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A new species of the genus *Guntheria* (Acari Trombiculidae) from a duck-billed platypus collected in the New South Wales

by Alex FAIN[1] & Alexandr A. STEKOL'NIKOV[2]

1 Institut royal des Sciences naturelles de Belgique, rue Vautier 29, 1000-Bruxelles, Belgique.
2 Zoological Institute, Russian Academy of Sciences, Universitetskaya 1, St. Petersburg 199034 Russia (e-mail: acari@zin.ru).

Abstract

A new species of chigger mites, *Guntheria (Phyllacarus) ornithorhynchi* **sp. n.**, is described from a duck-billed platypus collected in the New South Wales, Australia.

Keywords : chigger mites, Australia, parasites, taxonomy.

Introduction

The genus *Guntheria* WOMERSLEY, 1939 includes chigger mites distributed primarily in Australia and New Guinea. It is the largest chigger genus in these regions. Thus, in Australia it is represented by 52 species, while other 18 genera as a whole include 55 species. Australian *Guntheria* were revised briefly by DOMROW & LESTER (1985), and species of the genus from New Guinea were studied by GOFF (1980, 1981). An examination of the acarological collection from the Royal Belgian Institute of Natural Sciences provide us with a new species of *Guntheria* whose description is given below.

Material and methods

Mites were mounted in de Faure-Berlese's medium. All measurements are given in micrometres (µm). Terminology follows that of GOFF *et al.* (1982), with some adaptation: "ventral setae" (V) - setae on the ventral surface of idiosoma excluding coxal and sternal setae; VS - number of ventral setae; D - dorsal idiosomal setae; DS - number of dorsal idiosomal and humeral setae; TaIII - length of leg III tarsus; TaW - width of leg III tarsus. Type specimens are deposited in the Royal Belgian Institute of Natural Sciences, Bruxelles, Belgium (IRSNB), the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZIN) and the Museum of Sydney, Australia.

Results

Guntheria (Phyllacarus) ornithorhynchi sp. n.

Diagnosis : SIF = 5B-N-3-1100.0000; fPp = B/B/BNB; fCx = 1.1.1; fSt = 2.2; fSc: PL>AM >AL; Ip = 683; fD = 2H-6-6-6-6-4; DS = 30; VS = 46; NDV = 77.

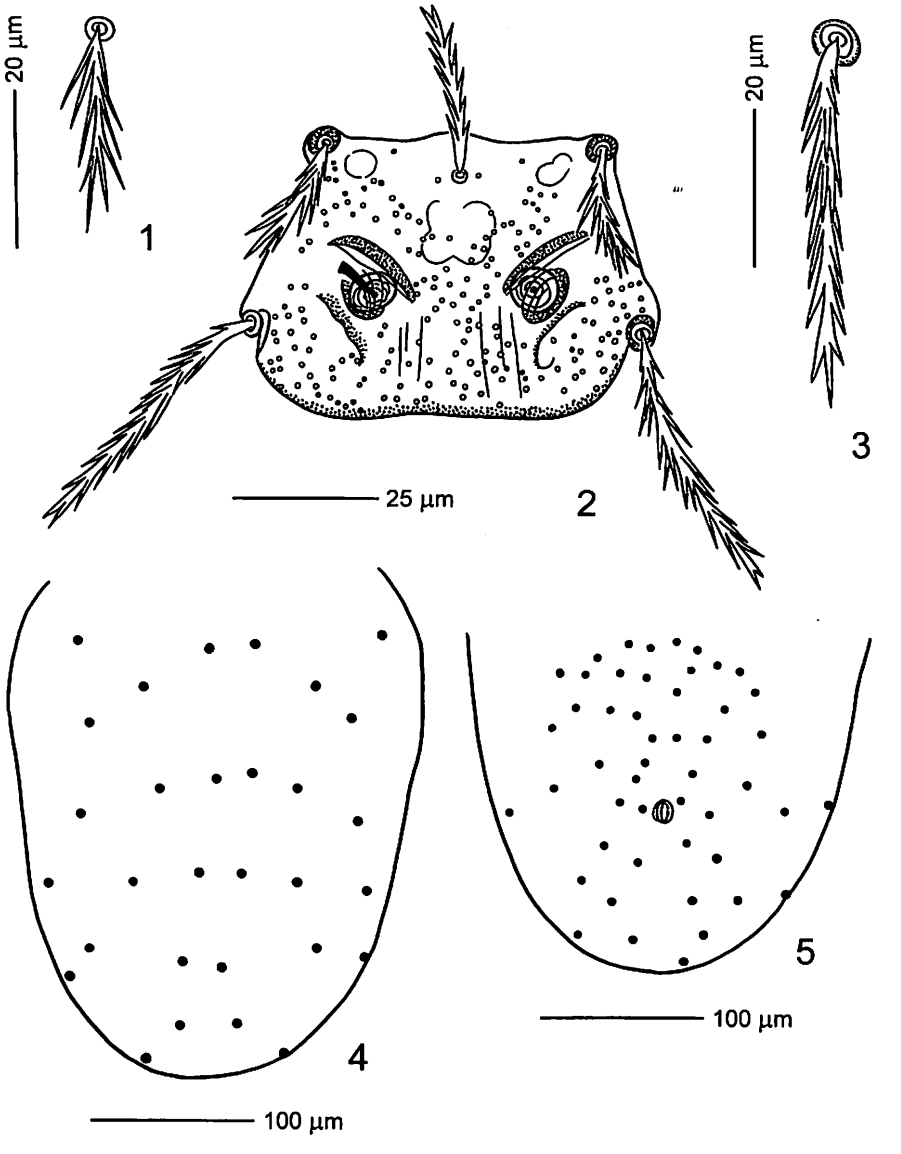
Description : *Larva* (Figs 1-10). Idiosoma. Eyes absent. One pair of humeral setae; 28 dorsal idiosomal setae, arranged 6-6-6-6-4 with some variation; 2 pairs of sternal setae and 42-49 ventral setae; total idiosomal setae 72-79. Gnathosoma. Cheliceral blade with small cap and one small medial tooth; gnathobase moderately punctate, bearing a pair of strongly branched setae; galeala nude; palpal claw 3-pronged; setae on palpal femur and genu branched; dorsal palpal tibial seta very thick and branched, lateral seta nude, ventral seta branched; palpal tarsus with 5 branched setae and inflated tarsala. Scutum. Moderately punctate, near trapezoidal, with posterior margin straight in center and with widely rounded corners; AM base posterior to level of AL bases; SB anterior to level of PL bases; PL>AM>AL; sensilla lost in all specimens examined. Legs. All 7-segmented, terminating in a pair of wide claws and a thin clawlike empodium. Leg I: coxa with 1 non-specialised branched seta (1B); trochanter 1B; basifemur 1B; telofemur 5B; genu 4B, 1 genuala, microgenuala; tibia 8B, 2 striated tibialae, long microtibiala; tarsus 16B, inflated tarsala 11 µm long, situated near the top of the segment, microtarsala, subterminala, parasubterminala, pretarsala. Leg II: coxa 1B; trochanter 1B; basifemur 2B; telofemur 4B; genu 3B, 1 genuala; tibia 6B, 2 tibialae; tarsus 15B, tarsala 12 µm long, microtarsala, pretarsala absent. Leg III: coxa 1B; trochanter 1B; basifemur 2B; telofemur 3B; genu 3B, genuala absent; tibia 6B, tibiala absent; tarsus 15B.

Standard measurements of holotype : AW = 52, PW = 72, SB = 30, ASB = 29, PSB = 22, SD = 50, P-PL = 16, AP = 32, AM = 26, AL = 23, PL = 47, H = 43, D = 34-41, pa = 247, pm = 205, pp = 239, Ip = 691, TaIII = 53, TaW = 17, DS = 30, VS = 49, NDV = 79.

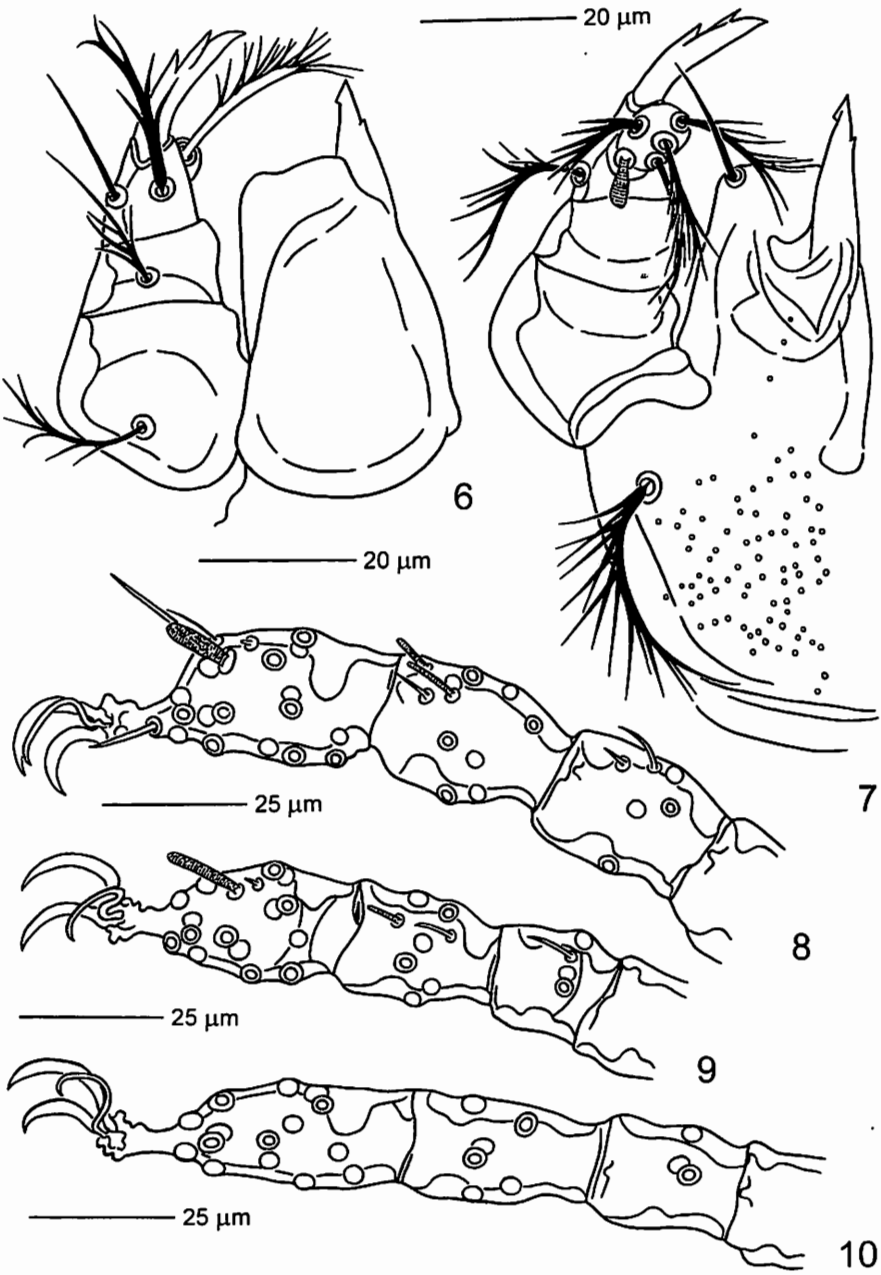
Standard measurements of the type series (N = 4) :

	AW	PW	SB	ASB	PSB	SD	P-PL	AP	AM	AL	PL	H
Min	45	66	26	27	20	47	14	31	26	20	41	38
Max	52	72	31	30	22	50	16	33	27	23	47	43
m	48	69	28	29	20	49	16	32	27	22	45	40

D	V	pa	pm	pp	Ip	DS	VS	NDV	TaIII	TaW
27-39	18-31	243	200	232	675	30	42	72	52	14
34-42	20-34	247	205	239	691	31	49	79	55	17
30-41	19-32	245	203	236	683	30	46	77	53	16



Figs 1-5. *Guntheria (Phyllacarus) ornithorhynchi* **sp. n.,** larva. 1 : anterior (preanal) ventral idiosomal seta. 2 : scutum. 3 : anterior dorsal idiosomal seta. 4 : arrangement of dorsal idiosomal setae. 5 : arrangement of ventral idiosomal setae.



Figs 6-10. *Guntheria (Phyllacarus) ornithorhynchi* **sp. n.**, holotype larva. 6 : dorsal aspect of gnathosoma. 7 : ventral aspect of gnathosoma. 8 : leg I. 9 : leg II. 10 : leg III.

Host : *Ornithorhynchus anatinus* (Shaw, 1799) (Mammalia, Monotremata, Ornithorhynchidae).

Type data : Holotype larva from *O. anatinus*, New South Wales, Australia. The host (a specimen in alcohol) was obtained by an exchange between IRSNB and the Museum of Sydney in 1930 year. Identification number of the host in IRSNB: I.Gén. 9323. Reg. 6B. Collector and date unknown. Chiggers were collected by A. FAIN. 3 paratypes larvae, same data. Holotype and 1 paratype are deposited in IRSNB, 1 paratype is deposited in ZIN, 1 paratype is deposited in the Museum of Sydney.

Etymology : Specific epithet derives from generic name of the host.

Differential diagnosis : The new species differs from all other *Guntheria* in absence of eyes, pretarsala II, genuala and tibiala III. It is similar to *Guntheria coorongensis* (HIRST, 1929) in form of scutum, nude galeala, number and arrangement of idiosomal setae, but differs in having 1 genuala I versus 3, fPp = B/B/BNB versus B/B/NNN, absence of palpal subterminala, smaller scutum, shorter setae and in other characters.

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