

Acarologia

A quarterly journal of acarology, since 1959
Publishing on all aspects of the Acari

All information:



<http://www1.montpellier.inra.fr/CBGP/acarologia/>
acarologia-contact@supagro.fr



**Acarologia is proudly non-profit,
with no page charges and free open access**

Please help us maintain this system by
encouraging your institutes to subscribe to the print version of the journal
and by sending us your high quality research on the Acari.

Subscriptions: Year 2020 (Volume 60): 450 €

<http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php>

Previous volumes (2010-2018): 250 € / year (4 issues)

Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France

ISSN 0044-586X (print), ISSN 2107-7207 (electronic)

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under the reference ID 1500-024 through the « Investissements d'avenir » programme (Labex Agro: ANR-10-LABX-0001-01)



Acarologia is under **free license** and distributed under the terms of the Creative Commons-BY-NC-ND which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.

A NEW GENUS AND SPECIES OF NORTH AMERICAN BAT CHIGGERS
(ACARINA : LEEUWENHOEKIIDAE) ¹

BY

P. H. VERCAMMEN-GRANDJEAN and S. G. WATKINS ².

A. INTRODUCTION.

Dr. Albert J. BECK, Assistant Research Parasitologist, International Center for Medical Research and Training, in the course of his research on the behavioral and physiological aspects of bats which affect their parasite populations, has submitted many chiggers to this laboratory for determination. An eminently distinctive new genus and species of Leeuwenhoekiidae was among material recently examined. Dr. BECK collected the species described here on *Antrozous pallidus pacificus*, a xerophilous, ground feeding, insectivorous bat, found roosting in the attic of an old wooden building in Rockville, Solano Co., California, on 16 January 1965. The chiggers were attached to the chest skin of the two *Antrozous* examined. No chiggers were found on twenty specimens of *Myotis yumanensis* and *Tadarida brasiliensis* collected in the same roost.

The new chigger is named for Dr. BECK in recognition of his long-standing generosity.

B. DESCRIPTION.

I. *Albeckia* n. g.

Leeuwenhoekiidae with the classic pattern of paired AM setae and all legs six segmented in addition to the following combination of characters : cheliceral blades with teeth confined to tricuspid cap ; palpal claw with 5 prongs ; palpal tarsus with four branched setae ($fT = 4B$) ; genualae : 2.1.1 ; scutum without antero-

1. This work was supported by PHS Research Grant AI-03793 from the National Institute of Allergy and Infectious Diseases, U.S. Public Health Service.

2. Respectively : Research Parasitologist and Laboratory Technician, George Williams Hooper Foundation, University of California Medical Center, San Francisco 22, California, U.S.A.

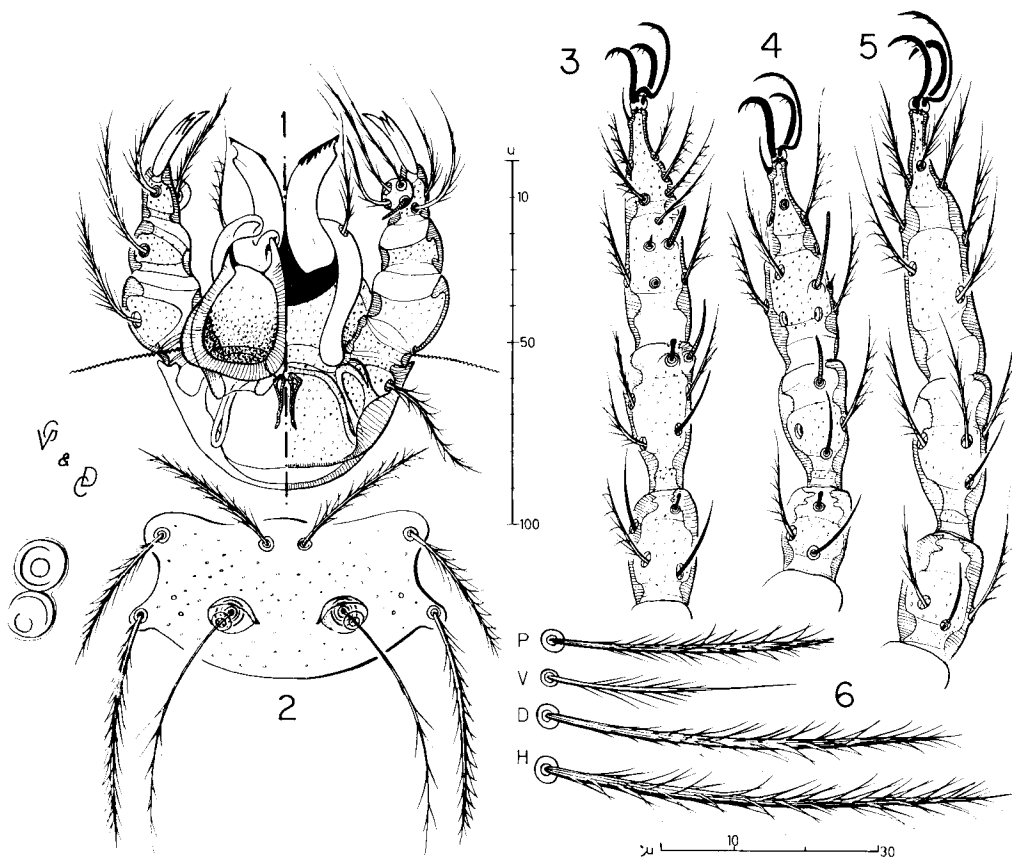
median nasus; spiracles and tracheae present; all tarsi with empodia. Type species by monotypy: *Albeckia albecki* n. sp.

The low number of palpo-tarsal setae is unique in described Leeuwenhoekiiidae.

II. *Albeckia albecki* n. sp.

a) *Measurements*: Means, in micra, of the holotype and nine paratypes:

AA	AW	PW	SB	ASB	PSB	SD	AP	AM	AL	PL	S	H	D	V	pa	pm	pp	Ip
10	69	80	29	28	18	46	23	44	44	63	66	63	58/38	35/41	279	245	273	797



b) *Scutum* (fig. 2): Subrectangular, anterior margin biconcave, lateral margins broadly recessed, posterior margin broadly convex; very sparsely punctate; all setae densely and finely barbed; $PL > AM = AL$; AM bases slightly behind the AL line, PLS and SB on the same line; sensillae flagelliform, sparsely branched on the distal half. Eyes present, posterior lens centered on SB line, both lenses of equal diameter (14μ).

Several specimens in the type series of forty have a short antero-median nasus. A similar phenomenon has already been noted in *Whartonia glenni* Brennan, 1962 (1).

c) *Idiosoma* : Neosomatic thickening of peri-rostral endocuticle apparent ; spiracles and unbranched tracheae present.

fD = 2H + (6.6.6)6.8.10.6.6.4.2 = 62 dorsal setae,

fV = 4.6.6.6.6.6.6.6.4.4 = 60 ventral setae, and

NDV = 122 total body setae.

Uropore between setae of the fifth ventral row. All dorsal setae densely and finely barbed ; humerals uniformly vested to base ; basal barbs of dorsal and pygidial setae short and sparse ; ventral setae resembling fish bones (fig. 6).

d) *Legs* (figs. 3, 4 and 5) : Ip = 797, fsp = 6.6.6, fCx = 2.1.1, and fSt = 0.2. Tarsal bar formula : fBT = 2b-2b-2b. Each claw and empodium with a pair of minute ventral, subterminal ciliae (onychotriches).

Leg 1 (fig. 3) : pa = 279 μ . Tarsus with two claws and empodium, pretarsala, solenidion (7 μ) with famulus in tandem middorsally ; both subterminala and para-subterminala absent, two ordinary branched setae instead.

Tibia with solenidion and phalliform microtibiala in tandem near distal margin ; second tibiala slightly behind midpoint of article.

Genu with phalliform microgenuala and genuala near distal margin, another genuala toward base of article.

Leg 2 (fig. 4) : pm = 245 μ . Tarsus with two claws and empodium, pretarsala, solenidion (21 μ) and famulus in tandem, their positions reversed relative to tarsus 1.

Tibia with apical solenidion and basal tibiala.

Genu with apical phalliform microgenuala and basal genuala.

Leg 3 (fig. 5) : pp = 273 μ . Tarsus with two claws and empodium, no specialized mastisetae.

Tibia with tibiala at basal third.

Genu with genuala near basal third.

e) *Gnathosoma* (fig. 1) : Cheliceral blades robust and moderately long, with a blunt butting tooth ; tricuspid cap elongate with dorso-lateral margin plain and ventrolateral margin a denticulate festoon ; galeal seta branched ; palpo-tibial claw with a long axial prong and four accessory teeth, not denticulate near base. Palpal formula : fPp = (P)-(P)-(B)B.B.G₅-E.B.B.B(B) and fT = 4B.

Palpo-tarsal setae conspicuously elongate and heavily branched.

f) *Synthetic identification formula* : (according to V.-G.'s chart, 1960)

SIF = 4B-B-5-2111.0000.

C. LOCALITY AND DATE : Rockville, Solano Co., California, 16 January 1965. A. J. BECK, collector.

D. HOST AND PARASITOPHYTE : *Antrozous pallidus pacificus* Mirriam (pallid bat) ; chest skin.

E. TYPE MATERIAL : Holotype No. 16165/1 in the United States National Museum, Washington, D.C. Thirty-nine paratypes numbered 16165/2 to/40 in the collections of : University of California at Davis, R. B. Loomis, Rocky Mountain Laboratory, and Hooper Foundation.

BIBLIOGRAPHY

- (1) VERCAMMEN-GRANDJEAN (P. H.) and WATKINS (S. G.), 1965. — " Revision of *Whar-tonia glenni* Brennan, 1962, an American bat parasite (Acarina : Leeuwen-Hoekii-dae) ", *Acarologia*, 7 : 492-509.
-