); BL = 3.57 (3.53–3.60). Lustre and colour: Habitus as in Figs. 97 and 100. Body with greasy lustre due to mostly weak but very dense punctation; setation dense but only moderately long. Body blackish dark brown, legs, mouthparts and antennae dark brown, only bases of femora occasionally lighter, reddish. Shape and sculpture: Head rather roundish, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc slightly elevated, convex. Temples weakly formed and short, slightly rounded in anterior half then almost straight (converging). Antennae rather elongate, articles 4–5 1.8–1.9 × longer than broad (male), 1.7–1.8 × longer than broad (female), articles 9–10 1.25–1.35 × longer than broad (male), 1.2–1.3 × longer than broad (female), last article only about 1.6 × penultimate. Neck (Fig. 102) poorly separated by slight constriction with punctation transforming into transverse coriaceous microsculpture. Pronotum about as long as wide (insignificantly transverse), sides arched anteriorly, but anterior corners not perfectly rounded, rather with a small angle sticking out from the arch; pronotal sides very slightly concave in posterior half. Posterior edge with thin marginal bead. Strong transverse impression before base strongly extending towards anterior corners, sides of disc impressed, middle of disc with two longitudinal, anteriorly diverging impressions. Elytra (Fig. 107) moderately convex, shoulders rounded, sides only slightly arched, suture with marginal bead, very thin on slightly oblique apical edge, before outer corners with small membranous lobe (spanning 1/4 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen only slightly constricted at base (Fig. 144), tergite II mostly unexposed by elongate elytra

with short and slight midline keel, but both tergites III and IV with strong and sharp midline keels, while tergite V with only a trace of a keel (but sharp). Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with broad palisade fringe on apex 2 × as broad medially than laterally, very gently arched (concave). Punctation and microsculpture: Head very deeply and densely punctate, interspaces none except in middle of disc and posterior midline plus apices of supraantennal prominences with loosened punctation (shinier surfaces). Clypeus densely and deeply punctate, with average (shiny) interspaces much less than (about half of) puncture diameter, epistomal sulcus as fine (transverse) groove within an impunctate transverse stripe. Pronotum with similar rough punctation but without discrete puncture edges and with smoothened (shiny) surface in anterior part of disc, only tiny punctures apparent; punctation more rough and microsculpture strong coriaceous/scabrous on hind parts and laterally. Elytra with moderately fine, evenly spaced punctures, more rough posteriorly but with indistinct puncture edges; interspaces 1–3 × puncture diameter, without apparent microsculpture making surface rather shiny. Abdomen with a few rough, deep punctures behind basal ridges of tergites, but posteriorly becoming finer, evenly spaced without microsculpture. Pubescence on body mostly short, very dense, thin, semi-erect; only a few darker, longer setae, most of them on abdominal sides. On head with a pair of bristles at inner bases of supraantennal prominences, another at inner sides of eyes and yet another pair near edges of vertex behind eyes. pronotum with bristles approximately at (rounded) anterior pronotal corners, a pair around widest points of sides, and another pair slightly inside from lateral margin behind half pronotal length. Femora and tibiae with fine, short setation, mid-tibial spurs very short. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 119, sternite IX as in Fig. 80, tergite X as in Fig. 120, aedeagus, frontal view with parameres as in Fig. 134, median lobe with internal sclerites (in the same view) as in Fig. 135, paramere in lateral view as in Fig. 136. Female: tergite IX as in Fig. 79, ringstructure as in Fig. 57, spermatheca as in Fig. 58.

DISTRIBUTION AND BIONOMICS: The species is only known from the lectotype, collected in India (West Bengal), and from two specimens from Nepal. The two latter were collected from wet moss.

COMMENT: The lectotype is teneral and very strongly shrunk, therefore its identity is somewhat doubtful; the specimens from Nepal were compared with the lectotype in 2000 and are the closest match.

Thinodromus boukali **sp.n.**

(Figs. 21–22, 28–29, 59–60, 76–78, 98–99, 138, 154–156)

TYPE LOCALITY: India, Kerala State, Thiruvananthapuram Distr., stream N Kallar [approx. 8°42'57"N 77°08'06"E], ca. 220 m.

TYPE MATERIAL: **Holotype** ♂: "INDIA: Kerala, 3.1.1999; 30km NNE Trivandrum, 300m; Kallar Bridge, 08°45'N 77°05'E [coordinates unprecise]; leg. D. Boukal (41) [small stream in secondary forest]" (NMW). **Paratypes** (10 exs.): "INDIA: Kerala, Thiruvanantha-; puram distr., 0.6km NE Kallar, rocky stream confluent to Kallar; river, above huge rocks and pools \ 08°42'50"N, 77°07'51"E, 190m; 16.X.2016, leg. Gyurm, branches,; rotting leaves on rough sand +; gravel between stones, flotation" (3 ♂♂, NMW; 1 ♂, 1 ♀, HNHM; 1 ♂, 1 ♀, Coll. Schülke; 1 ♂, Coll. Gildenkov; 1 ♀, MHNG), same but 15.X.2016 (1 ♂, MHNG).

DIFFERENTIAL DIAGNOSIS: Superficially rather similar to *Thinodromus tenuicornis*, but differs most importantly in the unique body setation and shorter antennae.

DESCRIPTION: Measurements (in mm, n = 10): HW = 0.48 (0.47–0.50); TW = 0.42 (0.41–0.44); PW = 0.50 (0.49–0.52); SW = 0.65 (0.63–0.69); MW = 0.73 (0.72–0.76); AW = 0.66 (0.65–0.69); HL = 0.35 (0.34–0.36); EL = 0.17 (0.16–0.18); TL = 0.08 (0.04–0.05); PL = 0.43 (0.42–0.44); SL = 0.70 (0.68–0.73); SC = 0.66 (0.64–0.69); FB = 1.53 (1.50–1.58); BL = 2.85 (2.67–3.04). Lustre and colour: Habitus as in Figs. 98–99. Rather lustrous despite moderately

dense (but on part of pronotum also strong) punctation and setation. Main body parts blackish dark brown except abdomen at base variously reddish, lighter. Mouthparts dark brown, legs medium brown with apices of femora darker. Antennae blackish dark brown but apically lightening, terminal two segments yellow. Shape and sculpture: Head transverse but less wide than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc slightly elevated, convex. Temples broadly rounded, almost straight (gently arched). Antennae rather elongate, articles 4–5 2.6–2.8 × longer than broad (male), 2.1–2.2 × longer than broad (female), articles 9–10 1.7–1.8 × longer than broad (male), 1.4–1.5 × longer than broad (female), last article only about 1.4 × penultimate. Neck (Fig. 138) separated by thin groove, conspicuous mostly by its different, transverse coriaceous microsculpture. Pronotum slightly transverse, sides arched anteriorly, concave in posterior half. Posterior edge with thin marginal bead. Strong transverse impression before base extending anteriorly towards sides, middle of disc with two shallow impressions. Elytra (Fig. 21) moderately convex, shoulders narrowly rounded, sides very slightly arched except posterior 1/5 where more strongly curved, suture with marginal bead, also on very oblique apical edge, before outer corners with small membranous lobe (spanning less than 1/4 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen somewhat constricted at base (Fig. 22), tergite II with strong midline keel behind basal ridge, tergite III with strong, sharp midline keel in depression behind basal ridge, tergite IV with weaker keel but also impressed. Abdomen widest at apices of segments IV–V. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with moderately broad palisade fringe on apex, at least a half broader medially than laterally, very gently arched (concave). Punctation and microsculpture: Head with coarse and dense punctures on posterior half (interspaces on average half of puncture diameter), almost without punctures anteriorly, rather shiny, middle of disc somewhat elevated. Clypeus very strongly and densely punctate with some microsculpture, epistomal sulcus as fine transverse groove with shinier, somewhat elevated surroundings. Pronotum on middle of disc with even larger and deeper punctures, interspaces reduced to thin ridges between punctures. Laterally with a shiny (almost impunctate, slightly elevated) area at around anterior 1/3 of length. Middle of disc depressed, as well as a large and medially deep U-shaped impression before posterior margin. Anteriorly, laterally and before U-shaped impression punctures generally smaller and more shallow; interspaces without microsculpture). Posterior edge of pronotum more dull, bearing punctures mixed with scabrous microsculpture. Elytra with fine and moderately dense punctures, interspaces more or less smooth and with indistinct microsculpture. Abdominal tergites with extremely fine punctures behind basal ridges, punctures posteriorly stronger (but still fine) and with no perceivable microsculpture. Pubescence on body mostly short, thin, dense and depressed, but most conspicuously with a couple of extremely thick and dark, long setae, mostly on abdominal sides. Strong, dark bristles situated at inner bases of supraantennal prominences and on edges of vertex behind eyes. Pronotum with two small but dark bristles on anterior edge of pronotum and an extremely strong pair slightly inside from the middles of lateral edges. Tergites with conspicuous seta: in transverse midline laterad with a smaller knob and large, dark bristle, mediad with a larger knob with smaller bristle. Femora and tibiae with fine, short setation, mid-tibial spurs rather short. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 28, tergite IX as in Fig. 76, sternite IX as in Fig. 77, tergite X as in Fig. 29, aedeagus, frontal view with parameres as in Fig. 154, median lobe with internal sclerites (in the same view) as in Fig. 155, paramere in lateral view as in Fig. 156. Female: tergite IX as in Fig. 78, ringstructure as in Fig. 59, spermatheca as in Fig. 60.

ETYMOLOGY: The species is named after David S. Boukal (České Budějovice) who first collected this species.

DISTRIBUTION AND BIONOMICS: The species is only known from the type locality and its surroundings.

According to David Boukal (pers. comm.) specimens were collected from a "small stream, ca. 1.5 m wide, max 10–20 cm deep, riffles shallow, stones, gravel, some leaf packs, current slow to moderate (fast in a few riffles), partly shaded, draining secondary forest / cultivated land, slightly polluted".

COMMENT: This species is quite different from any of the others treated here, most significantly in the aedeagus that has unusually shaped parameres.

Thinodromus jaechi **sp.n.**

(Figs. 121–122, 148–149, 157–159, 166–168)

TYPE LOCALITY: Ethiopia, SNNPR: Sidama zone, 14 km SE Shashemene, Wondo Genet, Worka river, ca. 07°04'44.3"N 38°38'29.3"E, ca. 1910 m.

TYPE MATERIAL: **Holotype** ♂: "ETHIOPIA: Oromia; 14 km SE Shashemene; 211 km S Addis Abeba; Worka river \ 07°04'44.33"N 38°38'29.32"E; 1910 m a.s.l.; 19.II.2014; leg. M.A. Jäch (9) [in ca. 5–8 m wide river, flowing through degraded forest]" (NMW). **Paratypes** (3 exs.): same data as holotype (2 ♀♀, NMW; 1 ♂, MHNG).

DIFFERENTIAL DIAGNOSIS: Similar to both *Thinodromus singularis* (FAUVEL, 1907) and *T. aequatorialis* (described below), but differs in the colouration, especially the antennae, which are light coloured with only the apical third dark, in this respect quite close to *T. brincki* with antennae significantly shorter but also dark in apical half (light in basal half).

DESCRIPTION: Measurements (in mm, n = 4): HW = 0.51 (0.50–0.52); TW = 0.46 (0.44–0.48); PW = 0.53 (0.51–0.56); SW = 0.77 (0.75–0.79); MW = 0.86 (0.84–0.88); AW = 0.73 (0.69–0.80); HL = 0.37 (0.36–0.38); EL = 0.18 (0.18–0.18); TL = 0.07 (0.07–0.08); PL = 0.51 (0.49–0.52); SL = 0.87 (0.86–0.88); SC = 0.83 (0.82–0.84); FB = 1.82 (1.80–1.84); BL = 3.38 (3.33–3.44). Lustre and colour: Habitus as in Figs. 148–149. Body moderately lustrous due to dense punctation and moderately long but dense setation. Head, elytra and abdomen blackish dark brown, pronotum reddish medium to dark brown. Legs and mouthparts reddish medium brown except basal 2/3 of tibiae and penultimate palpomere dark brown. Antennae reddish light brown at basal half but gradually darkening, apical third dark brown. Shape and sculpture: Head rather roundish, less wide than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of weak longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc with tiny longitudinal impression. Temples very weakly formed (almost straight, convergent). Antennae slightly elongate, articles 4–5 1.75–1.85 × longer than broad (male), 1.6–1.7 × longer than broad (female), articles 9–10 1.05–1.15 × longer than broad (male), 1.0–1.1 × longer than broad (female), last article about 1.6 × penultimate. Neck not separated by groove, only a gentle constriction. Pronotum about as long as wide, sides arched anteriorly, concave in posterior half. Posterior edge with extremely thin marginal bead. Strong transverse impression before base extending anteriorly towards sides, middle of disc with two extremely shallow longitudinal impressions. Elytra moderately convex, shoulders rounded, sides only slightly arched anteriorly but strongly curved in posterior 1/5, suture with marginal bead, very thin on slightly oblique apical edge, before outer corners with narrow membranous lobe (spanning 1/3 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen constricted at base, tergites II and III with slight keel, tergite IV with only trace of a midline keel. Abdomen widest at apices of segments IV–V, tergites III–V with strong transverse impressions behind basal ridges. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with medium thin palisade fringe on apex, about 1.5 × as broad medially than laterally, slightly concave (gently curved in middle). Punctation and micro-

sculpture: Head with medium fine and dense but discrete and very deep punctures, average interspaces less than half of puncture diameter (both anteriorly and posteriorly, between supraantennal prominences with smaller impunctate spaces). Clypeus strongly punctate (intermixed with coriaceous microsculpture) on its whole area, epistomal sulcus as transverse wrinkle across sometimes less punctate (to a smaller extent impunctate) area. Pronotum with similar but somewhat larger punctures on anterior middle of disc with larger, shinier interspaces, slightly more dense punctation posteriorly, large and medially deep U-shaped impression before posterior margin, middle of disc with inconspicuous knoblike or longitudinally elongate elevations on both sides of midline, pronotal surface otherwise rather dull. Elytra with fine and moderately dense punctures (average interspaces 1.5 × puncture diameter), only traces of coriaceous (very shallow) microsculpture, rather dull. Slight impressions behind scutellum and in anterior half of disc of each elytron. Abdomen moderately shiny, small and shallow but distinct punctures behind basal ridges, very tiny and scattered punctures posteriorly. Pubescence on forebody very short, thin, depressed, dense and dust-like; only abdomen with somewhat longer setae. Bristles on head short, a tiny pair situated at inner bases of supraantennal prominences, similarly thin at inner sides of eyes and a stronger and larger near edges of vertex behind eyes; bristles on pronotum small, but a pair on both sides of anterior middle more conspicuous. Femora and tibiae with fine, short setation, mid-tibial spurs almost imperceptible. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 121, sternite IX as in Fig. 166, tergite X as in Fig. 122, aedeagus, frontal view with parameres as in Fig. 157, median lobe with internal sclerites (in the same view) as in Fig. 158, paramere in lateral view as in Fig. 159. Female: ringstructure as in Fig. 167, spermatheca as in Fig. 168.

ETYMOLOGY: The species is named after Manfred A. Jäch (Wien) who collected the four known specimens of this species.

DISTRIBUTION AND BIONOMICS: The species is so far only known from the type locality.

COMMENT: This species is the northernmost known African representative of the *Thinodromus* of the '*Apocellagria* type'.

***Thinodromus aequatorialis* sp.n.**

(Figs. 70, 103, 110, 123–124, 160–162, 169, 179)

TYPE LOCALITY: South Sudan, Eastern Equatoria, Imatong Mts. (near Gilo [approx. 04°02'N 32°51'E], see PUTHZ 1971: 225).

TYPE MATERIAL: **Holotype** ♂: "SUDAN, Aequatoria; Imatong-Gebirge \ prope; singularis; Fauv. \ ex coll.; Scheerpeltz \ [light blue cardboard, indicating Afrotropics] \ ♂" (NMW).

DIFFERENTIAL DIAGNOSIS: Rather similar to the three closely related African species, *Thinodromus singularis*, *T. jaechi* and *T. brincki*, from the latter two it differs in the colouration, from the former it can only be separated by the different internal sclerites of the aedeagus.

DESCRIPTION: Measurements (in mm, n = 1): HW = 0.51; TW = 0.46; PW = 0.54; SW = 0.79; MW = 0.88; AW = 0.70; HL = 0.37; EL = 0.20; TL = 0.07; PL = 0.52; SL = 0.91; SC = 0.87; FB = 1.84; BL = 3.36. Lustre and colour: Habitus as in Fig. 179. Body with greasy lustre due to rather dense punctation on all surfaces, setation conspicuously short on forebody, but longer on abdomen. Body dark brown with an occasional reddish tint (mostly elytra and base of abdomen), legs, mouthparts and antennae dark brown, only basal antennomeres occasionally somewhat lighter. Shape and sculpture: Head rather roundish, less wide than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of weak longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc very slightly elevated. Temples very weakly formed (almost straight, convergent). Antennae rather elongate, articles 4–5 2.0–2.1 × longer than broad (male), articles 9–10 1.2–1.3 × longer than broad (male),

last article about 1.6 × penultimate. Neck (Fig. 103) not separated by groove, only a gentle constriction. Pronotum about as wide as long, sides arched in anterior 3/5, slightly concave in posterior 2/5. Posterior edge with extremely thin marginal bead. Strong transverse U-shaped impression before base extending anteriorly, middle of disc with extremely shallow impressions. Elytra (Fig. 110) moderately convex, shoulders rounded, sides only slightly arched anteriorly but strongly curved in posterior 1/5, suture with marginal bead, very thin on oblique apical edge, before outer corners with small membranous lobe (spanning 1/3 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen constricted at base (Fig. 70), tergite III with strong midline keel, tergite IV with smaller keel, tergite V only trace of it, but almost none on tergite II (mostly unexposed). Abdomen widest at apices of segments IV–V, tergites III–V with strong transverse impressions behind basal ridges. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with broad palisade fringe on apex 1.5–2.0 × as broad medially than laterally, very gently concave (angled in middle). Punctation and microsculpture: Punctation on head and pronotum moderately fine, but rather deep and extremely dense, interspaces none to 1/3 puncture diameter (in middle of disc). Clypeus deeply punctate but with more interspaces than on vertex (where practically none present), slight traces of microsculpture or roughness; epistomal sulcus as elevated sharp ridge across less densely punctate area. Pronotal punctation similar to that of head but punctures slightly larger, less deep, more interspaces and some rugosity in middle of disc. Elytra with moderately fine and shallow punctures, evenly sized; interspaces on average 1.5–2.0 × puncture diameter with little to no microsculpture. Abdominal tergites with more coarse punctures (like on pronotum) behind basal ridges but getting shallow, tiny and scattered posteriorly, no apparent microsculpture. Pubescence on forebody very short, thin, depressed, dense and dust-like; only abdomen with occasionally longer setae. Main body parts without any stronger setae, if any, they closely adhere to surface and rather inconspicuous. Femora and tibiae with fine, short setation, mid-tibial spurs almost imperceptible. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 123, sternite IX as in Fig. 169, tergite X as in Fig. 124, aedeagus, frontal view with parameres as in Fig. 160, median lobe with internal sclerites (in the same view) as in Fig. 161, paramere from lateral view as in Fig. 162. Female unknown.

ETYMOLOGY: The species is named after the area of the type locality. Equatoria is a historical region in South Sudan along the upper reaches of the White Nile.

DISTRIBUTION AND BIONOMICS: The species is so far only known from the type locality.

COMMENT: The internal sclerites of the aedeagus are sufficiently different to justify the separation of this taxon as a distinct species.

Thinodromus singularis (FAUVEL, 1907)

(Figs. 93, 104, 108, 145, 163–165, 170–172, 180–183)

Trogophloeus singularis FAUVEL 1907: 13.
Trogophloeus "(*Carpalimus*)" *singularis*: BERNHAUER & SCHUBERT 1911: 96.
Apocellagria singularis: HERMAN 1970: 389, 2001: 1498.
Thinodromus singularis: MAKRANCZY 2006: 86, 108.

TYPE MATERIAL: **Lectotype** ♂ (here designated): "Afrique Or[ienta]le Allemande [TANZANIA]; Kilimandjaro; (zone des cultures); Ch. Alluaud I-IV 1904 \ singularis; Fvl. \ Coll. et det. A. Fauvel; Trogophloeus; singularis Fvl.; R.I.Sc.N.B. 17.479 \ Syntype \ Lectotypus; Trogophloeus; singularis Fauvel; des. Makranczy, 2010 \ Thinodromus; singularis Fauvel; det. Makranczy, 2010" (ISNB).

ADDITIONAL MATERIAL EXAMINED:

KENYA: Naromoru, Naromoru river, 31.I.1980, leg. J.T. Polhemus (CL 1655) (3 ♂♂, 4 ♀♀, 1 ex., CASC; 1 ♂, HNHM; 1 ♂, MHNG; 1 ♂, 1 ♀, NMW).

TANZANIA: Uluguru Mts., Chenzema, 1700 m, 2.–22.VII.1971, leg. L. Berger, N. Leleup & J. Debecker (1 ♀, MRAC).

REDESCRIPTION: Measurements (in mm, n = 10): HW = HW = 0.53 (0.51–0.56); TW = 0.48 (0.46–0.50); PW = 0.55 (0.53–0.59); SW = 0.83 (0.79–0.88); MW = 0.96 (0.91–1.01); AW = 0.76 (0.70–0.86); HL = 0.37 (0.36–0.40); EL = 0.195 (0.19–0.20); TL = 0.07 (0.06–0.08); PL = 0.51 (0.49–0.54); SL = 0.96 (0.90–1.02); SC = 0.92 (0.86–0.98); FB = 1.89 (1.82–2.01); BL = 3.59 (3.30–3.97). Lustre and colour: Habitus as in Figs. 180–181. Body with greasy lustre due to dense punctation on all surfaces, setation conspicuously short on forebody, but longer on abdomen. Body dark brown with an occasional reddish tint (mostly elytra and base of abdomen), legs, mouthparts and antennae dark brown, only basal antennomeres occasionally somewhat lighter. Shape and sculpture: Head rather roundish, less wide than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of weak longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc very slightly elevated. Temples very weakly formed (almost straight, convergent). Antennae slightly elongate, articles 4–5 1.8–1.9 × longer than broad (male), 1.6–1.7 × longer than broad (female), articles 9–10 1.1–1.2 × longer than broad (male), 1.05–1.15 × longer than broad (female), last article about 1.6 × penultimate. Neck (Fig. 104) not separated by groove, only a gentle constriction. Pronotum only slightly transverse, sides arched anteriorly, concave in posterior half. Posterior edge with extremely thin marginal bead. Strong transverse impression before base extending anteriorly towards sides, middle of disc with two shallow longitudinal impressions. Elytra (Fig. 108) moderately convex, shoulders rounded, sides only slightly arched anteriorly but strongly curved in posterior 1/5, suture with marginal bead, very thin on slightly oblique and curved apical edge, before outer corners with small membranous lobe (spanning 1/3 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen constricted at base (Fig. 145), tergite III with strong midline keel, tergite IV smaller keel, tergite V only trace of it; slight midline keel on exposed part of tergite II. Abdomen widest at apices of segments IV–V, tergites III–V with strong transverse impressions behind basal ridges. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with medium thin palisade fringe on apex 1.5 × as broad medially than laterally, very gently concave (angled in middle). Punctation and microsculpture: On head punctation rather rough and deep, extremely dense, interspaces 1/3–2/3 puncture diameter, shiny, giving head greasy lustre. Clypeus almost as densely and deeply punctate as vertex, obscuring any trace of microsculpture (interspaces very small, only a small fraction of puncture diameters); epistomal sulcus as a transverse wrinkle inside an impunctate (shinier) stripe of varying width. Pronotal punctures somewhat larger but otherwise similar to those on head, occasionally loosening at spots along midline, making it more shiny. Elytral punctures similar to the ones on head but with interspaces slightly larger than puncture diameters; surface rather shiny in spite of slight coriaceous microsculpture. Abdominal tergites behind basal ridges with similar punctures to those on elytra but posteriorly much finer and evenly spaced with only traces of microsculpture making it quite shiny. Pubescence on forebody very short, thin, depressed, dense and dust-like; only abdomen with occasionally longer setae. Main body parts without any stronger setae, if any, they closely adhere to surface and rather inconspicuous. Femora and tibiae with fine, short setation, mid-tibial spurs almost imperceptible. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 182, sternite IX as in Fig. 170, tergite X as in Fig. 183, aedeagus, frontal view with parameres as in Fig. 163, median lobe with internal sclerites (in the same view) as in Fig. 164, paramere in lateral view as in Fig. 165. Female: tergite IX as in Fig. 93, ringstructure as in Fig. 171, spermatheca as in Fig. 172.

DISTRIBUTION AND BIONOMICS: This species is now known from Kenya and Tanzania.

No specific record is available for its habitat, although one label mentions a river.

COMMENT: MAKRANCZY (2006: 108) lists under *T. singularis* a specimen from "West Usambara". This single female cannot be assigned to a species with certainty. In the same entry the specimen from "Imatong Gebirge" is described above as a new species (*T. aequatorialis*).

Thinodromus brincki (SCHEERPELTZ, 1974)

(Figs. 15–16, 109, 146, 150, 153, 173–175, 184, 188–190)

Trogophloeus "(*Carpalimus*)" *brincki* SCHEERPELTZ 1974: 59.

Carpelimus brincki: HERMAN 2001: 1646. (note: all species originally described in the subgenus "*Carpalimus*" [misspelling of *Carpelimus*] after 1970 and not revised since are erroneously listed under *Carpelimus* in this paper)

TYPE MATERIAL: **Holotype** ♀: "S. Afr. Natal,; Albert Falls, Umgeni; River, E Pietermaritz-; burg.; 13.IV.51. No. 272 [approx. 29°37'14"S 30°27'28"E, loamy river after falls, with a pool and branches; small overgrown islands, shores of river at places open, stony, fairly dry, at places with dense vegetation] \ Swedish South Africa; Expedition; 1950-1951; Brinck - Rudebeck \ Trogophloeus (Carpalimus) Brincki n.sp. \ Holotypus \ Typus Trogophloeus; Brincki; O. Scheerpeltz \ Trogophloeus; (Carpalimus); Brincki n.sp.; det. Scheerpeltz, 1968 \ Type No.; 591:1-2; Zool. Mus. Lund Sweden; Staphylinidae \ ZML. 2002; 123 \ ♀ \ Holotypus; Trogophloeus; brincki Scheerpeltz; ver. Makranczy, 2002 \ Thinodromus; brincki (Scheerpeltz); det. Makranczy, 2002" (MZLU). **Paratype** (1 ex.): "S. Afr. Natal,; Albert Falls, Umgeni; River, E Pietermaritz-; burg.; 13.IV.51. No. 272 \ Swedish South Africa; Expedition; 1950-1951; Brinck - Rudebeck \ Cotypus; Trogophloeus; Brincki m.; O. Scheerpeltz \ Type No.; 591:2 \ ZML. 2002; 124 \ ♂ \ Paratypus; Trogophloeus; brincki Scheerpeltz; ver. Makranczy, 2002 \ Thinodromus; brincki (Scheerpeltz); det. Makranczy, 2002" (1 ♂, MZLU).

REDESCRIPTION: Measurements (in mm, n = 2): HW = 0.48 (0.47–0.49); TW = 0.45 (0.440–0.455); PW = 0.51 (0.50–0.52); SW = 0.70 (0.69–0.70); MW = 0.80 (0.78–0.82); AW = 0.66 (0.65–0.67); HL = 0.38 (0.37–0.38); EL = 0.18 (0.17–0.18); TL = 0.075 (0.07–0.08); PL = 0.47 (0.46–0.48); SL = 0.80 (0.79–0.81); SC = 0.77 (0.76–0.78); FB = 1.70 (1.68–1.72); BL = 3.43 (3.35–3.50). Lustre and colour: Habitus as in Figs. 150 and 153. Moderately dull, for most of body densely punctate and/or setose. Head, elytra and abdomen reddish dark brown, pronotum reddish medium brown. Individual tergites somewhat lighter apically, legs and mouthparts medium to dark brown, antennae light brown (basal half) to dark brown (apical half). Shape and sculpture: Head rather roundish, less wide than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; with a pair of weak longitudinal impressions on disc mediad supraantennal protuberances, posterior middle of disc very slightly elevated with a tiny impression in midline. Temples very weakly formed (almost straight, convergent). Antennae slightly elongate, articles 4–5 1.55–1.65 × longer than broad (male), 1.45–1.55 × longer than broad (female), articles 9–10 1.15–1.25 × longer than broad (male), 1.0–1.1 × longer than broad (female), last article about 1.6 × penultimate. Neck (Figs. 15–16) not separated by groove, only a gentle constriction. Pronotum rather narrow (slightly transverse), sides arched anteriorly, concave in posterior half. Posterior edge with extremely thin marginal bead. Strong transverse impression before base extending anteriorly towards sides, middle of disc with two extremely shallow longitudinal impressions. Elytra (Fig. 109) moderately convex, shoulders rounded, sides slightly arched, suture with marginal bead, also on oblique apical edge, before outer corners with narrow membranous lobe (spanning 1/3 of apical breadth). Apical edge bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen only slightly constricted at base, tergite III with small keel, tergites II and IV with weaker midline keel (Fig. 146). Abdomen widest at apices of segments IV–V, tergites II–V with wide transverse impressions behind basal ridges, only interrupted by the midline keel. Laterotergites widened and arched in posterior halves of segments II–V. Tergite VII with medium thin palisade fringe on apex 2 × as broad medially than laterally, very gently concave (angled in middle). Punctation and microsculpture: Head with medium fine but very deep and dense punctures somewhat varying in size, almost no interspaces except posterior midline of vertex. clypeus punctate and transversely microsculptured, epistomal sulcus as transverse, somewhat elevated line across impunctate area. Pronotum with similar

punctures to those on head, but slightly larger, even less interspaces (occasionally 1/3 of puncture diameter). Elytra with punctures just like on head but with interspaces about as puncture diameters; only traces of microsculpture giving it greasy lustre. Abdomen with similar sized punctures behind basal ridges but almost as dense as on head, punctures becoming smaller and with shiny interspaces posteriorly. Pubescence on forebody very short, thin, depressed, dense and dust-like; abdomen with longer and more sparse setae. Bristles on head short, a pair situated at inner bases of supraantennal prominences, another at inner sides of eyes and yet another near edges of vertex behind eyes; bristles on pronotum inconspicuous. Femora and tibiae with fine, short setation, mid-tibial spurs inconspicuous. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 184, sternite IX as in Fig. 173, tergite X as in Fig. 185, aedeagus, frontal view with parameres as in Fig. 188, median lobe with internal sclerites (in the same view) as in Fig. 189, paramere in lateral view as in Fig. 190. Female: ringstructure as in Fig. 174, spermatheca as in Fig. 175.

DISTRIBUTION AND BIONOMICS: Known only from South Africa.

The two known specimens were collected on a riverbank after waterfalls, partly vegetated, gravel islands at branchings; exact collecting method unrecorded, but might be washing of the shore (BRINCK & RUDEBECK 1955).

COMMENT: For unknown reason the female was chosen as holotype and the male as paratype; unfortunate choice as the female genital structures in the closely related species look very similar and hardly offer diagnostic value.

Thinodromus zuluanus sp.n.

(Figs. 94, 151–152, 176–178, 186–187, 191–193)

TYPE LOCALITY: South Africa, KwaZulu-Natal Province, St. Michaels-on-Sea, swamp near Mhlanga river, 30°48'54"S 30°23'59"E, ca. 10 m.

TYPE MATERIAL: **Holotype** ♂: "SOUTH AFRICA: KwaZulu-Natal; St. Michaels-on-Sea near Ramsgate; 30°49'S, 30°23'E [coordinates corrected with GoogleEarth: 30°48'54"S 30°23'59"E], swamp, sifting; 30.XI.2006, leg. J. Janák [litter under vegetation, sifted]" (TMSA). **Paratypes** (20 exs.): same data as holotype (1 ♂, 1 ♀, 11 exs., Coll. Janák; 1 ♂, 1 ♀, NMW; 1 ♂, 1 ♀, MHNG; 1 ♂, 1 ♀, HNHM; 1 ex., Coll. Gildenkov).

DIFFERENTIAL DIAGNOSIS: Even in appearance, this species differs significantly from all other African species in the wider pronotum (compared to the width of the elytra) with posteriorly barely concave sides and shorter elytra. This is also the smallest (shortest) of the African species treated here.

DESCRIPTION: Measurements (in mm, n = 10): HW = 0.47 (0.45–0.49); TW = 0.43 (0.41–0.44); PW = 0.50 (0.47–0.51); SW = 0.63 (0.60–0.66); MW = 0.69 (0.65–0.73); AW = 0.67 (0.63–0.73); HL = 0.36 (0.34–0.37); EL = 0.17 (0.16–0.18); TL = 0.08 (0.07–0.09); PL = 0.44 (0.42–0.46); SL = 0.63 (0.60–0.67); SC = 0.60 (0.57–0.64); FB = 1.48 (1.41–1.52); BL = 2.82 (2.73–3.05). Lustre and colour: Habitus as in Figs. 151–152. Moderately shiny, most of body weakly setose but head and posterior of pronotum densely punctate making these parts rather dull. Main body parts dark brown with some reddish tint, mouthparts and antennae dark brown, latter with base somewhat lighter, medium brown; legs medium to dark brown, apices of femora and basal 2/3 of tibiae darker. Shape and sculpture: Head rather roundish, less wide than pronotum, supraantennal tubercles anteriorly not reaching much beyond front edge of eyes; a pair of very weak longitudinal impressions on disc mediad supraantennal protuberances, almost as globose in appearance as pronotum. Temples very weakly formed (almost straight, convergent). Antennae rather elongate, articles 4–5 2.3–2.4 × longer than broad (male), 1.9–2.1 × longer than broad (female), articles 9–10 1.25–1.35 × longer than broad (male), 1.0–1.1 × longer than broad (female), last article about 1.6 × penultimate. Neck not separated by groove, only a gentle

constriction. Pronotum most remarkably globose in appearance, very convex and almost devoid of impressions, only trace of usual basal (U-shaped) impression observable. Pronotal sides very slightly concave (almost straight) in posterior half, posterior edge with almost imperceptibly thin marginal bead. Elytra moderately convex, shoulders rather narrowly rounded, sides arched, suture with thin marginal bead, also on oblique apical edge, before outer corners with narrow membranous lobe (spanning 1/3 of apical breadth). Apical edge strongly bent towards ventral side, marginal bead continuing in epipleural ridge. Elytron with shallow oblique impression between middle of suture and shoulder. Abdomen rather constricted at base, tergites II and III with slight keel, tergite IV with only trace of a midline keel. Abdomen widest at apex of segment IV, tergites III–V with strong transverse impressions behind basal ridges. Laterotergites slightly widened and arched in posterior halves of segments II–V. Tergite VII with medium thin palisade fringe on apex more than 2 × as broad medially than laterally, very gently concave (angled in middle). Punctation and microsculpture: Head with medium fine and dense but discrete and very deep punctures, average interspaces less than half of puncture diameters posteriorly; anteriorly punctures loosening a bit (between supraantennal prominences with significant impunctate spaces). Clypeus punctate and with coriaceous microsculpture (mostly anteriorly and laterally), epistomal sulcus as transverse, somewhat elevated, fine ridge across less punctate area. Pronotum with similar punctures to those on head, but somewhat obscured on anterior middle of disc, posterior half of disc with larger, deeper, more dense punctures, punctures barely separated, with rougher surface dull. Posterior transverse impression rather shallow and indistinct. Elytra with fine and sparse punctures (average interspaces 3 × puncture diameter), only some unevenness on surface, no trace of microsculpture, rather shiny. Abdomen very shiny, only minute insertions of setae behind basal ridges, very tiny and scattered punctures posteriorly. Pubescence on body mostly short, thin, depressed, moderately dense, on elytra and abdomen somewhat longer and more sparse, abdomen with a number of strong and long, dark bristles laterally. Bristles on head short, a pair situated at inner bases of supraantennal prominences, another at inner sides of eyes and yet another near edges of vertex behind eyes; bristles on pronotum small, but a pair on both sides of anterior middle more conspicuous. Femora and tibiae with fine, rather short setation, mid-tibial spurs very short. Last tarsomere with a few longer setae only. Primary and secondary sexual features: Male: sternite VIII as in Fig. 186, sternite IX as in Fig. 176, tergite X as in Fig. 187, aedeagus, frontal view with parameres as in Fig. 191, median lobe with internal sclerites (in the same view) as in Fig. 192, paramere in lateral view as in Fig. 193. Female: tergite IX as in Fig. 94, ringstructure as in Fig. 177, spermatheca as in Fig. 178.

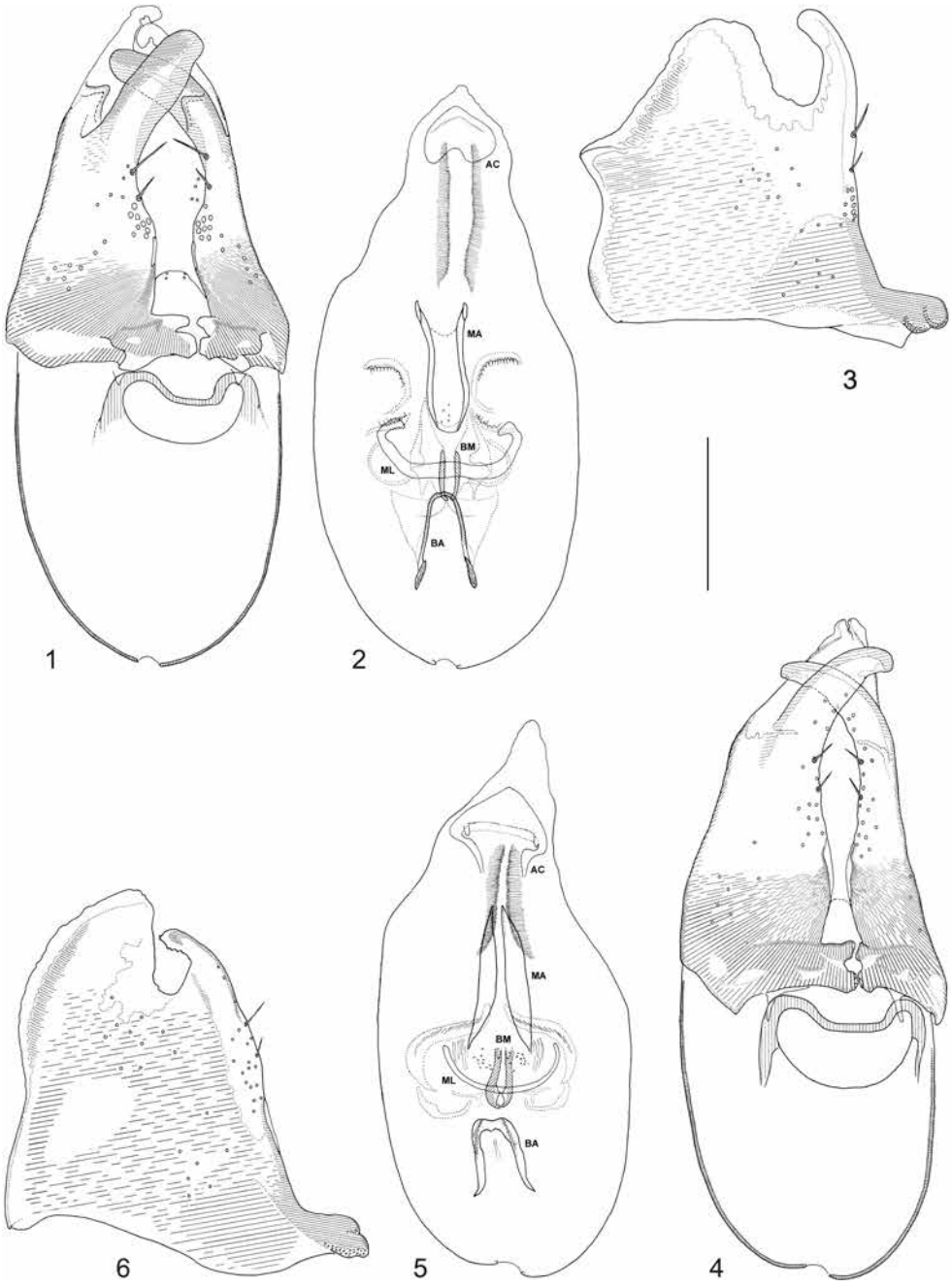
ETYMOLOGY: The species is named after the people living in the type locality area. The Zulu are a Bantu ethnic group, most of them live in KwaZulu-Natal.

DISTRIBUTION AND BIONOMICS: The species is only known from the type locality and was collected by sifting vegetable (bottom) debris in a small swamp at a river. It is suspected that the habitat/bionomics of this species slightly differ from those of the other African species.

COMMENT: This species stands out as distant from the otherwise fairly homogeneous group of eastern African species.

Acknowledgements

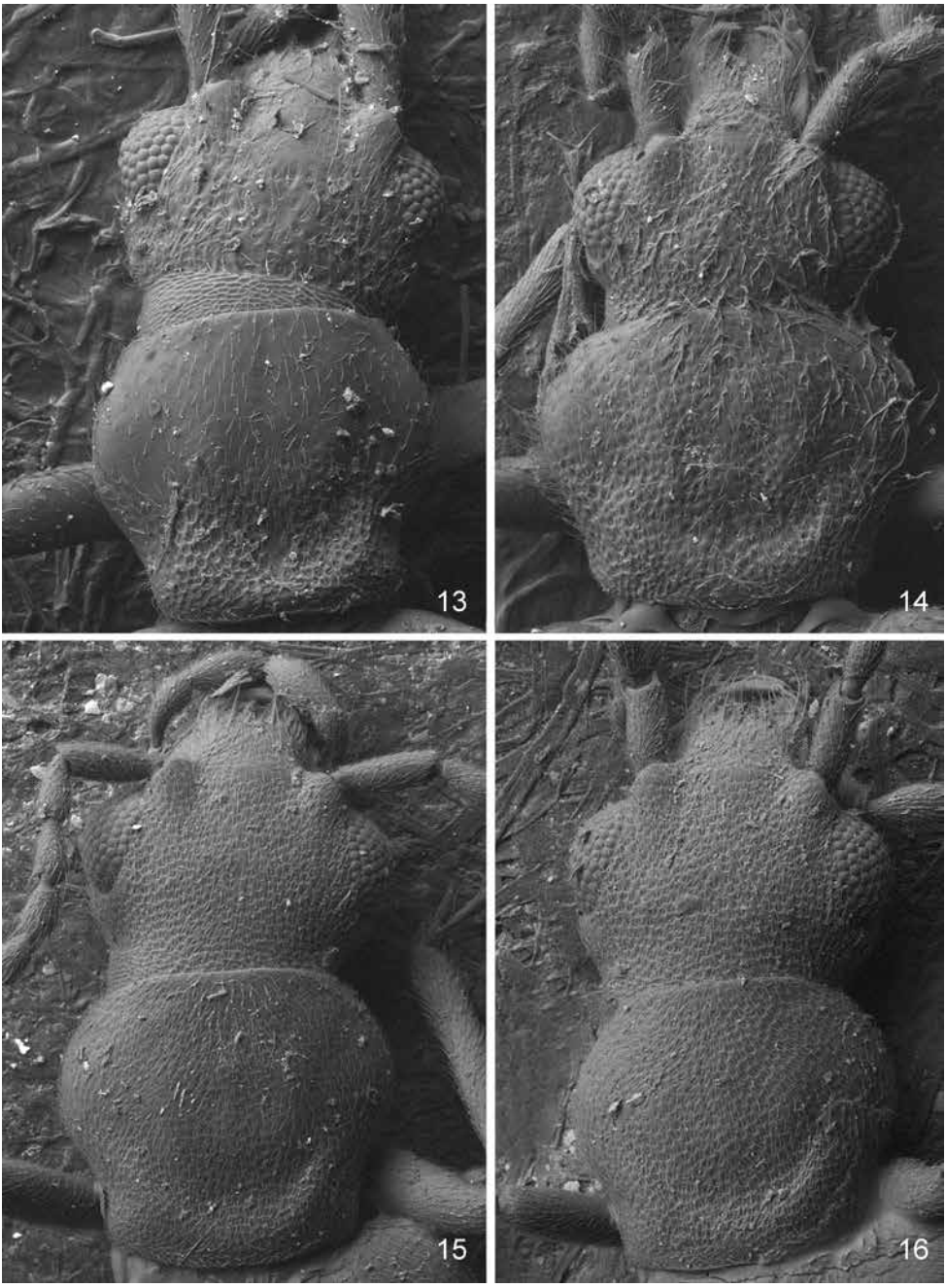
The author is indebted to Harald Schillhammer (NMW) for his help with the colour habitus images, and besides him I thank all the other curators providing access to collections and type material under their care: Martin J.D. Brendell and Roger G. Booth (BMNH), Phillip P. Parrillo and James H. Boone (FMNH), Didier Drugmand (ISNB), Marc de Meyer (MRAC), Roy Danielsson (MZLU), Roberta L. Brett and David H. Kavanaugh (CASC). A few of the SEM images were taken with financial help of the Hungarian Scientific Research Fund (OTKA No. 69235, principal investigator Zoltán Korsós).



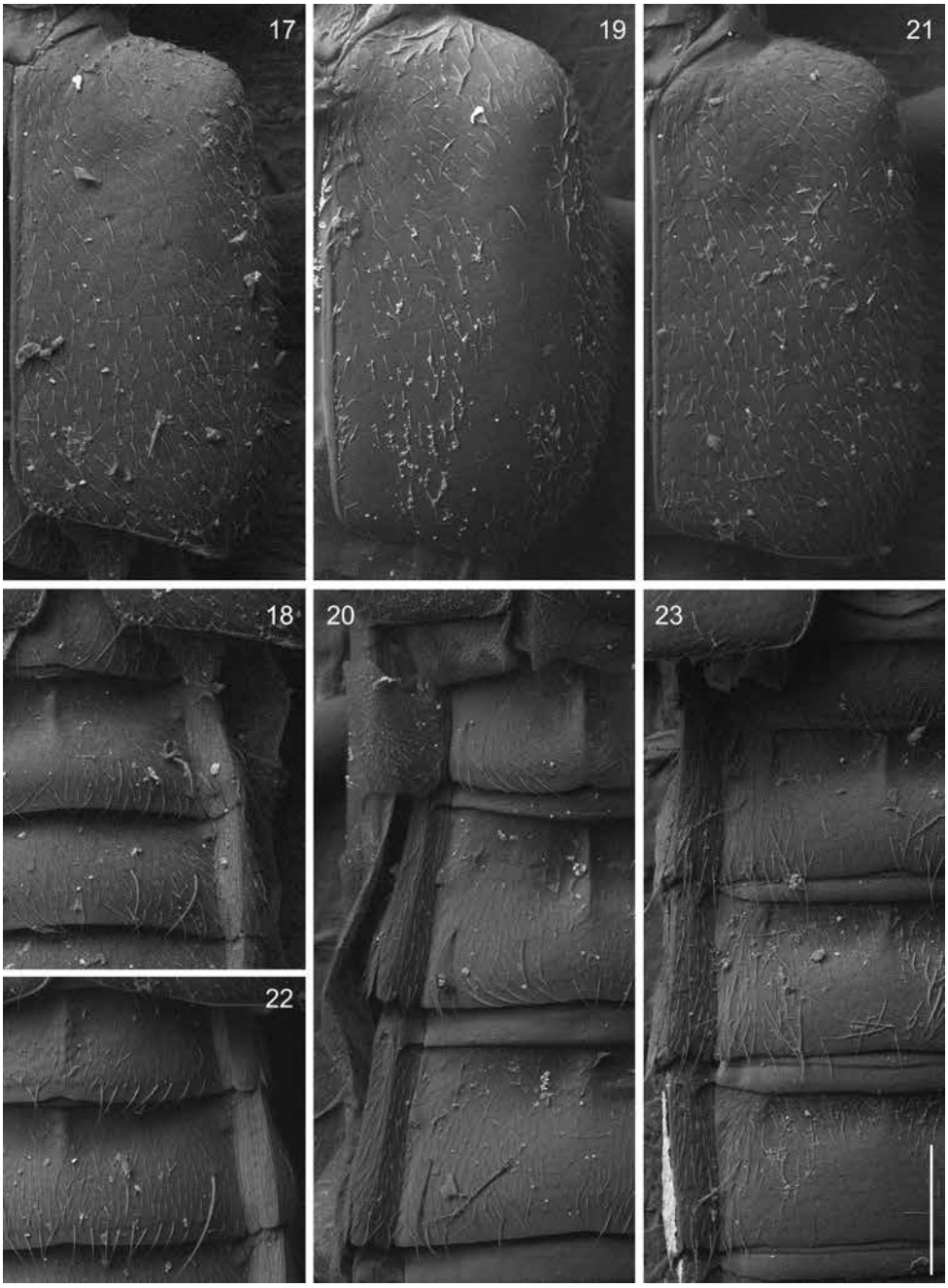
Figs. 1–6: *Thinodromus indicus* (1–3) and *T. tenuicornis* (4–6): 1–2, 4–5) aedeagus, frontal view; 3, 6) paramere, lateral view. Scale bar = 0.10 mm (1–6).

Figs. 7–9: Habitus of 7) *Thinodromus indicus* (♀), 8) *T. tenuicornis* (♂) and 9) *T. fuscipalpis* (♂).

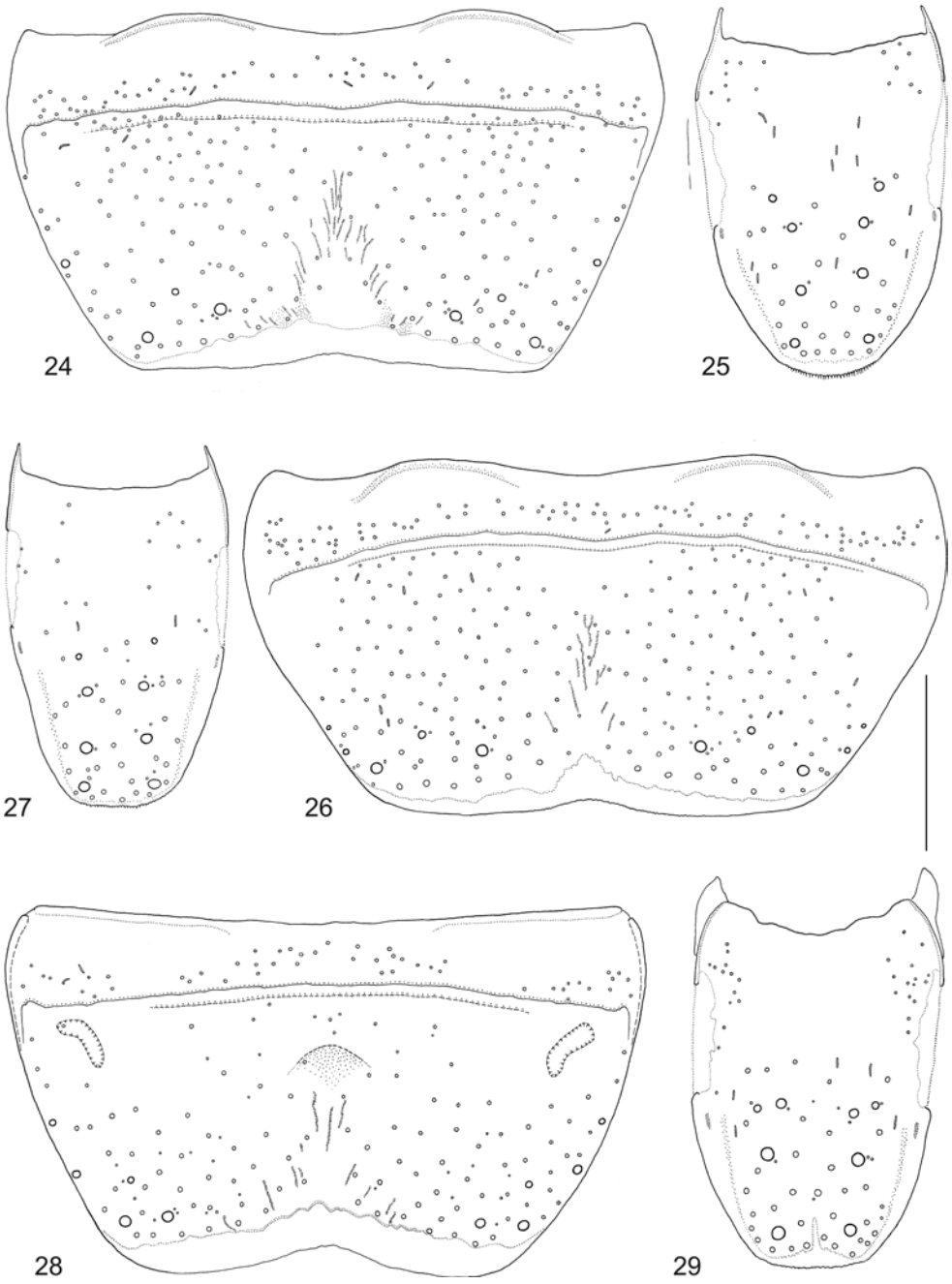
Figs. 10–12: Habitus of 10) *Thinodromus immolatus* (♂), 11) same (♀) and 12) *T. fuscipalpis* (♀).



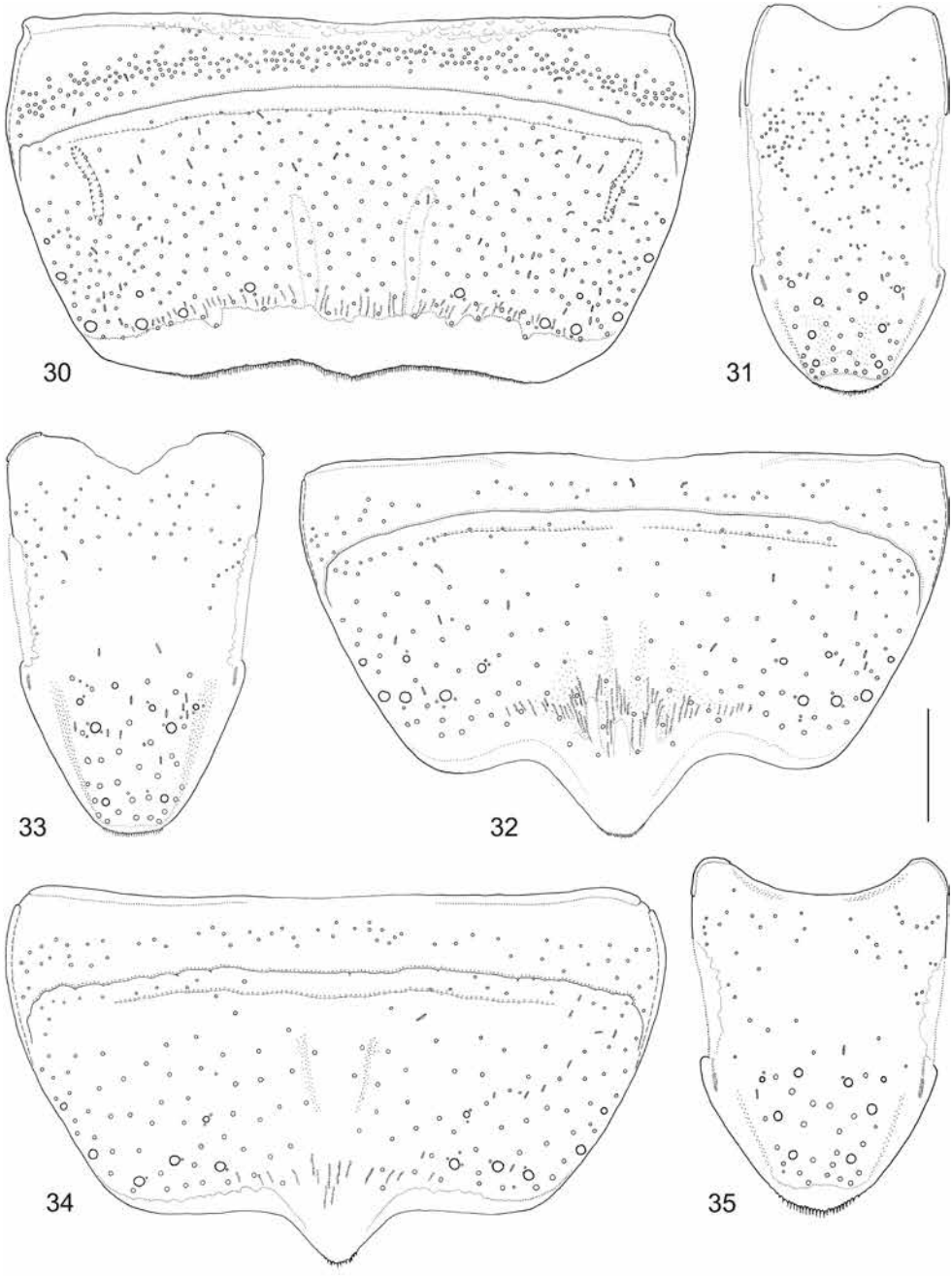
Figs. 13–16: Head and pronotum of 13) *Thinodromus indicus* (♂), 14) *T. pubicollis* (♂), 15) *T. brincki* (♂) and 16) same (♀).



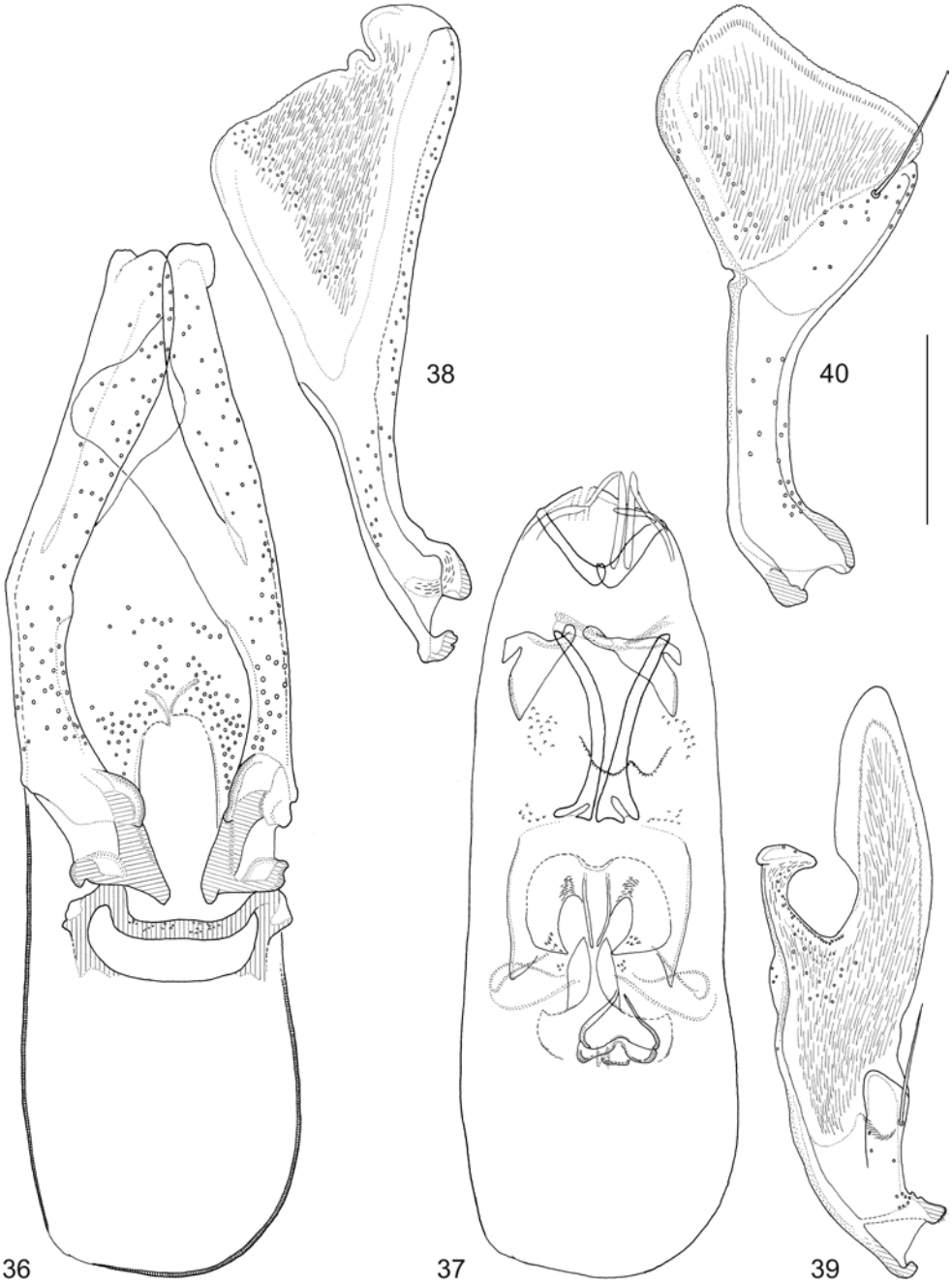
Figs. 17–23: *Thinodromus indicus* (17–18) and *T. tenuicornis* (19–20), *T. boukali* (21–22) and *T. pubicollis* (23): 17, 19, 21) elytron; 18, 22) tergites II-III; 20, 23) tergites II-IV. Scale bar = 0.18 mm (20), 0.20 mm (17, 19, 21), 0.21 mm (22), 0.22 mm (18, 23).



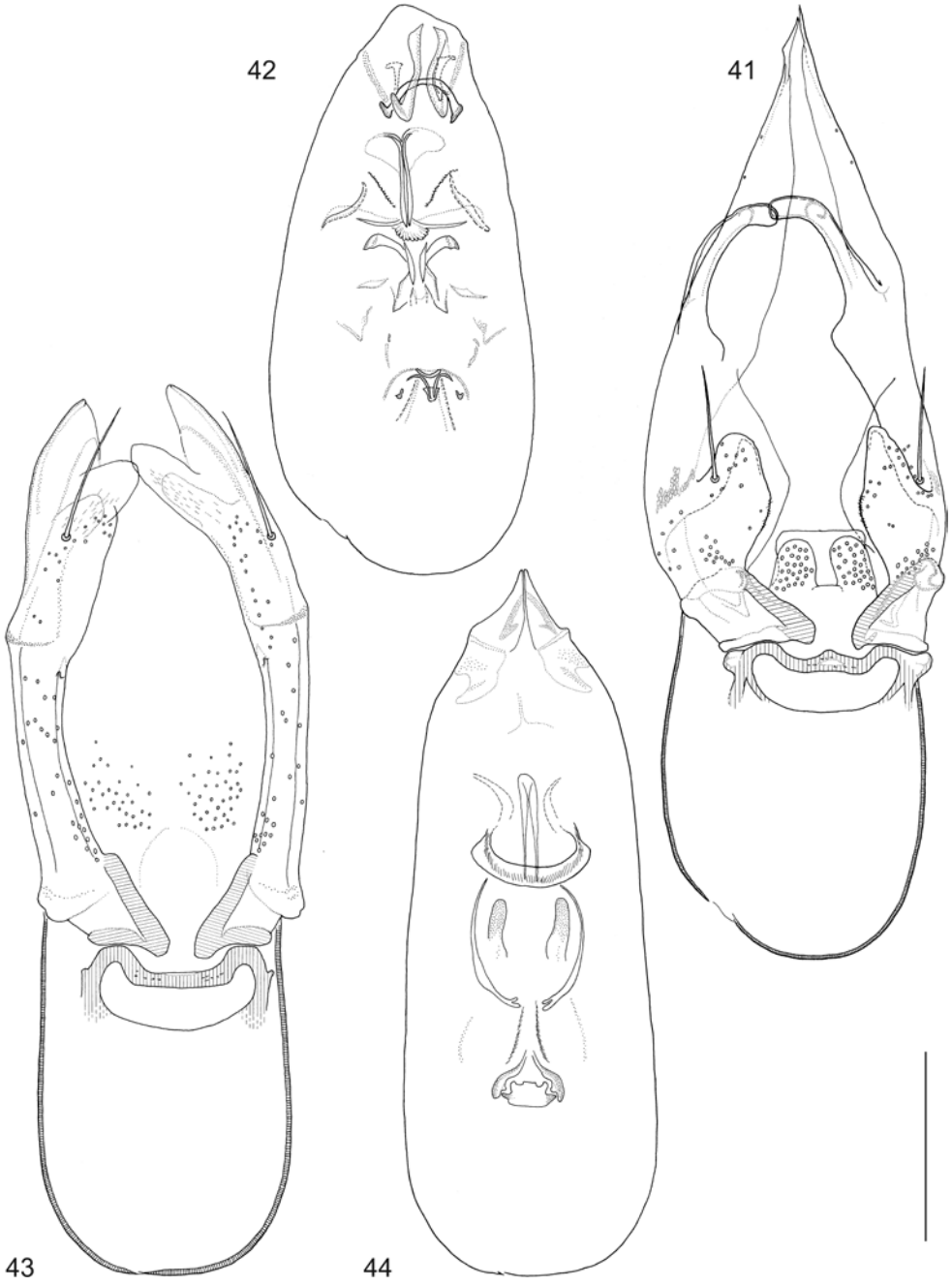
Figs. 24–29: *Thinodromus indicus* (24–25) and *T. tenuicornis* (26–27) and *T. boukali* (28–29): 24, 26, 28) male sternite VIII; 25, 27, 29) male tergite X. Scale bar = 0.10 mm (25, 27, 29), 0.12 mm (24, 26), 0.13 mm (28).



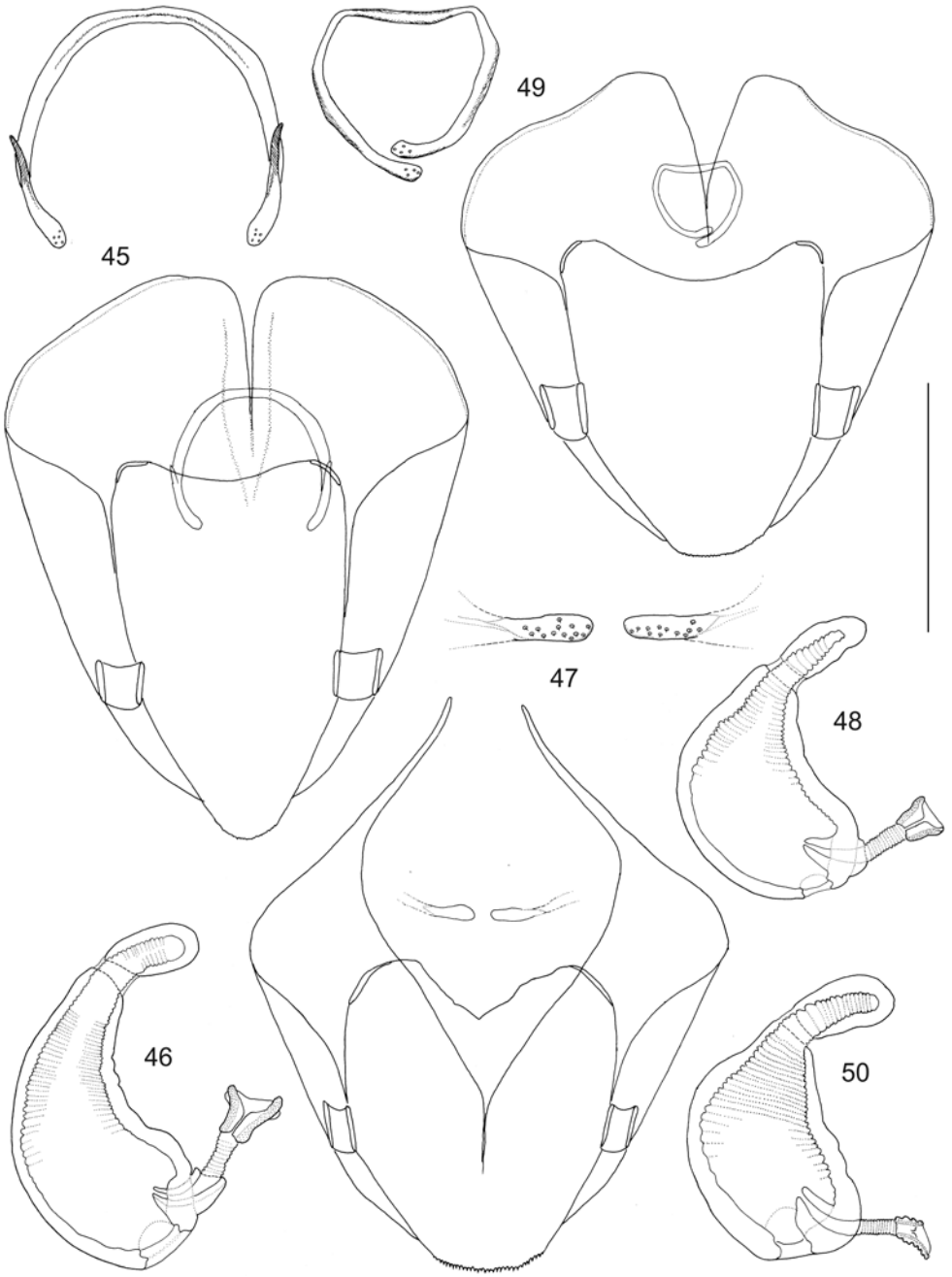
Figs. 30–35: *Thinodromus assamensis* (30–31), *T. schillhammeri* (32–33) and *T. immolatus* (34–35): 30, 32, 34) male sternite VIII; 31, 33, 35) male tergite X. Scale bar = 0.10 mm (33–34), 0.105 mm (35), 0.115 mm (32), 0.145 mm (30–31).



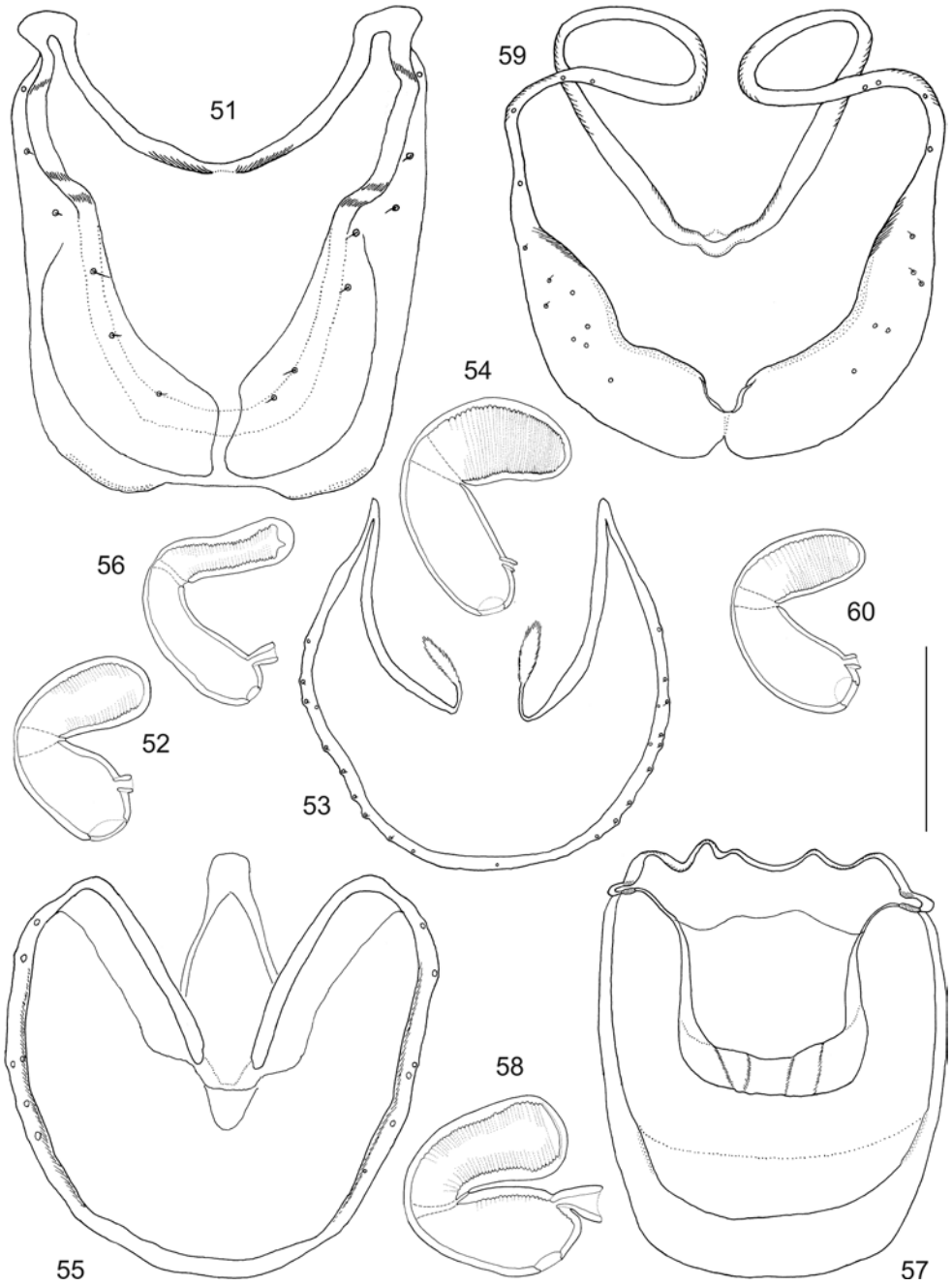
Figs. 36–40: *Thinodromus assamensis* (36–38), *T. schillhammeri* (39) and *T. immolatus* (40): 36–37) aedeagus, frontal view; 38–40) paramere, lateral view. Scale bar = 0.13 mm (40), 0.18 mm (39), 0.20 mm (36–38).



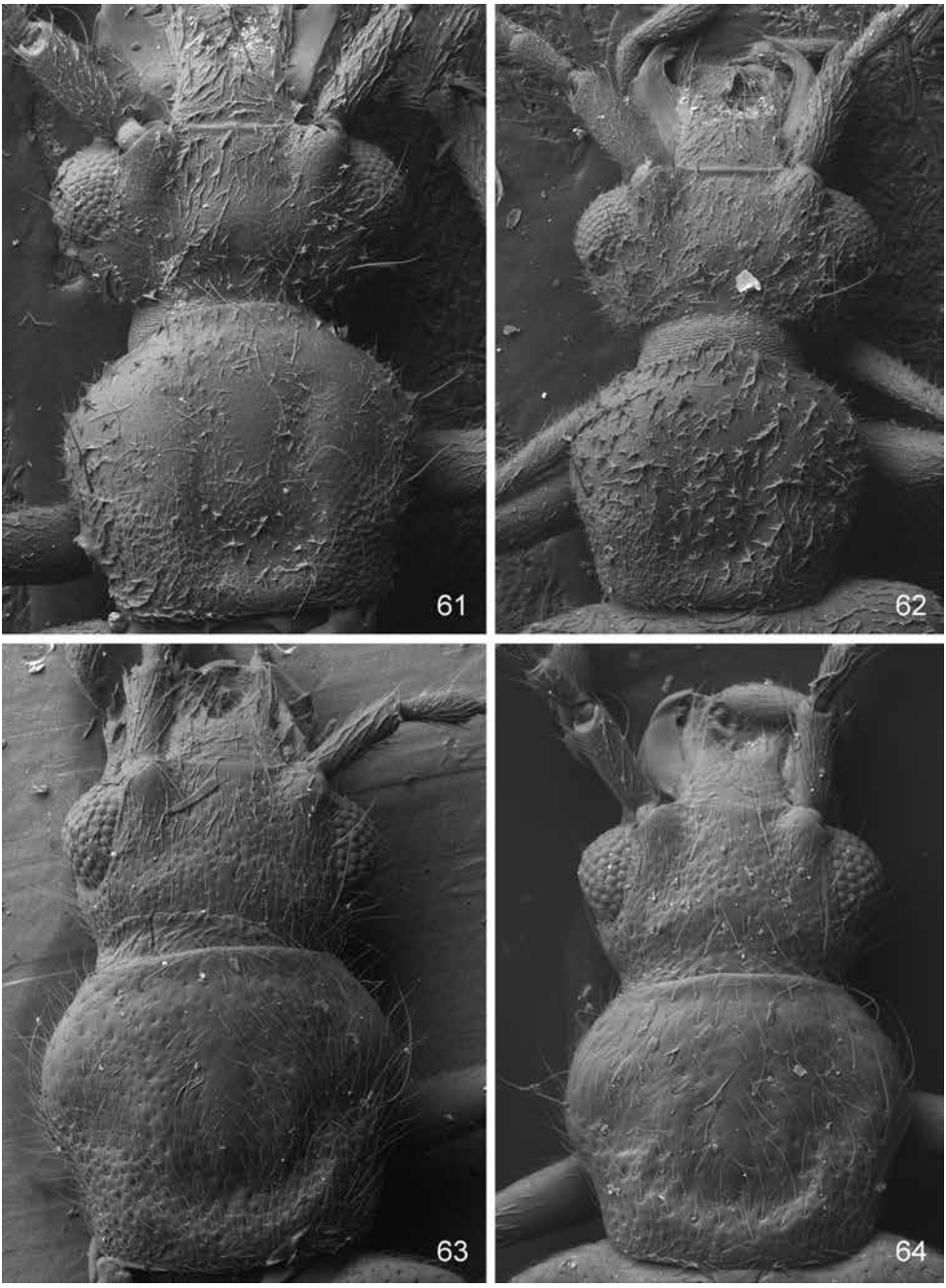
Figs. 41–44: Aedeagus (frontal view) of 41–42) *Thinodromus schillhammeri* and (43–44) *T. immolatus*. Scale bar = 0.13 mm (43–44), 0.18 mm (41–42).



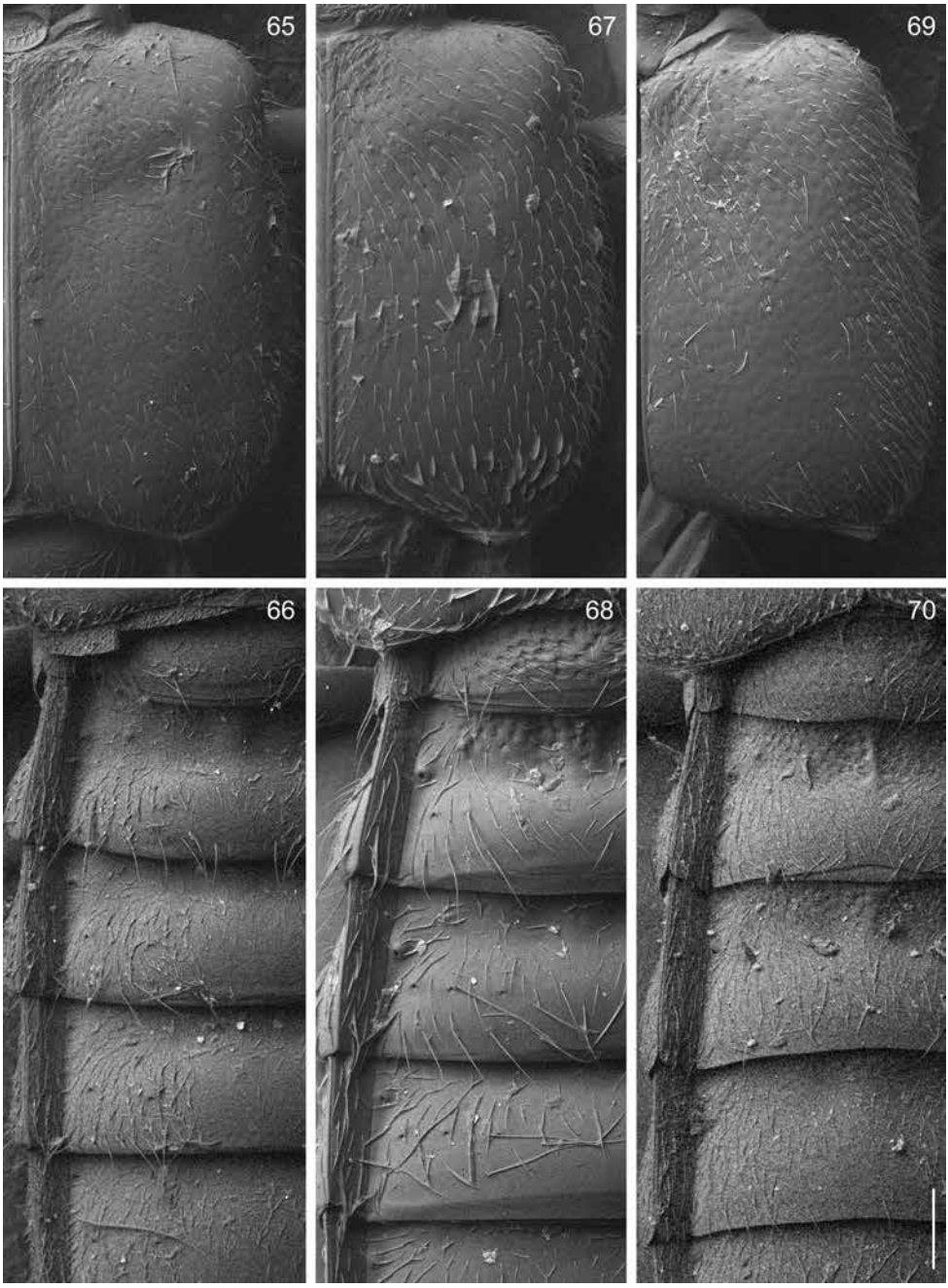
Figs. 45–50: *Thinodromus assamensis* (45–46), *T. schillhammeri* (47–48) and *T. immolatus* (49–50): 45, 47, 49) female segments IX-X with ringstructure (latter magnified 2 ×); 46, 48, 50) spermatheca. Scale bar = 0.09 mm (49), 0.10 mm (45, 47), 0.21 mm (50), 0.25 mm (48), 0.27 mm (46).



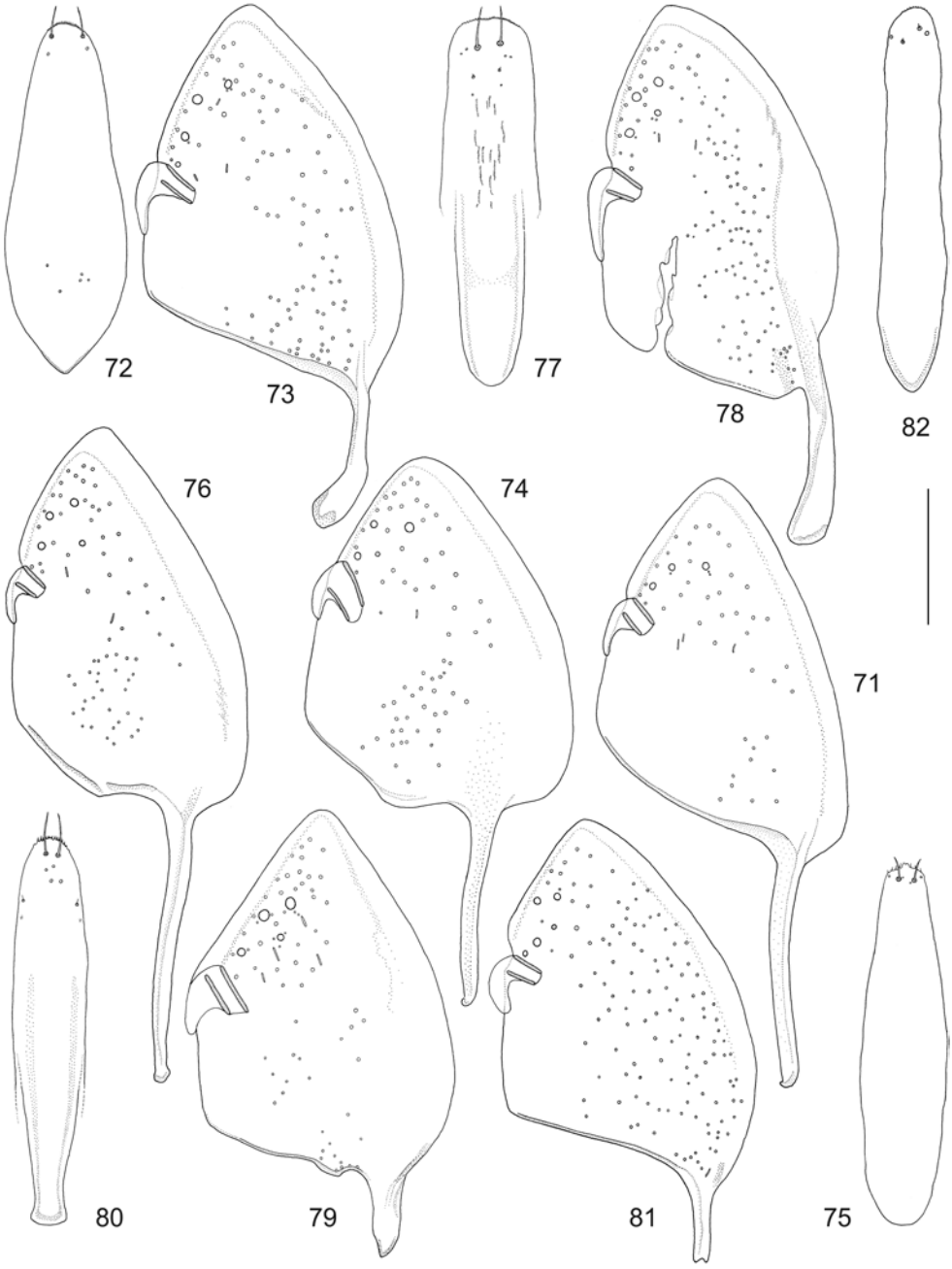
Figs. 51–60: *Thinodromus indicus* (51–52), *T. minglueni* (53–54), *T. fuscipalpis* (55–56), *T. amplipennis* (57–58) and *T. boukali* (59–60): 51, 53, 55, 57, 59) female ringstructure; 52, 54, 56, 58, 60) spermatheca. Scale bar = 0.06 mm (55, 57), 0.08 mm (52), 0.09 mm (53, 58), 0.10 mm (56, 60), 0.11 mm (51, 59), 0.15 mm (54).



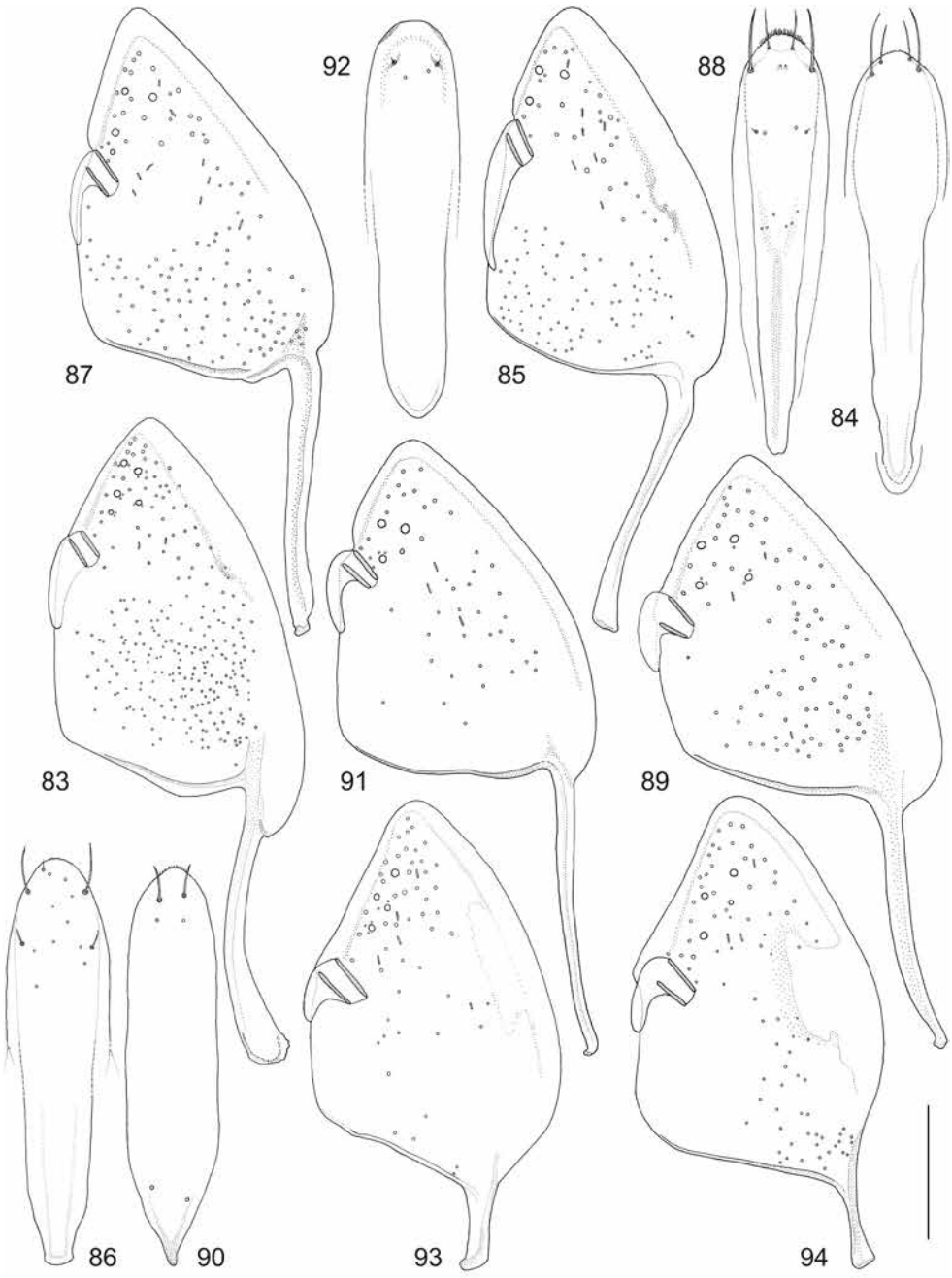
Figs. 61–64: Head and pronotum of 61) *Thinodromus assamensis* (♂), 62) same (♀), 63) *T. minglueni* (♂) and 64) same (♀).



Figs. 65–70: *Thinodromus assamensis* (65–66), *T. schillhammeri* (67–68), *T. pubicollis* (69) and *T. aequatorialis* (70): 65, 67, 69) elytron; 66, 68, 70) tergites II-IV. Scale bar = 0.14 mm (69–70), 0.16 mm (68), 0.18 mm (66–67), 0.20 mm (65).



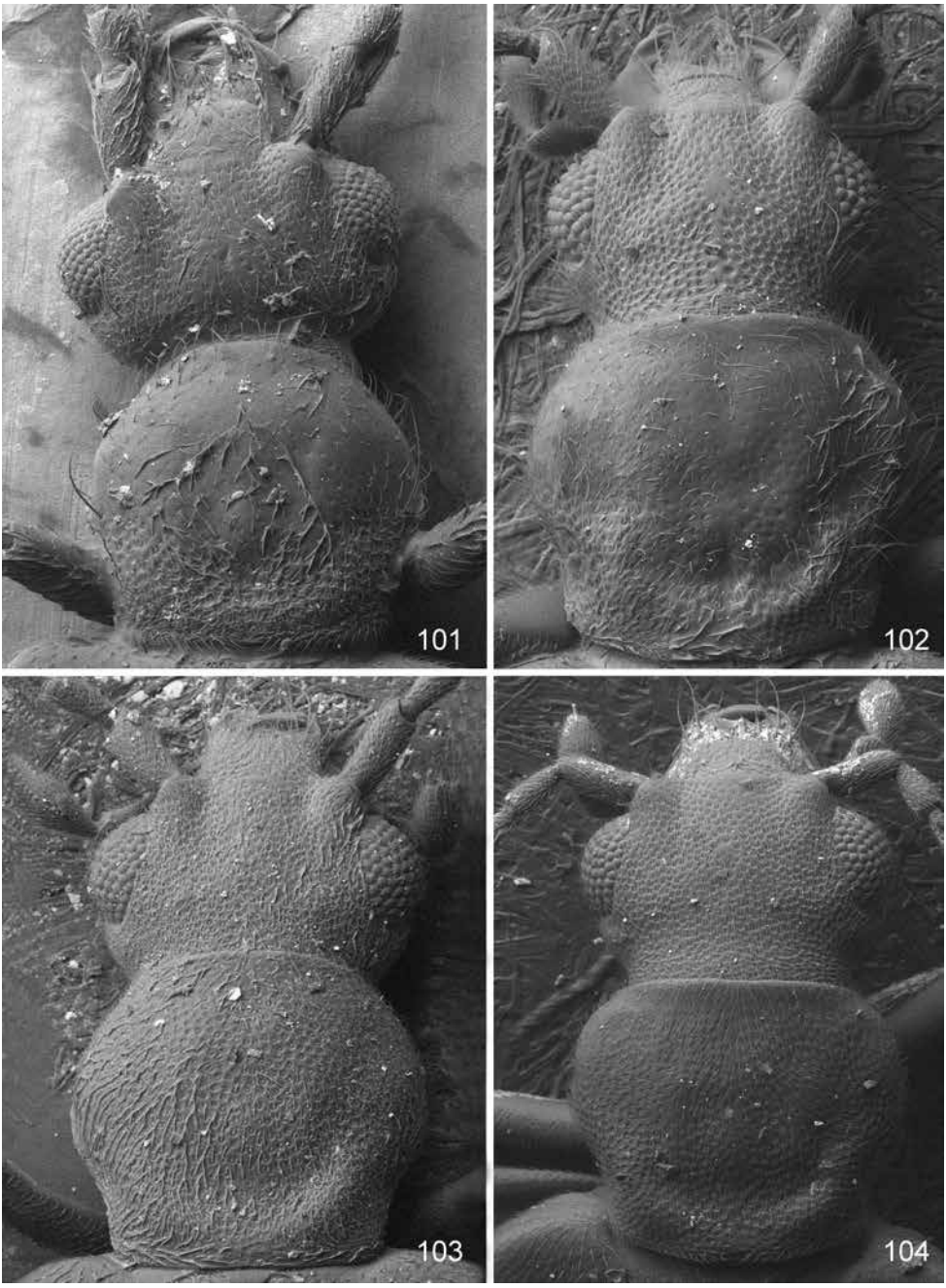
Figs. 71–82: *Thinodromus indicus* (71–73), *T. tenuicornis* (74–75), *T. boukali* (76–78), *T. amplipennis* (79–80), *T. minglueni* (81) and *T. fuscipalpis* (82): 71, 74, 76) outlines of male tergite IX; 73, 78, 79, 81) outlines of female tergite IX; 72, 75, 77, 80, 82) outlines of male sternite IX. Scale bar = 0.09 mm (73), 0.10 mm (74, 78–79, 82), 0.105 mm (75), 0.11 mm (71–72, 77, 81), 0.12 mm (76), 0.13 mm (80).



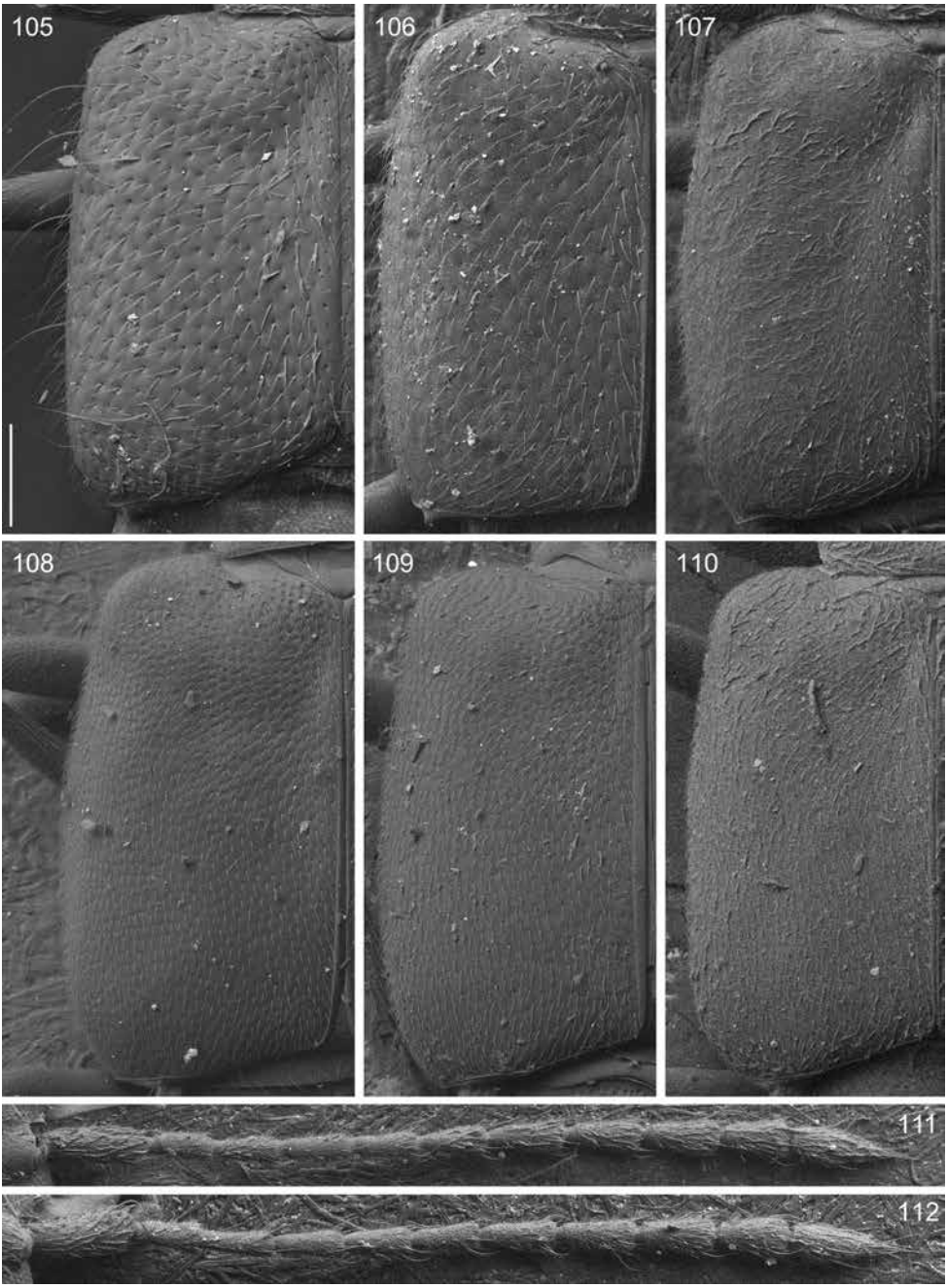
Figs. 83–94: *Thinodromus assamensis* (83–84), *T. schillhammeri* (85–86), *T. immolatus* (87–88), *T. pubicollis* (89–90), *T. minglueni* (91–92), *T. singularis* (93) and *T. zuluanus* (94): 83, 85, 87, 89, 91) outlines of male tergite IX; 93, 94) outlines of female tergite IX; 84, 86, 88, 90, 92) outlines of male sternite IX. Scale bar = 0.10 mm (90, 92, 94), 0.11 mm (89), 0.12 mm (91, 93), 0.14 mm (87–88), 0.17 mm (85–86), 0.21 mm (83–84).

Figs. 95–97: Habitus of 95) *Thinodromus minglueni* (♂), 96) same (♀) and 97) *T. amplipennis* (♂).

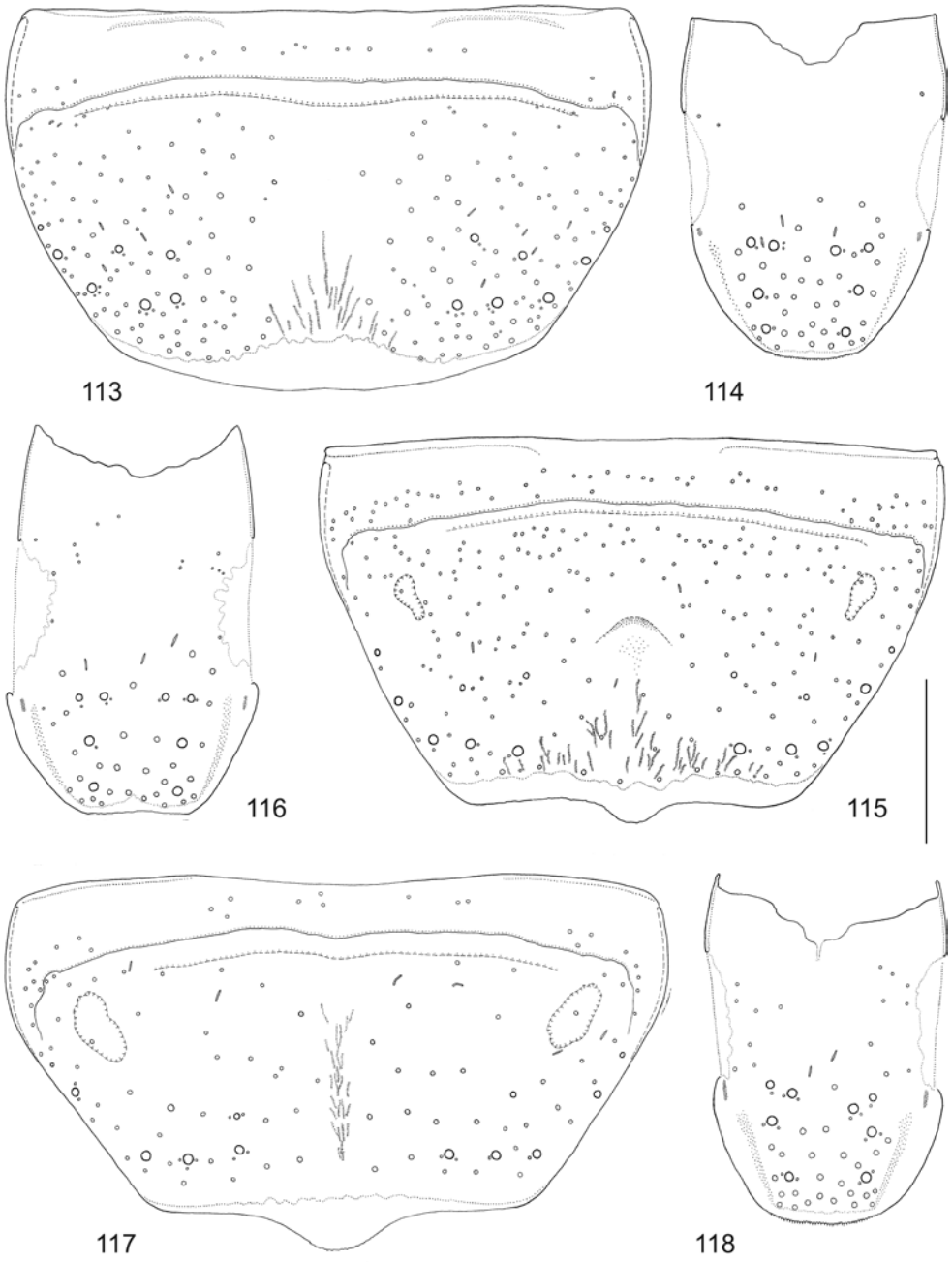
Figs. 98–100: Habitus of 98) *Thinodromus boukali* (♂), 99) same (♀) and 100) *T. amplipennis* (♀).



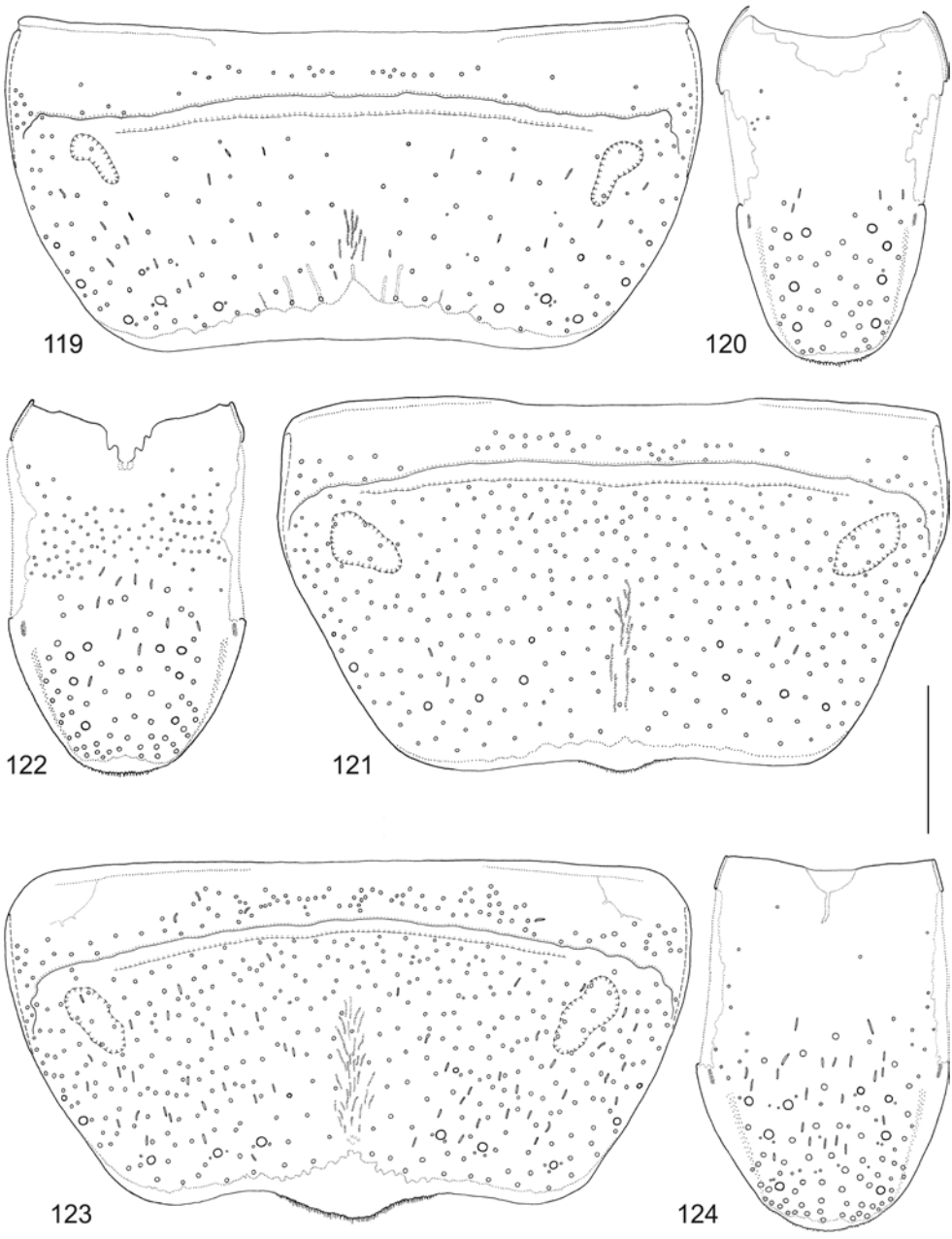
Figs. 101–104: Head and pronotum of 101) *Thinodromus schillhammeri* (♀), 102) *T. amplipennis* (♂), 103) *T. aequatorialis* (♂) and 104) *T. singularis* (♀).



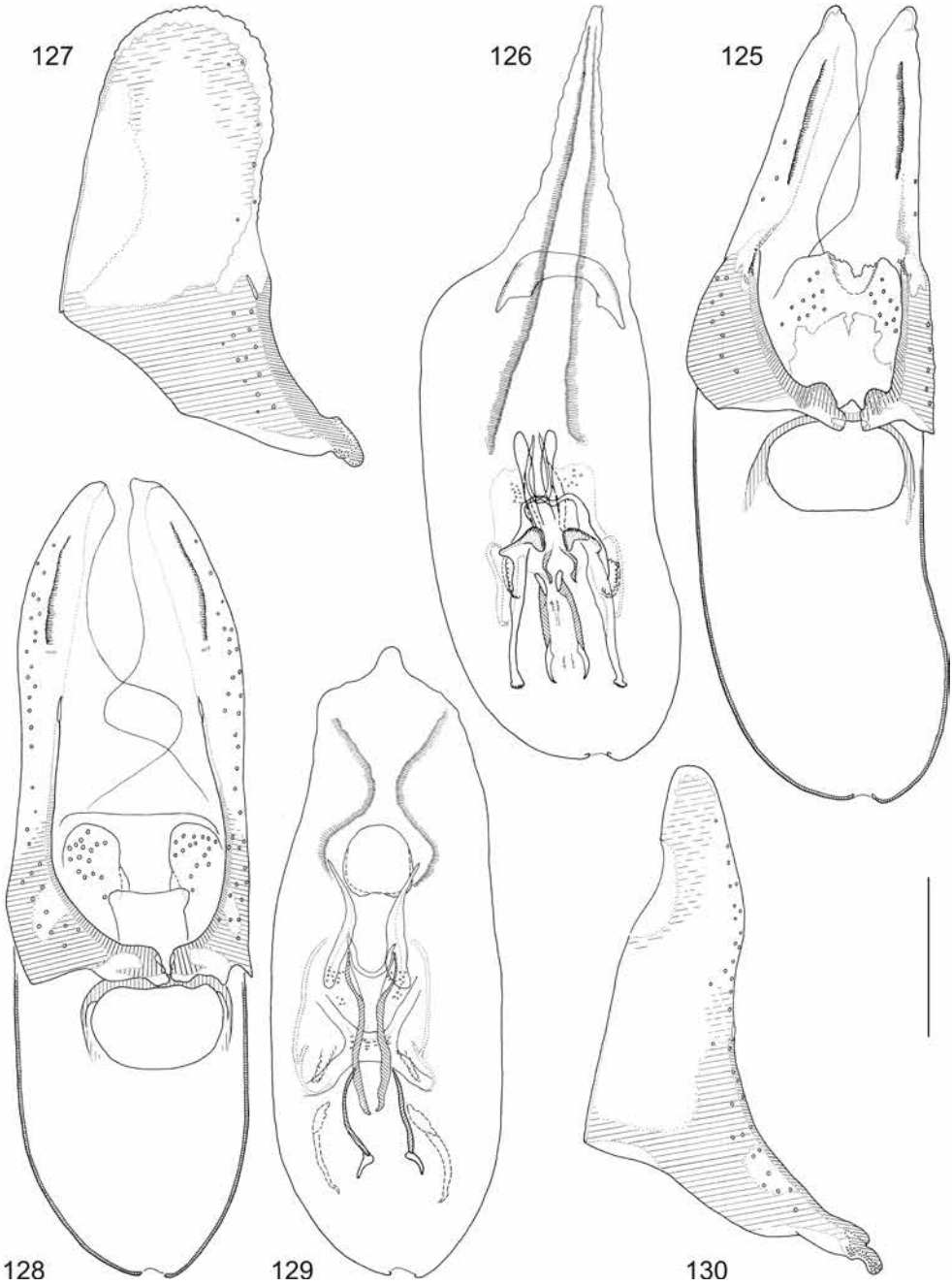
Figs. 105–112: *Thinodromus minglueni* (105), *T. fuscipalpis* (106), *T. amplipennis* (107), *T. singularis* (108), *T. brincki* (109), *T. aequatorialis* (110) and *T. assamensis* (111–112): 111) antenna (♂); 112) antenna (♀); 105–110) elytron. Scale bar = 0.16 mm (106), 0.17 mm (109), 0.19 mm (105), 0.20 mm (107–108, 110), 0.28 mm (111–112).



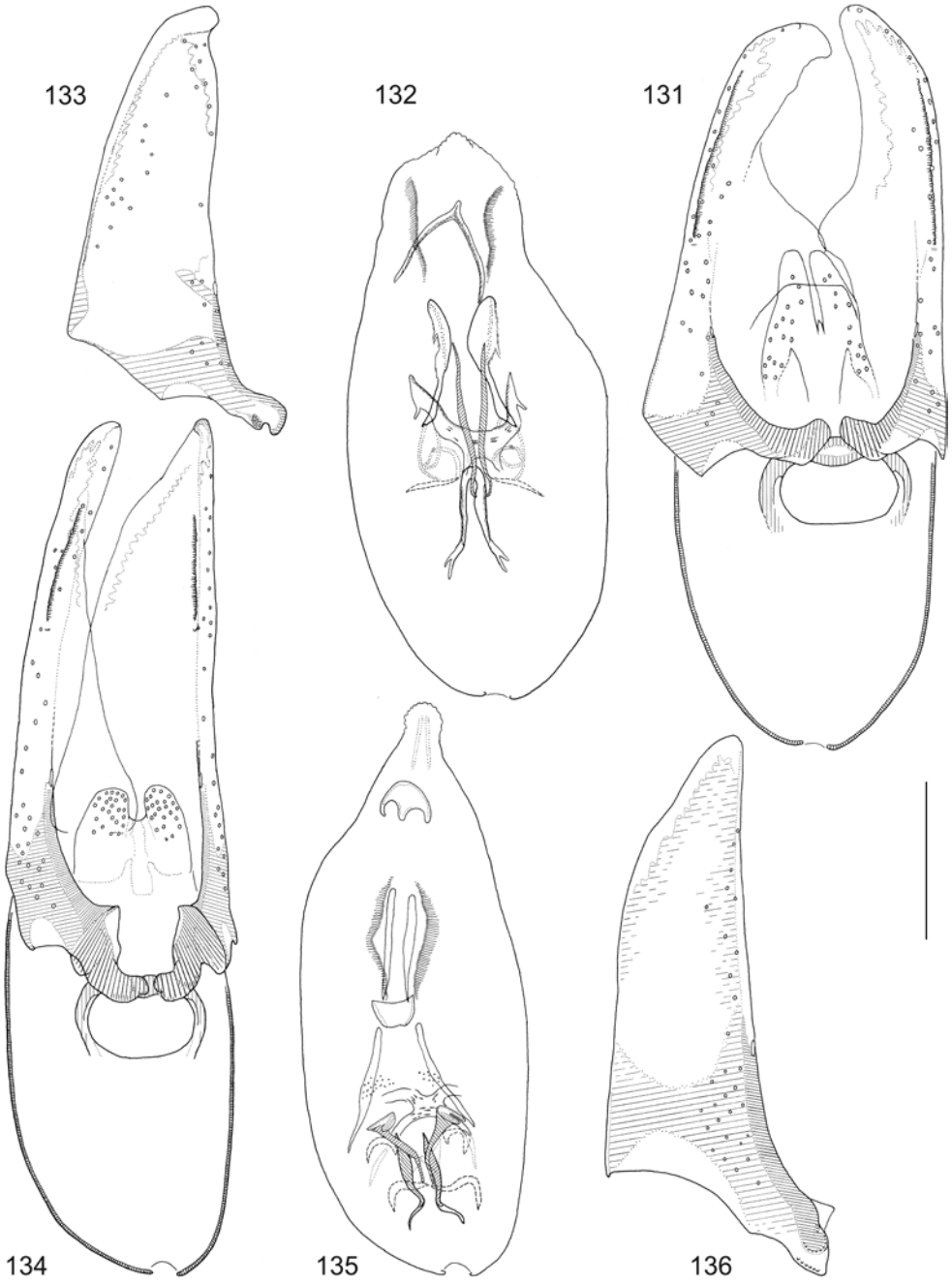
Figs. 113–118: *Thinodromus pubicollis* (113–114), *T. minglueni* (115–116) and *T. fuscipalpis* (117–118): 113, 115, 117) male sternite VIII; 114, 116, 118) male tergite X. Scale bar = 0.07 mm (114), 0.075 mm (116, 118), 0.085 mm (113, 117), 0.10 mm (115).



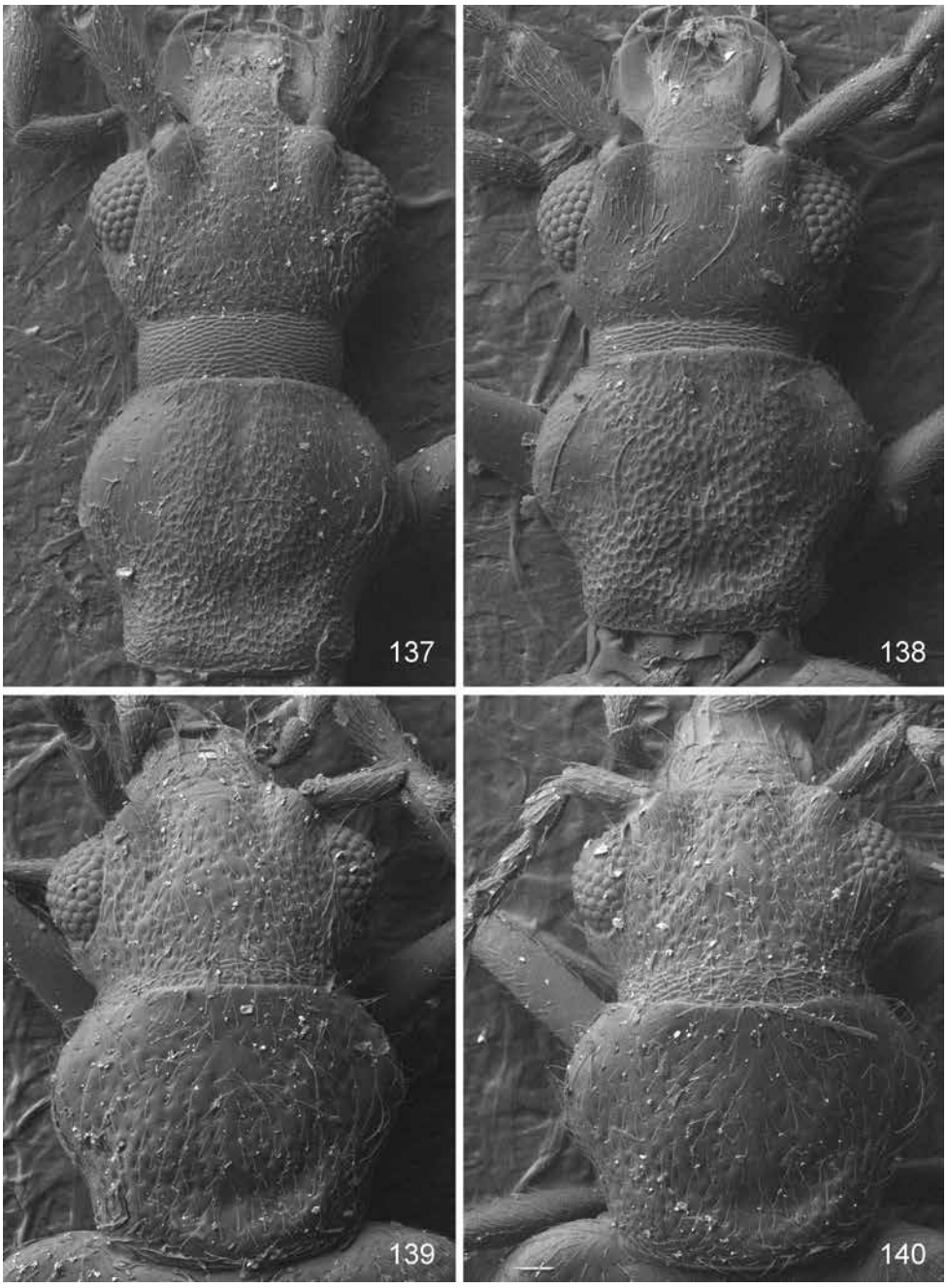
Figs. 119–124: *Thinodromus amplipennis* (119–120), *T. jaechi* (121–122) and *T. aequatorialis* (123–124): 119, 121, 123) male sternite VIII; 120, 122, 124) male tergite X. Scale bar = 0.10 mm (122, 124), 0.11 mm (119), 0.115 mm (120–121, 123).



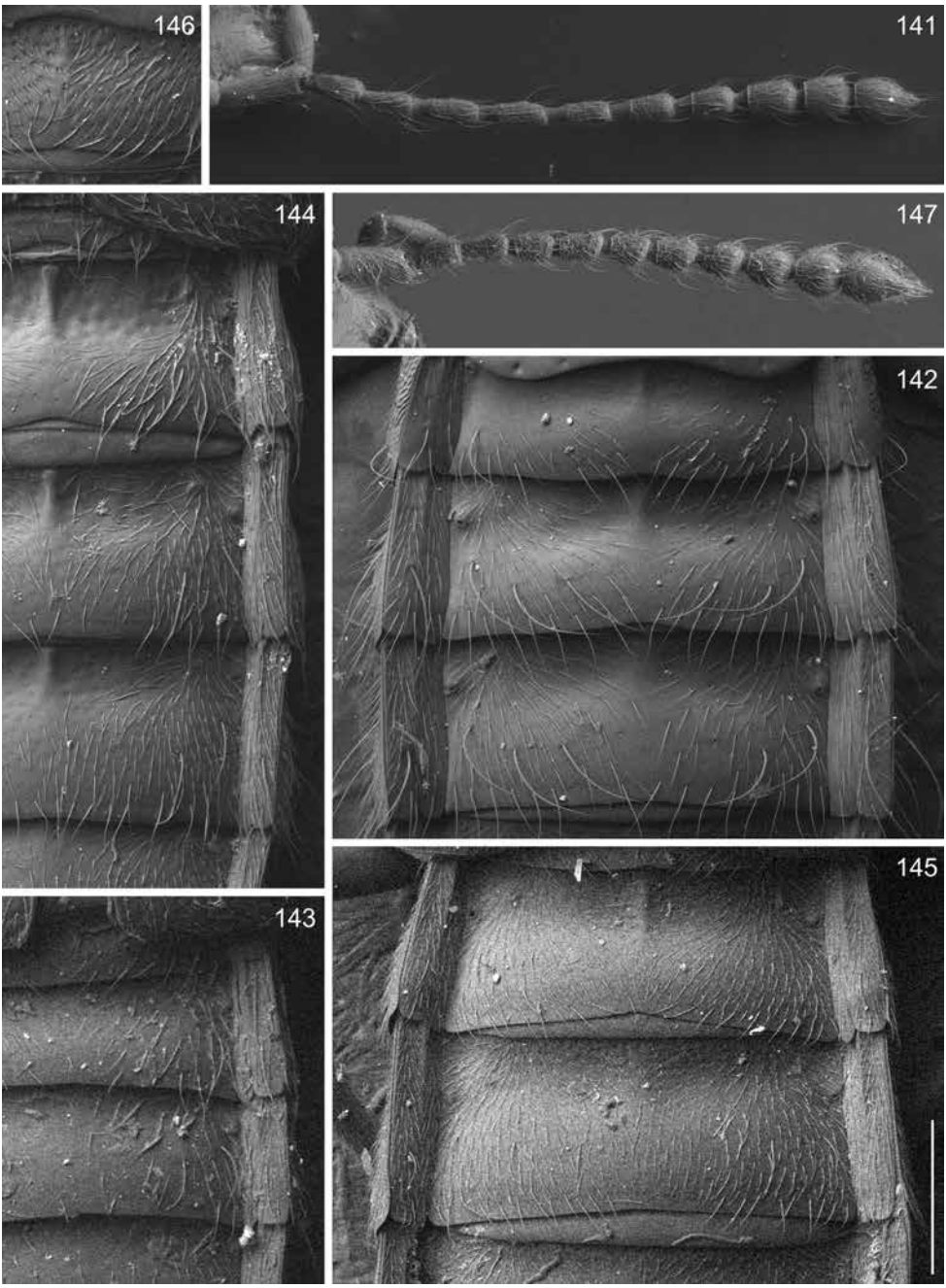
Figs. 125–130: *Thinodromus pubicollis* (125–127) and *T. minglueni* (128–130): 125–126, 128–129) aedeagus, frontal view; 127, 130) paramere, lateral view. Scale bar = 0.10 mm (125–127), 0.115 mm (128–130).



Figs. 131–136: *Thinodromus fuscipalpis* (131–133) and *T. amplipennis* (134–136): 131–132, 134–135) aedeagus, frontal view; 133, 136) paramere, lateral view. Scale bar = 0.10 mm (131–136).



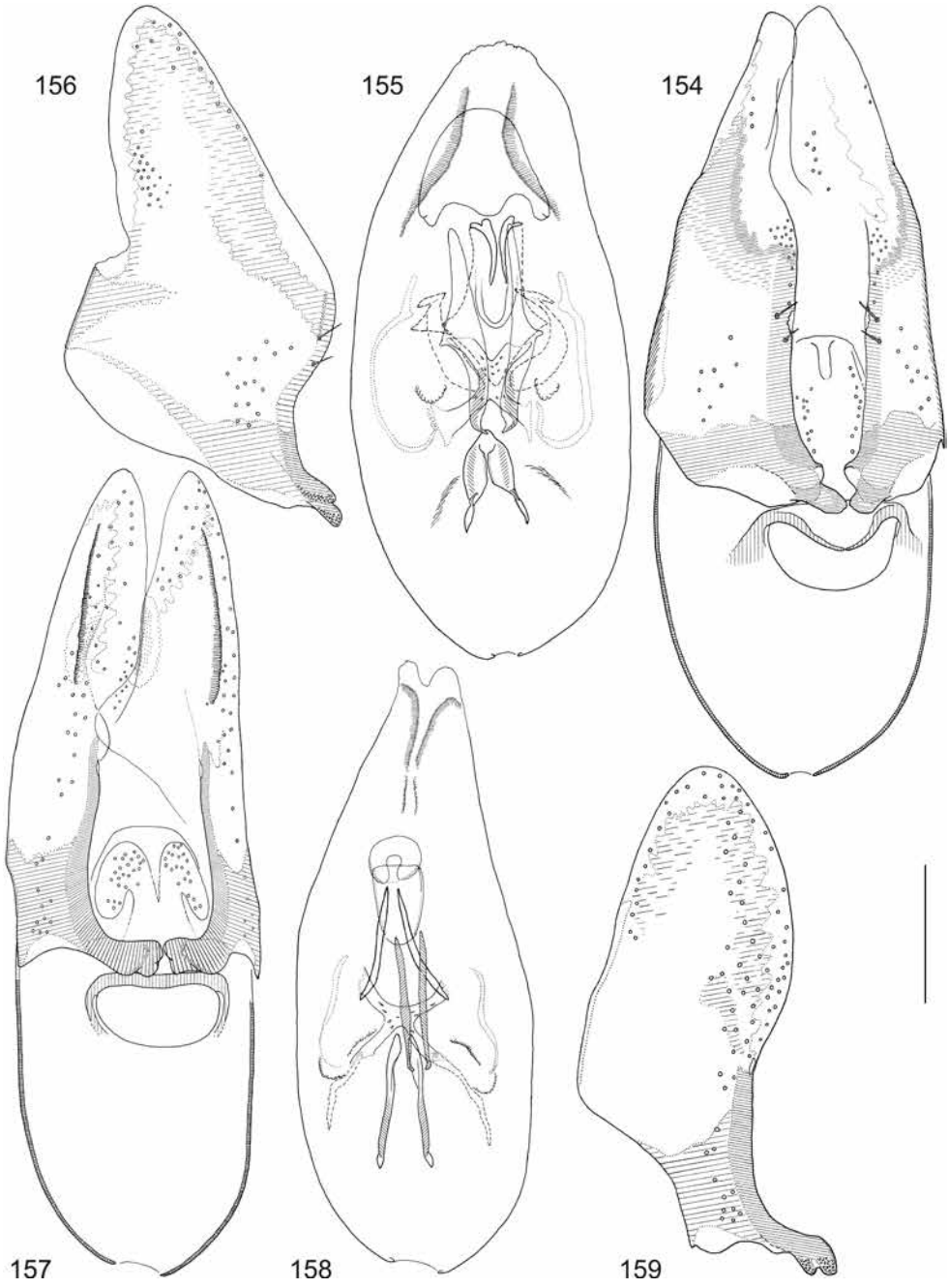
Figs. 137–140: Head and pronotum of 137) *Thinodromus tenuicornis* (♂), 138) *T. boukali* (♀), 139) *T. fuscipalpis* (♂) and 140) same (♀).



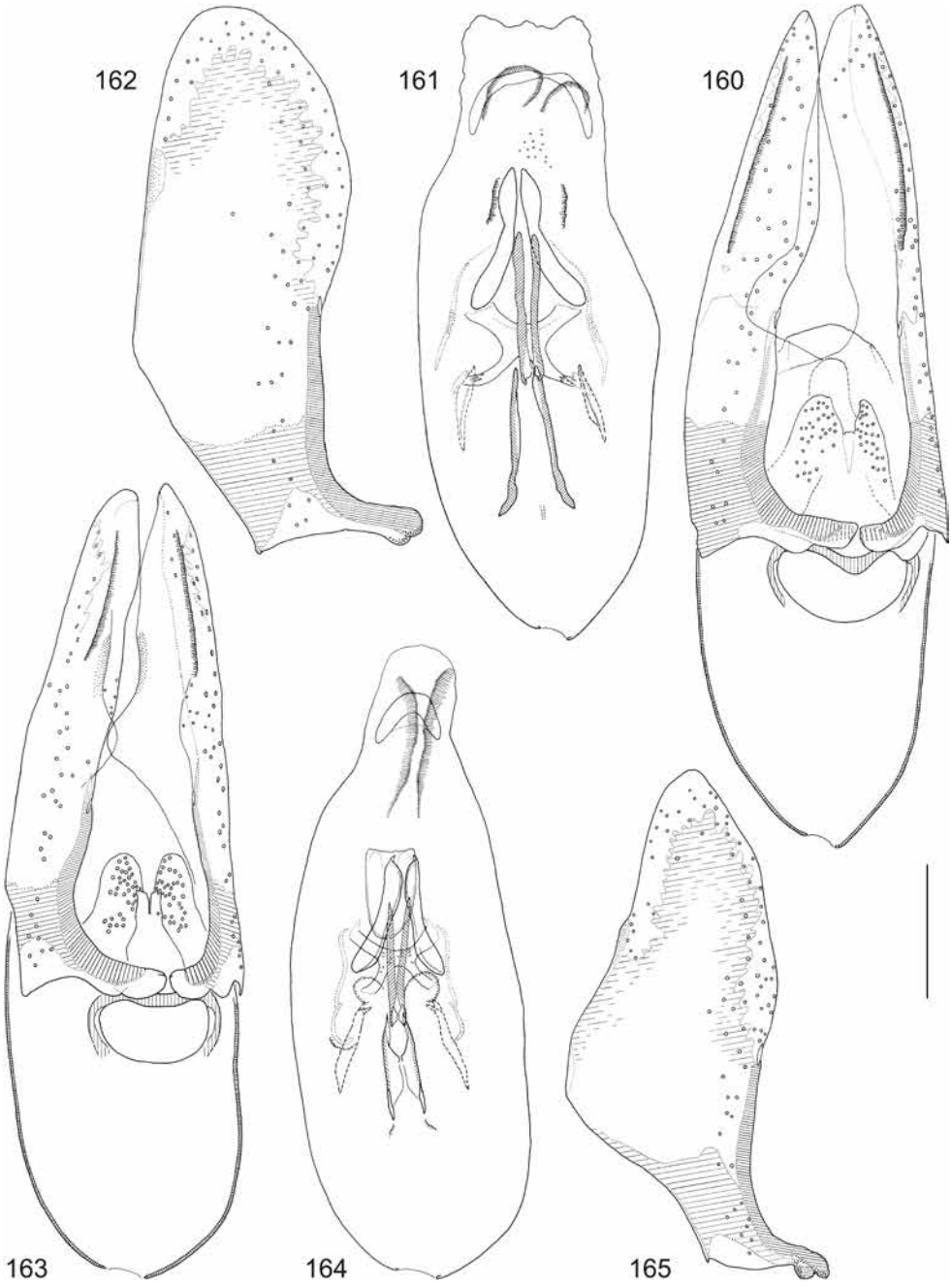
Figs. 141–147: *Thinodromus minglueni* (141–142), *T. fuscipalpis* (143), *T. amplipennis* (144), *T. singularis* (145), *T. brincki* (146) and *T. pubicollis* (147): 141) antenna (♀); 147) antenna (♂); 145) tergites II-III; 142–144) tergites II-IV; 146) tergite II midline keel. Scale bar = 0.20 mm (146), 0.24 mm (144), 0.28 mm (143, 145), 0.30 mm (142), 0.33 mm (147), 0.36 mm (141).

Figs. 148–150: Habitus of 148) *Thinodromus jaechi* (♂), 149) same (♀) and 150) *T. brincki* (♂).

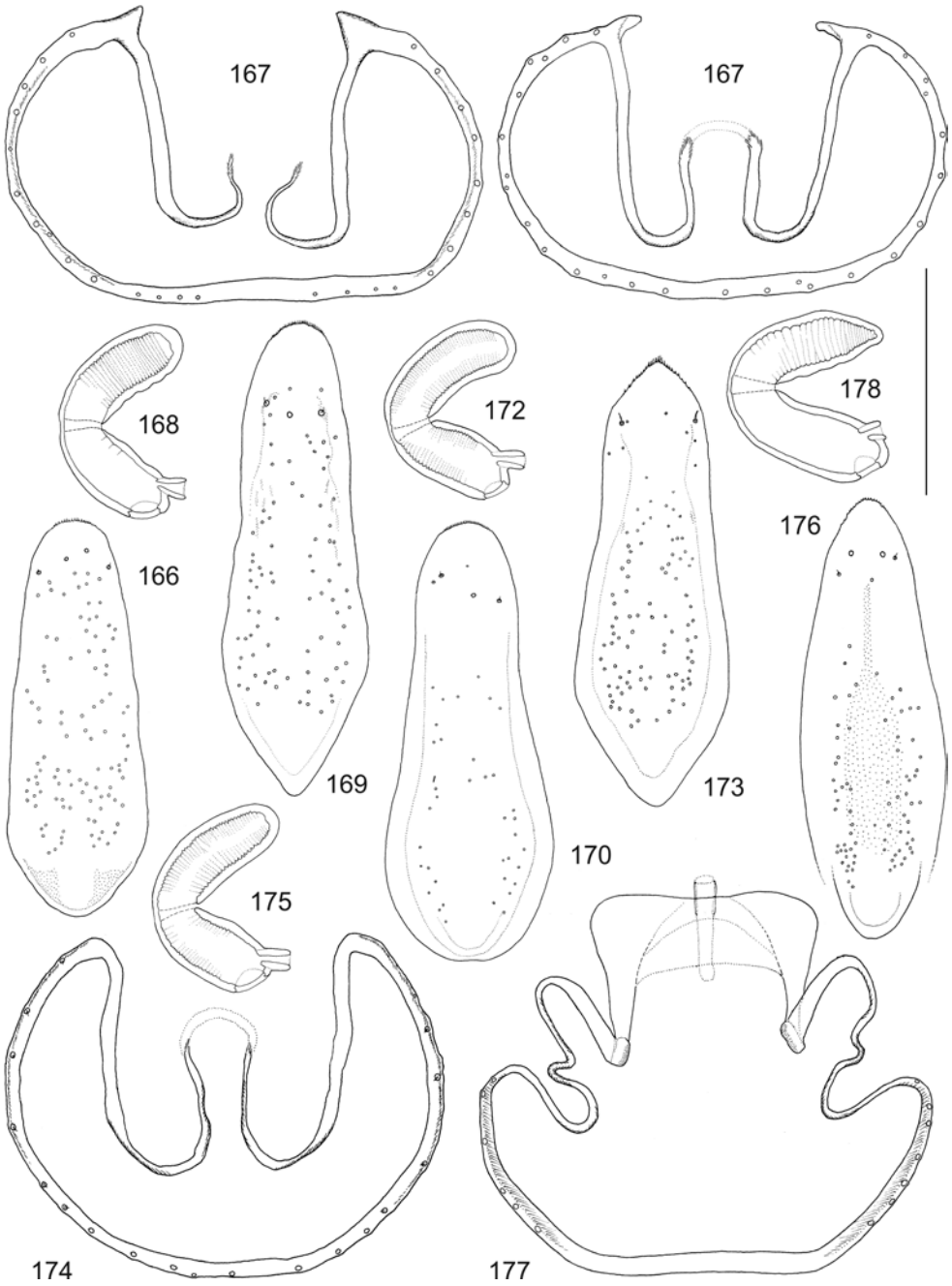
Figs. 151–153: Habitus of 151) *Thinodromus zuluanus* (♂), 152) same (♀) and 153) *T. brincki* (♀).



Figs. 154–159: *Thinodromus boukali* (154–156) and *T. jaechi* (157–159): 154–155, 157–158) aedeagus, frontal view; 156, 159) paramere, lateral view. Scale bar = 0.10 mm (157–159), 0.11 mm (154–156).

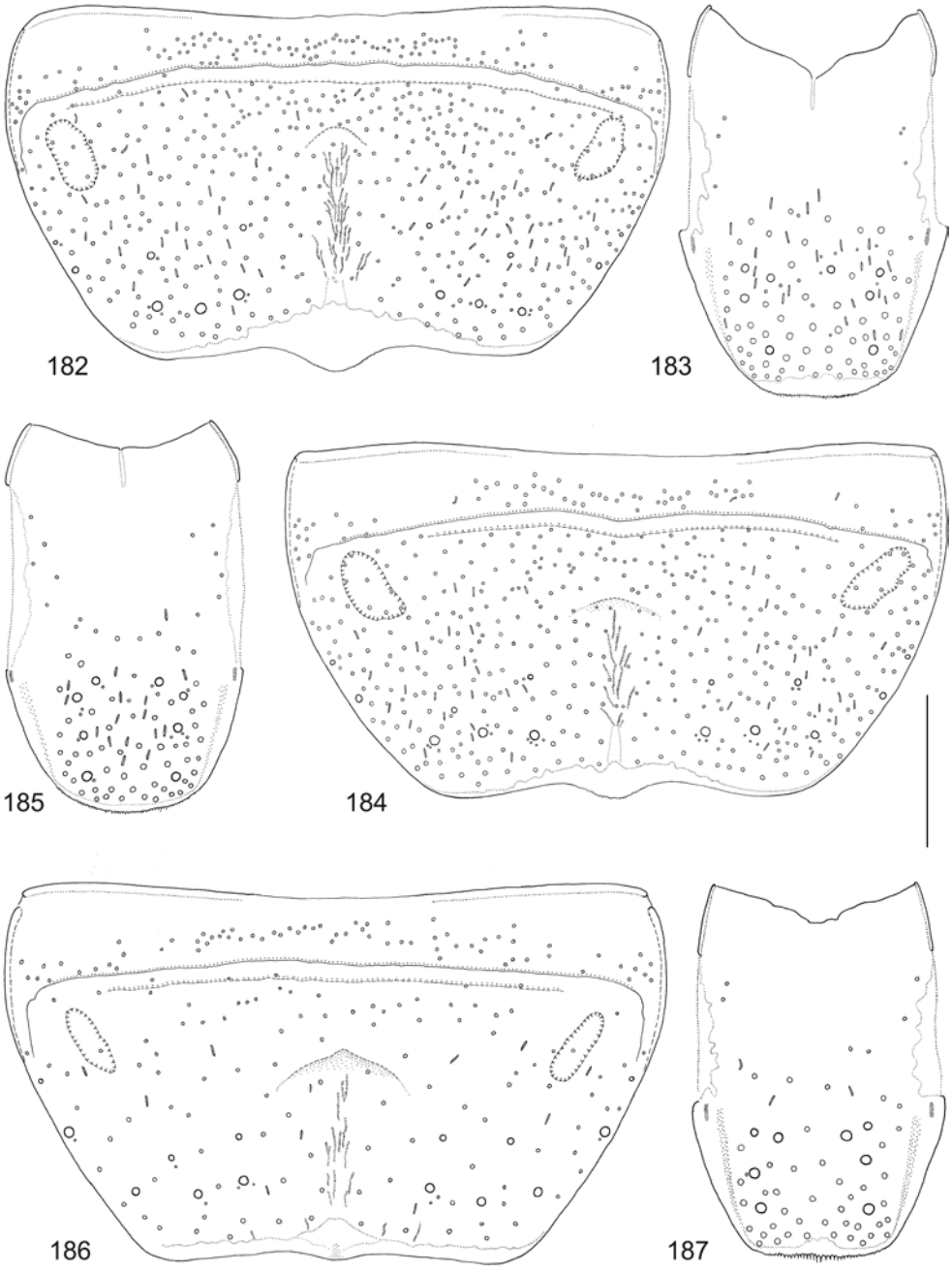


Figs. 160–165: *Thinodromus aequatorialis* (160–162) and *T. singularis* (163–165): 160–161, 163–164) aedeagus, frontal view; 162, 165) paramere, lateral view. Scale bar = 0.10 mm (160–162), 0.11 mm (163–165).

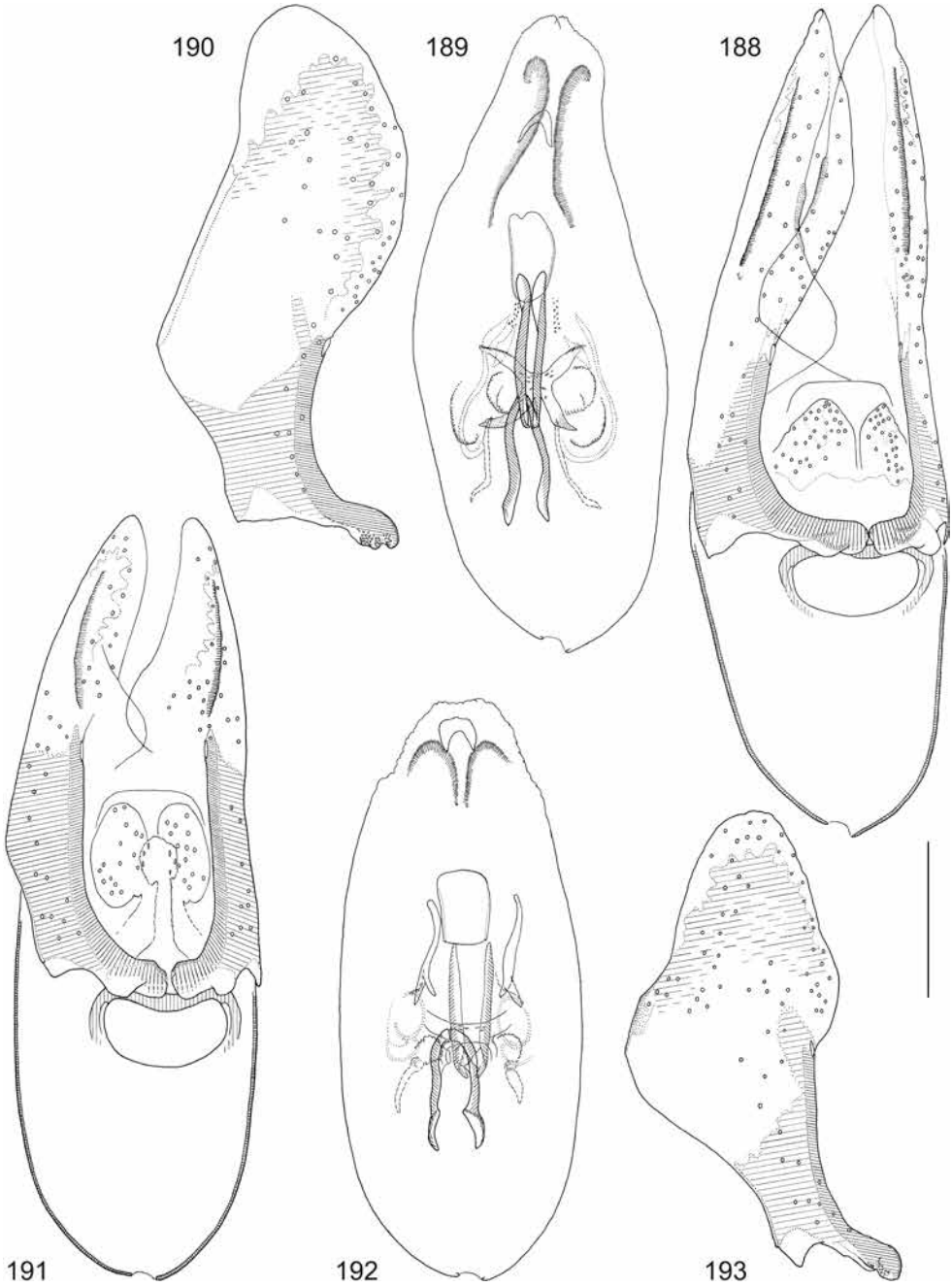


Figs. 166–178: *Thinodromus jaechi* (166–168), *T. aequatorialis* (169), *T. singularis* (170–172), *T. brincki* (173–175) and *T. zuluanus* (176–178): 166, 169–170, 173, 176) male sternite IX; 167, 171, 174, 177) female ringstructure; 168, 172, 175, 178) spermatheca. Scale bar = 0.07 mm (177), 0.09 mm (174), 0.10 mm (167, 171, 174), 0.12 mm (168, 172, 178), 0.16 mm (169, 173, 176), 0.17 mm (166), 0.19 mm (170).

Figs. 179–181: Habitus of 179) *Thinodromus aequatorialis* (♂), 180) *T. singularis* (♂) and 181) same (♀).



Figs. 182–187: *Thinodromus singularis* (182–183), *T. brincki* (184–185) and *T. zuluanus* (186–187): 182, 184, 186) male sternite VIII; 183, 185, 187) male tergite X. Scale bar = 0.085 mm (187), 0.10 mm (183, 185–186), 0.12 mm (182, 184).



Figs. 188–193: *Thinodromus brincki* (188–190) and *T. zuluanus* (191–193): 188–189, 191–192) aedeagus, frontal view; 190, 193) paramere, lateral view. Scale bar = 0.10 mm (191–193), 0.105 mm (188–190).

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