

A *RIEDLINIA SENSU STRICTO* OF KENYA ¹
(ACARINA — TROMBICULIDAE)

BY

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In 1959 the second author collected from a bat a small number of living trombiculid mites. Since some of them were apparently completely engorged, he attempted to rear them to the nymphal stage and succeeded in obtaining one nymph. This proved to be a new species of chigger, belonging to the genus *Riedlinia* Oudemans 1914 (1), more precisely to the sub-genus *Riedlinia* (*Riedlinia*) Vercammen-Grandjean 1963 = *Trombigastia* (*Scapularia*) Vercammen-Grandjean and Fain 1958 (2) (3) (4).

We respectfully dedicate this species to our esteemed colleague, Dr. Carl WILLMANN, under the name of :

***Riedlinia* (*Riedlinia*) *willmanni* n. sp.**

A. — SUBGENERIC DIAGNOSIS :

Scutum trapezoidal ; sensillae elongated, slightly thick, with thick barbs ; no lenticular eyes, chelicerae short and thick, galeal hairs nude ; two tarsal bars at each leg ; apical spatulation of the empodiums ; " neosomatic " phenomenae during the larval stage : (1) peri-rostral scapular thickening, (2) considerable idiosomal expansion, (3) noticeable intercoxal distention.

1. This work was supported by PHS Research Grant E-3793 from the National Institute of Allergy and Infectious Diseases, U. S. Public Health Service.

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B. — DESCRIPTION OF THE SPECIES :

I. LARVA.

1) *Measurements* : Means of three specimens.

(\emptyset S = maximal width of the sensilla)

AW	PW	SB	ASB	PSB	SD	AP	AM	AL	PL
41	59	19	19	9	28	25	33	28	35
S	H	D	V		pa	pm	pp	Ip	ØS
60	35	46/26	22/29		200	165	173	538	4

2) *Scutum* : (Fig. 3). Trapezoidal and wider than long, SB line closer to that of the PL, punctae clear and sparse ; sensillae not too thick ($4\ \mu$) and bearing long spicules or barbs ; anterior scutal hairs bearing fine barbs, longer than the rare barbs of the PL ; $PL > AM > AL$; $PW > 2\ AP$; $AM > AP$ and $AL > AP$; $AW + PW = 100$ (very small) ; $\frac{PW}{AW} = 1.44$ and $SS = 1,400$; no lenticular eyes.

3) *Idiosoma* : (Figs. 1 and 2). The engorged larva has a very large idiosoma, its profile is reniform. The noticeable peri-rostral thickening of the endocuticle appears distinctly. The distention between anterior and median coxae is subgenerically characteristic. $fD = 2\ H + 6.6.8.6.4 = 32$ dorsal hairs, $fV = 4.4.6.6.6.4.2. = 32$ ventral hairs and $NDV = 32 + 32 = 64$. Uropore situated between rows 3 and 4 of the ventral hairs.

4) *Legs* : $fsp = 7.7.7$; $fCx = 1.1.1$ and $fSt = 2.2$; anterior tarsal solenidion thicker and longer ($21\ \mu$) than the median ($15\ \mu$) (Fig. 5). Terminala, subterminala, and parasubterminala present. Genuae and tibialae as follows : $ga = 3$, $gm = 1$, $gp = 1$ and $tp = 1$. Leg index = 538, indicating a small species.

The empodiums are apically spatulate ; the claws near them are also slightly spatulate. Claws on empodiums are short and strong. Tarsal bar formula $fBT = 2\ b - 2\ b - 2\ b$.

5) *Gnathosoma* : (Fig. 3). Chelicerae short and strong, with small tricuspid cap. Palpus short, with tibial claw slender and trifurcate near its apex. Two nude galeal setae.

$fPp = (P) - (B) - (B).N.B.G_3 - E.B.B.B.B.B. (B) - (B)$

II. NYMPH.

1) *Measurements* : Of the type specimen.

ASB	PSB	SB	S	T	PL	OL	IL	PW	OW	CW
115	54	32	114	42	180	400	580	280	334	274
PH	OH	CH	P ₁	P ₂	P ₃	P ₄	IP	TL	TW	ML
216	280	210	580	380	368	492	1820	154	48	90

(See list of abbreviations at end of article)

RIEDLINIA (*RIEDLINIA*) *WILLMANNI* N.SP..

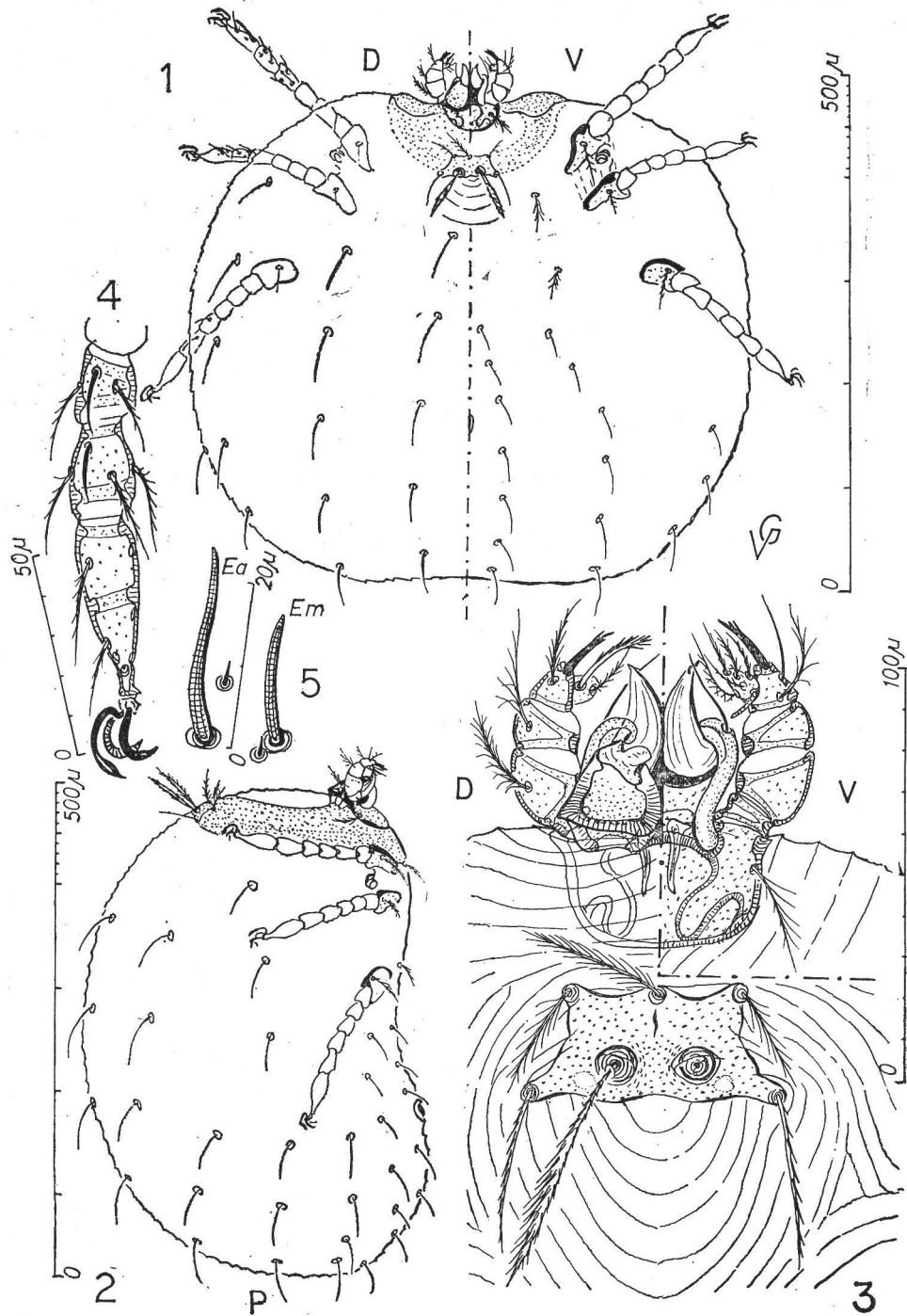


FIG. 1-5.

RIEDLINIA (RIEDLINIA) WILLMANNI N.SP..

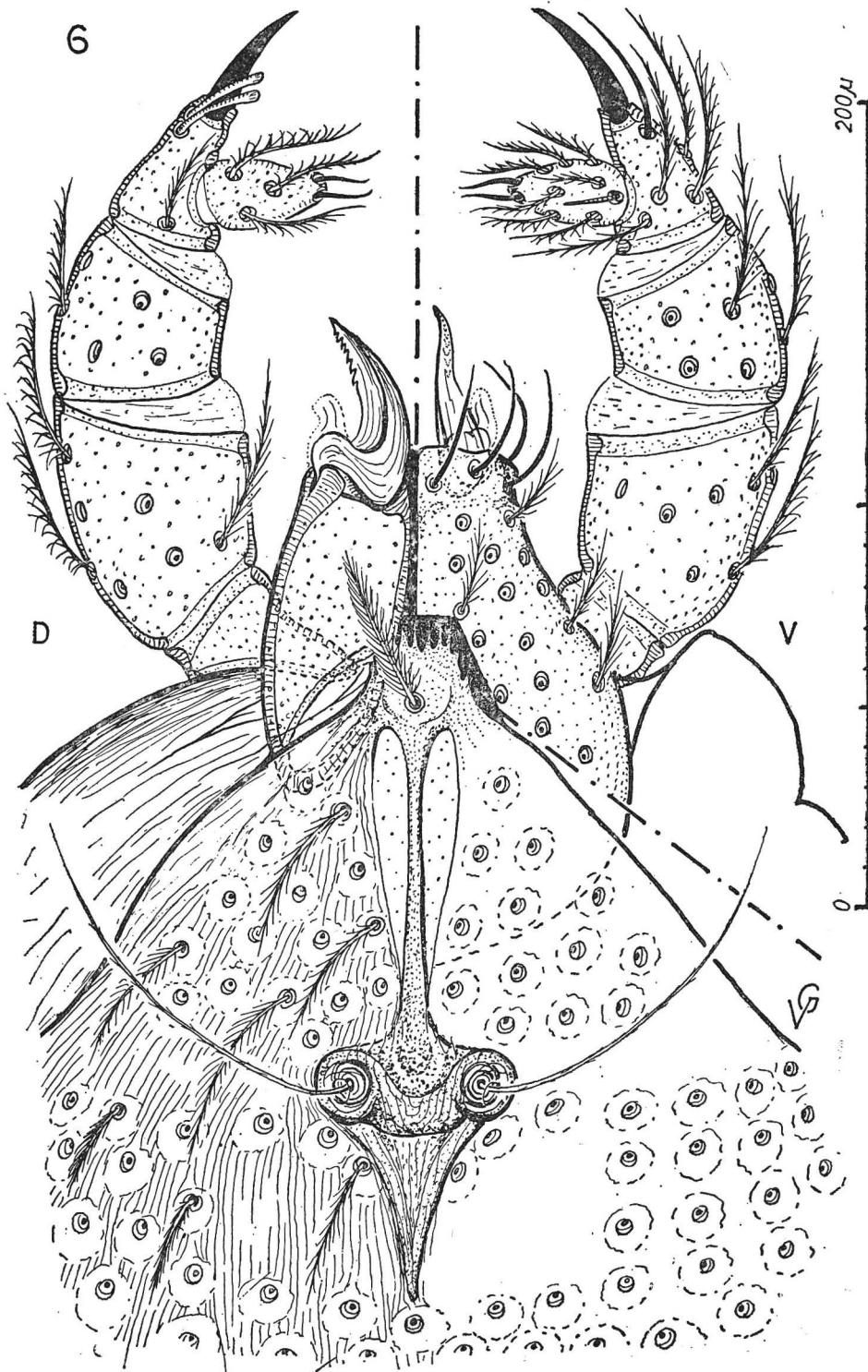


FIG. 6.

2) *Metopic area* : (Fig. 6). Tectum denticulate (10-12 teeth), square in form. Tectal hair long, finely and abundantly barbed. Sensillae slender, bearing scanty and inconspicuous barbs. Para-cristal hairs long and generously barbed (Fig. 9), 12-16 in number, on both sides of the crest.

3) *Idiosoma* : (Fig. 7-11). The typical constriction separating propodosoma from hysterosoma is less marked, if not absent, as in the case of the larva. The body is covered with hairs bearing barbs lying close to the rachis (like a spike of barley) (Fig. 10) ; the hairs of the pygidial region are a little longer (Fig. 11). The genital aperture is typical with its two pairs of discs (anterior the largest) protected by a double pair of falciform plates or sclerites. The two internal sclerites are provided with nude hairs bearing only one or two barbs (Fig. 13) ; the external plates are adorned with 8-10 barbed hairs very similar to those of the coxae (Fig. 12). The anal orifice, or uropore, is situated midway between the genital aperture and the pygidial edge ; its lips are embellished with the same kind of barbed hairs as the coxae (Fig. 12).

4) *Chelicera* : (Fig. 6). Chelobase short. Chelicera denticulate on their apical half (6-8 teeth).

5) *Hypostoma* : (Fig. 6). The two apical lobes are provided with four strong, straight, nude hairs.

6) *Palpus* : (Fig. 6). Tibial claw simple and sitting near two paraglyphic dorso-internal spines and one strong dorso-external paraglyphic nude seta. The tarsal pilose formula is : $fT = 10B. 4S$. The sub-basal solenidion (striated spur) is constant, and because of this, neglected in the formula. The palpal hairs are thin and finely barbed. We can count : 14-16 femoral, 10-12 genual, and 5-6 tibial barbed hairs.

7) *Legs* : (Figs. 7 and 8). Their aspect is classical in so far as it concerns their constitution, size and pilosity. The two claws of the forward pair of legs are half as long and half as strong as those of the three pairs of posterior legs. The tarsus of the anterior legs bears numerous and varied organelles : barbed hairs, nude setae, solenidions, famuli, etc. ; the anterior tibia are also provided with a great number of organelles but in smaller proportion ; and finally the genu also possesses them but still fewer in number. The tarsi, tibiae, and genu of the other pairs of legs are equally furnished with special organelles but definitely fewer in number. The sternal plate bears 8-10 barbed hairs similar to those adorning the epimera or coxae (Fig. 12).

C. LOCALITY AND DATE :

I. LARVA : KAREN, near Nairobi (Kenya), June 1959, and LANGATA, near Nairobi (Kenya); September 1959.

II. NYMPH : LANGATA ; larvae placed in incubation in September 1959, nymph reared in October 1959.

RIEDLINIA (RIEDLINIA) WILLMANNI N.SP.

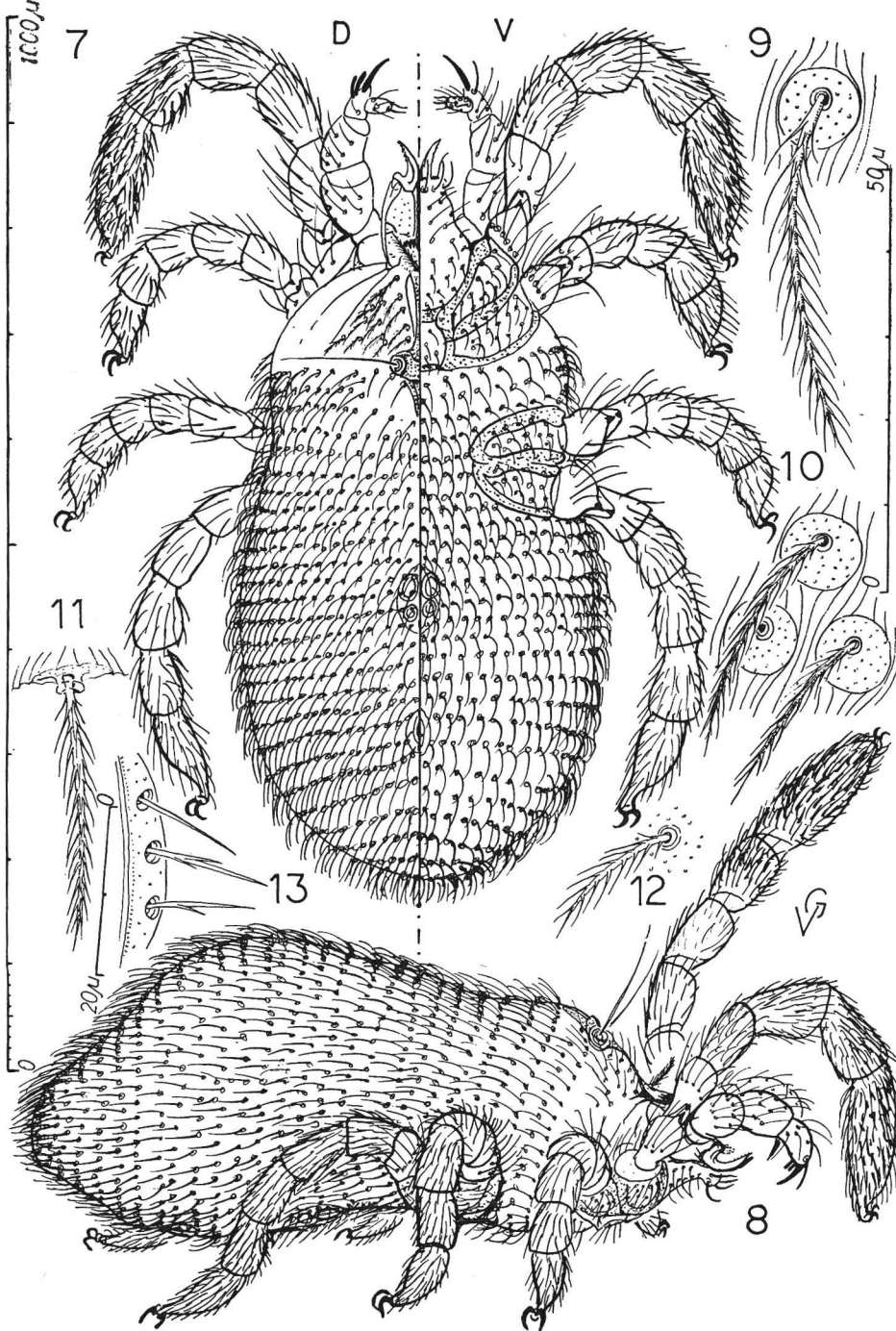


FIG. 7-13.

D. HOST AND PARASITOPHORE :

The larvae were found on *Hipposideros caffer centralis*, in the skin.

E. TYPE MATERIAL :

Holotype No. L-959/B-1 and paratype No. N-1059/B-1 at the Museum of Natural History (Smithsonian) in Washington, two paratypes at the G. W. Hooper Foundation in San Francisco.

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Abbreviations :

PL — OL — IL = respectively lengths of Propodosoma, Opisthosoma, and Idiosoma.
PW — OW — CW = respectively widths of Propodosoma, Opisthosoma, and Constriction.
PH — OH — CH = respectively heights of the same.
P₁ — P₂ — P₃ & P₄ = respectively lengths of legs 1, 2, 3 and 4.
IP = Leg-index (sum of the four preceding lengths).
TL — TW = respectively length and width of the first leg tarsus.
ML = length of the first leg tibia
T = length of the tectal hair.
