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Riedlinia (Trombigastia) libani, a new species indicating a relationship between the two subgenera *Trombigastia* and *Myotrombicula*

R. (*T.*) *libani,* UNE ESPÈCE NOUVELLE MARQUANT LA PARENTÉ ENTRE LES DEUX SOUS-GENRES *Trombigastia* ET *Myotrombicula*

By **P. H. VERCAMMEN-GRANDJEAN** **

(*George Williams Hooper Foundation for Medical Research, University of California, Medical Center, San Francisco, California 94122, U.S.A.*)

Résumé

Parmi plusieurs spécimens de Trombiculides de chauve-souris, en provenance de Beyrouth (Liban), l'un d'eux, récolté sur *Myotis blythi oxygnathus,* bien qu'incomplet (2 sensilles manquaient), attira l'attention de l'auteur. L'aspect du scutum — un peniscutum avec 2 extra-scutales PLs — présentant des « épaules » antérieures bien définies, semblaient devoir le rattacher au sous-genre *Myotrombicula.* Toutefois, d'autres caractères montraient avec évidence qu'il appartenait au sous-genre *Trombigastia.*

En raison de l'étroite ressemblance de cet Acare avec divers *Myotrombicula,* il semble que l'on puisse admettre l'existence d'un certain apparentement entre le complexe *Leptotrombidium* (contenant le sous-genre *Myotrombicula*) et le complexe *Riedlinia* (contenant le sous-genre *Trombigastia*).

Summary

Among several specimens of Trombiculids from bats of Beirut, Lebanon, one collected from *Myotis blythi orygnathus,* although incomplete (2 sensillae missing), attracted the author's attention. The scutal aspect — a peniscutum with 2 extra-scutal PLs — pre-

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sented well defined anterior « shoulders » and seemed to be related to the subgenus *Myotrombicula*. Nevertheless, other characters showed that it belonged to the subgenus *Trombigastia*.

The close resemblance of this Acarine to several *Myotrombicula* indicates the possible existence of a certain relationship between the *Leptotrobidium* complex (containing the subgenus *Myotrombicula*) and the *Riedlinia* complex (containing the subgenus *Trombigastia*).

In March 1962 I received from Dr. R. E. Lewis of the American University in Beirut, Lebanon, several specimens of Trombiculid mites collected from various bats. One of them particularly attracted my attention as it was from a *Myotis blythi oxygnathus*, a species of bat that I had already handled from different caves of Afghanistan (6) and one that was then found free of any Trombiculid mite.

The Trombiculid sent by Dr. Lewis was unfortunately a single specimen and its two sensillae were missing. The appearance of its scutum — a peniscutum with two extra-scutal PLs — showing definite anterior « shoulders » might have led to introducing the species into the subgenus *Myotrombicula* (5). But several other characters showed that it obviously belonged to the subgenus *Trombigastia* (8). Nevertheless, the strong resemblance of this mite to several *Myotrombicula* led to consideration of the existence of a certain relationship between the two main complexes, the *Leptotrombidium* complex (containing the subgenus *Myotrombicula*) and the *Riedlinia* complex (containing the subgenus *Trombigastia*) (9).

RIEDLINIA (TROMBIGASTIA) LIBANI n. sp.

A. Diagnosis :

Trombigastia with peniscutum having antero-lateral shoulders and a thickened antero-margin, much like *Trombigastia ascoschoengastia* (11) ; eyes consisting of a single lens on each side of the scutum ; fT = 7B ; galeala nude and cheliceral armature reduced to the usual tricuspid cap ; palpotibial claw trifurcate ; legs of seven segments ; no mastisetae on leg 3 ; and three genualae on leg 1. Synthetic Identification Formula, SIF = 7B.-N-3-3111-0000.

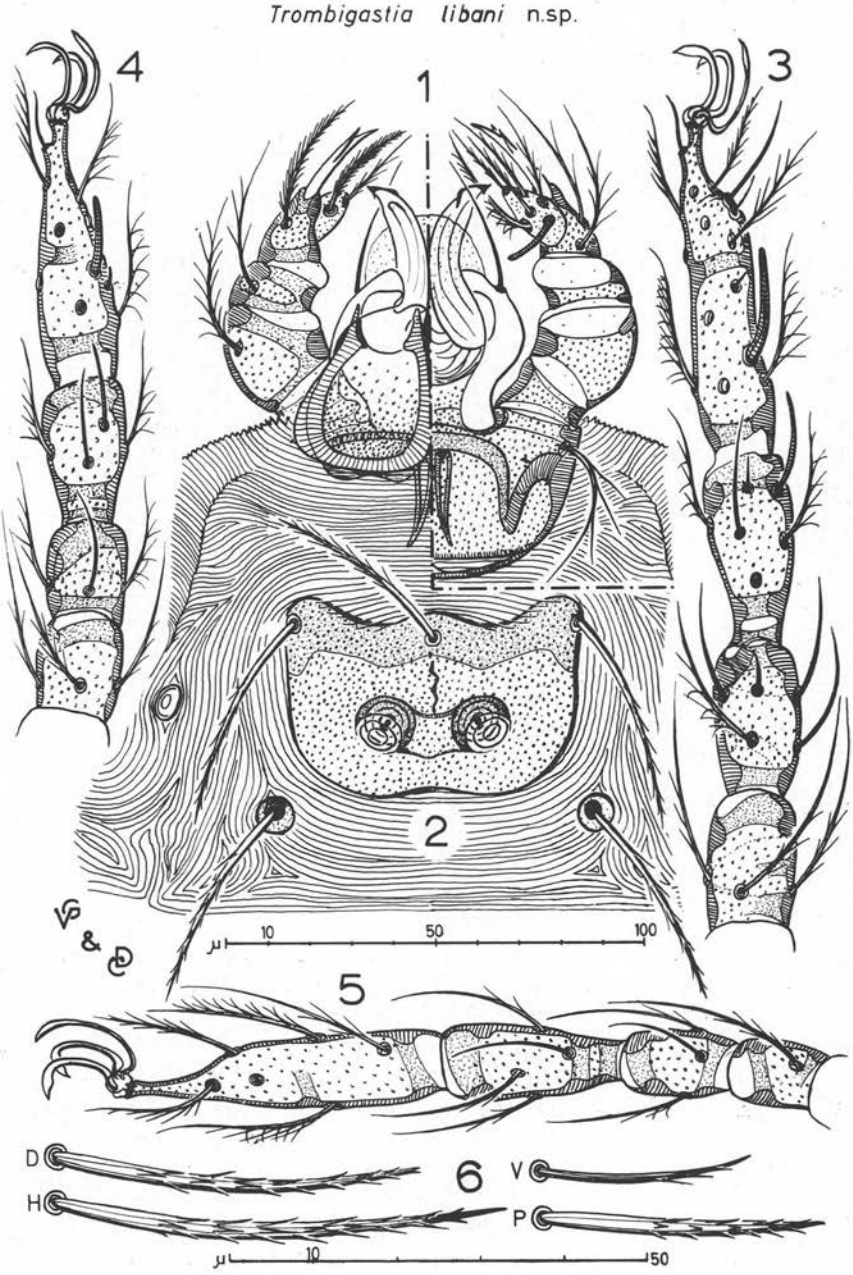
B. Description :

1) *Measurements :* of the holotype and a single specimen :

AW	PW*	SB	ASB	PSB	SD	AP	AM	AL	PL	S	H
67	71	22	30	18	48	—	47	52	53	—	53
		D	V		pa	pm		pp	Ip		
		44/33	26/30		294	244		270	808		

2) *Scutum :* (fig. 2). Peniscutum, with antero-lateral shoulders and thickened antero-margin, 10-16 μ wide ; densely punctate ; sensilla bases normally distant from

* PW = scutal width at the sensilla base level.


Trombigastia libani n.sp.
4
1
3
2
♀ & ♂
μ 10 50 100
5
D
H
6
V
P
μ 10 50

each other ; PLs on a small round sclerotized base (ø 9-10 µ) ; the five scutal setae are moderately barbed and nude about 15 µ from their base. PL ≥ AL > AM. Eyes, a single lens (ø 9 µ) on each side of the scutum on the sensilla base line.

3) *Idiosoma :* Figure-eight-shaped with very peculiar striations around the scutum (fig. 2). fD = 2H + 6.6.6.6.4.2. = 32 dorsal hairs. fV = 6.4.6.6,6,4,2 = 34 ventral hairs and NDV = 66. Uropore situated between rows 2 and 3 of the ventral hairs. Body setae as in fig. 6.

4) *Legs :* (figs. 3, 4 & 5). fsp = 777 ; fCx = 1.1.1 and fst = 2.2. ; tarsal bar formula, fBT = 2 *b* — b.sb — b.sb. Solenidion 1 thicker and about twice the length of solenidion 2. Subterminala, parasubterminala and pretarsalae present (ST, pST, PT and PT"+). Genualae and tibialae as follows : ga = 3, gm = 1, gp = 1 and tp = 1. Leg-index, Ip = 808 indicating a species of medium size. Claws and empodia apically spatulate.

5) *Gnathosoma :* (fig. 1). Chelostyle strong with usual tricuspid cap. Galeala nude ; palpus strong with slender trifurcate tibial claw. Strong tarsus with rather long basal solenidion, fT = 7 B. Palpal formula, fPp = (B) — (B) — (B). B. B.

C. Locality and date :

Cave near Amchite, Lebanon, 13 october 1960.

D. Host and parasitope :

Myotis blythi oxygnathus in skin.

E. Type material :

Holotype No. L-131060 in the Museum of Natural History (Smithsonian) in Washington, D.C., U.S.A.

Bibliographie

1. Audy (J. R.), Nadchatram (M.) and Vercammen-Grandjean (P. H.), 1963. — La « Néosomie », un phénomène inédit de néoformation en acarologie, allié à un cas remarquable de tachygénèse. *Bull. Acad. Roy. Belg.*, 5th Ser., 49, 1015-1027.
2. Oudemans (A. C.), 1914. — Acarologisch Aanteekeningen 53. *Ent. Ber. Amsterdam*, 4, 84-89.
3. Vercammen-Grandjean (P.-H.), 1960. — Introduction à un essai de classification rationnelle des larves de *Trombiculinae* Ewing 1944 (*Acarina-Trombiculidae*). *Acarologia*, 2, (4), 469-471.
4. —, 1963. — Révision du genre *Trombigastia*. Note préliminaire. (*Trombiculidae-Acarina*). *Acarologia*, 5, (1), p. 57.
5. —, 1963. — Le genre *Myotrombicula* Womersley et Heaslip 1943 est-il un mythe ? (*Trombiculidae-Acarina*). *Acarologia*, 5, (1), 58-60.

6. —, 1963. — Contribution à l'étude de la faune d'Afghanistan, 77. *Trombiculidae* de Chiroptères. *Acarologica,* 5, (4), 582-615.

7. —, 1964. — Un nouveau *Riedlinia* de Malaisie (*Trombiculidae*). *Acarologia,* 6, (1), 114-117.

8. —, 1964. — Le genre Trombigastia Vercammen-Grandjean et Brennan est un synonyme de *Riedlinia* Oudemans 1914. Révision du genre *Riedlinia* (*Acarina-Trombiculidae*). *Acarologia,* 6, (2), 312-323.

9. — and André (M.), 1966. — Introduction à la notion de « complexe » appliquée à la systématique des *Trombiculidae* (*Acarina*). *Acarologia,* 8, (1), 62-70.

10. —, and Brennan (J. M.), 1957. — Eight new chiggers from East Africa and a new genus, *Trombigastia* (*Acarina : Trombiculidae*). *Ann. Ent. Soc. Amer.,* 50, 484-496.

11. — and Fain (A.), 1958. — Les Trombiculidae parasites de Chiroptères. Révision du genre *Trombigastia.* Description d'un *Myotrombicula. Ann. Parasitol. Hum. Comp.* 33, 5-35.

12. — and Minter (M.), 1964. — A *Riedlinia sensu stricto* of Kenya (*Acarina-Trombiculidae*). *Acarologia,* 6, (3), 484-490.

13. — and Nadchatram (M.), 1965. — New considerations about the genus *Riedlinia* Oudemans, 1914. Reinstatement of the genus *Trombigastia* Vercammen-Grandiean and Brennan, 1957. Erection of a new genus, *Bishoplinia* (*Acarina : Trombiculidae*). *Acarologia,* 7 (supplement), 317-324.