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*Ludvík Hoberlandt, Praha:***MADAGASCAN HETEROPTERA IN THE NATIONAL MUSEUM  
OF PRAHA. IV.*****A new species of Tenagogonus STÅL (Gerridae).***

Up to the present time there has been not recorded for Madagascar any species of *Tenagogonus* STÅL. In the collection of Madagascan Heteroptera in the National Museum of Praha is a great series of *Tenagogonus*, which is new to science:

***Tenagogonus madagascariensis* sp. n.**

Colour; apterous ♂: Olive-brownish with fuscous more or less recognizable markings, slightly shining. Head olive-brownish, lateral margins with a longitudinal more or less fuscous stripe reaching from the base of head to the base of antennae and reaching the inner margin of eyes; by paler specimens lateral stripes are interrupted and do not reach the inner margin of head; vertex with a middle longitudinal fuscous stripe extending from the base of vertex to the tylus, frequently however interrupted or only at base visible; clypeus of ground-colour but by fuscous specimens in the middle infuscated, antennal tubercles infuscated and also frequently the bacculae; underside pale brown, eyes blackish-brown, shining, rostrum pale brownish, on lower surface with a longitudinal fuscous stripe, the apex of the third and the whole fourth joint blackish; first and second antennal joints dark brown, towards the apices infuscated, third and fourth joints blackish. Pronotum olive-brownish, more or less all around fuscous emarginated and in the middle with a longitudinal blackish stripe, connected with the basal fuscous margin but often not reaching the apical margin of the pronotum; now and then posterior part of the pronotum more or less infuscated, but the middle longitudinal blackish stripe is ever visible. The mesonotum on the lateral and posterior parts emarginated and first of all the lateral parts are often broad fuscous, that only the narrow middle part remains olive-brown; proper middle is marked with a narrow longitudinal stripe, not reaching the pronotal margin and continued on metanotum, which disappears in the black part. The metanotum from the great part blackish, only the middle basal part (except the black longitudinal stripe) and the lateral stripes are brownish. Sternum pale olive-brownish; the propleural area with a longitudinal more or less visible fuscous markings and the mesopleural region near to the margin of mesonotum with a narrow

sinuated stripe; the anterior acetabula in the middle with a fuscous little spot, the intermediate acetabula at base with a little fuscous spot and with an apical black margin; also the apical margin of posterior acetabula infuscated. The second abdominal tergite black, the third tergite black with olive-brownish coloured middle part, the fourth to seventh olive-brownish with broadly blackish sides and with anterior and posterior margin narrowly black, the eighth tergite whole fuscous except the base and also often the disc; the ninth segment brownish, anal cone fuscous. Sutura of connexivum narrowly fuscous, the inner half of connexivum brownish, exterior half fuscous, often with a paler spots in the middle on each segment; the prolonged angles of seventh connexival segment pale, black at the tip. Venter pale brownish. Coxae and trochanters pale brownish, anterior coxae and trochanters more or less visible fuscous spotted, the posterior margins of coxae and trochanters of the intermediate and posterior legs blackish; the anterior femora and tibiae more or less dark olive-brown, intermediate and posterior femora olive-brownish with blackish apex, intermediate tibiae toward the apex infuscate, the posterior tibiae blackish-brown; anterior tarsi pale, intermediate and posterior tarsi more or less fuscous or black.

Colour; apterous ♀: Similar to male but whole body rather dull and fuscous, markings are blending without sharp crossing. Whole antennae are dark. The posterior part of pronotum of ground colour, not fuscous; metanotum olive-brownish only the middle longitudinal stripe and the posterior margin black. Metapleura mostly without longitudinal fuscous spots, only the sinuated black stripe near margin of mesonotum more or less visible. Abdominal tergites with black longitudinal and transversal sutura, only the second and the eighth tergites fuscous with a paler disc; connexivum olive-brownish with longitudinal and transversal sutura black. Venter brown with fuscous sutura on sides and on 6. and 7. segments with blackish longitudinal irregular stripes between the dark marked sutura. Genital segments fuscous. Coxae and trochanters of intermediate and posterior legs more recognizable black marked.

Structure; apterous ♂: Head longitudinal, parallel-sided, in front of the antennae narrowed, about three-fourths as long as wide across the eyes (29 : 40); vertex between the eyes less than twice as one eye (18 : 10,5), eye about one and a half times as long as the greatest width seen from above (17 : 10,5); straight lateral margin of the head between apex of eye and base of antennal tubercle less than a half of length of eye (4,5 : 10,5); clypeus distinctly extending and rounded, also the antennal tubercles distinctly extending; head above covered with very short depressed pale pubescence, on lateral margins of head between apex of the eyes and base of antennal tubercles with several long erected fuscous bristles, lower surface of the head covered with shorter erected pubescence. Rostrum not reaching the middle of mesothorax; relative lengths of rostral segments 10 : 5 : 46 : 13. Relative lengths of antennal segments 56 : 57 : 76 : 87; about one and a half times as long as the length of the body; antennal segments very slender, basal segment at base curved and towards the apex slightly thicker, second segment linear, third and fourth moderately curved; antennae covered with very short depressed pubescence. Pronotum toward the apex narrowed, about two-thirds as wide across the

base as long in the middle (23 : 40), anterior half moderately convex, but the disc flattened or with an insignificant deepening, posterior half plan. Mesonotum from the pronotal margin to his apex as long as the length of pronotum (40 : 40), toward the apex distinctly wider, about three-fourths as wide before the apex as long, in the middle longitudinally sulcated. Metanotum little longer (lateral length) than broad (25 : 23), moderately convexed and divided into basal callous bilobate part and posterior lower part; posterior margin slightly sinuated. Mesosternum in the middle longitudinally slightly sulcated; mesopleural region above swollen-like bordered; the whole thorax rather rudely sculptured and covered with a very short and dispersed pale pubescence. Intermediate and posterior acetabula big and prolonged; posterior margins of middle and hind acetabula with fuscous bristles. Front coxa small; front trochanters small, cylindrical; front femora linear, parallel-sided; front tibiae linear only at the base moderately curved and at the apex thickened; front tarsus two-segmented, cylindrical and both of the same thickness; claws long inserted in the apical third of inner face of second segment. Middle legs with coxa moderately swollen, trochanters small, linear; femur linear only the apex moderately thickened; tibia and tarsus linear, tarsus two-segmented; claws very short. Hind coxa moderately swollen, trochanters small, linear; femur, tibia and tarsus linear, the tarsus two-segmented, claws very small. Relative lengths of the legs:

	Coxa	Trochanter	Femur	Tibia	Tarsus 1	Tarsus 2
Front	11	10	80	68	8	9
Middle	13	15	181	140	55	12
Hind	9	14	176	78	18	11

The all legs dispersely covered with a short depressed pubescence, only the apex of femora and tibiae and entire tarsus covered with a longer pubescence. Abdomen reaching to the proximal seventh of the hind femora. Three first tergites towards the apex deflexed and moderately arched, fourth and farther tergites horizontal and moderately arched; transversal sutures moderately swollen; tergites 1.—7. rudely sculptured and covered with a short and dispersed pale pubescence. Connexivum broad and his above margin sinuated, lower part erected and then turned exteriorly. Venter arched and towards the apex, seen from side, conical, posterior margin of the seventh segment slightly excavated and pleural region target-like enlarged and bently prolonged in an acute tip; venter covered with a short pale shining pubescence. Eight segment ovoid seen from above, nearly two thirds as wide as long (18 : 30), the dorsal surface longer (about a half) and roof-like, reaches over the ventral margin, ventral and dorsal margins are rounded; sides of segment are forced and in the middle of lower margin with a spine slightly turned at the back,

lateral angles of ventral posterior margin prolonged in the long convergend spines; entire segment covered with dense fuscous pubescence, rather longer in lateral margins. Ninth segment deeply dish-like, nearly parallel-sided, twice longer than wide; lateral margins in the middle with a row of 5—6 brushes of very long fuscous bristles. Anal tube in the basal part plan, in the apical half arched and conical; covered with dense pubescence.

Structure; apterous ♀: Longer and wider than male; head and rostrum as in the male; relative lengths of antennal segments 56 : 47 : 54 : 77, little longer than the whole body. Mesonotum little broader than in male. Relative lengths of legs:

	Coxa	Trochanter	Femur	Tibia	Tarsus 1	Tarsus 2
Front	8	13	90	77	10	15
Middle	15	22	209	179	76	13
Hind	12	16	203	99	24	16

Abdomen long, reaching to the proximal fourth of hind femora. Tergum and connexivum rather plan and wider than in male; posterior angles off the seventh segment without any processes. Genitalia with a long fuscous pubescence; figured.

Apterous male, total length: 6,5—6,7 mm; width across middle of mesonotum: 1,7 mm.

Apterous female, total length: 8,7—8,9 mm; width across middle of mesonotum: 2,4—2,5 mm.

Habitat: 1 ♂ (holotype) and 1 ♀ (allotype), 35 ♂♂ and 53 ♀♀ (paratypes) — Vohémar, North Madagascar; 8 ♂♂ and 4 ♀♀ (paratypes) — Ambanja, North Madagascar, 1937 F. LAMBERTON lgt.

This seems to be the most probable allied to *Tenagonus dubius* POISSON 1940. From the all species of *Tenagonus* of the Eastern Hemisphere differs except the colour markings, with target-like enlargement of posterior angles of seventh segment by male (on the contrary by female the posterior angles of this segment are obtusely rounded), with four spine-like processes on the eight segment of male and with a row of bristles in the middle of the lateral margins of the pygophore.

This species seems to be variable in colour. The following name is proposed for the extremely coloured forms: *Tenagonus madagascariensis* f. *fusca* n. Specimens of this colour form have the apical half of pronotum entirely black, therefore the medial black stripe disappears in this part of pronotum; the others characters similar as in forma typica, only the dark markings are more or less blackish.

16 ♂♂ (types) — Vohémar, North of Madagascar and 1 ♂ (type) — Ambanja, North of Madagascar, 1937 F. LAMBERTON lgt.

Some nymphal stages were taken with the great number of adult stages. There are in the collection 4 specimens of second stage, 9 specimens of third stage, 7 specimens of fourth stage and 10 younger and older specimens of fifth stage. The nymphal descriptions that follow are based on these specimens.

Second instar: Darkly-brown with fuscous obsolete markings, slightly shining; head more or less fuscous or pale with fuscous markings on the sides and with a middle longitudinal stripe; eyes predominantly fuscous; antennae brown, fourth antennal joint fuscous only; rostrum brown with the black tip. Pro-, meso- and metanotum olive-brownish, lateral margins and middle stripe of pronotum and metanotum fuscous; sternum brownish with some fuscous markings. Abdomen brownish with black posterior margins of singular tergites or entire abdomen blackish. Legs brownish with some longitudinal black stripes; tarsi blackish.

Head between the eyes parallel-sided, in the front of the eyes narrowly rounded; rostrum strongly developed, reaching to the middle acetabula. Pronotum short, transversally and regularly oval. Mesothorax toward the apex distinctly wider. Pronotum and mesonotum in the middle with a longitudinal very distinct suture. Metanotum very small, shaped by two valvular skins, not connected in the middle. Abdomen more or less reduced, without any visible connexivum, on the basal margins only with a fine keel. Acetabula strongly developed. Legs slender. Entire body with very fine and short pale pubescence.

Length: 3,58—3,65 mm; width: 1,11—1,12 mm.

I have seen 3 specimens from Vohémar and 1 specimen from Ambanja.

Third instar: General form and colour as in second instar, but some organs are more developed or modified: lateral margins of pronotum narrower and subacute, posterior margin slightly excavated. Valvular skins of metanotum broader. Acetabula strongly developed. Connexivum in the basal part more or less visible.

Length: 3,91—4,77 mm; width 1,33—1,34 mm.

I have seen 9 specimens from Vohémar.

Fourth instar: Specimens of great size, with some organs strongly developed and more or less resembling adult stages. Colour of body is characterized as in the image and the abdomen only in some specimens is entire blackish. Head shaped as in the image. Rostrum reaching between the base of middle acetabula. Pronotum transversally oval, lateral margins broadly rounded, posterior margin in the middle slightly excavated. Mesothorax resembling one of the adult stage. Acetabula and coxae strongly developed. Abdomen very short with strongly developed connexivum. Legs characterized as in image.

Metanotum broad, basal part resembling some of preceding instars, posterior part distinctly prolonged and in the middle jointed, but with longitudinal distinct suture.

Length: 4,84—5,82 mm; width: 1,87—1,90 mm.

I have seen 7 specimens from Vohémar.

Fifth instar: General colour olive-brownish with fuscous more or less recognizable markings, slightly shining. Lateral margins, a longitu-

dinal stripe in the middle of the head and clypeus blackish; antennae brown, last joints fuscous; rostrum brown, last segment black. Pronotum in the middle with a longitudinal blackish stripe and also lateral parts of the pronotum are fuscous. Mesonotum on the lateral and posterior parts obscurely emarginated, in the middle marked with a narrow longitudinal stripe and on each side with a fuscous spot. Metanotum fuscous, but the anterior lobate parts pale. Sternum brown with some spots on the acetabula. Abdomen brown with fuscous posterior margins of singular tergites and sternites. Legs brown with the fuscous tarsi and also fuscous tibia of middle and posterior legs. Entire body covered with short pale pubescence.

Head longitudinal, parallel-sided and in front of antennae narrowed, about two-thirds as long as wide across eyes; clypeus distinctly extended; lateral margins between the apex of the eyes and base of antennae with some fuscous bristles; rostrum reaching to the middle of mesothorax. Pronotum about one half as long as wide, posterior part of pronotum slightly prolonged in a short lobe; in the middle with a deep longitudinal sutural groove and also the mesonotum in the middle distinctly sulcated; mesonotum toward the apex distinctly wider, posterior margin broadly rounded. Metanotum in contrary to fourth instar considerably shorter; posterior part of metanotum is reduced and in the middle jointed — fine sutural line is visible only, the basal lobes in the younger specimens are not, in the older specimens more or less jointed. Acetabula strongly developed. Abdomen strongly developed, connexivum developed and more or less erected. Seventh abdominal segment toward the apex strongly narrowed, eight segment long and in his posterior part wider. Legs slender and tarsi unisegmentate.

Length: 5,96—6,34 mm; width: 1,69—1,86 mm.

I have seen 10 specimens from Vohémar.

**Tables of relative measurements of the singular nymphal stages  
of *Tenagogonus madagascariensis* n. sp.**

Head:

	Length	Width between the eyes	Width across the eyes
Second instar	19	16	25
Third instar	19	16	26
Fourth instar	24	20	36
Fifth instar	25	20	36

Pronotum:

	Length in the middle	Width in the middle
Second instar	12	22
Third instar	12	23
Fourth instar	16	30
Fifth instar	20	34

## Mesonotum:

	Length in the middle	Maximum width
Second instar	33	30
Third instar	40	36
Fourth instar	49	30
Fifth instar	51	30

## Metanotum:

	Length from the apex of pronotum to the posterior margin
Second instar	7
Third instar	8
Fourth instar	19
Fifth instar	13

## Abdomen:

	Length from the posterior margin of metanotum to the tip
Second instar	25
Third instar	36
Fourth instar	25
Fifth instar	55

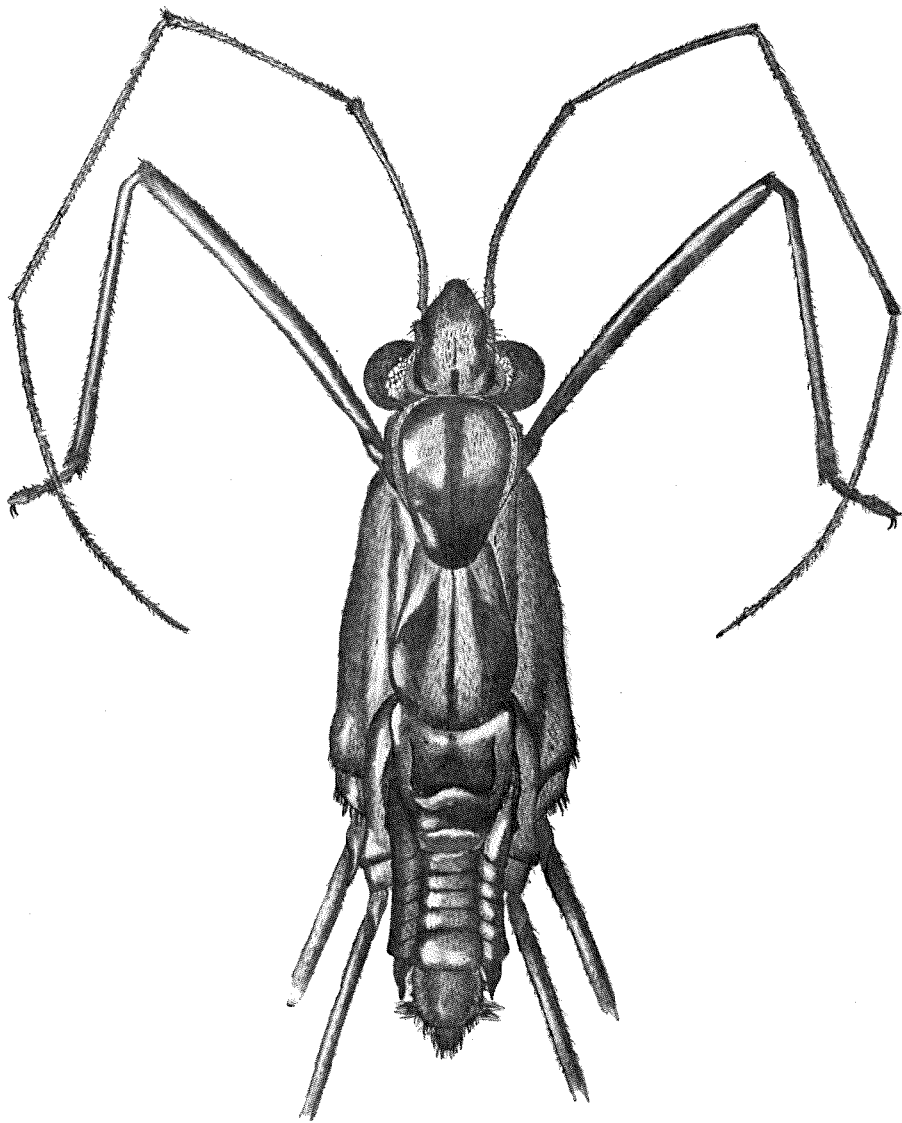
## Antennae:

	I.	II.	III.	IV.
Second instar	22	21	32	36
Third instar	22	22	34	55
Fourth instar	33	32	41	57
Fifth instar	35	35	39	68

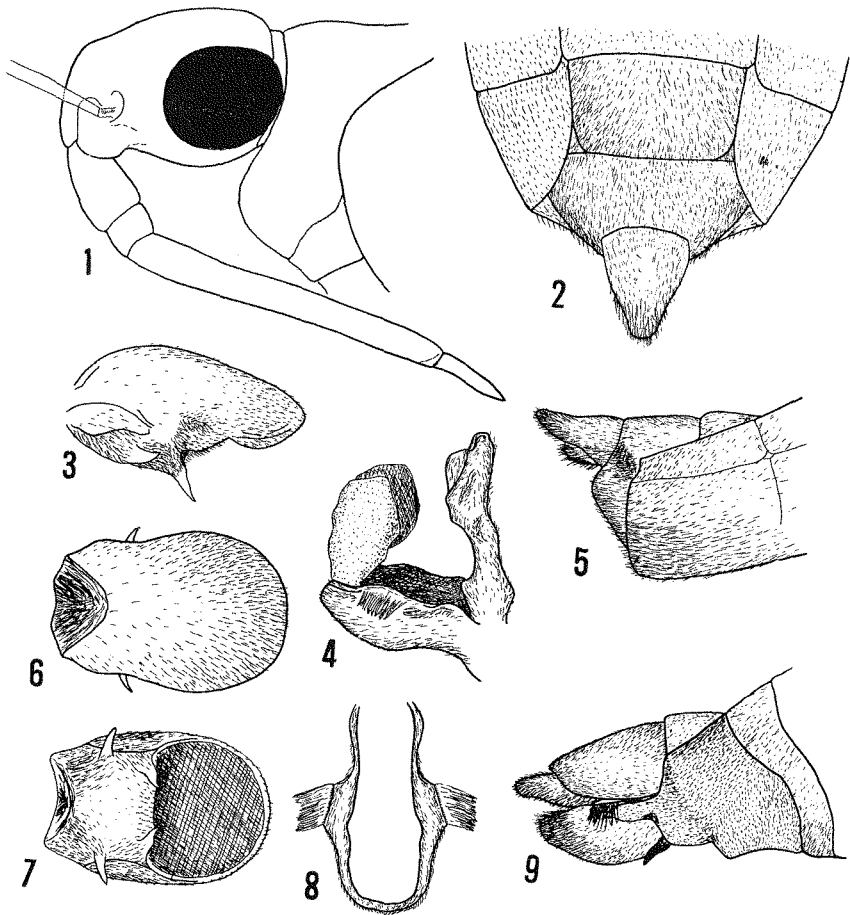
## Legs:

		Trochanter	Femur	Tibia	Tarsus
Second instar	front	8	46	42	14
	middle	7	103	88	43
	hind	5	93	43	20
Third instar	front	8	47	40	12
	middle	8	102	86	53
	hind	7	91	44	21
Fourth instar	front	12	62	56	20
	middle	13	147	121	68
	hind	18	139	89	29
Fifth instar	front	14	50	58	19
	middle	12	165	119	67
	hind	13	134	66	30

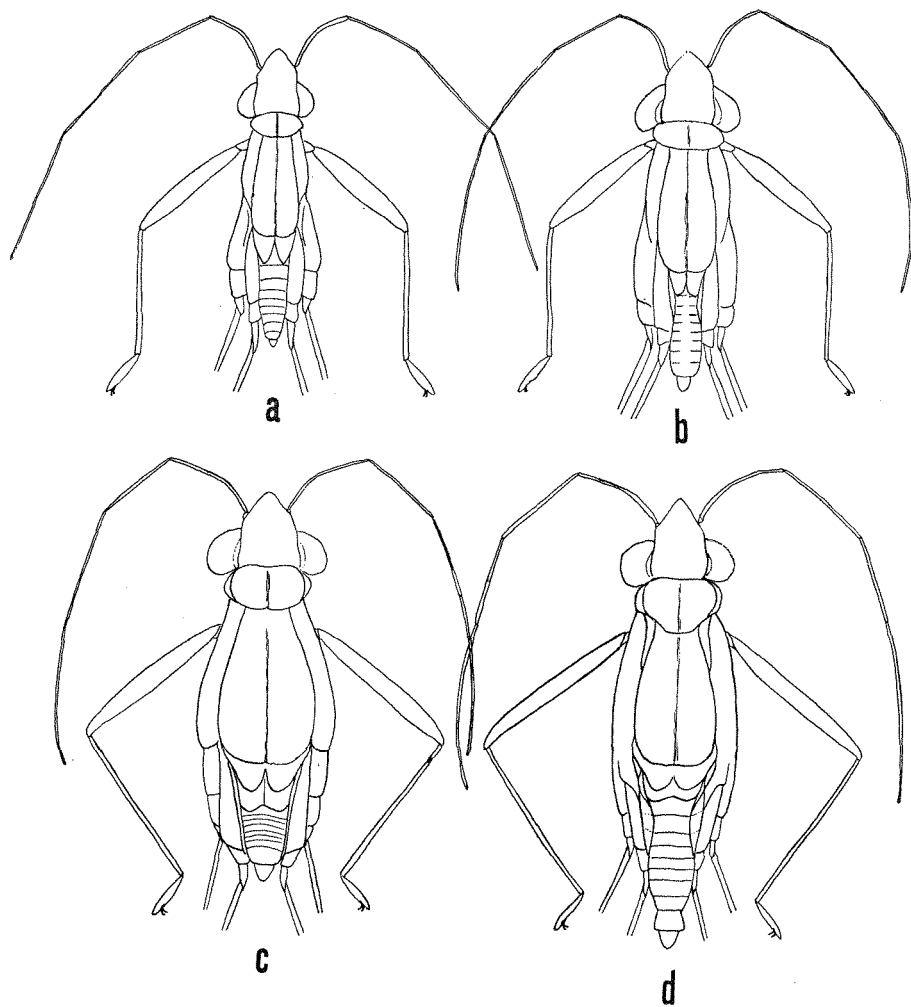




*Tenagonus madagascariensis* sp. n. — apterous male.



*Tenagogonus madagascariensis* sp. n. — 1. lateral view of head ♂; 2. dorsal view of apex of abdomen ♀; 3. lateral view of eighth segment ♂; 4. pygophor and anal tube with aedeagus ♂ (ninth and tenth abdominal segments); 5. lateral view of apex of abdomen ♀; 6. dorsal view of eighth segment ♂; 7. ventral view of eighth segment ♂; 8. dorsal view of ninth segment ♂; 9. lateral view of apex of abdomen ♂.



*Tenagogonus madagascariensis* sp.n. — the nymphs. a) second instar; b) third instar;  
c) fourth instar; d) fifth instar.

