BULLETIN DE L'INSTITUT ROYAL DES SCIENCES NATURELLES DE BELGIQUE, ENTOMOLOGIE, 64 : 165-175, 1994
BULLETIN VAN HET KONINKLIJK BELGISCH INSTITUUT VOOR NATUURWETENSCHAPPEN, ENTOMOLOGIE, 64 : 165-175, 1994

Four new species of larval Microtrombidiidae (Acari) parasitic on Diptera (Insecta) from Papua New Guinea and Brunei (Borneo)*

by A. FAIN and P. GROOTAERT

Summary

Four new species of mites of the genus *Microtrombidium* HALLER, 1882 (Acari, Microtrombidiidae), represented by their larvae parasitic on small flies (Diptera), are described.
Three of them were found in Papua New Guinea, i.e. *M. striatum* n.sp. from *Nanodromia elongata* (Hybotidae), *Meoneura* sp. (Carnidae), Ephydridae sp. and Phoridae sp.; *M. prostriatum* n. sp. from *Nanodromia spuria* and *M. punctatum* n. sp. from *Meoneura* sp. The fourth species, *M. bruneiense* n. sp. was collected from *Tambemyia* sp. (Dolichopodidae), in Brunei (Borneo).
Key words : Taxonomy. Larvae of *Microtrombidium*. Acari. Parasitic on Diptera. Papua New Guinea and Brunei (Borneo).

Resumé

Quatre nouvelles espèces d'acariens du genre *Microtrombidium* HALLER, 1882 (Acari, Microtrombidiidae), représentées par leurs larves parasites de petits Diptères, sont décrites. Parmi celles-ci, 3 furent récoltées en Papouasie Nouvelle Guinée, c'est le cas de *M. striatum* n. sp. trouvée sur *Nanodromia elongata* (Hybotidae), *Meoneura* sp. (Carnidae), Ephydridae sp. et Phoridae sp.; *M. prostriatum* n. sp. ex. *Nanodromia spuria* et *M. punctatum* n. sp. ex. *Meoneura* sp. La quatrième espèce, *M. bruneiense* n. sp. fut récoltée sur *Tambemyia* sp. (Dolichopodidae) à Brunei (Borneo).
Mots clé : Taxonomie. Larves de *Microtrombidium*. Acari. Parasites de Diptères. Papouasie Nouvelle-Guinée. Brunei (Borneo).

Introduction

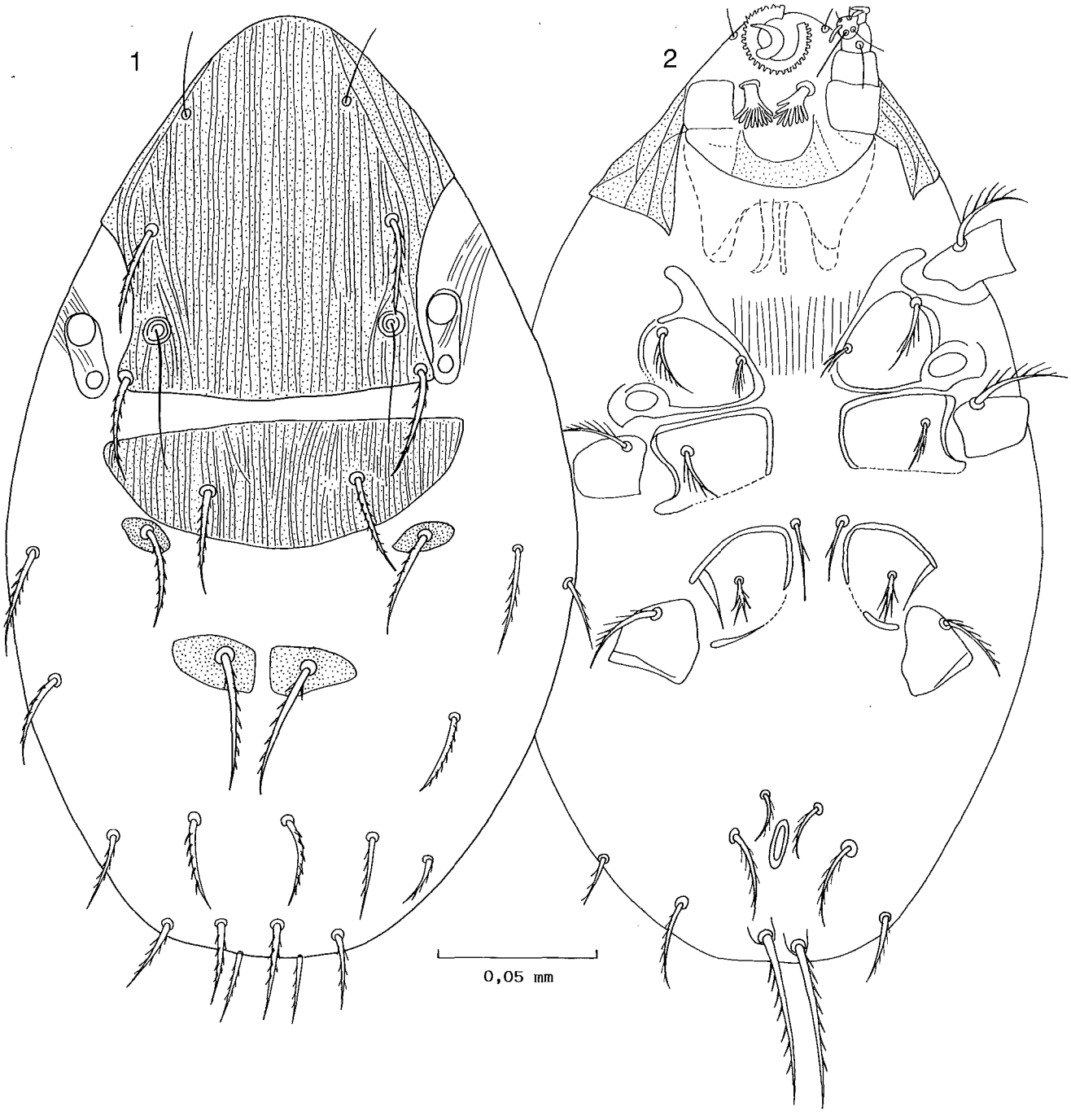
The 4 new species of *Microtrombidium* (Acari), described in this paper, were collected from several small flies (Diptera) in Papua New Guinea and in Brunei (Borneo) by the junior author. All these mites were attached to the abdomen or the ventral surface of the thorax of these flies.
All the measurements used here are in micrometers. The metric data are those proposed by SOUTHCOTT (1986) and FAIN and BAKER (1993). Nomenclature of the claws of the leg III as in SOUTHCOTT (1993).

The holotype and the paratypes of these new species are deposited in the Institut royal des Sciences naturelles de Belgique (IRSNB).

GENUS *Microtrombidium* HALLER, 1882

The four new species that we describe herein are the most close to *Microtrombidium fasciatum* (C.L. KOCH, 1836), a species that has been recorded from several European countries (OUDEMANS, 1909 and 1912, FEIDER, 1955, ROBAUX, 1972).
THOR and WILLMANN (1947) synonymized *Trombidium demeijerei* OUDEMANS, 1909 with *Microtrombidium fasciatum*. This position was later confirmed by FEIDER (1955) and ROBAUX (1972) who were able to obtain larvae from adult females of *M. fasciatum* kept in the laboratory. *M. fasciatum* is probably a complex of several closely related species and in order to clarify this situation a neotype should be designated and described among the larvae obtained from adult females.
The four species that we describe in this paper present the main characters of *M. fasciatum*, i.e. presence of 2 median dorsal shields, an anterior one prolonged anterior-ventrally and bearing 4 pairs of setae (including a pair of sensillae) and a posterior one smaller and carrying 1 pair of setae; behind these main shields the dorsum bears, in addition, 2 pairs of much smaller oval shields each carrying a strong pectinate seta; coxae with 2-1-1 setae; tarsi I and II ending in 3 normal claws (one median long and narrow and 2 shorter and thicker and with 2 preapical barbs, representing the anterior and the posterior claws); tarsus III inflated with 3 modified claws; posterior region of venter with 4 to 5 pairs of setae, the posterior pair being paramedian and distinctly longer that the other setae; mouth surrounded by a sclerotized ring open anteriorly and bearing 25 to 30 well-developed sclerotized teeth; hypostomal setae hand-shaped ending in 7 to 12 thick cylindrical finger-like processes; 2 pairs of eye-lenses, the anterior always larger than the posterior. Most of these characters have been clearly depicted by

* Contribution no 294 of the Biological Station Leopold III on Laing Island (PNG)



Figs 1-2. – Microtrombidium striatum *n. sp. Larva : dorsal (1) and ventral (2) view.*

OUDEMANS (1912) in his drawing of *Trombidium demeijerei*.

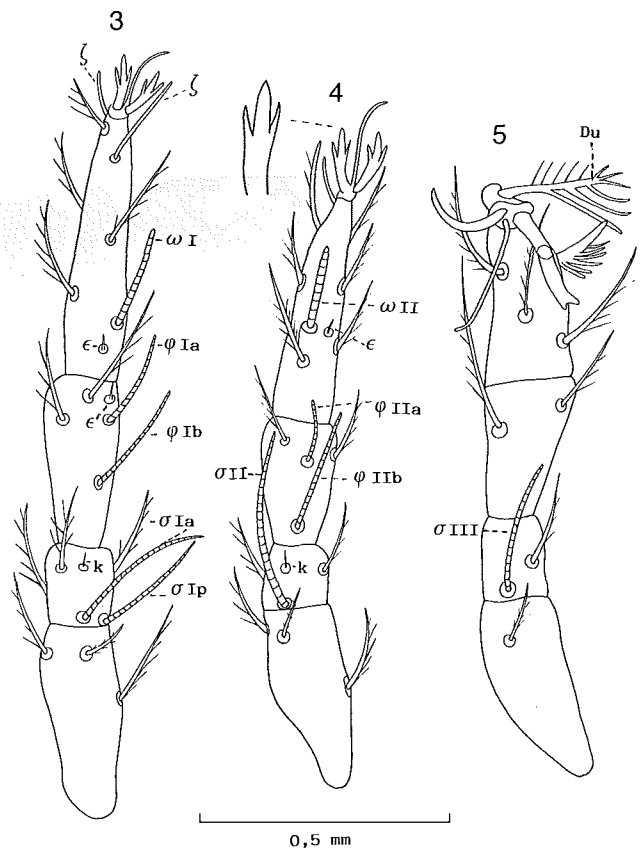
Key to the four new species from New Guinea and Borneo (Larvae)

1. The two dorsal median shields completely striated longitudinally. The posterior shield 45 long in midline with anterior border straight or slightly convex. Tarsi I 47 to 51 long. diameter of anterior eyes 10. Seta DU of tarsus III without a basal abnormally long pectination. Intercoxal setae with one short pectination . . . . . *M. striatum* n. sp.

The two dorsal median shields only partly striated, the non-striated areas being finely punctate. Posterior shield variable. Tarsi I 54 to 99 long. Anterior eyes larger. Seta DU of tarsus III with a very long basal pectination 2

2. Posteromedian shield very short (16 in midline) with anterior margin sclerotized and strongly concave. Anterior shield with anterior two thirds striated, the posterior third punctate. Setae of coxae I-II bifid, seta of coxae III trifid. Intercoxal setae III pectinate. Tarsi I 54 to 59 long. Anterior pair of eyes very large (diameter 30) . . . . . *M. prostriatum* n. sp.
Posteromedian shield from 33 to 50 long in midline, with anterior margin either straight or slightly convex. Anterior shield not as above. Coxal setae I-III with more pectinations. Tarsi I 68 to 99 long. Anterior pair of eyes smaller (diameter 16 to 21) 3

3. The punctate and not striated part of the anterior shield is confined to a small posteromedian rectangular area. Intercoxal setae III pectinate. Tarsi I 89 to 99 long. Apical solenidion φI 40-41 long and set close to the basal φI; σI posterior 60 long. . . . . *M. bruneiense* n. sp.
Anterior shield almost completely punctate, with a few striations confined around the base of sensillae and outside of the AM and AL setae. Intercoxal setae III smooth. Tarsi I 68 to 75 long. Apical solenidion φI 18-22 long and far from the basal φI; σI posterior 37 to 42 long . . . . . *M. punctatum* n. sp.



Figs 3-5. – Microtrombidium striatum *n. sp. Larva : dorsal view of the right legs I (3), II (4) and III (5).*

Description of the new species

1. *Microtrombidium striatum* nov. spec.

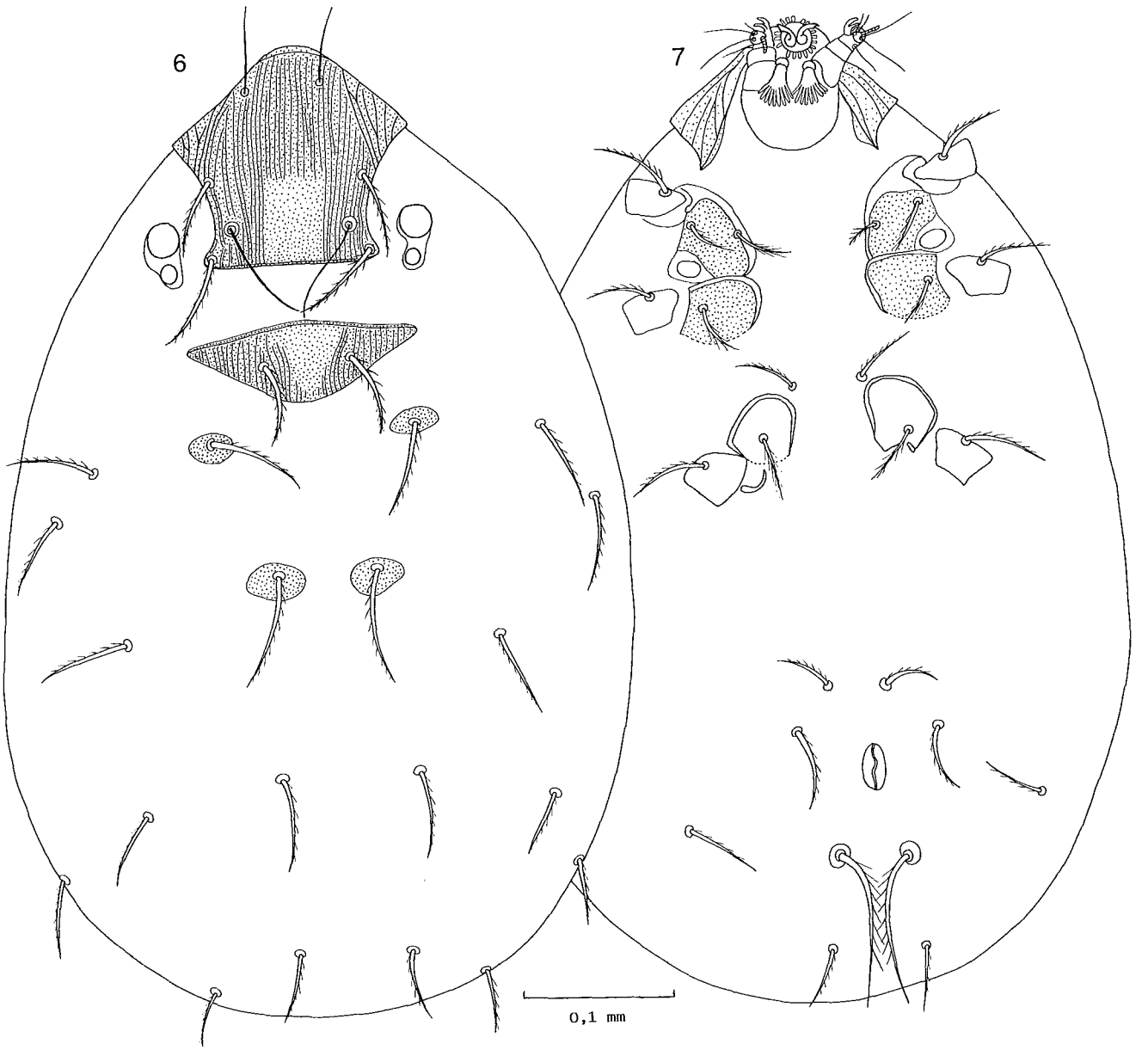
Larva, holotype (figs 1-5) : the metric data are listed in table I. *Dorsum :* the 2 median shields are completely punctate longitudinally as in *M. fasciatum.* Behind these shields the dorsum bears a total of 22 pectinate setae forming 5 transverse rows of 6-4-6-4-2 setae, among them 2 pairs (the anteromedian) are arising from small punctate platelets. These setae are 18 to 45 long. Diameters of eyes : 10 and 7-8. *Venter :* coxal setae 2-1-1, with 4 to 7 thin pectinations. The 2 intercoxal setae (between coxae III) bear one short and very thin setule. Opisthogaster with 4 pairs of pectinate setae, the anterior 18 to 30 long except for the posteroparamedian pair much longer (57 long) and thicker. Uropore well developed. Urstigma oval. *Gnathosoma :* palps 36 long; palptarsus very short bearing a solenidion and 7 normal inequal setae; palptibia ending in a bifid strongly curved spine. Hypostomal setae hand-shaped, ending in 9-10 long fingerlike prolongations. Chelicerae 36 long; movable digit curved with a preapical tooth. Mouth surrounded by a sclerotized ring bearing 28 teeth; the mouth is flanked by 2 thin and short (8 long) setae. *Legs :* Chaetotaxy (number of normal, pectinate setae) : trochanters 1-1-1, femora 6-5-4, genua 4-2-2, tibiae 6-5-5. Tarsi I-II with a median long and thin claw, and 2 (the anterior and the posterior) claws thicker and longer and bearing 2 narrow preapical barbs; tarsus III enlarged bearing 3 modified claws. *Specialized setae : Eupathidia :* tarsus I with a long (25 long) dorsal *dzeta* and a shorter (15) apico-ventral *dzeta. Solenidia :* tarsi 1-1-0, tibiae 2-2-0, genua 2-1-1. *Famulus (eta)* present on tarsi I and II and on tibia I. Genua I and II with a seta *k.* (see table 1).

Hosts and localities :
All our specimens (all larvae) were taken in Papua New Guinea from several families of flies : Hybotidae, Carnidae, Phoridae and Ephydridae.
Holotype larva from *Nanodromia elongata* (Hybotidae), from a sandy beach at Laing Island, Madang Province, Bogia Distr. (May 1992).
Paratypes : 9 paratypes with the same data as holotype; 1 paratype from the same host as holotype but from New Ireland, Taskiki (27.VI.1993); 4 paratypes from *Meoneura* sp. (Carnidae) (072C) also from Taskiki (27.VI.1993); 1 paratype from Ephydridae sp. from Taskiki; 1 paratype from Phoridae sp. from Laing Island (5.V.1993) and 1 paratype from *Chersodromia nigra* (Hybotidae) (051), New Ireland, Nusen Island (24.IV. 1993) (sandy beach).

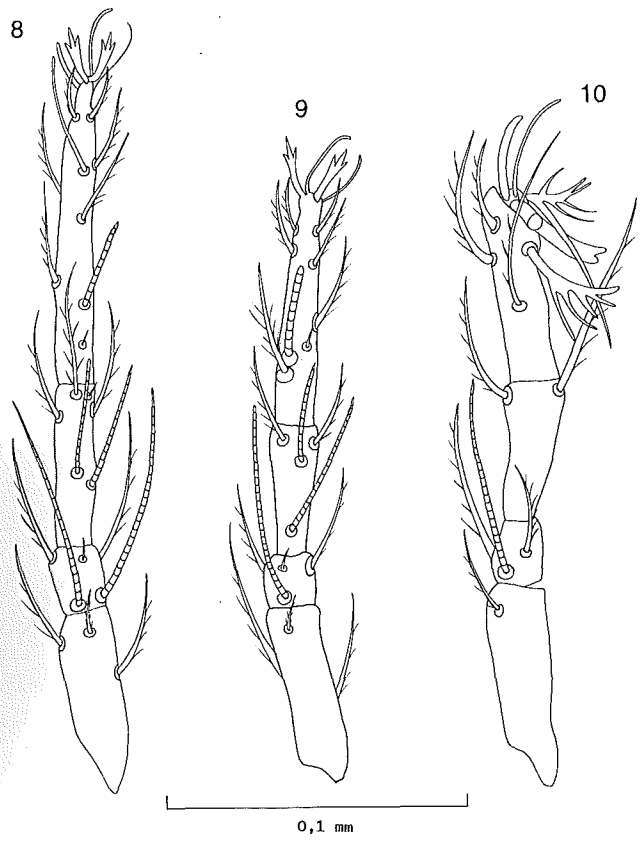
2. *Microtrombidium bruneiense* nov. spec.

Larva, holotype (figs 6-10) : the metric data are listed in table 2. *Dorsum :* anterior shield longitudinally striated except in a small rectangular area situated in the posteromedian region of the shield which is finely punctate. Anteroventral prolongation of the anterior shield narrowly triangular. Posterior shield with anterior margin slightly convex and striated in its lateral parts and in the posterior third of the median part behind the QL setae. There are 2 pairs of small oval platelets each bearing a pectinate seta, as in *M. striatum.* Behind the posterior shield the dorsum bears 20 pectinate setae, 36 to 70 long, forming 4 rows of 6-4-6-4 setae. Diameter of eyes : 21 and 9. *Venter :* coxal setae as in *M. striatum;* intercoxal setae III pectinate. There are 5 pairs of opisthogastric setae, 24 to 36 long except the postanal pair stronger and longer (90 long). *Gnathosoma* as in *M. striatum* but hypostomal setae with 12-13 prolongations. *Legs :* number of setae as in *M. striatum. Eupathidia* as in this species but the dorsal *dzeta* is 36 long. *Solenidia* and setae *k* as in *M. striatum* but some *solenidia* are much longer (see table 1 and 22) and the two solenidia *φI* are close to each other whilst in *M. striatum* they are more widely separated.

Host and locality :
Holotype and 4 paratypes larvae taken from *Tambemyia* sp. (Dolichopodidae) (n° 0018) from Tungku Rocks (rocky beach), Brunei, Borneo, 15.IV.1993.



Figs 6-7. – Microtrombidium bruneiense *n. sp. Larva : dorsal (6) and ventral (7) view.*



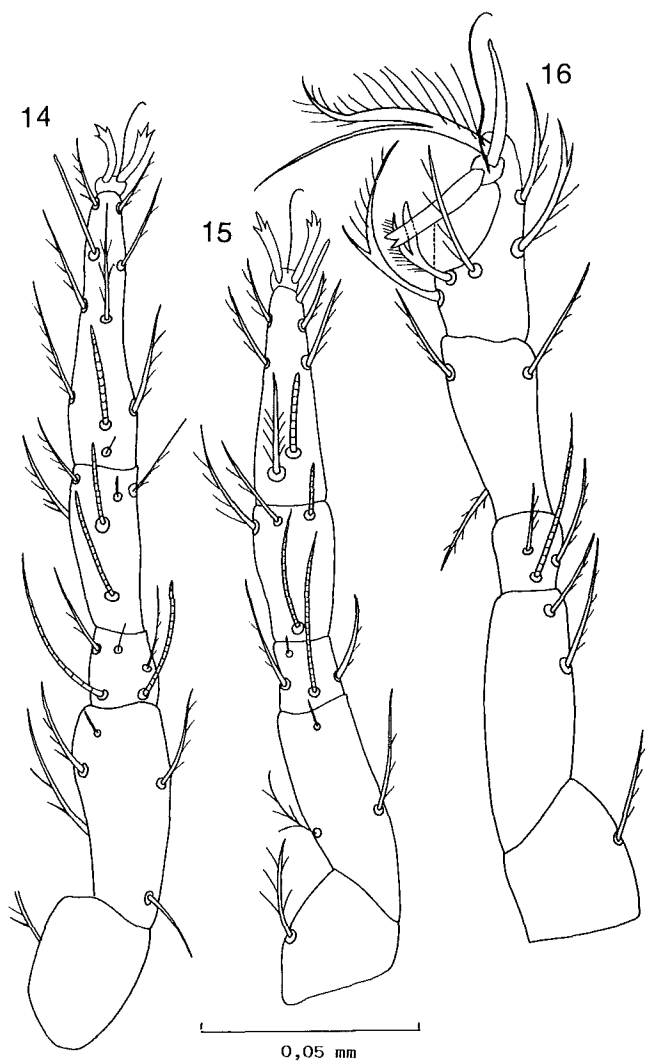
Figs 8-10; – Microtrombidium bruneiense *n. sp. Larva : dorsal view of the right legs I (8), II (9) and III (10).*

3. *Microtrombidium prostriatum* nov. spec.

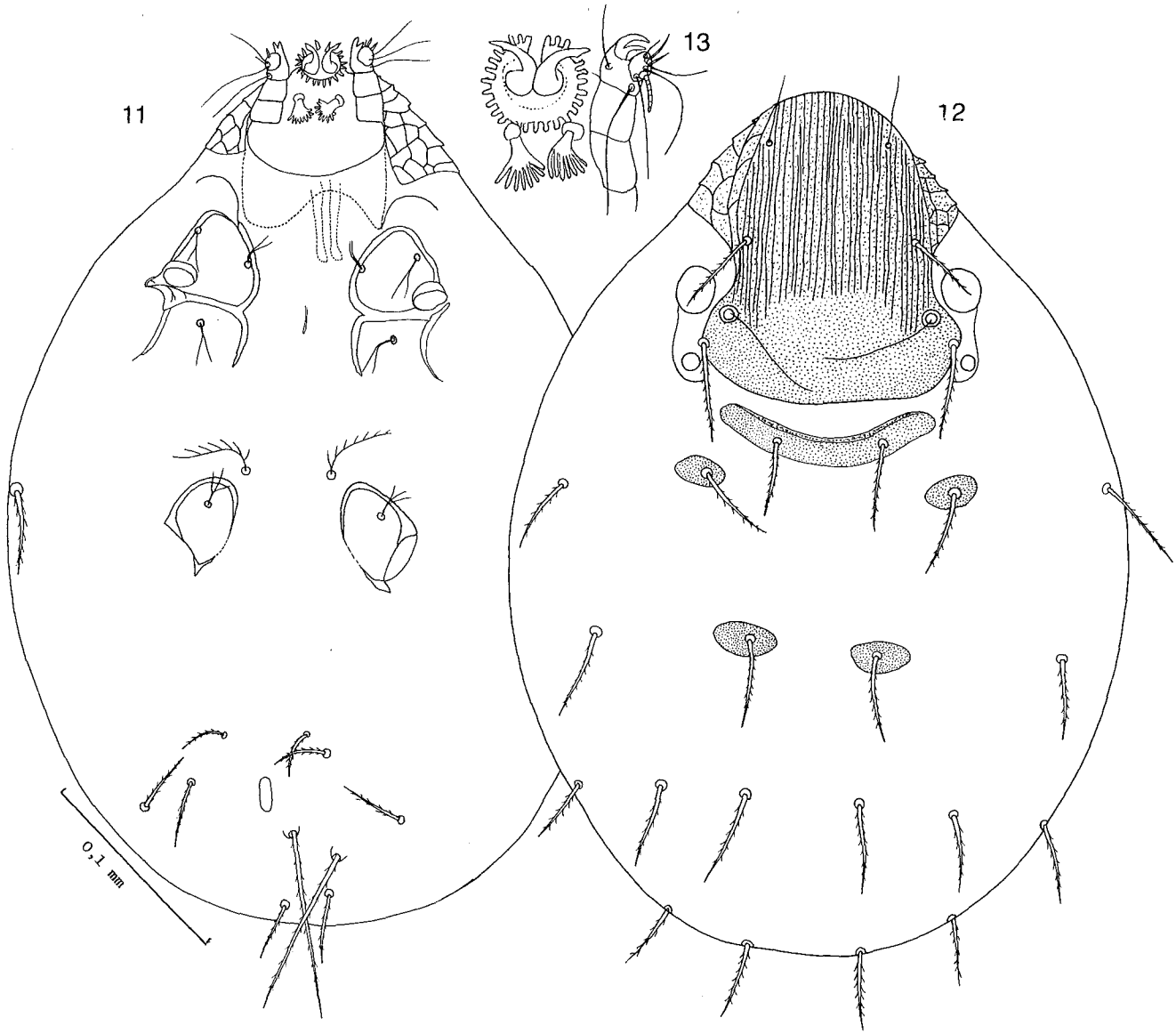
Larva, holotype (figs 11-16) : the metric data are listed in table 3. *Dorsum :* anterior shield longitudinally striated in its anterior two thirds, the posterior third is finely punctate. Lateral parts of the shield, outside of the setae AM and AL, with a network of lines. Postero-median shield very short (16 in midline), with anterior margin sclerotized and strongly concave. Behind the main shields the dorsum bears 2 pairs of small oval punctate platelets, each of them bearing a pectinate seta. There are a total of 20 pectinate setae, 30 to 60 long, behind the posterior median shield, they form 6-4-6-4 transverse rows. Anterior pair of eyes relatively very large (diameter 30), posterior pair only 10 wide. *Venter :* coxae I-II with 2-1 bifid setae, coxae III each with a trifid seta. Intercoxal setae III pectinate. Opisthogaster with 5 pairs of pectinate setae 18 to 30 long except the pair situated behind the uropore which is stronger and longer (90 long) than the other setae.

Gnathosoma : peribuccal toothed ring, hypostomal setae and palps as in *M. striatum. Legs :* leg segments, chaetotaxy and length of solenidia resembling those of *M. striatum* but distinctly longer than in this species (see tables 1 and 3). *Famuli* and setae *k* as in *M. striatum.*

Host and locality :
Holotype and 2 paratypes larvae from *Nanodromia spuria* (n° 137) from Papua New Guinea, Madang Province, Boroi (bush), 14.V.1993. This host develops in fresh water ponds and not in sea water as for *Nanodromia elongata* and this biological difference might explain why it is parasitized by another species of *Microtrombidium.*



Figs 14-16. – Microtrombidium prostriatum *n. sp. Larva : dorsal view of right legs I (14), II (15) and III (16).*

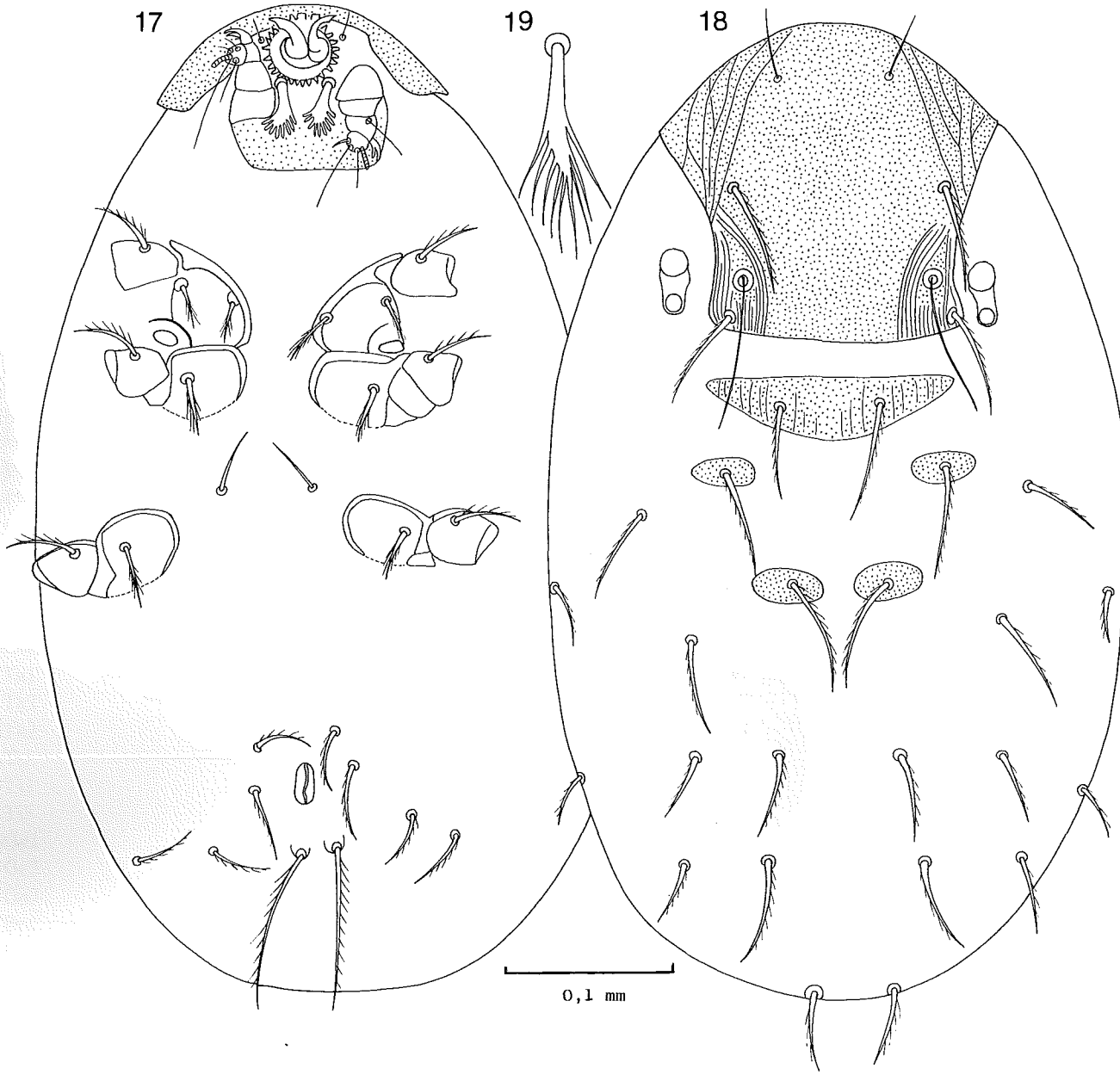


Figs 11-13; – Microtrombidium prostriatum *n. sp. Larva : dorsal view (11) and ventral view (12); ventral view of gnathosoma enlarged (13).*

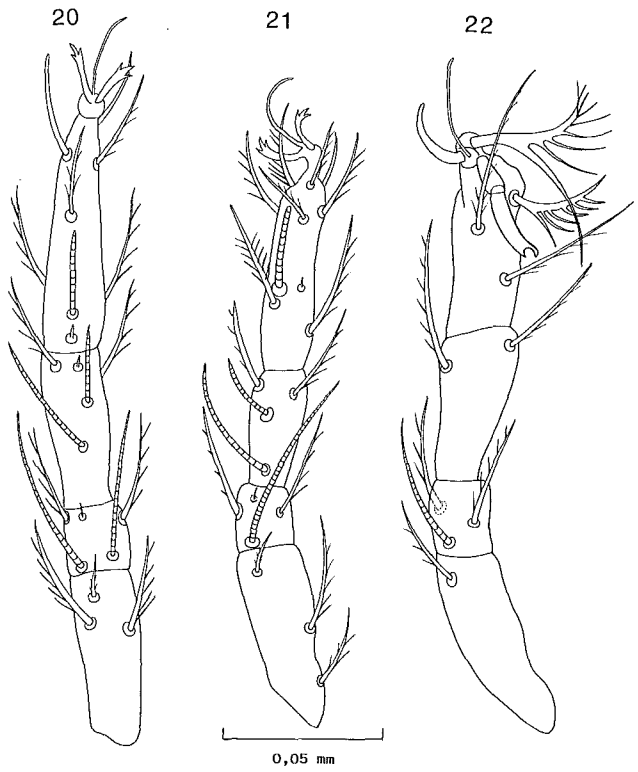
4. *Microtrombidium punctatum* nov. spec.

Larva, holotype (figs 17-22) : the metric data are listed in table n° 4. *Dorsum :* anterior median shield almost completely punctate except in its lateral parts outside the AM and AL setae and in 2 small areas around the bases of the sensillae which are striated. Ventrally the lateral prolongations of the shield are short and rounded. Posterior median shield with anterior margin straight and with unconspicuous striations. There are 2 pairs of small oval punctate platelets, each of them bearing a punctate seta, behind the posterior shield. Dorsum behind the posterior shield with 22 pairs of pectinate setae, forming 5 transverse rows of 6-4-6-2 setae 35 to 60 long. Diameters of eyes 16 to 10. *Venter :* coxal setae relatively thick, specially the internal I, bearing 6 to 12 thin pectinations. Intercoxal setae III smooth Opisthogaster with 5 pairs of pectinate setae 25-30 long except the posteromedian pair which is 78 long and bears long pectinations. *Gnathosoma :* as in *M. striatum. Legs :* number of setae as in *M. striatum.* Specialized setae : a *famulus* is present on tibia I, a seta *k* is present on genua I and II. Lengths of solenidia : see table 4.

Hosts and localities :
Holotype and 3 paratypes larvae, from *Meoneura* sp. (n° 065A), Papua, New Ireland, Lauapula, 27.IV.1993. Paratypes : 2 larvae from Phoridae sp. (n° 088) from Laing Island, 5.V.1993 and 1 larva from *Nanodromia elongata,* from New Ireland, Taskiki, 27.IV.1993.



Figs 17-19. – Microtrombidium punctatum *n. sp. Larva : ventral (17) and dorsal view (18), seta of coxa III (19).*



Figs 20-22. – Microtrombidium punctatum *n. sp. Larva : dorsal view of leg I (20), II (21) and III (22).*

References

FAIN, A. & BAKER, A., 1993. On some larval Microtrombidiidae (Acari : Prostigmata) parasitic on Phlebotomine Sandflies (Diptera : Psychodidae). *Bulletin et Annales de la Société royale belge d'Entomologie*, 129 : 325-339.

FEIDER, Z., 1955. Studiul citorva larve de Microtrombidiinae (Acarina) si noua delimitare a genului *Microtrombidium*. *Analele Stiintifice ale Universitatii "Al. I. Cuza" din Iasi (Serie noua)*. 1 : 61-117.

OUDEMANS, A.C., 1912. Du bis jetz bekannten Larven von Thrombidiidae und Erythraeidae. *Zoologische Jahrbücher*. Supplement 14. Erste Heft. pp. 1-230.

ROBAUX, P., 1972. Etude des larves de Trombidiidae. IV. Redescription des formes larvaires d'*Allothrombium neapolitanum* OUDEMANS, 1910, *Neothrombium neglectum* (BRUYANT, 1908) et *Microtrombidium fasciatum* (KOCH, 1836). *Acarologia* XIV : 612-630.

SOUTHCOTT, R.V., 1986. Studies on the Taxonomy and Biology of the Subfamily Trombidiinae (Acarina : Trombidiidae), with a critical Revision of the Genera. *Australian Journal of Zoology*, Supplementary Series, 123 : 1-116.

SOUTHCOTT, R.V., 1993. Revision of the Taxonomy of the larvae of the Subfamily Eutrombiinae (Acarina : Microtrombidiidae). *Invertebrate Taxonomy*, 7 : 885-959.

THOR, S. & WILLMANN, C., 1747. Trombidiidae. *Das Tierreich*, 71b, pp. 187-541.

A. FAIN and P. GROOTAERT
Institut Royal des Sciences naturelles
de Belgique,
rue Vautier 29,
B-1040 Bruxelles,
Belgium

Table 1 : Metric data of *Microtrombidium striatum* n.sp. (larvae).

	Holotype	Paratype 1	Paratype 2	Paratype 3	Paratype 4	Mean
Anterior shield						
AM	22	18	20	20	22	20.4
AL	32	29	30	25	33	29.8
PL	40	32	31	30	30	32.6
SENS	54	48	—	42	48	48
AMB	51	54	49	45	55	50.8
AW	78	75	78	73	75	75.8
PW	96	90	92	89	93	92
MA	41	42	38	37	35	38.6
AP	48	43	43	42	45	44.2
SA	30	28	28	27	28	28.2
SP	19	17	19	17	18	18
SB	74	73	70	68	74	71.8
L	125	120	113	111	114	116.6
W	114	110	115	119	122	116
LN	28	28	24	24	28	26.4
ASB	101	99	90	88	93	94.2
PSB	24	22	23	23	21	22.6
Posteromedian shield						
PSW	118	108	114	99	110	109.8
PSL	44	42	38	39	42	41
PLN	23	20	19	22	22	21.2
QW	49	47	50	46	46	47.6
QL	32	32	32	30	34	32
Legs						
Ta1	51	48	51	47	49	49.2
Ta2	37	40	40	37	40	38.8
Ta3	44	40	—	38	41	40.7
Ti1	32	30	30	30	24	29.2
Ti2	25	24	26	26	24	25
Ti3	30	28	—	28	30	29
Ge1	16	17	17	17	16	16.6
Ge2	13	12	12	13	12	12.4
Ge3	16	14	—	14	14	14.5
Fe1	37	35	36	36	34	35.6
Fe2	36	34	35	36	33	34.4
Fe3	42	39	—	36	37	38.5
Solenidions						
ω I	22	19	—	19	19	19.7
ω II	16	14	17	14	14	15
φ I apic. or poster	18	18	—	19	18	18.2
φ I basal or anter.	24	23	—	24	24	23.7
φ II apical	12	14	—	13	12	12.7
φ II basal	22	22	—	—	22	22
σ I anterior	37	35	36	38	34	36
σ I posterior	30	30	28	31	30	29.8
σ II	36	36	37	—	—	36.3
σ III	27	30	—	30	—	29
Idiosoma						
L	300	330	390	250	450	—
W	160	195	234	150	255	—

Table 2 :
Metric data of *Microtrombidium bruneiense* n. sp. (larvae).

	Holotype	Paratype 1	Paratype 2	Paratype 3	Mean
Anterior shield					
AM	42	36	40	39	39.2
AL	42	41	39	36	39.5
PL	60	62	61	56	59.7
SENS	64	58	60	—	60.6
AMB	48	43	—	45	45.3
AW	99	100	96	96	97.7
PW	105	108	110	108	107.7
MA	63	65	64	69	65.2
AP	48	51	48	50	49.2
SA	34	33	30	30	31.7
SP	24	24	23	24	23.7
SB	75	78	77	76	76.5
L	144	144	136	—	141.3
W	144	155	—	159	152.6
LN	28	27	23	—	26
ASB	120	120	112	—	117.3
PSB	24	24	24	26	24.5
Posteromedian shield					
PSW	144	138	142	—	141.1
PSL	48	49	51	48	49
PLN	21	22	21	21	21.2
QW	52	52	52	60	54
QL	55	57	56	51	54.7
Legs					
Ta1	99	94	90	89	93
Ta2	69	65	69	69	68
Ta3	66	64	63	63	64
Ti1	57	53	51	51	53
Ti2	42	41	42	39	41
Ti3	53	53	51	54	52.7
Ge1	24	22	24	24	23.5
Ge2	19	18	18	18	18.2
Ge3	19	21	19	19	19.5
Fe1	60	61	59	60	60
Fe2	60	56	60	57	58.2
Fe3	66	66	65	65	65.5
Solenidions					
ω I	26	26	23	24	24.7
ω II	—	28	23	24	25
φ I apic. or anter.	40	41	40	41	40.5
φ I basal or post.	40	41	35	38	38.5
φ II apical	—	18	18	20	18.6
φ II basal	35	35	35	35	35
σ I anterior	75	70	70	75	72.5
σ I posterior	60	60	60	60	60
σ II	65	70	70	75	70
σ III	66	65	60	60	62.7
Idiosoma					
L	615	810	510	405	—
W	420	550	300	195	—

Table 3.
Metric data of *Microtrombidium prostriatum* n. sp. (larvae).

	Holotype	Paratype 1	Paratype 2	Mean
Anterior shield				
AM	28	30	30	29.3
AL	35	35	—	35
PL	45	46	45	45.3
SENS	45	55	60	53.3
AMB	56	63	57	58.6
AW	82	85	86	84.3
PW	119	126	123	122.6
MA	46	45	42	44.3
AP	54	58	57	56.3
SA	36	39	36	37
SP	18	17	21	18.6
SB	96	99	96	97
L	155	150	150	151.6
W	124	126	—	125
LN	30	28	36	31.3
ASB	116	107	105	109.3
PSB	39	43	45	42.3
Posteromedian shield				
PSW	99	110	111	106.6
PSL	27	24	24	25
PLN	15	11	12	12.6
QW	50	55	51	52
QL	36	39	36	37
Legs				
Ta1	57	59	54	56.6
Ta2	43	42	42	42.3
Ta3	42	43	42	42.3
Ti1	35	36	33	34.6
Ti2	28	27	28	27.6
Ti3	44	41	39	41.3
Ge1	16	15	15	15.3
Ge2	13	13	15	13.6
Ge3	17	15	16	16
Fe1	48	48	50	48.6
Fe2	44	43	45	44
Fe3	52	51	54	52.3
Solenidions				
ω I	20	22	22	21.3
ω II	12	13	13	12.6
φ I apic. or poster	17	17	16	16.6
φ I basal or anter.	31	28	29	29.1
φ II apical	12	10	12	11.3
φ II basal	24	22	25	23.6
σ I anterior	43	47	44	44.6
σ I posterior	34	36	32	34
σ II	42	42	42	42
σ III	31	31	29	30.3
Idiosoma				
L	414	300	405	—
W	285	156	245	—

Table 4.
Metric data of *Microtrombidium punctatum* n. sp. (larvae)

	Holotype	Paratype 1	Paratype 2	Paratype 3	Paratype 4	Mean
Anterior shield						
AM	36	32	34	33	36	34.2
AL	46	48	53	47	45	48
PL	60	65	61	60	67	62.2
SENS	—	54	65	—	—	60
AMB	49	48	51	46	—	48.5
AW	120	119	111	116	111	115.4
PW	138	135	130	140	150	138.6
MA	66	72	66	72	69	69
AP	75	75	74	69	75	73.6
SA	54	54	51	49	51	51.8
SP	24	27	22	27	24	24.8
SB	114	115	106	117	114	113.2
L	171	180	179	180	180	178
W	174	160	161	171	—	166.5
LN	20	30	31	24	31	27.2
ASB	126	141	140	141	146	138.8
PSB	45	39	39	39	34	39.2
Posteromedian shield						
PSW	150	150	144	150	156	150
PSL	33	36	39	38	40	37.2
PLN	18	18	16	20	18	18
QW	66	69	65	68	68	67.4
QL	59	63	58	57	60	59.6
Legs						
Ta1	75	68	69	69	74	71
Ta2	60	57	57	60	60	58.8
Ta3	63	60	58	60	60	60.2
Ti1	45	45	45	42	42	43.8
Ti2	36	39	37	36	36	36.8
Ti3	45	49	46	46	50	47.2
Ge1	20	21	19	18	21	19.8
Ge2	16	16	15	15	16	15.6
Ge3	16	18	18	18	20	18
Fe1	54	51	51	49	55	52
Fe2	54	49	50	51	54	51.6
Fe3	61	60	63	60	62	61.2
Solenidions						
ω I	30	28	26	26	26	27.2
ω II	24	24	23	23	23	23.4
φ I apic. or poster	18	22	21	20	20	20.2
φ I basal or anter.	—	36	37	33	36	35.5
φ II apical	18	18	19	18	19	18.4
φ II basal	30	33	33	—	33	32.2
σ I anterior	—	52	54	—	50	52
σ I posterior	—	42	40	—	37	39.6
σ II	60	58	56	—	54	57
σ III	50	48	49	50	44	48.2
Idiosoma						
L	—	330	336	900	1200	—
W	—	185	190	550	610	—