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Charletonia domawiti n. sp., *Caeculisoma nestori* n. sp., and
Iguatonia barbillae n. gen. and n. sp. from Brazil
(Acari: Prostigmata: Erythraeidae)

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ABSTRACT. *Charletonia domawiti* n. sp., *Caeculisoma nestori* n. sp. and *Iguatonia barbillae* n. gen., n.sp., all larval erythreid, are described from Brazil.

Key words: acarology, taxonomy, new genus, new species, Acari, Prostigmata, Erythraeidae, *Charletonia*, *Caeculisoma*, *Iguatonia*, Brazil.

INTRODUCTION

The genus *Charletonia* OUDEMANS, based only on larvae, is widespread in all parts of the world. In South America the knowledge of the genus is poor. Up to date, two species: *C. rocciai* TREAT & FLECHTMANN, 1979, and *C. alvedae* HAITLINGER, 2000 were known (TREAT & FLECHTMANN 1979, HAITLINGER 2000). In this paper the third species of the genus is described.

The genus *Caeculisoma* is known from Australia, New Zealand, Africa, Asia and South America; only five species, based on larvae, were known hitherto: *C. darwiniense* SOUTHCOTT, 1961, *C. sparnoni* SOUTHCOTT, 1972, *C. cooremani* SOUTHCOTT, 1972, *C. mouldsi* SOUTHCOTT, 1988 all from Australia, *C. huxleyi* SOUTHCOTT, 1972 from New Zealand and *C. hunanica* ZHENG, 2002 from China (SOUTHCOTT, 1961 1972, 1988, ZHENG 2002). From South America (Argentina, Paraguay) one species *C. tuberculatum* BERLESE, 1888 was known, based on adults. The second species from Brazil, based on a larva, is described below.

A new genus *Iguatonia* with a new species from Brazil is also described.

Charletonia domawiti n. sp.

ETYMOLOGY

The name of the species has been derived from the name Domawit.

DIAGNOSIS

C. domawiti belongs to the group of species with four setae between coxae II-III, long Ti III 340-405 and TaI 185-220. In this group there are *C. ishii* SOUTHCOTT and *C. volzi* SOUTHCOTT. It differs from *C. ishii* in the longer AW (94 vs 78-82), AP (64 vs 51), L (134 vs 109-118), W (140 vs 118-121) and the number of dorsal setae (41 vs 71); from *C. volzi* in the longer TiIII (382 vs 351), AW (94 vs 71-79), ISD (86 vs 67-74), AP (64 vs 32-42), L (134 vs 98-101), W (140 vs 110-117) and the number of dorsal setae (41 vs 68). Until now, from South America two larval species of the genus were known: *C. rocciai* Treat from Brazil and *C. alvedae* HAITLINGER from Peru. It differs from *C. rocciai* in the longer L (134 vs 88), W (140 vs 107-109), ISD (86 vs 58-59), TaI (204 vs 135-145) and TiIII (382 vs 168-170); from *C. alvedae* in the longer L (134 vs 92), W (140 vs 120), ISD (86 vs 60), GL (186 vs 152), TaI (204 vs 160) and TiIII (382 vs 220).

DESCRIPTION

Larva. Dorsum with 44 slightly barbed setae. One eye on each side (fig. 1). Dorsal scutum somewhat wider than long, with three pairs of scutalae, all weakly barbed. ML=PL (AL broken). Two pairs of sensillae, both nude. AM<S (fig. 3).

Idiosoma ventrally with a pair of short and barbed setae 1a (between coxae I) and long weakly barbed setae 2a (between coxae II). Setae 2a are distinctly longer than setae 1a. Between coxae II-III four slightly barbed setae 3a and 18 slightly barbed setae posterior to coxae III. All setae on coxae I-III slightly barbed (fig. 2).

Gnathosoma with hypostomalae scl and galaetae, both nude. Palpfemur with slightly barbed seta; palpgenu with barbed seta. Palptibia with three setae (two barbed, one nude) (fig. 4). Palptarsus with 7 setae, 1 $\bar{u}$, 1 very long seta and 5 distinctly shorter setae, all nude (fig. 5).

Leg lengths: leg I 1180, leg II 1076, leg III 1338. Ip=3594.

Setal formula: Leg I. Ta 1 ω , 1 ζ , 22B; Ti 2 ϕ , 1Co, 1 κ , 18B; Ge 1 σ , 1 κ , 12B; Tf 5B; Bf 4B; Tr 1B (figs. 6, 7).

Leg II. Ta 1 ω , 1 ζ , 22B; Ti 2 ϕ , ?18B; Ge 1 κ , 12B; Tf 5B; Bf 4B; Tr 1B (figs. 8, 9).

Leg III. Ta 22B; Ti 1 ϕ , 18B; Ge 12B; Tf 5B; Bf 3B; Tr 1B (figs. 10, 11).

TYPES

Holotype: BRAZIL, vicinity of Foz do Iguacu, 8 III 2003 from plants; leg. R. HAITLINGER (preserved in the Museum of Natural History, Wrocław University).

***Caeculisoma nestori* n. sp.**

ETYMOLOGY

The name of the species has been derived from the name Nestor.

DIAGNOSIS

Sensillary setae AM behind bases of ML; $L < W$, TaIII 118, TiIII 152, ISD 30. It differs from *C. darwiniense* in the shorter ISD (30 vs 47-48), AW (72 vs 83-85), leg I (490 vs 520), longer leg II (500 vs 455), leg III (596 vs 535) and greater number of dorsal setae (fD 44 vs 28); from *C. sparnoni* in the longer AW (72 vs 59), AL (42 vs 27), TaI (108 vs 77), TiIII (152 vs 100) and shorter ISD (30 vs 48); from *C. huxleyi* in the shorter AW (72 vs 94), PW (72 vs 115), L (86 vs 159), AL (42 vs 75) and ISD (30 vs 109); from *C. mouldsi* in the shorter ISD (30 vs 48-66), TaI (108 vs 19-155), TiIII (152 vs 240-279), the presence 2 ϕ on Ti I (3 ϕ in *C. mouldsi*) and 1 σ on GeI (2 σ in *C. mouldsi*) and from *C. hunanica* in the shorter ISD (30 vs 67), W (92 vs 107), L (86 vs 111) and AL, ML, PL (42, 42, 36 vs 51, 67, 51, respectively).

Table 1. Metric data for *Charletonia domawiti* n. sp. (1) and *Caeculisoma nestori* n. sp. (2)

1	2		1	2	
IL	463	1288	scI	72	24
IW	305	1102	PsFd	80	30
L	134	86	PsGd	54	26
W	140	92	TaI	204	108
AW	94	74	TiI	314	106
MW	110	80	GeI	204	96
PW	130	72	TfI	126	50
AL	-	42	BfI	172	52
ML	68	42	TrI	76	32
PL	68	36	CxI	84	46
AM	74	32	TaII	202	106
S	108	40	TiII	274	102
ISD	86	30	GeII	174	90
AA	16	10	TfII	112	50
SB	26	12	BfII	150	54
GL	186	116	TrII	68	38
pgI	40	22	CxII	96	60
AP	64	44	TaIII	214	118
DS	48-62	30-54	TiIII	382	152
O	18	16	GeIII	204	98
1a	62	28	TfIII	162	62
2a	94	-	BfIII	180	62
1b	100	40	TrIII	84	42
2b*	84	26	CxIII	112	62
2b**	54	34			
3b*	88	36			
3b**	56	36			

* - proximal seta; ** - distal seta

DESCRIPTION

Larva. Dorsum with 30 barbed setae. One eye on each side (fig. 12). Dorsal scutum somewhat wider than long, with three pairs of barbed scutalae. $AW < MW > PW$, $AL = ML > PL$. Two pairs of sensillary setae AM and sensillary setae S. AM nude, S distally setulose, both placed behind base of ML (fig. 14).

Idiosoma ventrally with one pair of setae 1a between coxae I. Between coxae II and III two barbed setae; 10 weakly barbed setae posterior to coxae III (fig. 13). Setae on coxae I-III slightly barbed (figs. 17-19).

Gnathosoma with nude hypostomata and galeatae (fig. 15). Palpfemorata barbed, palpgenuata and three ?nude palptibialae (two broken) (fig. 16). Palptarsus badly visible.

Leg lengths: leg I 490, leg II 500, leg III 596. $Ip = 1586$.

Setal formula: Leg I. Ta 1 ω , 1 ζ , 22B; Ti 2 ϕ , 1 κ , 18B; Ge 1 σ , 1 κ , 12B; Tf 5B; Bf 5B; Tr 1B (fig. 17).

Leg II. Ta 1 ω , 1 ζ , 21B; Ti 2 ϕ , 18B; Ge 1 κ , 12B; Tf 5B; Bf 5B; Tr 1B (fig. 18).

Leg III. Ta 22B; Ti 1 ϕ , 18B; Ge 12B; Tf 5B; Bf 2B; Tr 1B (fig. 19).

TYPES

Holotype: Brazil, vicinity of Foz do Iguacu, 8.03.2003, from plants; leg. R. Haitlinger (preserved in MNHWU).

***Iguatonia* n. gen.**

DIAGNOSIS

Scutum with three pairs of setae, sensillae AM beyond bases of setae PL, near sensillae S. Two setae between coxae III; coxalae I-III 1-2-2; Ti I-III 16-16-16. Palpal odonotus with two teeth.

Type species: *Iguatonia barbilla* n. sp.

REMARKS

This genus differs from other genera of larval Callidosomatinae: from *Momorangia* SOUTHCOTT, 1972 in three pairs of scutalae (vs more 3 pairs), from *Andrevella* SOUTHCOTT, 1961 in coxalae 1,2,2 (vs 1,1,1), from *Charletonia* OUDEMANS, 1910, *Callidosoma* WOMERSLEY, 1936, *Caeculisoma* BERLESE, 1888, *Carastrum* SOUTHCOTT, 1988, *Hauptmannia* OUDEMANS, 1910, *Harpagella* SOUTHCOTT, 1996, *Pussardia* SOUTHCOTT, 1961 and *Grandjeanella* SOUTHCOTT, 1961 in AM placed below bases of PL and from *Dambullaeus* HAITLINGER, 2001 in ML-ML distance greater than AL-AL distance (vs ML-ML distance smaller than AL-AL and PL-PL distance), bases of AM and S conveniently situated (vs relatively farlocated) and palpal odonotus with two teeth (vs without teeth) (WOMERSLEY 1936, SOUTHCOTT 1961, 1988, 1996, HAITLINGER 2001).

***Iguatonia barbilla* n. sp.**

ETYMOLOGY

The name of the species has been derived from the name Barbilla.

DIAGNOSIS

L 64-68, W 82-84, ω 1 very long 52, two palptibialae, GL 96-100, TaIII 88-94, TiIII 116-126, ISD 10.

DESCRIPTION

Larva. Dorsum with 26 barbed setae. One eye on each side (fig. 20). Dorsal scutum wider than long, with three pairs of scutalae, all barbed. AL<ML<PL in holotype, AL<ML>PL in paratypes. Anterior pair of sensillae (AM) located near posterior pair of sensillae (S), AM nude, S with setules in anterior half; S about twice longer than AM (fig. 22).

Idiosoma ventrally with pair of barbed setae (1a) (between coxae I). Between coxae II pair of barbed setae (2a); between coxae III pair of setae (3a); 15 setae posterior to coxae III, all barbed. All setae on coxae I-III are barbed (fig. 21).

Table 2. Metric data for *Iguatonia barbilla* n. sp.

	H	P		H	P
IL	235	273-463	scI	18	20
IW	178	197-381	PsFd	56	52-56
L	64	64-68	PsGd	22	16-18
W	84	82-84	TaI	84	82-84
AW	56	54-60	TiI	78	76-78
MW	66	66-72	GeI	62	60-62
PW	72	70-74	TfI	38	36-38
AL	40	40-42	BfI	48	44-46
ML	48	50-52	TrI	32	36-40
PL	52	42-48	CxI	?42	46-54
AM	38	36-38	TaII	78	76-84
S	-	62-72	TiII	76	82
ISD	10	10	GeII	64	64-72
AA	12	12-14	TfII	32	36-42
SB	18	14-16	BfII	42	44-52
GL	96	100	TrII	34	32-34
pgI	18	16-18	CxII	46	54-56
AP	26	20-22	TaIII	90	88-94
DS	34-54	30-60	TiIII	116	116-126
O	14	12-14	GeIII	68	62-70
1a	24	22-24	TfIII	52	46-52
2a	32	30-32	BfIII	56	54-60
1b	38	34-40	TrIII	40	40
2b*	34	30-42	CxIII	52	52-54
2b**	30	32			
3b*	34	34-36			
3b**	28	34			

* - proximal seta; ** - distal seta; H - holotype, P - paratypes

Gnathosoma with nude hypostomalae and nude galealae. Palpfemur with setulose seta, palpgenu with short, weakly barbed seta, palptibia with two nude setae (fig. 23). Palptarsus with 6 setae (one seta is barbed) (fig. 24).

Leg lengths: leg I 384 holotype, 398, 384 paratypes, II 372, ?420, 390, III 474, 496, 458.

Setal formulae: Leg I. Ta 1 ω , 1 ζ , 20B; Ti 2 ϕ , 1 κ , 16B; Ge 11B; Tf 5B; Bf 4B; Tr 1B; Cx 1B (fig. 25).

Leg II. Ta 1 ω , 1 ζ , 19B; Ti 2 ϕ , 16B; Ge 11B; Tf 5B; Bf 4B; Tr 1B; Cx 2B (fig. 26).

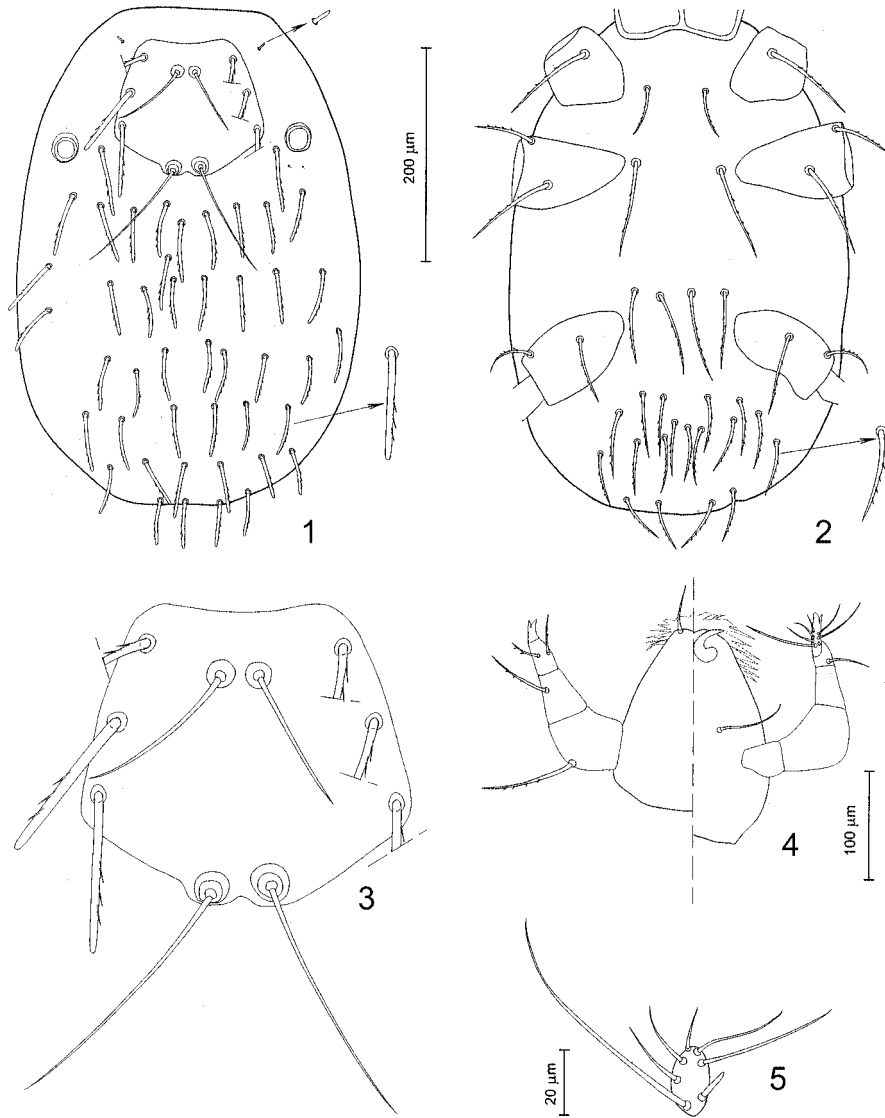
Leg III. Ta 20B; Ti 1 ϕ , 16B; Ge ?12B; Tf 5B; Bf 2B; Tr 1B; Cx 2B (fig. 27).

TYPES

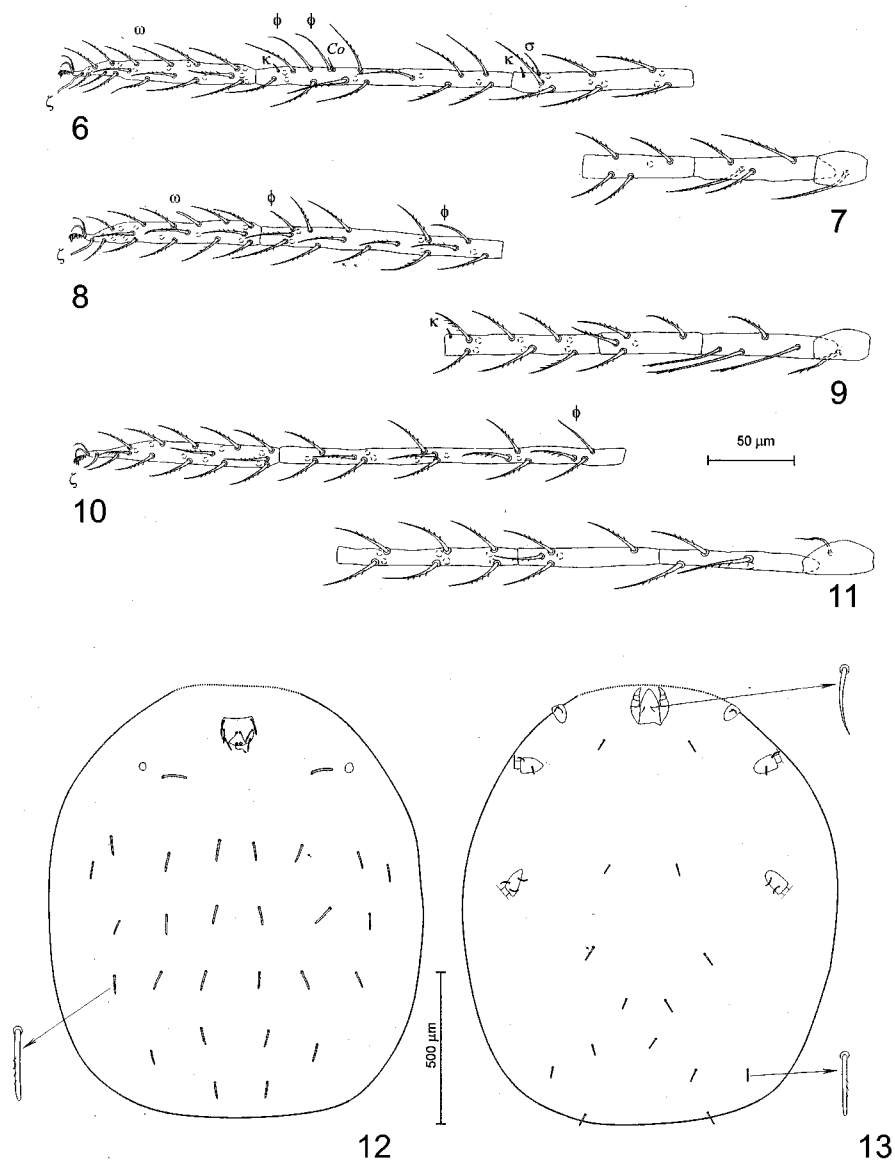
Holotype: BRAZIL, vicinity of Foz do Iguacu, 8 III 2003, from plants; 2 paratypes: same locality as holotype (one specimen from plants, the second from abdomen of an adult undetermined Homoptera); leg. R. HAITLINGER (holotype preserved in MNHWU, paratypes in author's collection).

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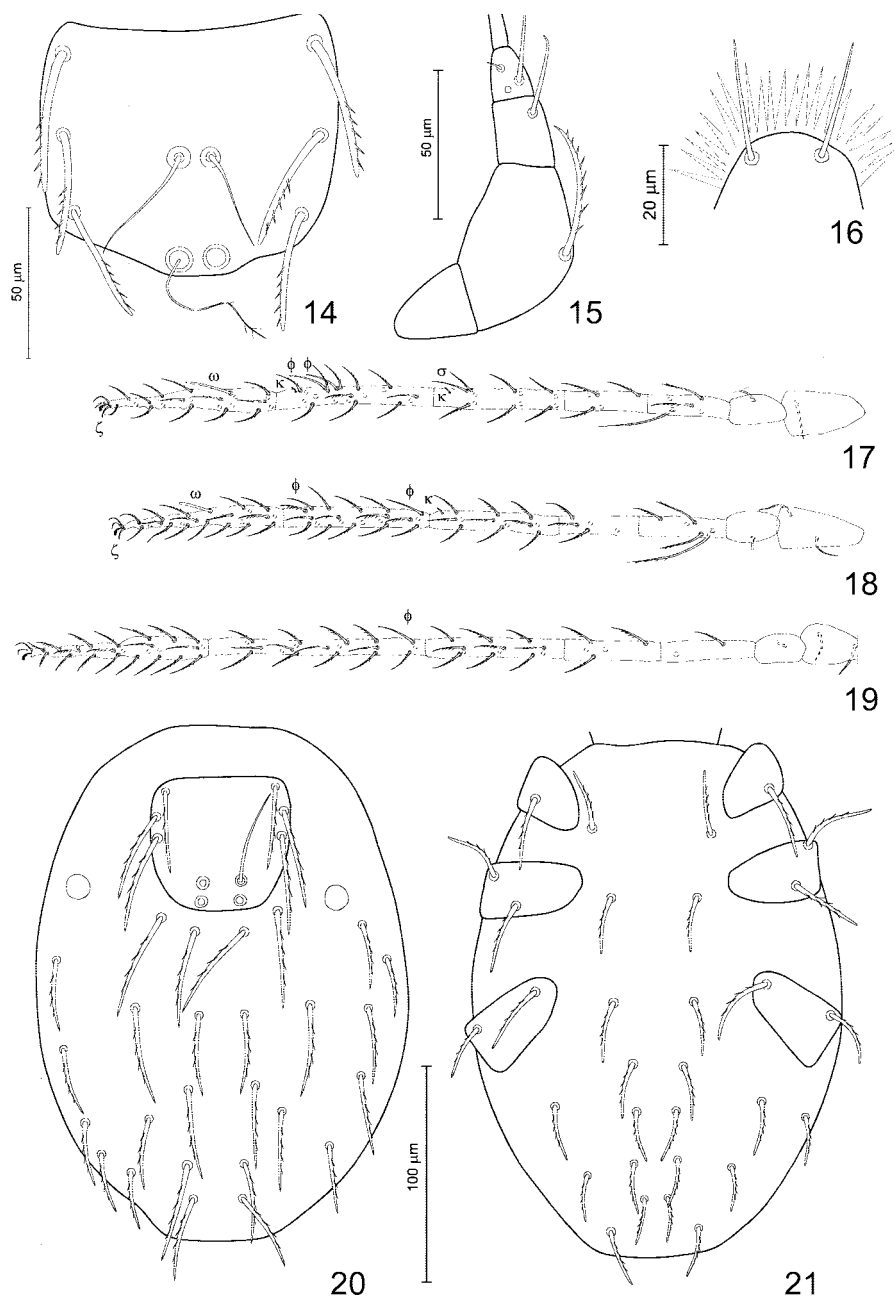
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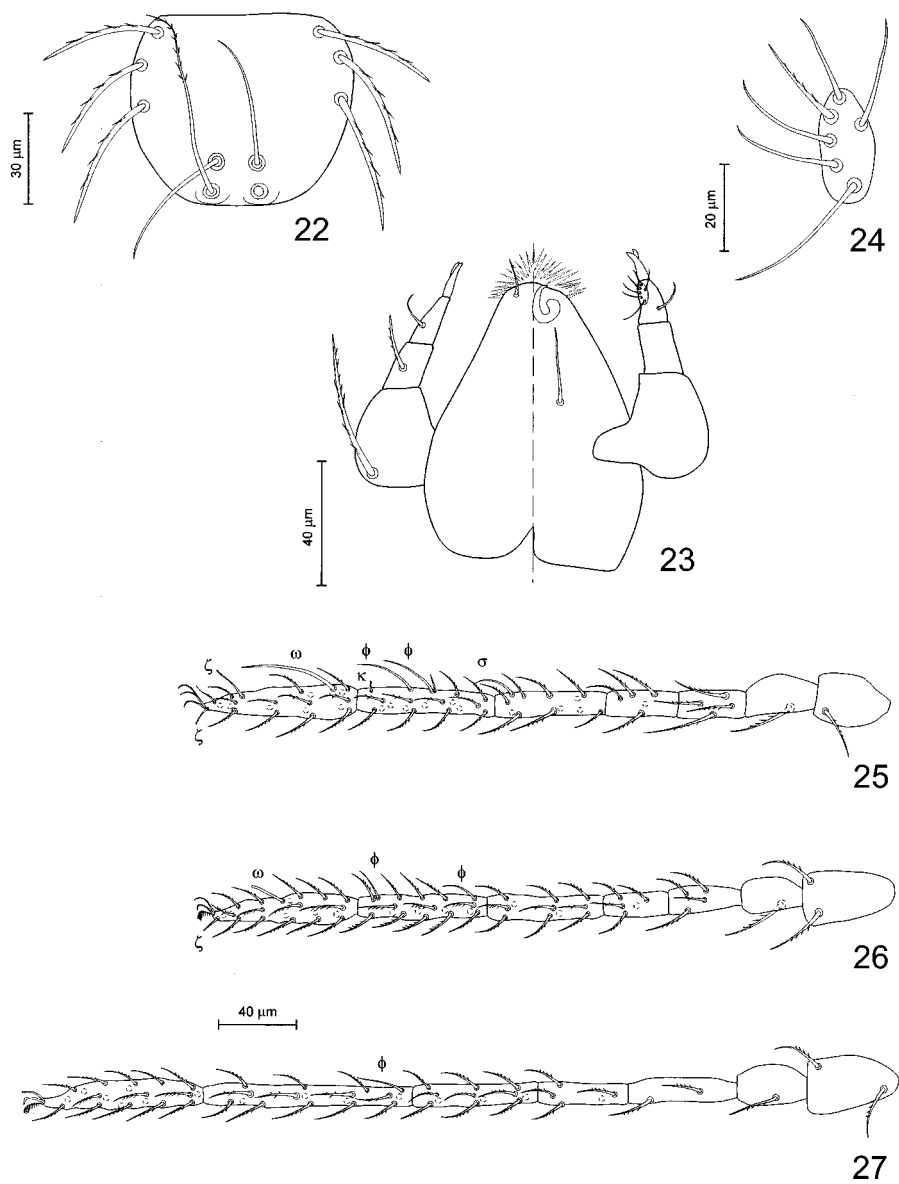
1-5. *Charletonia domawiti*: 1 - idiosoma, dorsal view, 2 - idiosoma, ventral view, 3 - scutum, 4 - gnathosoma, dorsal view - left side, ventral view - right side, 5 - palptarsus



6-11. *Charletonia domawiti*: 6 - leg I, tarsus-genu, 7 - leg I, telofemur-trochanter, 8 - leg II, tarsus-tibia, 9 - leg II, genu-trochanter, 10 - leg III, tarsus-tibia, 11 - leg III, genu-trochanter. 12-13. *Caeculisoma nestori*: 12 - idiosoma, dorsal view, 13 - idiosoma and gnathosoma, ventral view



14-19. *Caeculisoma nestori*: 12 - idiosoma, dorsal view, 13 - idiosoma and gnathosoma, ventral view, 14 - scutum, 15 - palp, dorsal view, 16 - galealae, 17 - leg I, tarsus-coxa, 18 - leg II, tarsus-coxa, 19 - leg III, tarsus-coxa. 20-21. *Iguatonia barbillae*: 20 - idiosoma, dorsal view, 21 - idiosoma, ventral view



22-27. *Iguatonia barbillae*: 22 - scutum, paratype, 23 - gnathosoma, dorsal view - left side, ventral view - right side, 24 - palptarsus, 25 - I leg, tarsus-coxa, 26 - II leg, tarsus-coxa, 27 - III leg, tarsus-coxa