

## A new species of *Ljunghia* OUDEMANS, 1932 (Acari, Laelapidae) from a New-Caledonian Spider.

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### Summary

*Ljunghia* (*Metaljunghia*) *novaecaledoniae* n.sp. (Acari, Laelapidae) is described from a New-Caledonian spider, *Barychelus* sp. (Barychelidae).

### Résumé

*Ljunghia* (*Metaljunghia*) *novaecaledoniae* n.sp. (Acari, Laelapidae) est décrit d'une araignée *Barychelus* sp. (Barychelidae), de Nouvelle Calédonie.

### Introduction

The subgenus *Metaljunghia* FAIN, 1989 (type species *Ljunghia rainbowi* DOMROW, 1975) included until now five species, all described from Mygalomorph spiders. Among them four were described from Australia and one from Central Africa.

In the present paper I describe a new species from a New-Caledonian spider, *Barychelus* sp. (Barychelidae). I also record the discovery of *Ljunghia* (*Metaljunghia*) *pulleinei* WOMERSLEY, 1956 from a new host, *Encyocrypta* sp. (Barychelidae) and a new locality (New Caledonia).

All the measurements are in micrometers.

#### 1. *Ljunghia* (*Metaljunghia*) *novaecaledoniae* nov. spec.

*Female* : (holotype) (figs 1-5) :

Length and maximum width of idiosoma in the holotype 615 × 390, in three paratypes 528 × 295, 590 × 360 and 630 × 365. *Dorsum* : Length and width of the shield in holotype 498 × 285; in three paratypes 471 × 288, 480 × 280 and 484 × 282. This shield is strongly attenuated in its posterior half, it bears a poorly developed network of lines in its posterior part and 24 pairs of setae, of which twenty pairs are in its podonotal part

and four pairs are in its opisthonotal part. In the holotype *j*2 is lacking on one side. Length of setae : *j*1 24, *j*2 93, *j*3 120, *j*4 123, *j*5 105, *j*6 123, *z*1 33, *z*2 90, *z*3 123, *z*4 75, *z*5 and *z*6 120, *s*1 75, *s*2 90, *s*3 120, *s*4 and *s*5 135, *r*2 95, *r*3 120, *Z*2 135, *Z*3 120, *Z*4 and *Z*5 105. Some of these setae are very finely barbed. Soft cuticle with 15-16 pairs of setae similar to the scutal setae. Tectum long, triangular, with barbed edges. Peritreme narrow, reaching the posterior part of coxa I. *Venter* : Sternal shield without a pattern of lines, it is wider (120 wide at level of setae *St*2) than long in midline (69). Sternal setae I-III 50-60-60 long. Metasternal setae absent in holotype and in two paratypes, in two paratypes only one seta is present and in three paratypes there are two setae. Genital shield slightly expanded in its posterior half where it is 69 wide; genital setae lacking in all specimens. Soft cuticle of opisthogaster with 10 pairs of setae 50-65 long, some of them slightly barbed. Anal shield oval, with faint striations. Paired anal setae barbed and longer (55) than the postero-median seta (36 long). *Gnathosoma* : Deutosternum with six rows of denticles, each row with 5 to 16 denticles (in holotype : 15-15-11-10-10-7). Cornicles thick and with a slight apical cleft. Chelicerae : both digits straight; fixed digit 18 long, with rounded apex and bearing a short pilus dentilis; movable digit 52 long, cylindroconical, with a poorly distinct preapical tooth. Chaetotaxy of palps (trochanter to tibia) : 2(1) - 5 - 10 - 13. Legs devoid of spines or spurs. Claws modified (very short and poorly sclerotized).

*Male* (figs 6-8) :

Length and maximum width of idiosoma 425 × 265, of dorsal shield 375 × 240. Dorsal shield distinctly attenuated posteriorly but less than in the female. It bears a well developed network of lines and 21 pairs of setae (17 in anterior part and 4 in posterior part). Soft cuticle as in female. *Venter* : Sternigenital shield 192 long and 102 wide (at level of setae *St* II), with three pairs of setae Opisthogaster with 10 pairs of setae 33-50 long. Anal shield oval, with paired setae situated at level of

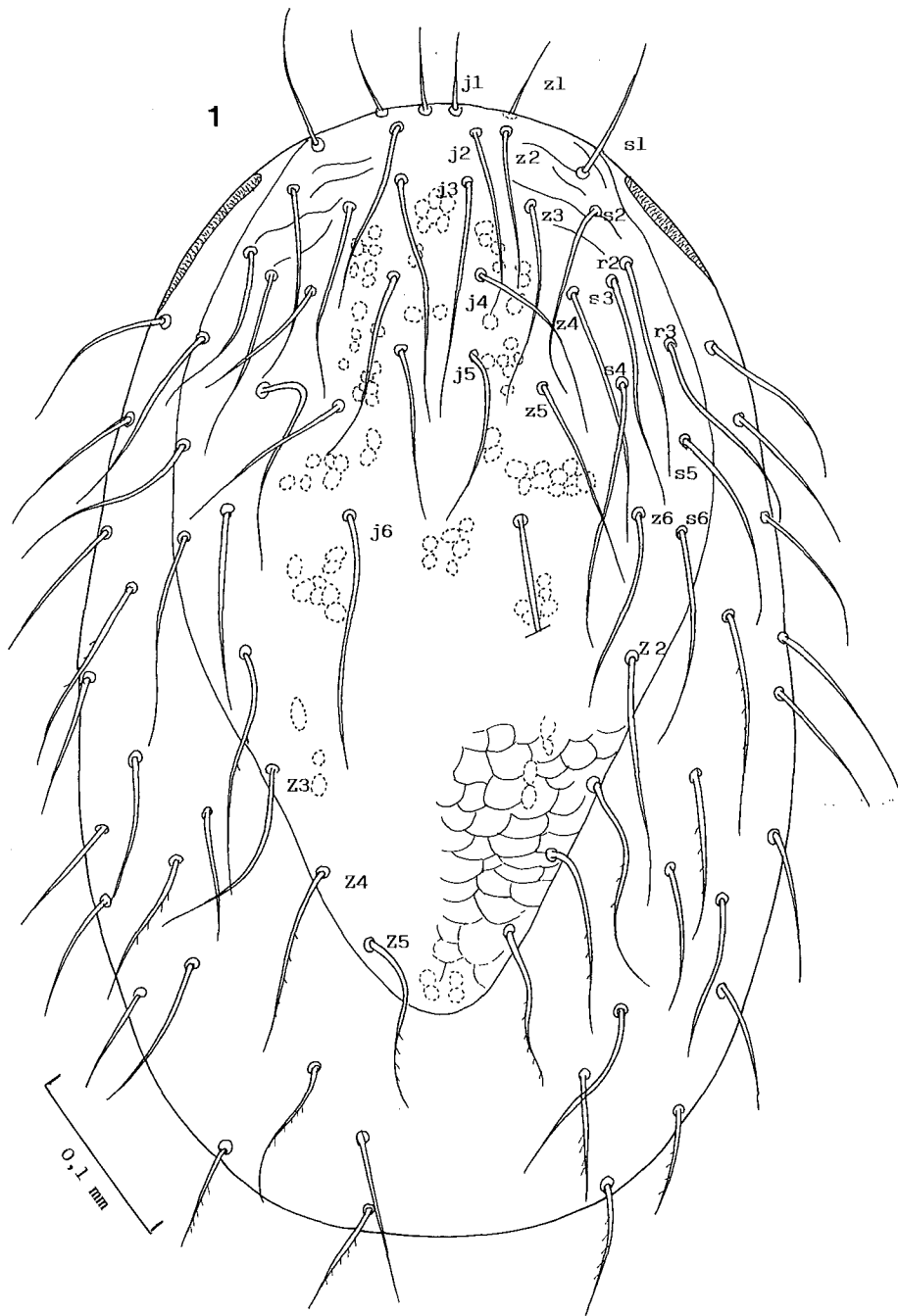


Fig. 1: *Ljunghia* (*Metaljunghia*) *novaecaledoniae* n.sp. Female in dorsal view.

the middle of the anus, the posterior seta shorter. Chelicerae: Fixed digit very short, thick and cylindricoconical, with a short pilus dentilis. Spermatodactyl much longer than movable digit and strongly inflated apically.

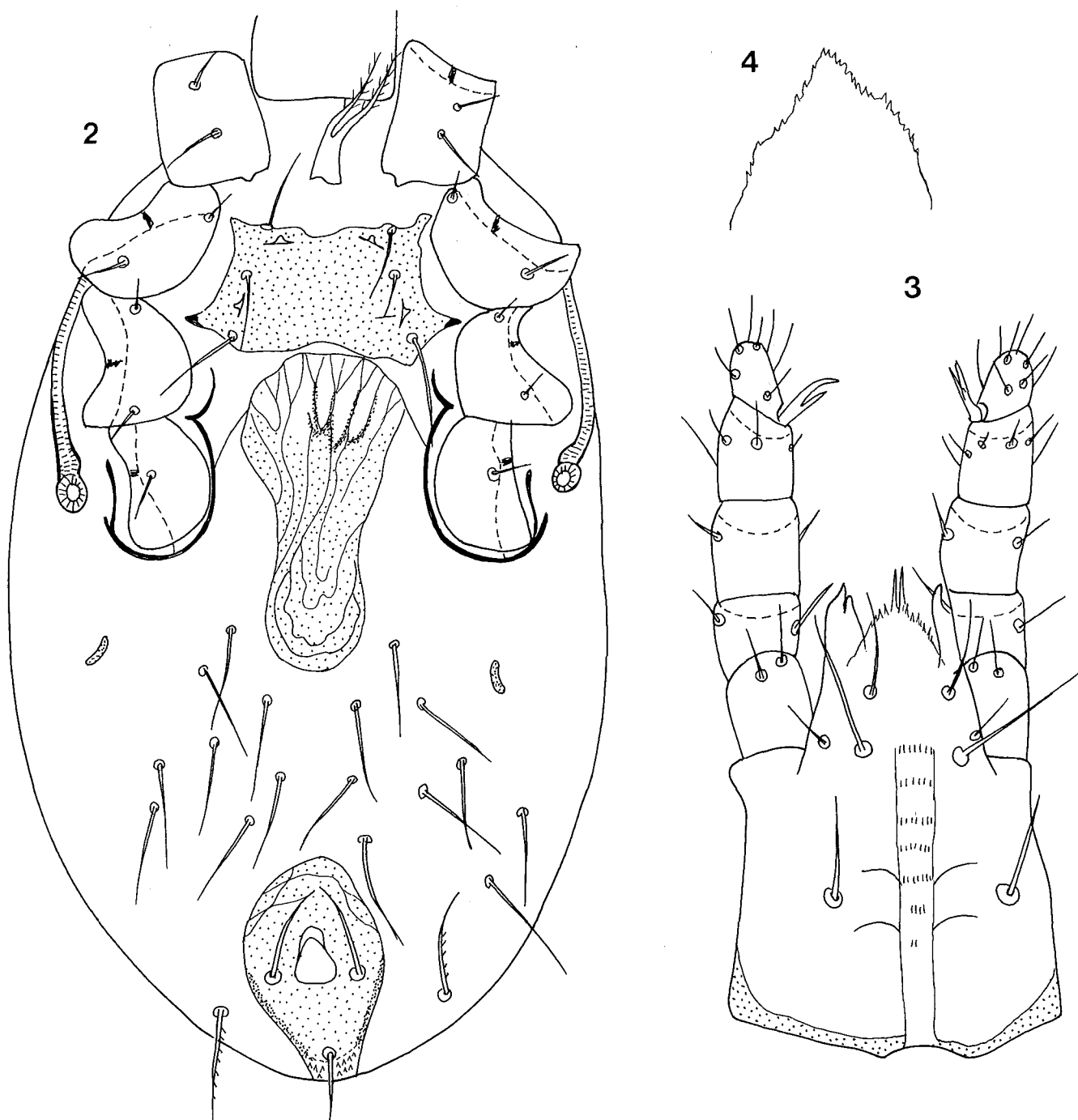
*Deutonymph* (figs 9-10):

Length and width of idiosoma  $450 \times 285$ , of dorsal shield  $396 \times 205$ . The shield bears a well-developed network of lines and carries 18-19 pairs of setae of which 15 (16) are in anterior half and 3 (4) are in posterior half. These setae are similar to those of the

female and male. Peritreme as in female. *Venter*: Sternal plate 206 long and 94 wide (maximum width) with generally three pairs of setae, rarely with a fourth shorter seta on one side. There are 10 pairs of opisthogastric setae. Chelicerae as in female but digits slightly shorter.

*Protonymph* (figs 11-13):

The protonymphal stage was previously unknown in the genus *Ljunghia*. My specimen is 360 long and 262 wide. The dorsum bears two separated shields, the anterior carries 11 pairs of long setae. Posterior shield semilunar



Figs 2-4: *Ljunghia* (*Metaljunghia*) *novaecaledoniae* n.sp. Female: in ventral view (2); gnathosoma in ventral view (3); tectum (4).

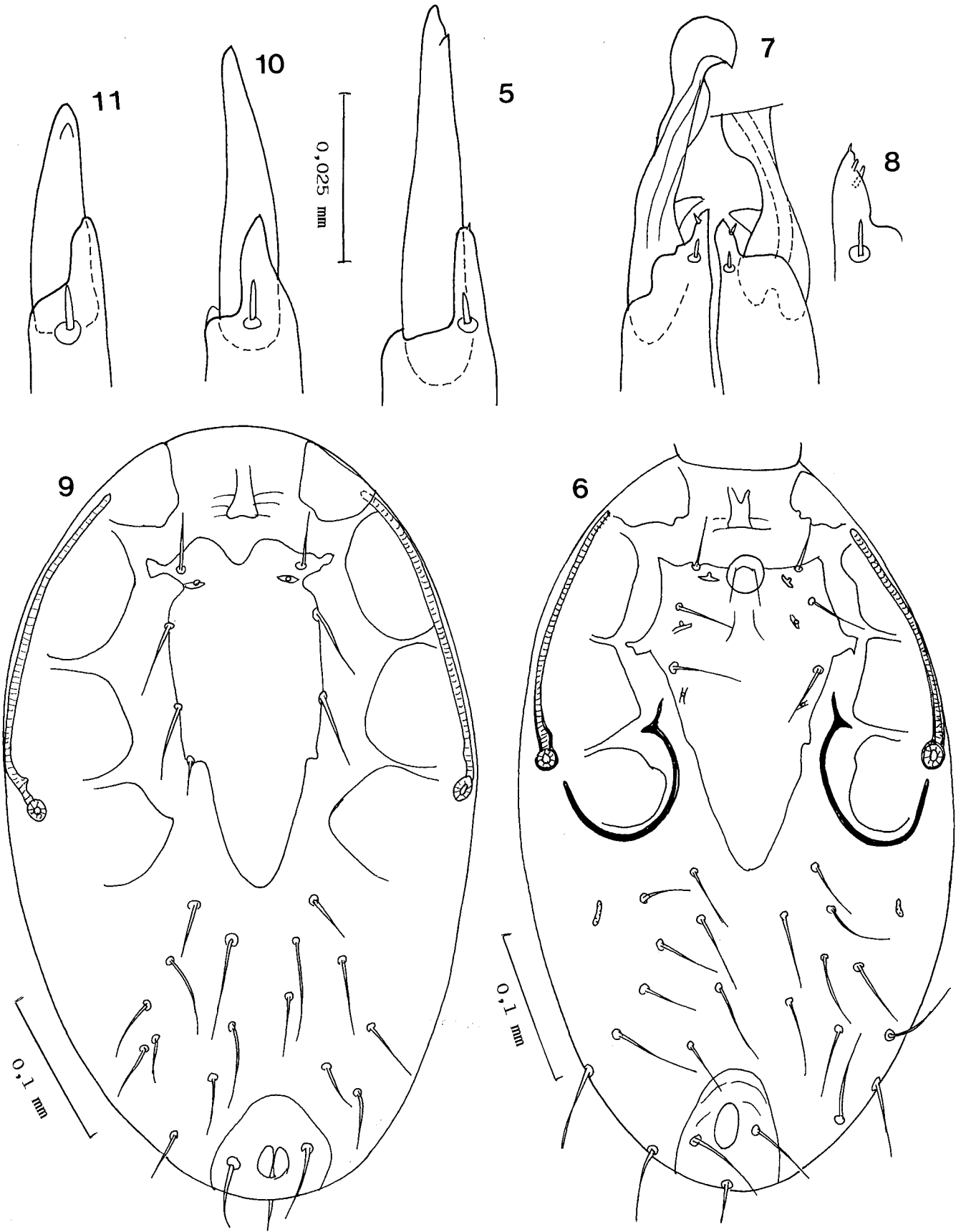
with a strong scaly pattern and bearing three setae. Sternal shield broad with three pairs of setae. Soft cuticle of opisthogaster with nine thin rather long setae. Peritreme very short, reaching the middle of coxa III. Chelicerae as in deutonymph but with slightly shorter digits.

*Host and locality* :

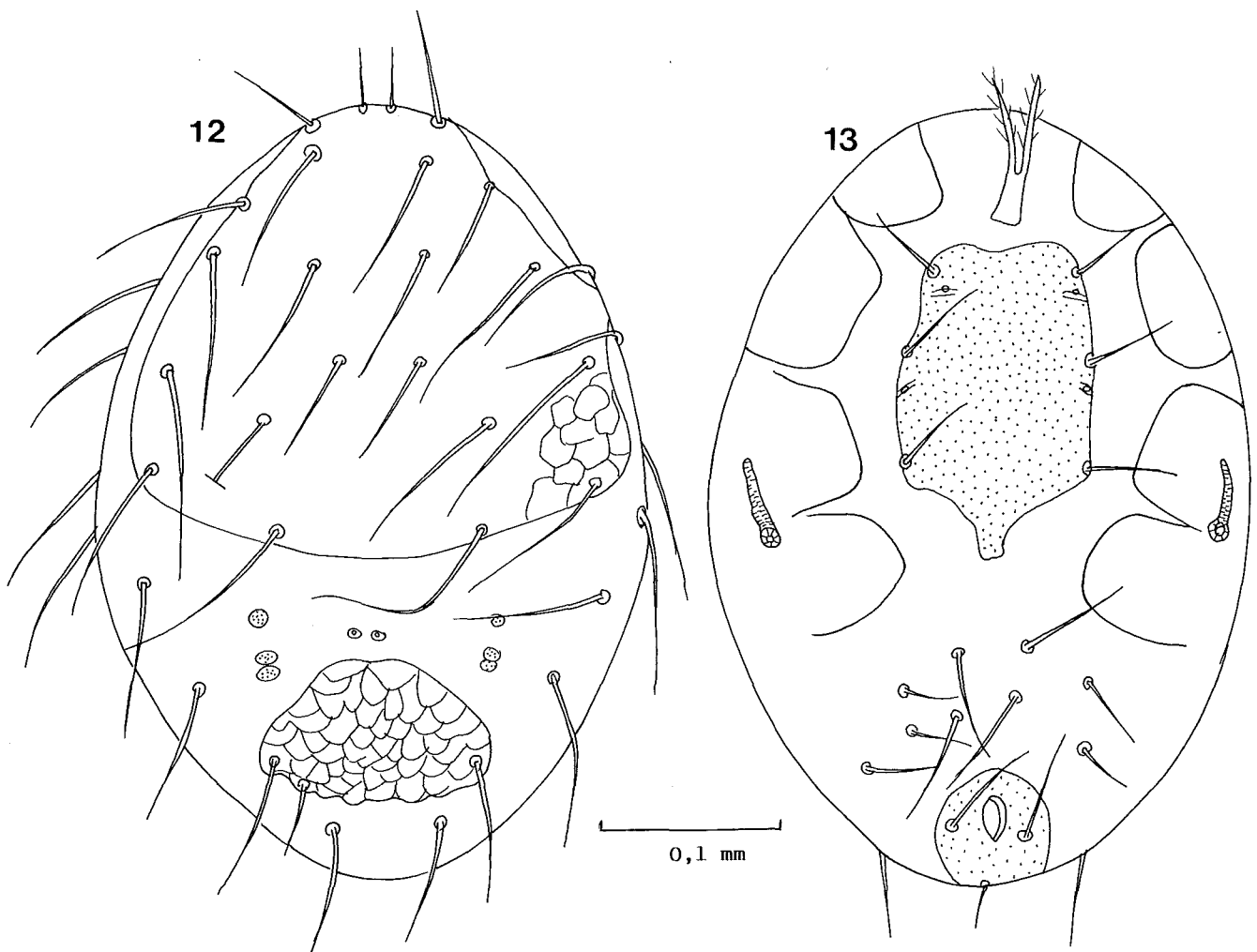
Holotype female from a spider, *Barychelus* sp. (*Barychelidae*), from Riviere Bleue, New Caledonia. Coll.

Pablo Goloboff, Robert Raven and Norman Platnick, 4 September 1990 (GCE 921-0321-4).

Paratypes: 7 females, 1 male, 4 deutonymphs and 1 protonymph, with the same data as holotype. Holotype, 1 male and 1 nymph in the Queensland Museum. One female paratype in The British Museum (Natural History). One female paratype in the United States National Museum. One female paratype in the Cornell University Insect Collection. Other specimens in the Institut royal des Sciences naturelles de Belgique, Brussels.



Figs 5-11: *Ljunghia (Metaljunghia) novaeacaledoniae* n.sp. Female: Cheliceral digits (5). Male: in ventral view (6); chelicerae (7-8). Deutonymph: ventral view (9) and cheliceral digits (10). Protonymph: cheliceral digits (11).



Figs 12-13 : *Ljunghia (Metaljunghia) novaecaledoniae* n.sp. Protonymph : in dorsal (12) and ventral view (13).

*Remarks :*

This new species differs from the other species of the subgenus *Metaljunghia* by the complete absence (in all females) of the genital setae. In *L. (M.) rainbowi* DOMROW, 1975 the genital shield is devoid of setae but the genital setae are situated on the soft cuticle at both sides of the shield. Moreover *L. novaecaledoniae* differs from *L. rainbowi* by the shape of the sternal shield, much wider than long, and the aspect of the chaetotaxy of the dorsal shield with 24 pairs of setae instead of only 15 pairs in *L. rainbowi*.

In *L. (M.) hoggi* DOMROW, 1975, the genital setae may be situated either on the shield or close to it on the soft cuticle. Our new species differs from *L. hoggi* by the complete absence of the genital setae and also by the presence of only three pairs of setae on the opisthonotal part of the dorsal shield (*J4* being lacking), by the strongly tapering aspect of the scutum, the smaller size of that shield (less than 500 long instead of 585-615 in *hoggi*) and the much greater inequality of the cheliceral digits (fixed and movable digits 27 and 45 long respectively in *hoggi*).

From *L. (M.) pulleinei* WOMERSLEY, 1956, *L. (M.) aname* FAIN, 1991 and *L. (M.) africana* FAIN (in press) *L. novaecaledoniae* differs in the female by the tapering aspect of the scutum, the absence of genital setae and the aspect of the cheliceral digits (digits straight and not curved as in these species).

**2. *Ljunghia (Metaljunghia) pulleinei***  
WOMERSLEY, 1956

This species is represented in my collection only by deutonymphs. I give herein a new description of this stage.

*Deutonymph* (figs 14-17) :

The specimen described herein is strongly flattened, it is 690 long and 450 wide (idiosoma). The dorsal shield is 480 long and 270 wide, it bears a distinct pattern of lines and carries 18 pairs of unequal setae (15 in anterior part and 3 in posterior part). These setae measure : *j1* to *j6* 30-43-145-130-48-108; *z1* to *z3* 35-150-160; *z5*

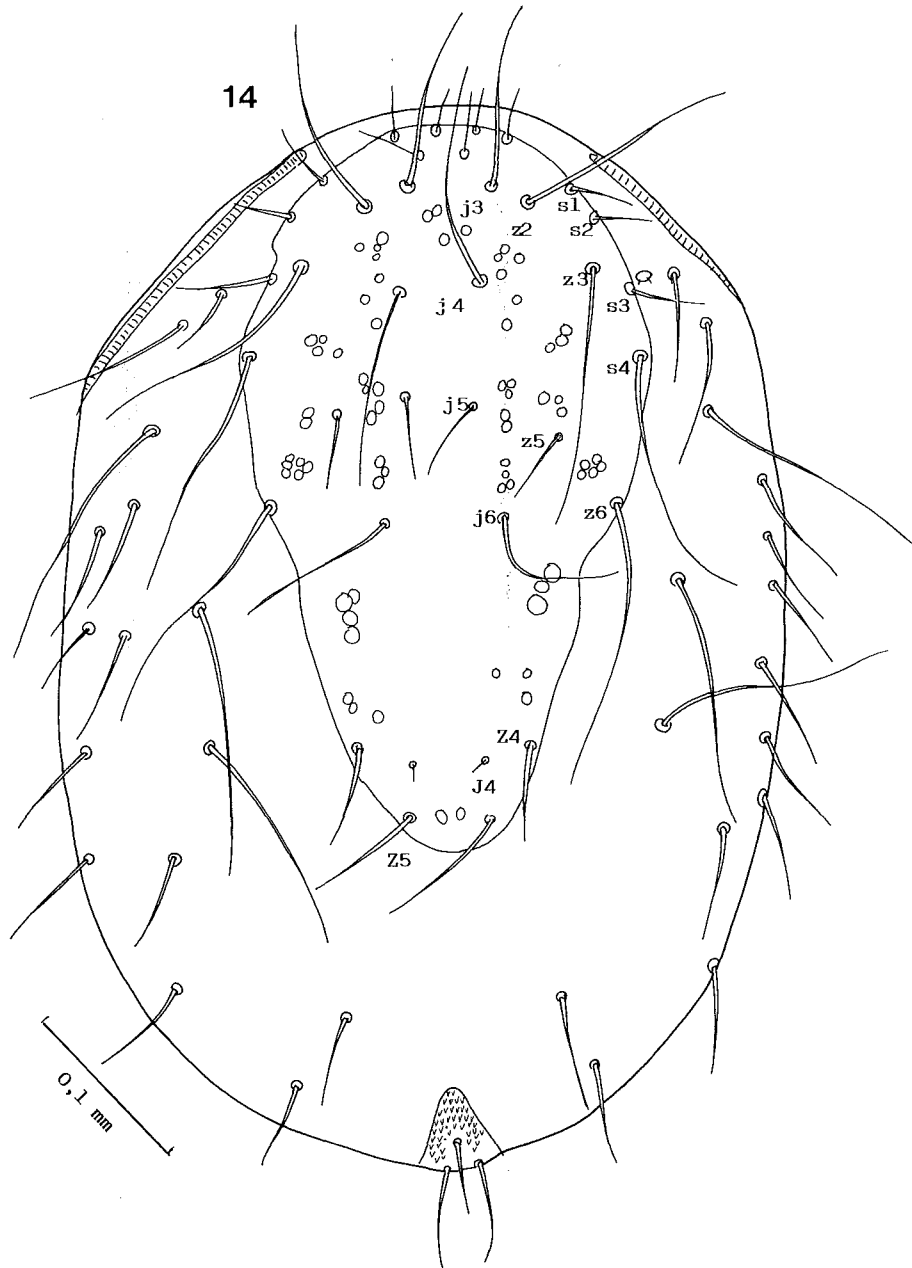


Fig. 14: *Ljunghia* (*Metaljunghia*) *pulleinei* WOMERSLEY. Deutonymph in dorsal view.

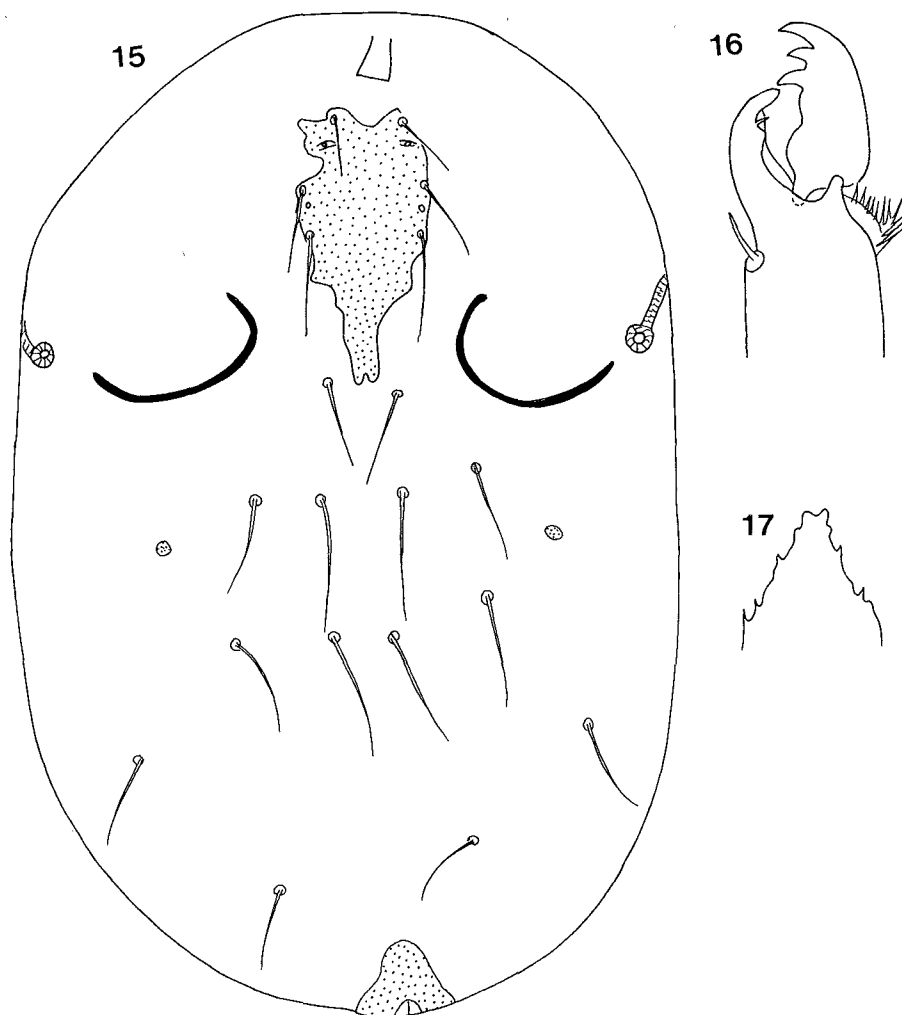
36; z6 175 (z4 is lacking); s1 and s2 40; s3 60; s4 175; J4 12; Z4 57; Z5 93. Some of these setae are finely barbed. Soft cuticle with 15 pairs of setae 40 to 180 long. Peritreme reaching middle of coxa I. Venter: Sternal shield with irregular margins, abruptly narrowed in posterior third and bearing three pairs of setae 40-70 long. Soft cuticle with seven pairs of setae 60-100 long. Anal shield strongly narrowed in its anterior part. Paired anal setae 60 long, situated slightly behind anus. Legs: Claws strongly modified. Gnathosoma: Deutosternum with a single longitudinal file of 6 denticles. Total length of chelicera 180; both digits curved, fixed digit 18 long with a short pilus dentilis, movable digit 27 long with apex attenuated and bearing in addition 2 ventral teeth. Palps (trochanter to tibia) with 2-5-6-14 setae.

#### Host and locality:

Ten deutonymphs from a spider, *Encyocrypta* sp. (Barychelidae), from Mandjelia, New Caledonia. Coll. Pablo Goloboff, Robert Raven and Norman Platnick, 12 September 1990 (GCE n° 91-0321-3).

#### Acknowledgments

Pablo Goloboff of Cornell University, Ithaca, New York, U.S.A., Robert Raven of the Queensland Museum, South Brisbane, Australia, and Norman Platnick of the American Museum of Natural History, New York, New York, U.S.A., collected the spiders bearing these mites. I thank George Eickwort of Cornell University for



Figs 15-17 : *Ljunghia* (*Metaljunghia*) *pulleinei* WOMERSLEY. *Deutonymph* in ventral view (15); cheliceral digits (16); tectum (17).

making the mites available for description. The spiders were collected during an expedition organized by N. Platnick and R. Raven and sponsored by a grant from the U.S. National Geographic Society.

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