# The genus Thinodromus Kraatz, 1857 in West-Central Africa (Coleoptera, Staphylinidae: Oxytelinae) 

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#### Abstract

The West-Central African (countries mostly former French colonies) Thinodromus fauna is investigated. The region's fauna is very incompletely known, many taxa still await description. The naming of the structures in the aedeagus is a first step towards establishing homologies. The region's named species (T. decorsei CAMERON, 1948, T. nigerius Gildenkov, 2000, T. thoracicus Gildenkov, 2000) are reviewed, eight distinctive species are hereby described as new: Thinodromus excultus sp. n. (Equatorial Guinea), T. gabonicus sp.n. (Gabon), T. kedougouensis sp.n. (Senegal), T. makokouensis sp.n. (Gabon), T. malkinianus sp.n. (Cameroon), T. mateui sp.n. (Gabon), T. mauritanicus sp. n. (Mauritania), T. odzalensis sp. n. (Congo). With 76 figures.


Key words - Coleoptera, Staphylinidae, Oxytelinae, Thinodromus, aedeagal characters, new species.

## INTRODUCTION

Most species of Thinodromus KRAATZ, 1857 are very uniformly looking, so it is not surprising that rather few taxa are described from Africa. The area treated in this paper ranges from Mauritania to Chad and Congo. This work excludes the Thinodromus aethiopicus species group that superficially looks like Carpelimus rather than Thinodromus, and for which the greatest diversity is in Central and Eastern Africa, with only one described species from Sierra Leone. This species group is mentioned in certain literature as the subgenus Mendaxinus GILDENKOV, 2004 (type species: Trogophloeus schoutedeni CAMERON, 1928) and is kept with Thinodromus for
phylogenetic reasons. Of the remaining Thinodromus diversity, only 3 species were described from this area: T. decorsei CAMERON, 1948, T. thoracicus Gildenkov, 2000 and T. nigerius Gildenkov, 2000. Since Thinodromus is a widespread genus and present everywhere with numerous (albeit externally usually rather similar) species, it is expected that the tropical areas of Africa also have a great diversity in Thinodromus species, with at least 50 species (estimate). T. thoracicus (described and placed into a new subgenus, Carpaliaceus by GILDENKOV in 2000), a species with a strange spine-row on the posterior edge of sternite VII, previously thought to be unique to this species, also lives in this area, with another closely related species described herein (also with this spine-row). The traditional subgeneric assignments are abandoned, for reasons given in MAKRANCZY (2006).

## MATERIAL AND METHODS

Regarding the scarceness of any available collection from the former French Africa, it is not surprising that the material that could be examined is rather low in number. The core of this was a bunch of specimens I selected on my personal visit in Paris (MNHN) on 4-5 January, 2001. A few supplementary specimens were later found in other collections. From only one species (T. gabonicus) was abundant material available. It was felt necessary to undertake this study, anyway, because the unstable political conditions in many of these countries make the availability of further, significant materials unlikely in the near future.

Concerning the examined material, the following is a list of the depositories: BMNH $=$ The Natural History Museum, London, England; CASC $=$ California Academy of Sciences, San Francisco, California, USA; FMNH = Field Museum of Natural History, Chicago, Illinois, USA; HNHM = Hungarian Natural History Museum, Budapest, Hungary; MHNG = Muséum d'Histoire Naturelle, Genève, Switzerland; MNHN = Muséum National d'Histoire Naturelle, Paris, France; MRAC = Musée royal de l'Afrique centrale, Tervuren, Belgium.

## THE INTERNAL STRUCTURES OF THE AEDEAGUS IN THINODROMUS

## Basis of naming, former nomenclature adopted

Species of Thinodromus are very similar-looking, therefore the examination of the male genitalia is obligatory for any determination work and also for descriptions of new taxa. The modification of the male sternite VIII and the aedeagal characters have the most
critical role in determining the correct application of species-group names. Apart from these, it is only the so-called ringstructure, a peculiar remnant (of possibly the tenth sternite) in the female terminalia (abdominal tip) that is relatively rich in species-specific characters, therefore this provides aim in identification (in not all, but possibly most species). However, proper study of this latter structure requires a very good quality embedded preparation of the abdominal tip. The ringstructures are illustrated only for a couple of species, so for the present, still the aedeagal characters provide most phylogenetic information. Knowing the importance of the rather tiny, sometimes membraneous, but often well-sclerotized internal structures of the aedeagi, it is necessary to develop a naming system, which should be then standardized for easier reference to the structures. The proposed nomenclature of the structures in the aedeagus (based largely on traditions with the subfamily Aleocharinae) is a first step towards establishing homologies.

In naming the different structures, some traditional terminology (mostly for athetine aedeagi) are kept, although it is very difficult to say whether any of the internal structures are homologous to those in the very differently modified aleocharine aedeagi. It would actually be more important to establish homologies between the aedeagal structures of the most closely related oxyteline lineages, but this still is a hopeless task at this point. Fig. 1 shows the following internal sclerites named (in two different inner sacs of species described in this article): AC = apical copulatory sclerite (unpaired); $\mathrm{BA}=$ basal sclerites (paired); $\mathrm{BM}=$ basomedial sclerites (paired); $\mathrm{MA}=$ medioapical sclerites (paired); $\mathrm{ML}=$ medial lamellae (unpaired).

## Illustrations

An effort was made to illustrate the hypothetically homologous structures in a similar way. For any such approach to be successful, it is very necessary to find aedeagi in good condition and with their inner sacs not everted. This is not always easy, especially when the available material is very little and/or very old (like in the present study). Another important factor is (this topic is briefly touched in MAKRANCZY 2006) the way illustrated objects are shown from an aspect/several aspects that maximizes the number of characters the viewer can extract from the drawings. It was found to be practically useless to show aedeagi from "lateral" view - however, this aspect is very necessary to illustrate the shape of the parameres. Most internal structures are lamellar and parallel to the basal orifice, therefore of these little more than a bunch of fine lines can be seen from the side. On the other hand, the "frontal" view should be separated into two drawings, where the silhouette of the median lobe base is shown on both, but one details the outer "shell" with the parameres, while the other focuses on the internal structures. This is necessary because of the extreme overlap of important details. For the same reason it was advisable to tilt the drawn objects by approx. 15 degrees - such tilt allows overlapping structures to move out from the "shadow" enough to show their forms, but still does not significantly distort the general "frontal" aspect (parameral view) of an aedeagus.


Fig. 1. Aedeagal sclerites in Thinodromus Kraatz, 1857: BA = basal sclerites, BM = basomedial sclerites, $\mathrm{ML}=$ medial lamellae, $\mathrm{MA}=$ medioapical sclerites, $\mathrm{AC}=$ apical copulatory sclerite. - Figs 2-5. Antennae: $2-3=T$. gabonicus sp. n. male and female, $4-5=$ T. mateui sp. n. male and female. - Figs 6-8. Genitalia: T. decorsei (CAMERON, 1948), 6-7 = aedeagus, $8=$ paramere. Scale $=0.16 \mathrm{~mm}$ for Figs $2-3,0.18 \mathrm{~mm}$ for Figs $4-5,0.10 \mathrm{~mm}$ for Figs $6-8$

For the illustrations permanent preparations were made in Euparal mounting medium on plastic cards pinned with the specimens. Drawing was done with either Olympus BH-2 and Olympus BH-1 or a Jenalab (Carl Zeiss, Jena) compound microscopes and drawing tubes (camera lucida). Descriptions and measurements are made with Wild M 8 and Leica MZ 125 stereoscopic microscopes. The drawings of the antennae are based on SEM images taken of uncoated specimens with a Hitachi S-2600 N scanning electron microscope.

## DESCRIPTIONS OF THE SPECIES

As explained before, the here presented review deals with an amonunt of species that is unquestionnably a very small fragment of the African fauna. The approach is, therefore, a detailed description of the features found to be useful, with only comparative notes. A key - at this point - was thought to be useless, as there are probably a vast number of other undescribed species in the area. It is expected that at least every other sampled specimen belongs to yet unnamed species. The descriptions usually mention the bionomics, this is also pointless here, as it is almost totally unknown. Some specimens were collected at light, and for one species the old label reads "bank of stream" that is probably true for all the species herein. They might live at stream or riverbanks, in plant debris or under stones.

A special note is necessary about the length of the antennomeres. The data given with the descriptions refer to male specimens (if not otherwise noted). Females in most Thinodromus species groups often have noticeably shorter antennomeres. The deviation is usually not great ( $5-10 \%$ ), and in those species where the antennae are more elongate, the difference between sexes is generally more apparent. The situation is illustrated for one species where there is a great deviation, T. gabonicus sp. n. (Figs 2-3) and another where the difference between sexes is hardly noticeable, T. mateui sp. n. (Figs 4-5).

Codes used for the measurements $-\mathrm{AW}=$ maximum width of abdomen; $\mathrm{BL}=$ approximate body length; $\mathrm{EL}=$ length of eye; $\mathrm{FL}=$ forebody length (combined length of head, pronotum and elytra); $\mathrm{HL}=$ head length from front margin of clypeus to the beginning of neck; $\mathrm{HW}=$ head width with eyes; $\mathrm{PL}=$ length of pronotum in the middle-line; $\mathrm{PW}=$ maximum width of pronotum; SC = length of elytra from hind apex of scutellum; SL = length of elytra from shoulder; SW = approximate width of shoulders; TL = length of temple; TW = head width at temples. All measured from dorsal view.

## Thinodromus decorsei (CAMERON, 1948)

(Figs 6-9, 25-26, 65)
Studied type material - Lectotype (male): "Co-type [curator label], Museum Paris, Moyen Chari, Fort Archambault [=Sarh, $9^{\circ} 09^{\prime}$ N, $18^{\circ} 23^{\prime}$ E], Boungoul (Ba-Karé), Mission Chari-Tchad, Dr. J. Decorse, 1904; Avril; Trog. decorsei Cotype Cam.; M. Cameron

Bequest, B.M. 1955-147.; Lectotypus Trogophloeus decorsei Cameron, des. Makranczy, 2001; Thinodromus decorsei Cameron det. Makranczy, 2001" (BMNH). Paralectotype (2): "Museum Paris, Moyen Chari, Fort Archambault, Ba-Karé ou Boungoul, Mission Chari-Tchad, Dr. J. Decorse, 1904; Avril; Type; Paralectotypus Trogophloeus decorsei, des. Makranczy, 2002; Thinodromus decorsei Cameron det. Makranczy, 2002" [other specimen with identical locality labels] ( 1 male, 1 female coll. générale, MNHN). Lectotype and paralectotypes are designated in order to fix the identity of this species, for the express purpose of nomenclatural stability.

Other material - Tchad [Chad]: district de Kanem [Prefecture du Kanem, approx. $15^{\circ} 00^{\prime} \mathrm{N}, 16^{\circ} 00^{\prime} \mathrm{E}$ ], VI.1958, [leg.] P. Renaud ( 1 male MRAC, 1 male HNHM).

Description - Measurements (in mm, $\mathrm{n}=5$ ): $\mathrm{HW}=0.61$ ( $0.59-0.64$ ); $\mathrm{TW}=0.51$ ( $0.50-0.52$ ); $\mathrm{PW}=0.68(0.66-0.72) ; \mathrm{SW}=0.82(0.79-0.90) ; \mathrm{AW}=0.90(0.88-0.96) ; \mathrm{HL}=$ 0.36 (0.35-0.37); $\mathrm{EL}=0.25(0.23-0.28) ; \mathrm{TL}=0.02(0.02-0.02) ; \mathrm{PL}=0.47$ (0.44-0.50); $\mathrm{SL}=$ $0.75(0.72-0.81) ; \mathrm{SC}=0.70(0.68-0.76) ; \mathrm{BL}=3.37(3.00-3.60) ; \mathrm{FL}=1.67(1.52-1.84) \mathrm{mm}$. - Colour. Moderately shiny (more than average), body dark blackish brown, legs and antennae dark brown, tips of supraantennal tubercles somewhat lighter. - Shape and sculpture. Head rather transverse, temples short, but well visible, eyes mostly occupy the sides of head. Antennal segments ovoid, antennomeres 4-5 1.14-1.20× longer than broad, antennomeres 9-10 1.14-1.21× broader than long (in females antennomeres 4-5 1.17-1.22× broader than long, antennomeres $9-101.44-1.61 \times$ broader than long). Pronotum also transverse, posterior half of pronotal side more or less straight. Pronotum with moderately deep horseshoe-shaped impression, its side branches anteriorly do not reach much beyond the horizontal middle-line of pronotum. Reflexed lateral margin medium thin, a fine margin even apparent at the posterior edge. Elytra together $1.23 \times$ broader than long, slightly dilating towards apex, extremely gently impressed in anterior half of disc. - Punctation and microsculpture. Head punctation medium coarse, not very dense, puncture interspaces at least $3 / 4$ of the diameter. Pronotal punctation similarly moderately deep, puncture sizes rather even, but interspaces vary (between a third to full puncture diameter). Elytral punctation slightly but noticeably more coarse and deep, average interspace is half of a puncture diameter. Abdominal punctation rather coarse, similar to that of the elytra, getting more sparse posteriorly on terga. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation uni-sized, semierect, hairs are rather long and sparser than average (most apparent on elytra). On abdominal terga among the usual sized setae with some longer hairs. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 6-8) AC well-developed but rather thin, other sclerites less prominent, sternite VIII (Fig. 25), tergite X (Fig. 26); female: ringstructure (Fig. 65).

Comparative notes - Elytral punctation has same roughness/depth as in T. gabonicus, but punctation of the pronotum is very different. It has the most transverse antennomeres of all known species in the region. Outside the region it is rather similar to T. dasys Gildenkov, 2000, described from South Africa.

## Thinodromus excultus sp . n .

(Figs 10, 13-15, 27-28, 66)
Type material - Holotype (male, antennae lost): "Yengüe [ $2^{\circ} 13^{\prime} \mathrm{N}, 9^{\circ} 53^{\prime} \mathrm{E}$ ], R[io] Campo, Guinea Española [Equatorial Guinea], J. Mateu leg., [on the backside] 23-27. (IX.1948)" (MRAC). Paratype (1 female): same data as holotype, (MRAC).

Description - Measurements (in mm, $\mathrm{n}=2$ ): $\mathrm{HW}=0.57$ ( $0.56-0.57$ ); $\mathrm{TW}=0.48$ ( $0.48-0.48) ; \mathrm{PW}=0.61(0.60-0.61) ; \mathrm{SW}=0.75(0.74-0.76) ; \mathrm{AW}=0.82(0.80-0.84) ; \mathrm{HL}=$ $0.31(0.30-0.32) ; \mathrm{EL}=0.22(0.21-0.22) ; \mathrm{TL}=0.02(0.02-0.02) ; \mathrm{PL}=0.46(0.46-0.46) ; \mathrm{SL}=$ $0.75(0.74-0.76) ; \mathrm{SC}=0.69(0.68-0.70) ; \mathrm{BL}=3.15(3.10-3.20) ; \mathrm{FL}=1.51(1.50-1.52) \mathrm{mm}$. - Colour. Body appears quite shiny, principally for the very fine punctation and large unsculptured interspaces. Dark blackish brown, legs and antennae dark brown, supraantennal tubercles somewhat lighter, brown. Tips of tibiae and tarsi also lighter. - Shape and sculpture. Head rather transverse, temples hardly noticeable to absent, eyes occupy sides of head. Antennal segments ovoid, antennomeres 4-5 1.10-1.20× longer than broad, antennomeres 9-10 1.07-1.14× broader than long (female antenna). Pronotum also transverse, posterior half of pronotal side straight or very gently concave. Pronotal impression moderately deep horseshoe-shaped, its side branches anteriorly reach till the horizontal middle-line of pronotum, no other apparent impression. Reflexed lateral margin very thin, not very conspicuous, only apparent in the posterior half of pronotal side and very fine on the posterior edge. Elytra together $1.20 \times$ broader than long, dilating towards apex, has a rather conspicuous impression posterior to the scutellum and shallow oblique depressions in the anterior half of disc. - Punctation and microsculpture. Head punctation extremely fine and uniform with varying interspaces (sometimes twice as diameters). Pronotal punctation very fine and uniformly sized, interspaces varying slightly, usually larger than puncture diameters. Elytral punctation coarser, puncture size and shape vary, average interspace $1 / 2$ of diameters. Abdominal punctation fine and uneven, with greatly varying (but usually larger than diameter) interspaces, posteriorly finer on terga. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation uni-sized, medium dense, semierect, hairs are rather long. On abdominal terga among the usual sized setae with some longer hairs. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 13-15) AC very large and thick, other sclerites much less prominent, sternite VIII (Fig. 27), tergite X (Fig. 28); female: ringstructure (Fig. 66).

Comparative notes - This species can be distinguished by the unusually fine punctation from most congeners in the region. Among the species dealt with here, this taxon has no obvious relatives; perhaps a more distant connection can be stated with T. makokouensis, T. mauritanicus and T. odzalensis, based on certain genital features. The female ringstructure also has rather unique formation, unfortunately the females of the latter three species are still unknown.

Etymology - The name refers to the rather fine and very uniform punctation on the pronotum of the species.


Figs 9-12. Forebodies of Thinodromus Kraatz, 1857 species: $9=$ T. decorsei (CAMERON, 1948), $10=$ T. excultus sp. n., $11=$ T. gabonicus sp. $\mathrm{n} ., 12=T$. kedougouensis sp. n.

## Thinodromus gabonicus sp. n .

(Figs 2-3, 11, 16-18, 29-30, 67)
Type material - Holotype (male): "Gabon, [Ogooue-Ivindo,] Makokou (43) [00³4' N, $12^{\circ} 52^{\prime}$ E], 29.I. 1963 , [leg.] H. Coiffait, Mission Biologique au Gabon, P. P. Grasse Directeur" (coll. Coiffart, MNHN). Paratypes (54): same data as holotype (3 MNHN, 2 HNHM, 1 BMNH, 1 MRAC); Gabon, [Ogooue-Ivindo,] Belinga (202) [ $01^{\circ} 08^{\prime} \mathrm{N}, 13^{\circ} 07^{\prime}$ E], 13.III.1963, [leg.] H. Coiffait, (29 MNHN, 1 FMNH); same but (119) (1 MNHN); same but (119L) 12.III.1963, (1 MNHN); same but (219L), ( 1 MHNG); Gabon, [OgooueIvindo, $\mathrm{M}^{\prime}$ Vadi (201L) [ $01^{\circ} 13^{\prime} \mathrm{N}, 13^{\circ} 12^{\prime} \mathrm{E}$ ], 13.III.[19]63, [leg.] H. Coiffait, ( 10 MNHN , 1 BMNH, 1 MRAC, 1 MHNG, 1 FMNH).

Description - Measurements (in mm, $\mathrm{n}=3$ ): $\mathrm{HW}=0.58$ ( $0.56-0.60$ ); $\mathrm{TW}=0.50$ ( $0.48-0.52$ ); $\mathrm{PW}=0.69(0.66-0.70) ; \mathrm{SW}=0.85(0.82-0.88) ; \mathrm{AW}=0.90(0.88-0.92) ; \mathrm{HL}=$ 0.33 ( $0.30-0.36) ; \mathrm{EL}=0.22 ; \mathrm{TL}=0.02 ; \mathrm{PL}=0.48(0.44-0.50) ; \mathrm{SL}=0.77(0.74-0.80) ; \mathrm{SC}=$ 0.70 ( $0.66-0.72$ ); $\mathrm{BL}=3.32(3.10-3.50)$. $\mathrm{FL}=1.69$ ( $1.56-1.78$ ) mm. - Colour. Body moderately shining, very dark reddish-brown, almost black, supraantennal processes lighter. Legs dark brown, apices of tibiae and tarsi lighter. - Shape and sculpture. Head rather transverse, temples indistinct, eyes occupy sides of head. Antennal segments ovoid, antennomeres 4-5 1.33-1.48× longer than broad, 9-10 1.03-1.15× broader than long (in females $1.10-1.23 \times$ longer than broad and 1.19-1.35 $\times$ broader than long, respectively) (Figs 2-3). Pronotum strongly transverse, side margin well-noticeably concave before posterior angles; this may only be slightly so in the other species. Pronotal horseshoe-shaped impression strong; disc with a shallow impression anterio-medially, but dual impression on middle hardly noticeable. Reflexed margin broad, laterally rather pronounced, laminar, posteriorly hardly noticeable. Elytra together slightly $(1.23 \times)$ broader than long, dilating towards apex, anterior half of disc uneven surfaced, with slight protuberances at the sides of the (usually impressed and microsculptured) postscutellar area - Punctation and microsculpture. Head punctation rather strong, dense, punctures unequal sized. Pronotal punctation strong, interspaces at least $1 / 2-3 / 4$ puncture diameters (puncture sizes not even). Elytral punctation strong, interspaces about 1/2-3/4 diameters. Punctation on abdomen moderately strong, puncture diameters slightly larger than interspaces, more sparse towards apex. No microsculpture anywhere on body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation with uni-sized hairs, but everywhere, especially on pronotum, longer than usual for this pubescence pattern. Hairs on elytra shorter and very uniform (equal length and thickness). Abdominal terga with some very long setae. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 16-18) all sclerites thin, thread-like, AC a conspicuous, reverse V-shaped structure. Sternite VIII (Fig. 29), tergite X (Fig. 30); female: ringstructure (Fig. 67).

Comparative notes - This species can be distinguished from others by its unusually strong pronotal punctation, broad and concave pronotal lateral margin and rather long hairyness. Strength of elytral punctation is similar to that of T. decorsei.

Etymology - The name refers to the type locality of the species.


Figs 13-18. Genitalia of Thinodromus Kraatz, 1857 species: T. excultus sp. n., 13-14 = aedeagus, $15=$ paramere. $T$. gabonicus sp.n., 16-17 $=$ aedeagus, $18=$ paramere. Scale $=0.10 \mathrm{~mm}$


Figs 19-24. Genitalia of Thinodromus Kraatz, 1857 species: T. kedougouensis sp. n., 19-20 = aedeagus, $21=$ paramere. T. makokouensis sp. n., 22-23 $=$ aedeagus, $24=$ paramere. Scale $=0.10 \mathrm{~mm}$ for Figs $19-21,0.17 \mathrm{~mm}$ for Figs 22-24

# Thinodromus kedougouensis sp. n . 

(Figs 12, 19-21, 31-32, 68)
Type material - Holotype (male): "Senegal X. 1980, [Tambacounda,] Kedougou, [= Kedogou, $\left.12^{\circ} 33^{\prime} \mathrm{N}, 12^{\circ} 11^{\prime} \mathrm{W}\right]$ B Sigwalt leg." (coll. Levasseur, MNHN). Paratypes ( 1 female, 1 male [aedeagus damaged]): same data as holotype, (coll. Levasseur, MNHN).

Description - Measurements (in mm, $\mathrm{n}=3$ ): $\mathrm{HW}=0.53$ ( $0.52-0.53$ ); $\mathrm{TW}=0.43$ (0.43-0.44); PW = $0.58(0.58-0.59) ; ~ \mathrm{SW}=0.73(0.70-0.74) ; \mathrm{AW}=0.78(0.76-0.80) ; \mathrm{HL}=$ $0.30(0.30-0.31) ; \mathrm{EL}=0.20(0.20-0.22) ; \mathrm{TL}=0.00 ; \mathrm{PL}=0.42(0.42-0.43) ; \mathrm{SL}=0.67$ ( $0.64-0.70) ; \mathrm{SC}=0.59(0.58-0.60) ; \mathrm{BL}=3.25(3.14-3.44) . \mathrm{FL}=1.43(1.42-1.44) \mathrm{mm} .-$ Colour. Body moderately shining, very dark reddish-brown, almost black. Supraantennal processes lighter, yellowish. Legs medium brown, basal 2/3 of tibiae darker (dark brown). - Shape and sculpture. Head rather transverse, its sides occupied by the large eyes, no visible temples. Antennal segments ovoid, antennomeres 4-5 1.50-1.70× longer than broad, antennomeres 9-10 1.07-1.17× broader than long (in females antennomeres 4-5 $1.21-1.36 \times$ longer than broad, antennomeres $9-101.00-1.08 \times$ broader than long). Pronotum less strongly transverse, there is no concavity before the posterior angles. Reflexed lateral margin is narrow; very fine margin behind. Anterior margin with slight depressions near the anterior angles. Pronotum with rather deep horseshoe-shaped impression before base, in the form of a shallow depression even extending to the anterior edge of pronotum, also with shallow, slightly oblique dual impression in middle of disc. Elytra together only slightly $(1.28 \times)$ broader than long, dilating towards apex, each elytron with a barely visible impressed area in the anterior half of disc. - Punctation and microsculpture. Head punctation consists of moderately deep punctures, puncture size is nearly equal to spaces in between; puncture sizes vary greatly. Pronotum with rather deep punctures, average punctures nearly as interspaces; greatly varying sized punctures. Elytral punctures deeper than those on head, space between them smaller than size of average punctures. Puncture sizes only a little bit larger than on pronotum. On abdomen basal parts of terga have strong punctation, similar to the one on elytra; it is shallower towards apex of terga. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation predominantly of uni-sized type, relatively sparse, mostly semierect, but some finer hairs are depressed, especially at the base of pronotum. Hairs of various length and thickness; many are strong. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 19-21) AC barely developed, but BM exceptionally large and strong, Similarly ML very large and transversal. Sternite VIII (Fig. 31), tergite X (Fig. 32); female: ringstructure (Fig. 68).

Comparative notes - This species is notable for its unusually small pronotum, less broad than in others. There is no concavity before posterior angles of pronotum. In the inner sac of the aedeagus the BM and also the MA are very strongly developed, while AC is almost indistinct. T. nigerius GILDENKOV, 2000 is very similar species in this respect.

Etymology - The name refers to the type locality of the species.

# Thinodromus makokouensis sp. n. 

(Figs 22-24, 33-34, 37)
Type material - Holotype (male): "Gabon, [Ogooue-Ivindo,] Makokou (39) [00³4' N, 1252' E], 26.I.1963, [leg.] H. Coiffait, Mission Biol[ogique] au Gabon, P.P. Grasse Directeur" (coll. Coiffait, MNHN).

Description - Measurements (in mm, $\mathrm{n}=1$ ): $\mathrm{HW}=0.68 ; \mathrm{TW}=0.58 ; \mathrm{PW}=0.76 ; \mathrm{SW}$ $=0.96 ; \mathrm{AW}=1.06 ; \mathrm{HL}=0.40 ; \mathrm{EL}=0.27 ; \mathrm{TL}=0.00 ; \mathrm{PL}=0.58 ; \mathrm{SL}=0.92 ; \mathrm{SC}=0.86 ; \mathrm{BL}=$ 3.84. FL $=1.96 \mathrm{~mm}$. - Colour. Body surface moderately shining, very dark reddish-brown, almost black, supraantennal processes lighter, yellowish. Legs medium brown, tibiae (except for apices) slightly darker. - Shape and sculpture. Head rather transverse, large eyes occupy sides, no developed temples. Antennal segments ovoid, antennomeres 4-5 $1.26-1.35 \times$ longer than broad, antennomeres 9-10 1.00-1.10× longer than broad. Pronotal sides rounded and convex everywhere, no concavity. Reflexed lateral margin very narrow, posteriorly hardly noticeable. Horseshoe-shaped pronotal impression moderately deep, similar to T. odzalensis. Elytra together only very slightly ( $1.22 \times$ ) broader than long, dilating towards apex, each elytron has a shallow and moderately large impressed area in the anterior half of disc. - Punctation and microsculpture. Head punctation very fine, but punctures more equal in their sizes; close, interspace smaller than diameter. Pronotal punctation very fine; interspace nearly equal to puncture diameter; variously sized punctures. Elytral punctation medium fine, moderately deep, interspaces smaller than puncture sizes. Abdominal punctation extremely fine, variously sized punctures. interspaces large, their ratio to puncture sizes does not differ anteriorly and posteriorly. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation medium dense and of the two-sized type, like in T. odzalensis, composed of very thin small hairs, more or less depressed and long, stronger, semierect setae. Mixture of the two types most apparent on the abdominal terga and on the elytra. Pronotal base mostly with the finer type hairs, just like the head, while pronotal sides mostly have the long ones. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 22-24) AC reverse V-shaped with strongly developed lamellar sides, MA +BM with a conspicuous fused formation. Sternite VIII (Fig. 33) with the middle of posterior edge slightly pulled out bearing a V-shaped medial incision, tergite X (Fig. 34); female: unknown.

Comparative notes - This species is similar to T. odzalensis in many aspects, even the aedeagal structures show a great similarity. Without doubt they are close relatives. The characteristic two-sized type setation differentiates them from other similar congeners. The pronotal margin is almost unnoticeable in this taxon and this is the largest amongst the known species in the region. Another unique feature is that the middle of posterior edge on male sternite VIII bears an unusually sharp V-shaped incision.

Etymology - The species is named after the type locality.


Figs 25-30. Abdominal segments of Thinodromus Kraatz, 1857 species: T. decorsei (CAMERON, 1948), $25=$ male sternite VIII, $26=$ male tergite X. T. excultus sp. n., $27=$ male sternite VIII, $28=$ male tergite X. T. gabonicus sp. n., $29=$ male sternite VIII, $30=$ male tergite X. Scale $=0.10 \mathrm{~mm}$ for Figs $27-28$ and $30,0.13 \mathrm{~mm}$ for Figs $25-26$ and 29


Figs 31-36. Abdominal segments of Thinodromus Kraatz, 1857 species: T. kedougouensis sp. n., $31=$ male sternite VIII, $32=$ male tergite X. T. makokouensis sp. n., $33=$ male sternite VIII, $34=$ male tergite X. T. mateui sp. n ., $35=$ male sternite VIII, $36=$ male tergite X . Scale $=0.10 \mathrm{~mm}$ for Figs $31-32,0.13 \mathrm{~mm}$ for Figs 33-34, 0.08 mm for Figs 35-36


Figs 37-40. Forebodies of Thinodromus Kraatz, 1857 species: $37=$ T. makokouensis sp. n., $38=$ T. mateui sp. n., $39=$ T. mauritanicus sp. $\mathrm{n} ., 40=$ T. nigerius Gildenkov, 2000

# Thinodromus mateui sp. n. 

(Figs 4-5, 35-36, 38, 41-43, 69)
Type material - Holotype (male):"Gabon, [Ogooue-Ivindo,] IV.1971, Makokou [ $00^{\circ} 34^{\prime} \mathrm{N}, 12^{\circ} 52^{\prime} \mathrm{E}$ ], [leg.] J. Mateu" (MHNG). Paratypes (2): same data as holotype ( 1 fe male MHNG, 1 male [aedeagus missing] MRAC).

Description - Measurements (in mm, $\mathrm{n}=3$ ): $\mathrm{HW}=0.45(0.44-0.47)$; $\mathrm{TW}=0.41$ ( $0.40-0.41) ; \mathrm{PW}=0.52(0.51-0.53) ; \mathrm{SW}=0.62(0.61-0.63) ; \mathrm{AW}=0.70(0.68-0.72) ; \mathrm{HL}=$ $0.29(0.28-0.30) ; \mathrm{EL}=0.18(0.17-0.18) ; \mathrm{TL}=0.02(0.02-0.03) ; \mathrm{PL}=0.37(0.35-0.39) ; \mathrm{SL}=$ $0.62(0.60-0.64) ; \mathrm{SC}=0.57(0.55-0.59) ; \mathrm{BL}=2.31(2.17-2.43) ; \mathrm{FL}=1.29(1.25-1.33) \mathrm{mm}$. - Colour. Body moderately shining, very dark reddish-brown, almost black, first antennomeres lighter, yellowish. Legs uniformly dark brown. - Shape and sculpture. Head rather transverse, eyes occupy sides of head, temples hardly discernible. Antennal segments more cylindrical, antennomeres 4-5 1.21-1.45× longer than broad, antennomeres 9-10 $1.13-1.27 \times$ broader than long (in females almost the same) (Figs $4-5$ ). Pronotum very transverse, sides noticeably concave in the second half, before posterior angles. With rather deep and broad horseshoe-shaped impression, in the form of a shallow depression even extending to the anterior edge of pronotum. Reflexed lateral margin rather thin, only apparent in the posterior third, anteriorly absent, posteriorly medium wide. Elytra together slightly ( 1.28 x ) broader than long, dilating towards apex, gently impressed in anterior half of disc. - Punctation and microsculpture. Head punctation rather fine and very dense, interspaces less than diameter of punctures. Pronotal punctation consists of variously sized punctures (a few twice as large as others), interspaces much less than average puncture diameters. Elytral punctation moderately deep, somewhat irregular, interspaces smaller than diameters. Abdomen rather coarsely punctured, deep, rather closely spaced punctures, becoming slightly sparser towards apex. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation exceptionally dense (especially on head), medium long uni-sized hairs. On abdominal terga among the usual sized setae with some longer hairs. - Primary and secondary sexual features. Male: in the inner sac of aedeagus the AC weakly developed, but MA unusually large (Figs 41-43), sternite VIII (Fig. 35), tergite X (Fig. 36); female: ringstructure (Fig. 69).

Comparative notes - By far the smallest species known in the region. Also unique in having more cylindrical (rather than ovoid) antennomeres. This taxon appears to stand alone without any known relatives in West-Central Africa. Not only the external morphology and the male genitalia, but also the female ringstructure suggest distant connections to the other species here. It possibly has closer relatives elsewhere in Africa or in Asia.

Etymology - The species is named after the collector of the type specimens.


Figs 41-46. Genitalia of Thinodromus Kraatz, 1857 species: T. mateui sp. n., 41-42 = aedeagus, $43=$ paramere. $T$. mauritanicus sp. n., $44-45=$ aedeagus, $46=$ paramere. Scale $=$ 0.10 mm for Figs $41-43,0.15 \mathrm{~mm}$ for Figs 44-46


Figs 47-52. Genitalia of Thinodromus Kraatz, 1857 species: T. nigerius Gildenkov, 2000, $47-48=$ aedeagus, $49=$ paramere. $T$. odzalensis sp. n., $50-51=$ aedeagus, $52=$ paramere. Scale $=0.10 \mathrm{~mm}$ for Figs 47-49, 0.13 mm for Figs 50-52

## Thinodromus mauritanicus sp . n .

(Figs 39, 44-46, 53-54)
Type material - Holotype (male): "Azougi, pr. Atar, Adrar mauritanien, [= Mauritania, Azougil, $20^{\circ} 29^{\prime} \mathrm{N}, 13^{\circ} 07^{\prime} \mathrm{W}$, ] leg. B. de Miré, 11.I.[19]48." (coll. Jarrige, MNHN). Paratypes ( 2 males [aedeagi distorted]): same data as holotype (coll. JARRIGE, MNHN).

Description - Measurements (in mm, $\mathrm{n}=3$ ): $\mathrm{HW}=0.65$ (0.61-0.70); $\mathrm{TW}=0.50$ ( $0.48-0.52$ ); $\mathrm{PW}=0.75(0.70-0.80) ; \mathrm{SW}=0.88(0.84-0.92) ; \mathrm{AW}=0.96(0.92-1.02) ; \mathrm{HL}=$ 0.39 ( $0.38-0.40$ ); $\mathrm{EL}=0.27$ ( $0.26-0.28) ; \mathrm{TL}=0.00 ; \mathrm{PL}=0.51$ ( $0.48-0.54) ; \mathrm{SL}=0.79$ ( $0.76-0.82$ ); $\mathrm{SC}=0.69$ ( $0.64-0.74$ ); $\mathrm{BL}=3.20(3.00-3.50) . \mathrm{FL}=1.73(1.66-1.82) \mathrm{mm} .-$ Colour. Body moderately shining, very dark reddish-brown, almost black. Supraantennal processes lighter, yellowish. Legs medium to dark brown, tibiae without their apices the darkest. - Shape and sculpture. Head rather transverse. Antennal segments ovoid, antennomeres 4-5 1.25-1.50× longer than broad, antennomeres 9-10 1.00-1.26 $\times$ broader than long. Pronotum very transverse, only very slightly concave before posterior angles. Reflexed lateral margin broad. Anterior margin with very slight depressions near the anterior angles. With moderately deep horseshoe-shaped impression, dual impression in middle of disc and depressions along anterior edge very shallow. Reflexed lateral margin laminar, rather wide, anteriorly absent, posteriorly fine. Elytra together slightly ( $1.22 \times$ ) broader than long, dilating towards apex, elytron with a shallow and moderately large impressed area in the anterior half of disc. - Punctation and microsculpture. Head punctation with moderately deep punctures, much closer than their diameter. Pronotal punctation consists of variously sized punctures, almost as far away as their diameter (so sparser than on head). Elytral punctation is deep and close, interspaces much smaller than diameters. Abdominal punctation with moderately small, irregularly spaced punctures, getting rather sparse towards apex. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation uni-sized, rather dense, but with varying hair sizes and thicknesses, like in T. kedougouensis. On abdominal terga among the usual sized setae with some longer hairs. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 44-46) AC distorted H-shaped, other sclerites rather small, weakly developed. Sternite VIII (Fig. 53), tergite X (Fig. 54); female: unknown.

Comparative notes - Its unusually transverse pronotum, unusual formation of the apical edge of male sternite VIII distinguishes it from other congeners. Based on aedeagal features, this species has a closest relative in T. odzalensis, although externally the similarity is more distant, T. makokouensis and T. odzalensis seem to be more alike. This group of three species have a tendency for unusual formation of the apical edge on male sternite VIII; while in most other species it is membraneous and gently pulled out in the middle, here appears to be more sclerotized and either pulled out in a point or two humps.

Etymology - The name refers to the type locality of the species.

## Thinodromus nigerius GILDENKOV, 2000

(Figs 40, 47-49, 55-56)
Studied material - "Nigeria: Ile-Ife, W State, [ $07^{\circ} 28^{\prime}$ N, $04^{\circ} 34^{\prime} \mathrm{E}$ ], 15 Jul 1970, col. J. T. Medler, Coll. Mus. Tervuren" (1 male, MRAC); "Coll. Mus. Tervuren, Côte d'Ivoire: [Departement de Divo,] Divo [ $05^{\circ} 50^{\prime} \mathrm{N}, 05^{\circ} 22^{\prime}$ W], J. Decelle, 28.XI. $1963^{\prime \prime}$ (1 male, MRAC).

Description - Measurements (in mm, $\mathrm{n}=2$ ): $\mathrm{HW}=0.51(0.50-0.52)$; $\mathrm{TW}=0.46$ (0.45-0.46); $\mathrm{PW}=0.58(0.57-0.58) ; \mathrm{SW}=0.70(0.70-0.70) ; \mathrm{AW}=0.79(0.78-0.80) ; \mathrm{HL}=$ $0.31(0.30-0.32) ; \mathrm{EL}=0.20(0.20-0.20) ; \mathrm{TL}=0.03(0.02-0.03) ; \mathrm{PL}=0.42(0.42-0.42) ; \mathrm{SL}=$ 0.67 ( $0.66-0.68$ ); $\mathrm{SC}=0.58(0.58-0.58) ; \mathrm{BL}=2.70(2.60-2.80) ; \mathrm{FL}=1.41(1.40-1.42) \mathrm{mm}$. - Colour. Moderately shiny, head rather dull (traces of microsculpture?). Body dark brown (blackish with reddish tint), forebody appears a tad lighter than abdomen, legs and antennae medium to dark brown, supraantennal tubercles and first antennomeres also somewhat lighter. - Shape and sculpture. Head rather transverse, temples very short, not conspicuous, eyes almost fully occupy sides of head. Antennal segments ovoid, antennomeres 4-5 1.40-1.60× longer than broad, antennomeres 9-10 1.00-1.14× broader than long. Pronotum also transverse, pronotal side before hind angles very gently concave. Horse-shoe-shaped impression posteriorly rather deep, its side branches reach till the anterior edge of pronotum in the form of shallowly depressed areas. Disc in the middle with gentle dual impressions. Reflexed lateral margin thin, not very conspicuous, only apparent in the posterior half of pronotal side and on posterior edge. Elytra together broader than long (1.25×), gently dilating towards apex, with a shallow impression behind shoulders in the anterior third of disc (anterior to it there may be a small elevated area; behind scutellum impression with microsculpture). - Punctation and microsculpture. Head punctation medium fine but very dense, almost no significant interspaces (therefore appears more dull than other body parts). Pronotal punctation also medium fine, interspaces 1/2-3/4 of puncture diameters. Elytral punctation very similar to that of pronotum, but posteriorly with more coarse punctures. Abdominal punctation rather coarse (posteriorly increasing) with larger interspaces (at least $1 / 2-3 / 4$ of puncture diameters), therefore it appears the most shiny of the main body parts. Microsculpture on the body only in traces on the head (not clearly visible for its dense punctation) and in posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation semierect, uni-sized. Rather short and uniform on elytra and head, a little longer and unequal on pronotum, on abdomen with rather long hairs on posterior edges of terga. - Primary and secondary sexual features. Male: the inner sac of the aedeagus (Figs 47-49) has similar development to that in T. kedougouensis, sternite VIII (Fig. 55), tergite X (Fig. 56).

Comparative notes - T. nigerius GILDENKOV, 2000 is rather similar to T. capensis Bernhauer, 1934, described from South Africa.

Bionomics - The holotype of T. nigerius was collected at light.


Figs 53-58. Abdominal segments of Thinodromus Kraatz, 1857 species: T. mauritanicus sp. n., $53=$ male sternite VIII, $54=$ male tergite X. T. nigerius Gildenkov, 2000, $55=$ male sternite VIII, $56=$ male tergite X. T. odzalensis sp. n., $57=$ male sternite VIII, $58=$ male tergite X. Scale $=0.13 \mathrm{~mm}$ for Figs 53-54, 0.10 mm for Figs 55-58

Taxonomic note - Thinodromus nigerius was described by Gildenkov (2000) from Nigeria (Ibadan, $07^{\circ} 28^{\prime} \mathrm{N}, 04^{\circ} 34^{\prime} \mathrm{E}$ ), based on a single female specimen. The description is supplemented by a forebody and an antenna sketch and a drawing of the spermatheca. The spermatheca has no diagnostic value in Thinodromus, at least not between closely related species. Almost the same goes for the description of the antenna, it is different between sexes and also displays a great extent of intraspecific variability. There are too many undescribed Thinodromus species and external similarities between taxa are so great that only unique, character-rich features enable safe distinction of them. On my close personal examination of the holotype specimen in London (2000) it turned out that the tip of the abdomen had been removed in the process of preparation and is now lost. Therefore the more distinctive ringstructure cannot be illustrated for this species. In conclusion, the original description of the taxon is missing any information with a serious diagnostic value, therefore the use of the name here should not be considered as being without doubt.

## Thinodromus odzalensis sp. n.

> (Figs 50-52, 57-59)

Type material - Holotype (male): "Odzala, Congo, [Congo: Cuvette, Odzala, $00^{\circ} 31^{\prime}$ N, $14^{\circ} 39^{\prime}$ E, X.1963,] Octobre, Museum Paris, Mission A. Descarpentries Et A. Villiers 1963-1964" (coll. générale, MNHN).

Description - Measurements (in mm, $\mathrm{n}=1$ ): $\mathrm{HW}=0.64 ; \mathrm{TW}=0.48 ; \mathrm{PW}=0.72 ; \mathrm{SW}$ $=0.92 ; \mathrm{AW}=0.90 ; \mathrm{HL}=0.36 ; \mathrm{EL}=0.26 ; \mathrm{TL}=0.00 ; \mathrm{PL}=0.54 ; \mathrm{SL}=0.84 ; \mathrm{SC}=0.80 ; \mathrm{BL}=$ 3.60; FL $=1.80 \mathrm{~mm}$. - Colour. Body moderately shining, very dark reddish-brown, almost black. Supraantennal processes lighter, yellowish. Legs light brown, with exception of tibiae which are darker brown. - Shape and sculpture. Head slightly transverse, large eyes occupy the sides, no temples. Antennal segments ovoid, antennomeres 4-5 1.26-1.45× longer than broad, antennomeres 9-10 1.09-1.23× broader than long. Pronotum broadly rounded on all sides, there is no concavity anywhere. Reflexed lateral margin thin, posteriorly almost unnoticeably fine, anteriorly absent. Horseshoe-like impression slightly W-shaped, moderately deep, the dual impression in the middle and the anterio-medial one almost inperceptably shallow. Elytra together slightly ( $1.21 \times$ ) broader than long, dilating towards apex, elytron has a shallow and small impressed area in the anterior half of disc. - Punctation and microsculpture. Head punctation composed of very fine, shallow punctures, sizes about equal to interspaces. Pronotal punctation with very fine but variously sized shallow punctures, sizes are generally smaller than interspaces. Elytral punctation slightly stronger, slightly deeper, punctures about equal to interspaces. Abdomen finely punctured at base of terga, towards apex punctation becomes sparser. No apparent microsculpture anywhere on the body except posterior pronotal corners, where punctation diminishes into coriaceous ground sculpture. - Pubescence. Setation rather dense and of the two-sized pattern. Part of hairs very thin and small, more or less depressed, others long, stronger, semierect. The two different types are most apparent on the abdominal terga and on the elytra.


Figs 59-61. Forebodies of Thinodromus Kraatz, 1857 species: $59=$ Thinodromus odzalensis sp. n., $60=$ T. thoracicus GILDENKOV, 2000, $61=$ T. malkinianus sp. n. - Figs 62-64. Apices of sternites VII of Thinodromus Kraatz, 1857 species: $62=$ T. thoracicus Gildenkov, 2000, 63-64 $=$ T. malkinianus sp. n. Scale $=200 \mu \mathrm{~m}$

Pronotal base mostly have the finer type hairs, just like the head, while pronotal sides mostly have the long ones. - Primary and secondary sexual features. Male: in the inner sac of the aedeagus (Figs 50-52) AC strongly developed, reverse V-shaped with a thick base, other structures much weaker. Sternite VIII (Fig. 57) in the middle of posterior edge pulled out (posteriorly pointed), tergite X (Fig. 58); female: unknown.

Comparative notes - Closely related to T. makokouensis, with which they have the setation type in common and several aedeagal features. Also they are the two largest species of the ones currently known from the area. Uniquely, in this species the middle of the apical edge of sternite VIII in males is pulled out in a point. Notable for its very fine pronotal punctation, too.

Etymology - The name refers to the type locality of the species.

## Thinodromus thoracicus Gildenkov, 2000

(Figs 60, 62, 70-73)
Studied material - Paratypes: Sierra Leone: (no further data), bank of stream (2 males, 2 females HNHM).

Description - Measurements (in mm, $\mathrm{n}=4$ ): $\mathrm{HW}=0.52(0.48-0.56)$; $\mathrm{TW}=0.48$ ( $0.43-0.52$ ); $\mathrm{PW}=0.63(0.59-0.66) ; \mathrm{SW}=0.74(0.72-0.76) ; \mathrm{AW}=0.82(0.76-0.88) ; \mathrm{HL}=$ 0.30 ( $0.29-0.32) ; \mathrm{EL}=0.17(0.16-0.18) ; \mathrm{TL}=0.06(0.06-0.07) ; \mathrm{PL}=0.43(0.40-0.46) ; \mathrm{SL}$ $=0.72(0.66-0.76) ; \mathrm{SC}=0.66(0.60-0.72) ; \mathrm{BL}=3.04(2.76-3.40) ; \mathrm{FL}=1.53(1.36-1.72) \mathrm{mm}$. - Colour. Moderately shiny, body strongly reddish medium brown, legs and mouthparts a tad lighter, terminal two antennomeres and sometimes tip of 9th much lighter. Head a little darker than other main body parts. Head strongly transverse, temples not strongly developed but well marked. Antennal segments more conical with conspicuous basal ridge, strongly dilating apically, antennomeres 4-5 2.25-2.50× longer than broad, antennomere 9 about 1.30 longer than broad (in females almost the same), antennomre 10 much shorter than the neighbouring ones. Pronotum also transverse, posterior half of pronotal side almost straight or very gently concave. Pronotum with two broad oblique depressions on the lateral parts of disc, the middle longitudinal stripe very gently depressed, flat. Reflexed lateral margin not visible on pronotum (from strictly dorsal view), but a thin reflexed margin exists on the posterior edge. Elytra together much broader than long ( $1.31 \times$ ), dilating towards apex, inner-anterior part of disc gently impressed transversally. - Punctation and microsculpture. Head punctation rather fine, puncture interspaces usually $1 / 2-3 / 4$ of puncture diameters. Pronotal punctation only a little more coarse (or more apparent because of the lack of microsculpture). Elytral punctation about twice as coarse as the pronotal one, appears rather deep. Abdominal terga with punctation more similar to that of the head, shallow and irregular punctation, interspaces as large as average puncture diameters. Microsculpture apparent only on head, which makes it appear more dull. - Pubescence. Setation uni-sized, semierect, hairs rather short. Abdominal setation composed of very thin hairs of medium length and density.


Figs 65-69. Female ringstructures of Thinodromus Kraatz, 1857 species: $65=$ T. decorsei (CAMERON, 1948), $66=$ T. excultus sp. n., $67=$ T. gabonicus sp. n., $68=$ T. kedougouensis sp. n., $69=$ T. mateui sp. n. Scale $=0.10 \mathrm{~mm}$ for Figs $65-68,0.08 \mathrm{~mm}$ for Fig. 69

- Primary and secondary sexual features: Male: aedeagus (Fig. 70), apical edge of sternite VII with a row of 34 strong and short spines (Fig. 62), sternite VIII (Fig. 71), tergite X (Fig. 72); female: ringstructure (Fig. 73).

Comparative notes - This and the following species belong in a species group with a rather unique appearance (in certain works subgenus Carpaliaceus Gildenkov, 2000, type species Thinodromus thoracicus GILDENKOV, 2000). Apart from a notably more reddish colouration, light coloured and shortened terminal (10-11) antennomeres, a slightly different spermatheca, sternite VII has a very unique modification. Slightly erecting from the plane of the disc of sternite VII there is a row of stout, dark spines with unknown function. This trait distinguishes this group from any other known Thinodromus species.

Bionomics - Only information is the "bank of stream" on the labels of some type specimens.

## Thinodromus malkinianus sp. n .

 (Figs 61, 63-64, 74-76)Type material - Holotype (male):"Mamfe [ $05^{\circ} 46^{\prime} \mathrm{N}, 09^{\circ} 17^{\prime} \mathrm{E}$ ], Brit. Cameroons, I.10.1949, [leg.] B. Malkin; Collection of the California Academy of Sciences, San Francisco, Calif." (CASC).

Description - Measurements (in mm, $\mathrm{n}=1$ ): $\mathrm{HW}=0.52 ; \mathrm{TW}=0.48 ; \mathrm{PW}=0.61 ; \mathrm{SW}$ $=0.78 ; \mathrm{AW}=0.82 ; \mathrm{HL}=0.30(0.50-0.54) ; \mathrm{EL}=0.16 ; \mathrm{TL}=0.06 ; \mathrm{PL}=0.43 ; \mathrm{SL}=0.68 ; \mathrm{SC}$ $=0.62 ; \mathrm{BL}=2.90 ; \mathrm{FL}=1.44 \mathrm{~mm} .-$ Colour. Moderately shiny, body strongly reddish medium brown, legs and mouthparts a tad lighter, terminal two antennomeres and tip of 9th somewhat lighter. Head a little darker than other main body parts. Head strongly transverse, temples weakly developed but apparent. Antennal segments ovoid-conical with conspicuous basal ridge, strongly dilating apically, antennomeres 4-5 1.36-1.54× longer than broad, antennomeres 9-10 1.19-1.33 longer than broad (male antenna). Pronotum also transverse, posterior half of pronotal side near straight. Pronotum with two broad oblique depressions on the lateral parts of disc, the middle longitudinal stripe rather flat with somewhat shinier very gently elevated midline in posterior third. Reflexed lateral margin not visible on pronotum (only slightly in the posterior corners), but a thin reflexed margin exists on the posterior edge. Elytra together much broader than long ( $1.14 \times$ ), dilating towards apex, inner-anterior part of disc gently impressed transversally. - Punctation and microsculpture. Head punctation rather fine, puncture interspaces usually $1 / 2-3 / 4$ of puncture diameters. Pronotal punctation just a little more coarse (or more apparent because of the lack of microsculpture). Elytral punctation at least twice as coarse as the pronotal one, appears rather deep, elytra very shiny. Abdominal terga with punctation more similar to that of the pronotum, but more sparse, irregular, interspaces as large as average puncture diameters. Microsculpture apparent only on head, which makes it appear more dull. - Pubescence. Setation uni-sized, semierect, hairs rather short. Abdominal setation composed of very thin hairs of medium length and density.


Figs 70-73. Thinodromus thoracicus Gildenkov, 2000:70 $=$ aedeagus, $71=$ male sternite VIII, $72=$ male tergite $\mathrm{X}, 73=$ female ringstructure. - Figs 74-76. T. malkinianus sp. n.: $74=$ aedeagus, $75=$ male sternite VIII, $76=$ male tergite X . Scale $=0.10 \mathrm{~mm}$ for Figs 70 and $76,0.07 \mathrm{~mm}$ for Fig. 73-74, 0.11 mm for Fig. $75,0.12 \mathrm{~mm}$ for Fig. $71,0.13 \mathrm{~mm}$ for Fig. 72

- Primary and secondary sexual features. Male: aedeagus (Fig. 74), apical edge of sternite VII with a row of 20 strong and short spines (Fig. 63) and in ventral view (Fig. 64), sternite VIII (Fig. 75), tergite X (Fig. 76); female: unknown.

Comparative notes - This is the second known species of the Thinodromus thoracicus species group. Compared to T. thoracicus, this species has a shorter row of spines on the apical edge of sternite VII. It also has a notably more elongate aedeagus, albeit with similar features. Externally, females might be more difficult to distinguish, but this species is slightly smaller, the pronotum less wide, the posterior $3 / 5$ of the pronotal side less concave, rather straight, the 10th antennomere rather similar to the 9 th and the temples less pronounced, less bulging out behind the eye.

Etymology - The species is named after the collector of the holotype specimen.

Acknowledgments - Apart from the curators of the institutions from where the study material originated, I would like to thank Michael Engel (University of Kansas, Lawrence, KS, USA) for helping me with the photography of specimens, KrisZTina BucZkó (Hungarian Natural History Museum, Budapest, Hungary) for the use of the SEM, Ming-LuEn Jeng (University of Kansas, Lawrence, KS, USA) for arrangements and carrying specimens, Thierry Deuve and the late Nicole Berti (Muséum National d'Histoire Naturelle, Paris, France) for various favours regarding borrowed material and DIDIER DRUGMAND (Brussels, Belgium) who was extremely helpful and arranged my visit in Paris.

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