

**A new larval Trombidiid of the genus
Microtrombidium (Acari, Trombidiidae)
parasitic on shore flies (Diptera, Canacidae)
in the Galápagos Is.**

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Summary

Microtrombidium baerti n. sp. (Acari, Prostigmata, Trombidiidae) is described from flies from the Galápagos Is.

Résumé

Microtrombidium baerti n. sp. (Acari, Prostigmata, Trombidiidae) est décrit de mouchettes des Iles Galápagos.

Introduction

We describe herein a new larval Trombidiid mite, *Microtrombidium baerti* n. sp. found by P.G. on two species of canacid flies collected by Dr L. BAERT and his team, in Cabo Hommon, Fernandina Is., Galápagos.

All the measurements are in micrometers.

Abbreviations: BMNH: British Museum, Natural History; IRSNB: Institut royal des Sciences naturelles de Belgique.

**Family Trombidiidae
Subfamily Microtrombidiinae**

***Microtrombidium baerti* n. sp.**

This new species is named for Dr L. BAERT, IRSNB, who collected the parasitized flies in the Galápagos Is.

Larva (Figs 1-7): the standard data are listed in the Table I. *Dorsum*: with two median shields. Anterior shield widened in its anterior half, its

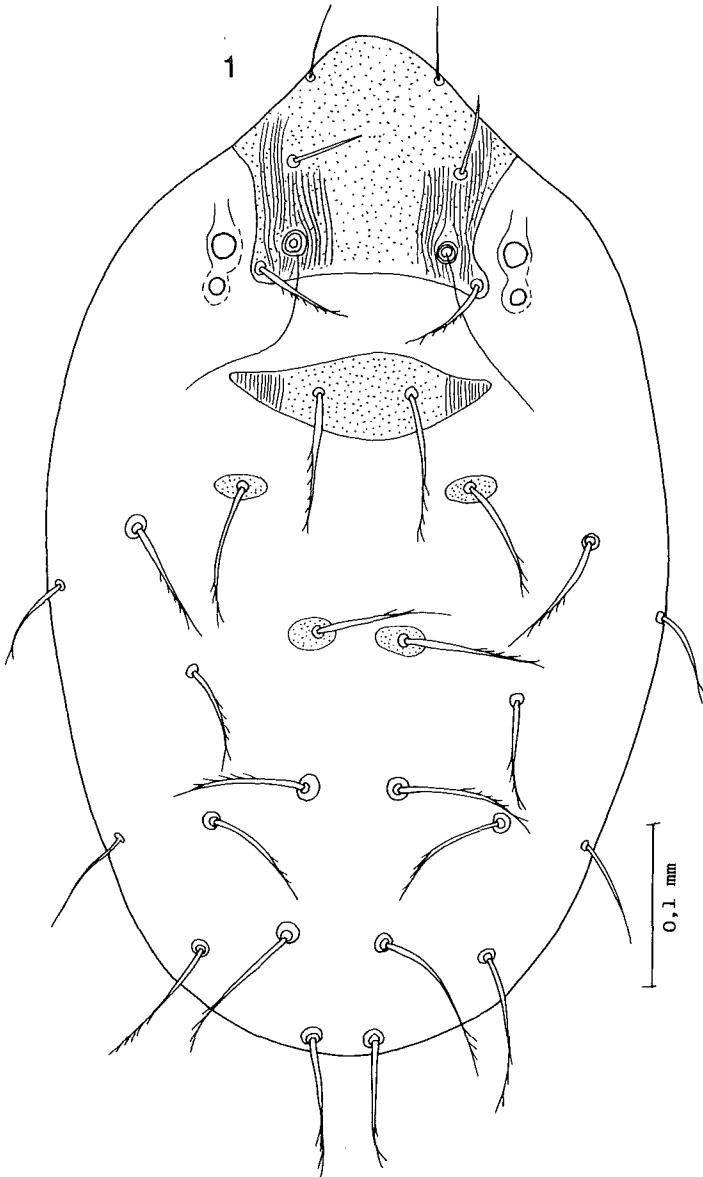
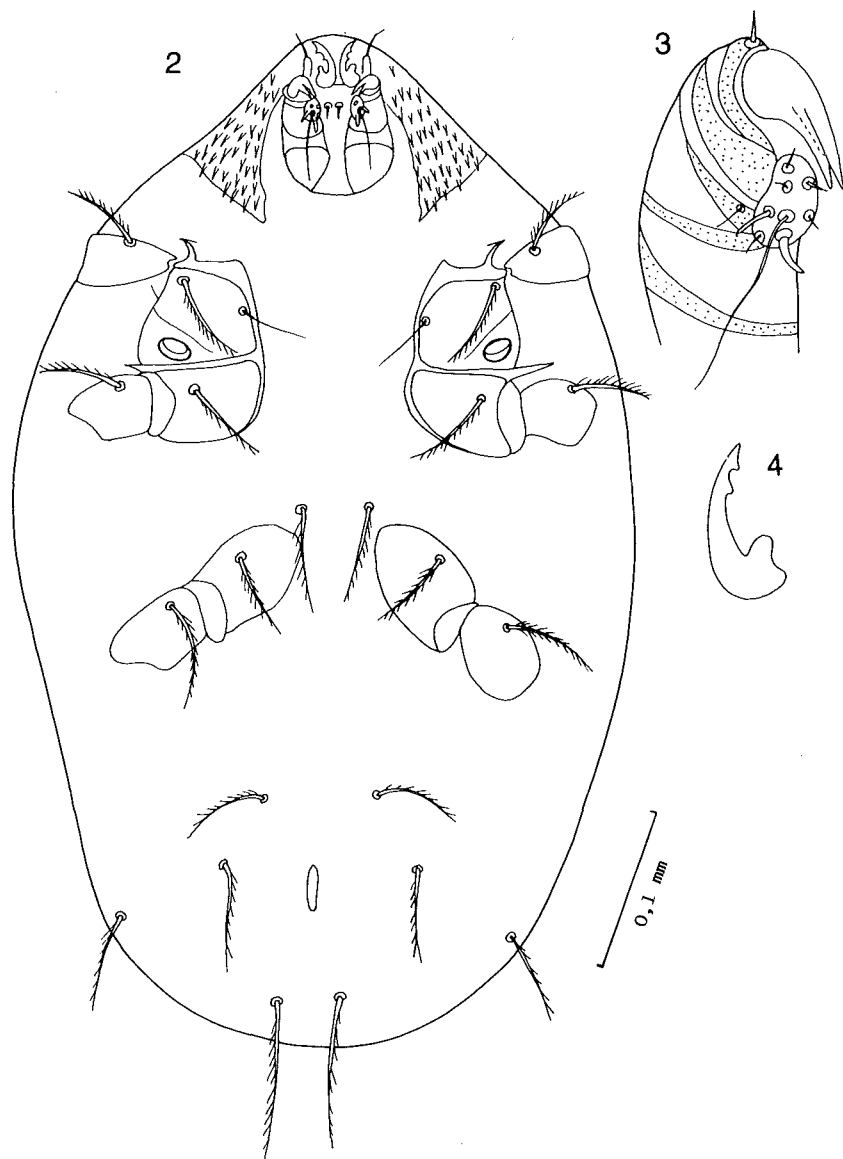


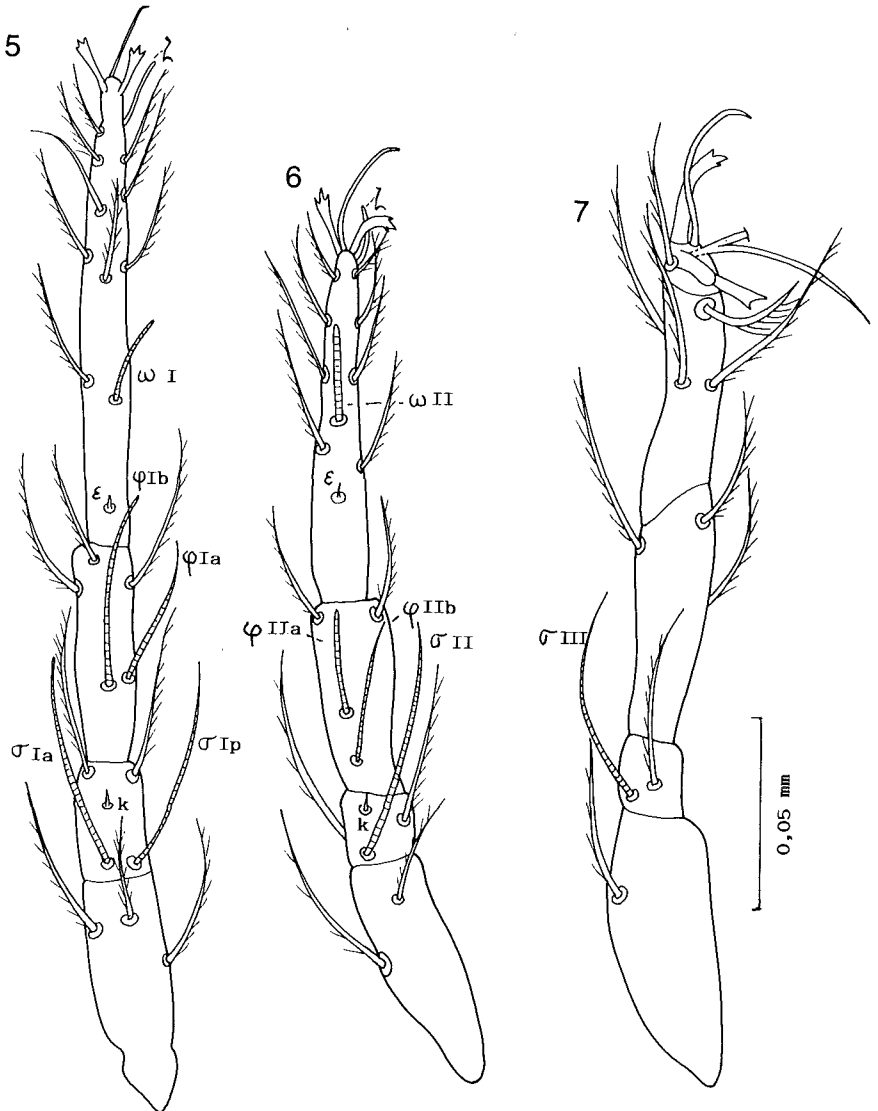
Fig. 1. *Microtrombidium baerti* n. sp. Larva in dorsal view.

posterior margin slightly concave, it carries longitudinal striations confined in the lateral regions of the shield. This shield bears 4 pairs of setae, of which one pair of sensillae. Posterior median shield spindle-shaped, striated longitudinally in its lateral areas, it carries one pair of pectinate setae. Behind this shield the cuticle bears 11 pairs of shortly pectinate setae, 60



Figs 2-4. *Microtrombidium baerti* n. sp. Larva in ventral view (2); apical segments of palp in ventral view (3); movable digit of chelicera (4).

to 90 long. Two pairs of these setae (the two anterointernal pairs) are situated on small oval punctate platelets. Most of the more posterior setae are situated in the middle of small refringent but not punctate rounded areas. *Venter*: the anterior dorsal shield is prolonged ventrally along the



Figs 5-7. *Microtrombidium baerti* n. sp. Larva: Four apical segments of legs I (5), leg II (6) and III (7) (in dorsal or dorsolateral view).

gnathosoma, this ventral part of the shield is covered by numerous and very narrow cuticular scales resembling fine spinelets. Coxae I-III with 2-1-1 setae all pectinate except the internal seta of coxa I which is smooth. There is a pair of pectinate setae between coxae III. Behind legs III the opisthosoma bears 4 pairs of pectinate setae 45 to 90 long. Uropore well developed 40 long. *Gnathosoma* completely ventral, with a short base;

hypostomal setae very short, spine-like. Absence of a chitinous ring around the mouth. *Palps*: tibia very short with a strong bifid dorsal spine. Palptarsus very small bearing 7 setae, of which one thin and long, one short, thick and curved and 5 very short. There is also a short solenidion. Movable cheliceral digit curved bearing two small teeth. *Legs*: tarsus I and II with 3 claws of which 2 lateral are widened near the apex where they bear two small denticles (one at each side), the middle claw is longer and narrower and not widened apically. Tarsus III longer and thicker than the other tarsi and bearing 3 claws of which one is strongly modified and bifid. Number of pectinate setae on the legs I to III: trochanters 1-1-1; femora 6-5-4; genua 4-2-2; tibiae 6-5-5; tarsi 20-15-13. *Solenidions*: tarsi I and II each with a solenidion *omega*; tibiae I and II each with 2 solenidions *phi*; genu I with two long solenidions *sigma*; genua II and III each with a long solenidion *sigma*. *Famulus (eta)*: tarsi I and II each with a very small *famulus* in the basal third of the segment. *Seta k*: one seta *k* on each of genua I and II. *Eupathidia (dzeta)*: 2 on tarsus I and 1 on tarsus II.

Remarks:

Microtrombidium baerti presents a combination of characters which is unique in this genus. There is no peribuccal chitinized ring (this ring is present in almost all the known species of this genus), anteroventral prolongations of the dorsal shield with numerous very thin spine-like scales (they are lacking in all the other species in the genus), coxa I with the internal seta smooth, lateral claws of tarsi I-II with two preapical teeth, the two median shields striated only in their lateral parts.

THOR & WILLMANN (1941) retained in the genus *Microtrombidium* 6 species only based on the larval stage. All these species present around the mouth a chitinous toothed ring open anteriorly. among the species described after this paper, some have this ring (e.g. *M. thaumapilosum* ROBAUX, 1974 and *M. caudatum* COOREMAN, 1944), whilst others lack this ring. This is the case for *M. tirnavense* FEIDER, 1949, *M. fluminis* MICHENER, 1946, *M. spasicutum* ROBAUX, 1974 and *M. keithleyi* ROBAUX, 1977. In the first three species all the coxal setae are bifid (they are not bifid in *M. baerti*), moreover in *M. spasicutum* and in *M. fluminis* the posterior margin of the anterior shield is trilobed. *M. keithleyi* differs from *M. baerti* by the following characters: absence of ventral prolongation of anterior dorsal shield, solenidions of the genua much shorter, three solenidions on genu I and two on genu II and III, all coxal setae pectinate, palps with a different shape, some dorsal setae much longer, uropore absent. A last species, apparently devoid of a peribuccal chitinous ring is *Trombidium* (or ? *Microtrombidium*) *hindustanicum* HIRST, 1926. In this species the palps are longer, the second dorsal shield is much narrower and the dorsal setae shorter.

Table I. Standard data (in micrometers) for the larvae of *Microtrombidium baerti* n.sp.

	Holotype	Paratypes				Mean
		n°1	n°2	n°3	n°4	
<i>Anterior shield</i>						
AM	39	36	45	51	39	42
AL	45	48	39	50	48	46
PL	62	69	68	65	69	66,6
SENS	90	91	80	90	92	88,6
AMB	66	75	73	75	68	71,4
AW	96	95	99	96	96	96,4
PW	129	125	135	141	135	133
MA	51	60	-	-	63	58
AP	63	72	66	62	66	65,8
SA	44	48	42	36	48	43,6
SP	27	30	30	30	25	28,4
SB	90	96	96	99	96	95,4
L	155	169	-	-	165	163
W	165	165	160	168	-	164,5
LN	30	40	-	-	45	38,3
ASB	128	142	-	-	144	138
PSB	27	27	27	24	23	25,6
<i>Posteromedian shield</i>						
PSW	160	150	148	165	152	155
PSL	49	57	48	48	45	49,4
PLN	21	23	21	22	24	22,2
QW	48	43	51	57	53	50,4
QL	78	84	75	84	81	80,4
<i>Legs</i>						
Ta1	120	105	120	120	114	115,8
Ta2	91	90	92	90	87	90
Ta3	81	78	78	78	75	78
Ti1	63	58	63	63	66	62,6
Ti2	54	56	57	52	54	54,6
Ti3	74	72	75	72	72	73
Ge1	30	30	33	32	30	31
Ge2	26	24	26	24	25	25
Ge3	27	27	27	27	27	27
Fe1	69	67	72	72	74	70,8
Fe2	73	66	72	79	68	71,6
Fe3	76	75	81	78	75	77
<i>Solenidions</i>						
ωI	26	27	24	24	27	25,6
ωII	27	27	27	25	27	26,6
φI apic. or poster.	33	36	32	31	36	33,6
φI basal or anter.	45	55	45	48	48	48,2
φII apical	24	27	25	24	22	24,4
φII basal	28	35	33	36	33	33,2
σI anterior	60	66	60	65	63	62,8
σI posterior	60	64	50	60	65	59,8
σII	65	74	65	75	64	68,6
σIII	72	70	69	68	66	69
<i>Idiosoma</i>						
L	585	501	1080	1250	420	-
W	360	209	690	850	270	-

Hosts and localities

Holotype larva from *Nocticanace scapanius* WIRTH, 1969 (Diptera, Canacidae), from Cabo Hammond, Fernandina Island, Galápagos Is. (L. BAERT leg., 3.V.1991).

Paratypes: 3 larvae with the same data as holotype; 2 larvae from *Nocticanace usingeri* WIRTH, 1969, from the same locality and date as the holotype.

All these host-flies were caught with a black light trap (18h30 to 05.00). These flies live in the "intertidal zone". At night they rest on the back of the crab *Grapsus grapsus* (CURIO, 1964).

Holotype and 4 paratypes in IRSNB, Brussels, one paratype in the BMNH, London.

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