

## Notes on the genus *Ljunghia* OUDEMANS, 1932 (Acari, Mesostigmata) associated with Mygalomorph spiders from the Oriental and Australian regions

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### Abstract

A new species, *Ljunghia minor* sp. n., (Acari, Mesostigmata) is described from the spider *Selenocosmia javanensis*, from a locality near Buitenzorg, Java. A new subgenus, *Metaljunghia* subg. n. is created to accommodate the Australian species of *Ljunghia* (type species: *L. rainbowi* DOMROW, 1975).  
**Key-words** : Acari, Association, Mygalomorph Spiders, Java, Australia.

### Résumé

*Ljunghia minor* sp. n. (Acari, Mesostigmata) est décrit de l'araignée *Selenocosmia javanensis*, provenant des environs de Buitenzorg, Java. Un nouveau sous-genre, *Metaljunghia* subg. n. est créé pour les espèces australiennes de *Ljunghia* (espèce type *L. rainbowi* DOMROW, 1975).

**Mots-clés** : Acariens, Association, Araignées mygalomorphes, Java, Australie.

### Introduction

The genus *Ljungia* Oudemans, 1932 (Laelapidae) has been described for a single species, *L. selenocosmiae* OUDEMANS, 1932, found on the mygalomorph spider *Selenocosmia javanensis* (Walkenaer) (Theraphosidae), at Deli, Sumatra, Indonesia.

Womersley (1956) described a second species, *L. pulleini* from female specimens found on *Selenocosmia stirlingi* Hogg, from South Australia.

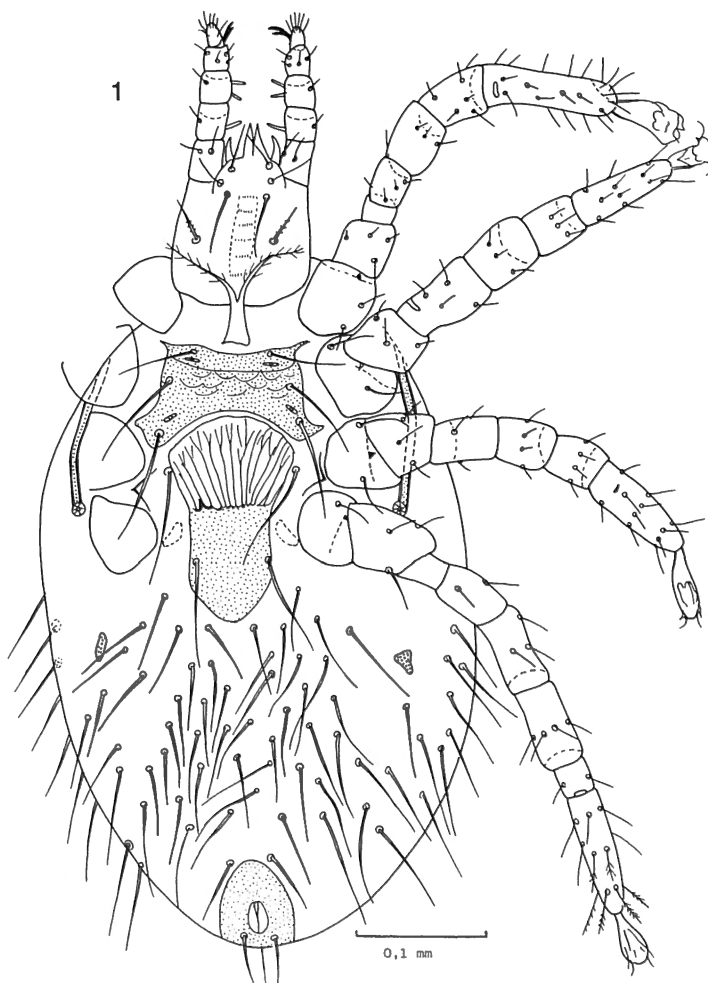
Domrow (1975) discovered new species, of both sexes, of *L. pulleini* from *Aname* sp. (Dipluridae) in South Australia and from an unidentified spider in Queensland. He redescribed and redepicted this species. In the same paper he described two new species from the same group of spiders, i.e. *L. hoggi* from *Aganippe subtristis* Pickard-Cambridge (Ctinizidae) from South Australia and *L. rainbowi* from an unidentified spider in South Australia. Domrow redefined the genus *Ljunghia* and placed it in the family Dermanyssidae sensu Evans and Till, 1969.

Recently, in examining spiders conserved in the Institut royal des Sciences naturelles in Brussels, we found a new species of *Ljunghia* from an Indonesian spider, *Selenocosmia javanensis*. This new species shows the same main characters as the type species, however it is clearly distinct

from it, in both sexes, by several important characters and we describe it herein as a new species. Moreover, it appears now that the three Australian species differ from the two Indonesian species by several characters which justify their separation in a new subgenus, *Metaljunghia*.

All the measurements used herein are in micrometers ( $\mu\text{m}$ ).

Fig. 1. – *Ljunghia (Ljunghia) minor* sp.n. Female, in ventral view.



Family **Laelapidae**  
 Genus **Ljunghia** OUDEMANS, 1932  
 Subgenus **Metaljunghia** subgen. nov.

*Definition :*

With the general characters of *Ljunghia*. It differs from it, in both sexes, by the smaller size of the dorsal shield which bears a smaller number of setae (not more than 25 pairs of setae) and the smaller number of setae on the opisthogaster. Moreover, in the female it differs mainly by the reduction of the fixed digit of the chelicera and the complete absence of the metasternal setae.

*Type species :*

*Ljunghia rainbowi* DOMROW, 1975

Key to the genus *Ljunghia* (adults)  
 (Partly from DOMROW, 1975)

1. *Female* : with long metasternal setae; cheliceral digits equal or subequal in length; dorsal shield bearing 32-36 pairs of setae.  
*Male* : podosomal part of sternigenital shield with 4 pairs of setae . . . . .  
*Ljunghia (Ljunghia)* OUDEMANS, 1932  
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*Female* : metasternal setae lacking; fixed digit of chelicera distinctly shorter than movable digit; dorsal shield with 15-25 pairs of setae.  
*Male* : podosomal part of sternigenital shield with 3 pairs of setae . . . . .  
*Ljunghia (Metaljunghia)* subg. nov.  
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2. *Female* : dorsal shield reaching the posterior margin of dorsum and bearing 32 pairs of setae; idiosoma 750 long and 505 wide; tectum denticulate, triangular, not bifid.  
*Male* : opisthosomal part of sternigenital shield bearing 7 setae . . . . .  
*L. (L.) selenocosmia* OUDEMANS, 1932

*Female* : dorsal shield reaching posteriorly the four fifth of the total length of the dorsum and bearing 36 pairs of setae; idiosoma 550-570 long and 345-366 wide; tectum denticulate and bifid or trifid.  
*Male* : opisthosomal part of sternigenital shield bearing one pair of setae . . . . .  
*L. (L.) minor* spec. nov.

3. Dorsal shield with 25 (17 + 8) pairs of setae; palps (trochanter to tibia) with 2-5-6-14 setae; genital setae on the shield; sternal shield wider than long with posterior margin slightly concave . . . . .  
*L. (M.) hoggi* DOMROW, 1975

Dorsal shield with 15-18 pairs of setae; number of setae on palps reduced; sternal shield either much wider than long with a strongly concave

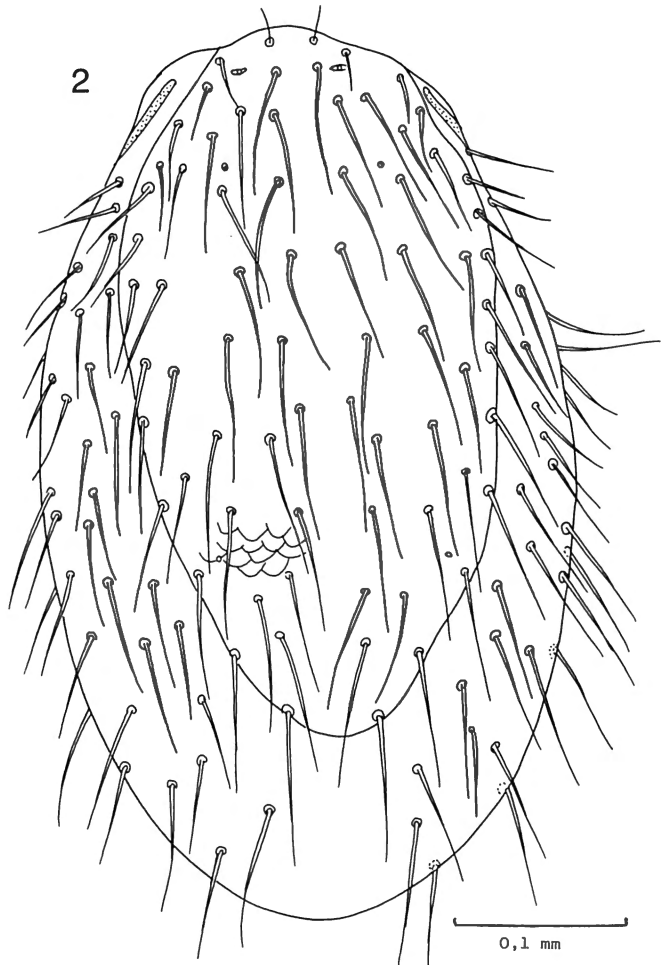
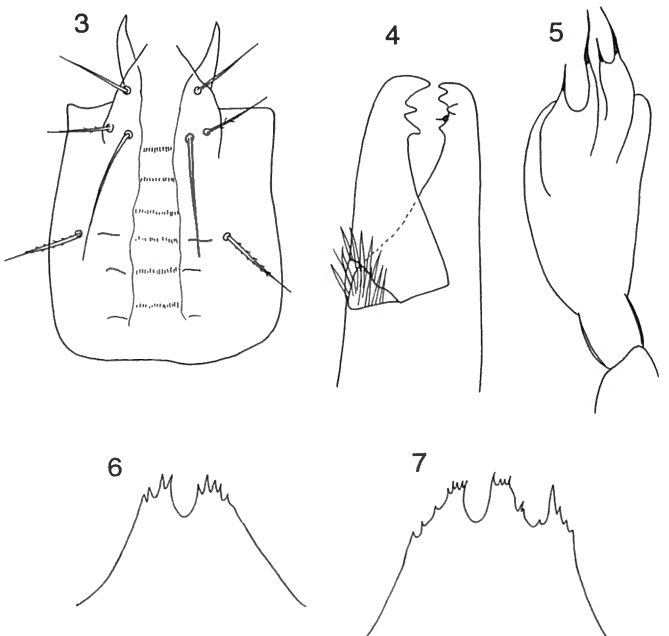


Fig. 2. — *Ljunghia (Ljunghia) minor* sp.n. *Female*, in dorsal view.

Figs. 3-7. — *Ljunghia (Ljunghia) minor* sp.n. *Female* : ventral surface of gnathosoma (3); cheliceral digits (4); J-shaped processes on the pulvillus (5); tectum, bifid (6) or trifid (7).



posterior margin or almost quadrangular with posterior margin slightly eroded . . . . . 4

4. Dorsal shield with 18 (15 + 3) pairs of setae; genital setae on genital shield; palps with 2-5-6-11 setae; sternal shield much wider than long and with posterior margin strongly concave; deutosternal denticles simple . . . . .  
 . . . . . *L. (M.) pulleini* WOMERSLEY, 1956

Dorsal shield with 15 (11 + 4) pairs of setae; genital setae off genital shield; palps with 2-5-5-14 setae; sternal shield almost square with posterior margin slightly excavated; deutosternal denticles multiple . . . *L. (M.) rainbowi* DOMROW, 1975

Genus *Ljunghia* OUDEMANS, 1932

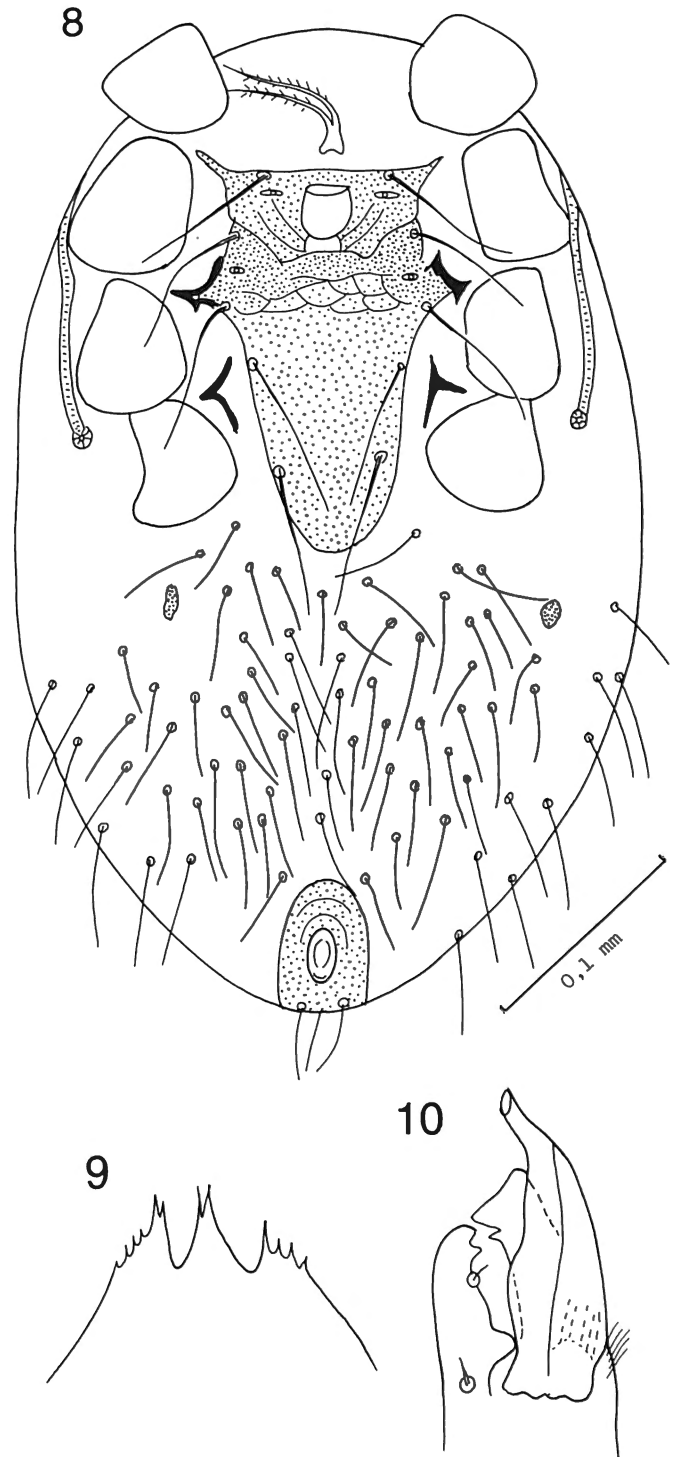
*Ljunghia (Ljunghia) minor* spec. nov.

*Female*, holotype (figs. 1-7): Idiosoma in holotype 555 long and 360 wide. Measurements in 3 paratypes: 570 × 366; 561 × 362; 550 × 360. Dorsal shield 466 long and 255 wide. The shield bears 35 to 36 pairs of setae (generally 22 podonotal and 14 opisthonotal); these setae measure 15 to 90 long. Soft cuticle of dorsum with about 35 to 36 pairs of setae 70 to 90 long. Venter: Sternal shield wider (120 wide at the level of second pair of sternal setae) than long (50 in midline). The anterior third of the shield is very poorly sclerotized. The shield bears 3 pairs of setae 65 to 90 long. Metasternal setae 100 long. Genital shield bearing one pair of setae 90 long. Anal shield oval, longer than wide (80 × 57) with 3 setae situated behind the anus. Soft cuticle of opisthogaster bearing 35 to 40 pairs of setae 50 to 90 long. There are 2 small metapodal plates. Peritreme narrow ending forwards at the level of the anterior margin of coxa I. *Gnathosoma*: Deutosternum with 6 rows of 10-21 denticles. Cornicles well developed, narrowed at apex. Cheliceral digits equal in length (35 long). A small pilus dentilis is present of fixed digit. Both digits bear 2 and 3 teeth respectively. Tectum bilobed or trilobed with numerous denticles. Number of palpal setae: trochanter 2; femur 5; genu 6; tibia 14. Legs long. Pulvilli II to IV ending into 2 very thin and sclerotized J-shaped appendages. Claws I-IV strongly modified.

*Male* (figs. 8-10): Idiosoma 450 long and 285 wide. Dorsal shield 390 long and 210 wide bearing 36 pairs of setae. Sternigenital shield with 5 pairs of setae. Soft cuticle of opisthogaster with about 40 pairs of setae. Tectum trilobed. Peritreme, and pulvilli and claws as in the female. Chelicerae as in *L. selenocosmia* OUDEMANS.

*Habitat*:

Holotype female and 9 females, 10 males and 11 nymphs, all paratypes, collected from the mygalomorph spider *Selenocosmia javanensis*, near Buitenzorg, Java. The mites were fixed at the bases of the legs I and II. The parasitized spider belongs to the collections of the Institut royal des



Figs. 8-10. — *Ljunghia (Ljunghia) minor* sp.n. Male: ventral view (8); tectum (9); cheliceral digits (10).

Sciences naturelles de Belgique. Holotype in this Institute. One male and one female, paratype, in the British Museum (Nat. Hist.).

*Remarks*

*L. minor* differs from *L. selenocosmia* by the following characters:

*In both sexes :*

1. Smaller size of the body and reduction of the dorsal shield which does not cover the posterior fifth of the dorsum.
2. Greater number of setae on the dorsal shield (36 pairs, for 32 pairs in *L. selenocosmia*).
3. Tectum bifid or trifid.
4. Claws of legs II-IV strongly modified (normal in *L. selenocosmia*).

*In the male :* by the presence of only 10 setae on sternigenital shield (for 15 setae in *L. selenocosmia*).

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**References**

- DOMROW, R., 1975. *Ljunghia* Oudemans (Acari, Dermanyssidae), a genus parasitic on mygalomorph spiders. *Records of the South Australian Museum*, 17 : 31-39.
- OUDEMANS, A.C., 1932. *Tijdschrift voor Entomologie*, 13, Suppl. 202-210.
- OUDEMANS, A.C. : unpublished plates n° 554 and 555 of *Ljunghia selenocosmia* Oudemans.
- WOMERSLEY, H., 1956. On some Acarina-Mesostigmata from Australia, New Zealand and New Guinea, *Journal of the Linnean Society of London, Zoology*, 42 : 505-599.

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