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A NEW GENUS AND SPECIES OF QUILL WALL MITES
(ACARINA : LAMINOSILOPTIDAE : FAINOCOPTINAE)
FROM *COLIUS COLIUS* (AVES : COLIIFORMES : COLIIDAE) (1)

Results of the Namaqualand-Namibia Expedition
of the King Léopold III Foundation
for the Exploration and Protection of Nature (1980)

BY

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(With 7 figures in the text)

ABSTRACT

Colicoptes elongatus gen. n., sp. n. ex *Colius colius* is described and figured.

In former studies the authors erected the subfamily Fainocoptinae within the *Laminosioptidae* VITZTHUM, 1931 for mites living in developing feathers between the feather sheath and the feather germ, burrowing in the not yet ceratinized feather quill. New taxa have been described from Australia (LUKOSCHUS & LOMBERT, 1979), U. S. A. (LOMBERT *et al.*, 1979), Europe (LUKOSCHUS & LOMBERT, 1980) and Africa (LOMBERT *et al.*, in preparation). These mites are arranged in five genera : *Fainocoptes*, *Calamicoptes*, *Streetacarus*, *Podicipedicoptes* and *Rallicoptes*.

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During the Namaqualand-Namibia Expedition of the King Leopold III Foundation one of us (F. S. L.) had the opportunity to investigate a « mouse-bird » *Colius colius* LINNAEUS. Mites collected from developing feather germs differ strongly from the named genera by considerable reduction of idiosomal and leg setation. A new genus and species will be described here. All measurements are given in microns (μm) in tabulated form (Table I).

Colicoptes gen. n.

With the characteristics of family *Laminosioptidae* VITZTHUM, 1931 and of subfamily *Fainocoptinae* LUKOSCHUS & LOMBERT, 1979; legs III and IV slender; legs I and II with femora and genua fused dorsally. All setae seti- to filiform. Gnathosomal alae absent, propodosomal alae present, sejugal sclerites absent. Female genital region with one pair genital setae between legs III. Chaetotaxy of idiosoma present are *sci*, *sc e*, *l1*, *l3*, *l4*, *l5*, *d2*, *d5*, *h*, *sh*, *cx III*, *cx IV*, *ga*, *a*. Chaetotaxy of legs: tarsi 6-7-4-4, tibiae 1-1-1-1, genua 1-0-0-0, femora 1-1-0-0, trochanters 0-0-0-0. Solenidiotaxy: tarsi 2-1-0-0, tibiae 1-1-1-1, genua 1-1-0-0.

The genus differs from the other genera of the subfamily mainly by short formation of idiosomal setae; absence of trochanteral setae, coxals I, and of some idiosomal setae; and position of female genital region relatively far forward between legs III.

Type species: *Colicoptes elongatus* sp. n.

Colicoptes elongatus sp. n.

Medium-sized, slender, dorsoventrally flattened species of pale yellow colour with brown legs and light-brown propodosomal shield and the characteristics of genus.

Female (holotype) Figs. 1-6. — Length including gnathosoma 575, average of four paratypes 614 (578-666), width 122, in paratypes 122 (112-134).

Venter (Fig. 1). — Legs inserted laterally in widely separated groups. Epimera I fused in Y-shape, epimera II-IV free. Weakly sclerotized epimera III with lateral projections, IV without. Coxal regions III, IV with coxal setae (*cx III*, *cx IV*). Genital region between legs III with epigynium (*Eg*), three valves in inverted V-shape, one pair genital setae (*ga*) near valves, without connections to epimera III or IV. Subhumeral setae (*sh*) anterior to epimera III. Sejugal region without distinct furrow, posterior to legs II without sclerites. Slender lateral propodosomal alae (*W*) act as anchoring apparatus. Opisthosoma about half of total length, with blunt end, sub-

TABLE 1

Measurements of *Colicoptes elongatus* gen. nov., spec. nov. (holotype ♀ and allotype ♂).
All measurements in microns (μm).

	♀	♂		♀	♂
Total length	575	392	Leg I	48	48
Total width	122	149	Leg II	46	48
Length gnathosoma ...	48	48	Leg III	72	68
Width gnathosoma ...	55	53	Leg IV	73	69
Length opisthosoma ...	287	126	Pretarsus I	17	18
Length shield	69	65	II	21	20
Width shield	50	50	III	24	24
d 1	—	—	IV	24	25
d 2	6	4	Ambulacrum I	5	5
d 3	—	—	II	6	6
d 4	—	—	III	8	7
d 5	182	157	IV	8	7
l 1	19	17	Omega 1 leg I	22	18
l 2	—	—	Omega 3 leg I	18	18
l 3	9	6	Omega 1 leg II	36	34
l 4	5	3	Phi I	21	20
l 5	21	3	II	25	27
sc i	18	18	III	10	?
sc e	106	106	IV	9	18
sh	14	13	Sigma I	3	2
h	24	24	II	3	?
g a	20	19	III	—	—
g p	—	—	Genu I seta (mG)	7	6
a	5	?	Genu II seta (mG)	—	—
cx I	—	—	Femur I seta (vF)	8	14
cx III	20	23	Femur II seta (vF)	27	29
cx IV	28	20	Tarsus III seta	50	50
Length prop. alae	38	27	Tarsus IV seta	56	58
Width prop. alae	11	10	Trochanter III seta	—	—
dps	3	3	Trochanter IV seta	—	—
vps	4	4			

— = absent; ? = not measurable.

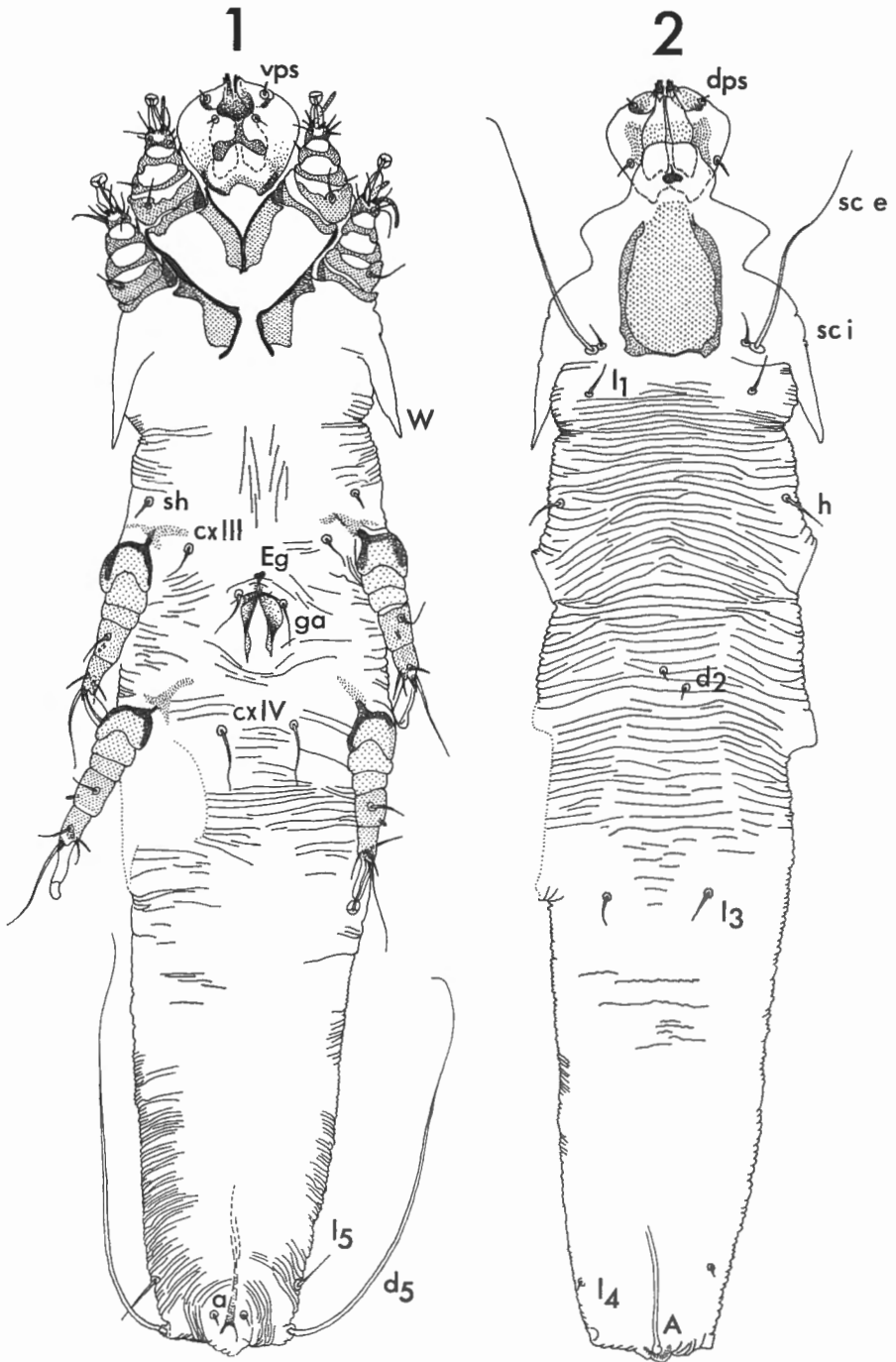


Fig. 1, 2. — *Colicoptes elongatus* gen. n., sp. n., holotype female.
1: venter; 2: dorsum.

terminal anal region with anal setae (*a*) and laterally inserted, relatively short *d 5* and *l 5*. Cuticle of venter soft with striations as figured. Gnathosoma « headlike » with necklike articulation to idiosoma surpassing legs I; with two-segmented palps; four pairs of setae; apical solenidia; scraping chelicerae with reduced digitus fixus and three teeth on movable digit. Gnathosoma and epistoma without lateral prolongations.

Dorsum (Fig. 2). — Propodosomal shield with strongly sclerotized U-shaped border, independent of scapular setae. Metapodosoma and opisthosoma with soft striated cuticle. Present are *sc e*, *sc i*, *h*, *d 2*, *l 1*, *l 3*, *l 4*. Duct of bursa copulatrix opens dorsotermally on small rounded sclerotized elevation (A).

Legs (Figs. 3-6). — All legs with five segments and long stalked pretarsus. Legs I and II conical with dorsally fused femora and genua; legs III and IV slender. Tarsi I and II with two strong sclerotized apical hooks, legs III, IV with one less distinct hook. Legs II without median genual seta (*mG*). Setation given in definition of genus. See Table I for measurements.

Male (allotype) (Fig. 7). — Like female, but with shorter opisthosoma. Length 392, width 149. Genital region ventrocaudal (*GA*), genital setae (*ga*) in normal position. Solenidion *phi IV* twice length of female *phi IV*. Posterior direction of aedeagus in the only male specimen may be caused by preparation. Measurements in Table I.

Tritonymph. — Gnathosoma morphologically and functionally similar to adults. Idiosoma with soft cuticle and adultlike propodosomal shield. Legs shorter, especially legs III and IV. As in other genera (except *Rallicoptes*), tarsi I, II each with two solenidia.

Host and locality. — *Colius colius* LINNAEUS; Swakopriverbed, Namibia 22° 44' S; 15° 56' E. LUKOSCHUS leg. The mites were found in developing feathers of the back.

Deposition of types. — Holotype ♀ and allotype ♂ within Institut royal des Sciences naturelles de Belgique, Bruxelles; paratypes: South African Institute for Medical Research, Johannesburg; U. S. National Museum of Natural History (Smithsonian Institution), Washington, D. C.; and in collection of authors.

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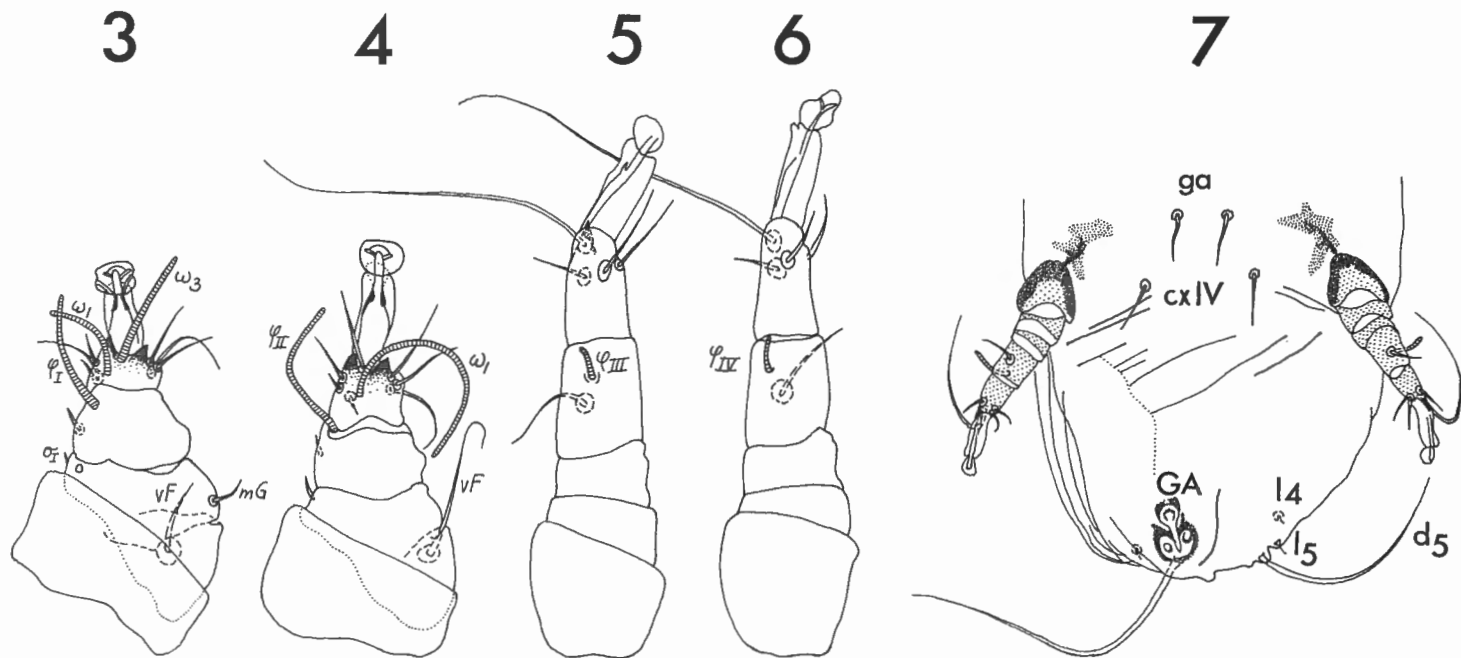


Fig. 3-7. — *Colicoptes elongatus* gen. n., sp. n.
 3-6 : legs of holotype in dorsal view; 3 : leg I; 4 : leg II; 5 : leg III; 6 : leg IV; 7 : allotype male, venter of opisthosoma.

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