

Two new species of *Lorryia* (Acari: Tydeidae) from Greece

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(With 17 Figures)

Abstract

Two new species of tydeid mites of the subfamily Tydeinae, *Lorryia paraobliqua* sp. n. and *L. alykaenae* sp. n. from Greece are described and illustrated.

Introduction

During studies carried out by the authors on the family Tydeidae in Greece, the genus *Lorryia* Oudemans (sensu Kaźmierski 1989) was found to be represented by 20 species, five of which were proved to be new to science while twelve were new records for Greece (Panou and Emmanouel 1995a-d; in press; Panou and Kaźmierski 1996). In the present paper two more new species of *Lorryia* are described and illustrated.

For the description, the setal nomenclature of the dorsum is based on Lindquist (1985) for the propodosoma and on Kaźmierski (1989) for the hysterosoma, of the venter on Grandjean (1935, 1938, 1957) as modified by Marshall (1970) and of lyrifissures, appendages and palps on André (1981a, b). All measurements are given in micrometers (μm).

Description of new species

Lorryia paraobliqua sp. n.

(Figs 1-9)

FEMALE (Figs 1-8) - Dimensions of holotype: length of idiosoma 282, breadth 184.

Dorsum (Fig. 1) - Without any reticulate pattern. Striation type "*Paralorryia*" sensu Baker (1965). Striae with "Roman-I" shaped formations (Figs 7, 8) which in lateral view appear to be small elevations as shown in Fig. 6. Dorsal propodosomal setae as well as c_1 , c_2 , d_1 , e_1 rodlike, while opisthosomal setae f_1 , f_2 , h_1 , h_2 , ps_1 more expanded distally, clublike (Figs 1, 7, 8). All idiosomal setae nude; sensory setae simple and slender. Measurements as follows: v_2 17, sc_1 18, sc_2 18, c_1 15, c_2 17, d_1 17, e_1 17, f_1 18, f_2 19, h_1 20, h_2 21, ps_1 18, S 40. Lyrifissura *ia* lies posteromedially to c_1 - c_2 and *im* anterolaterally to e_1 .

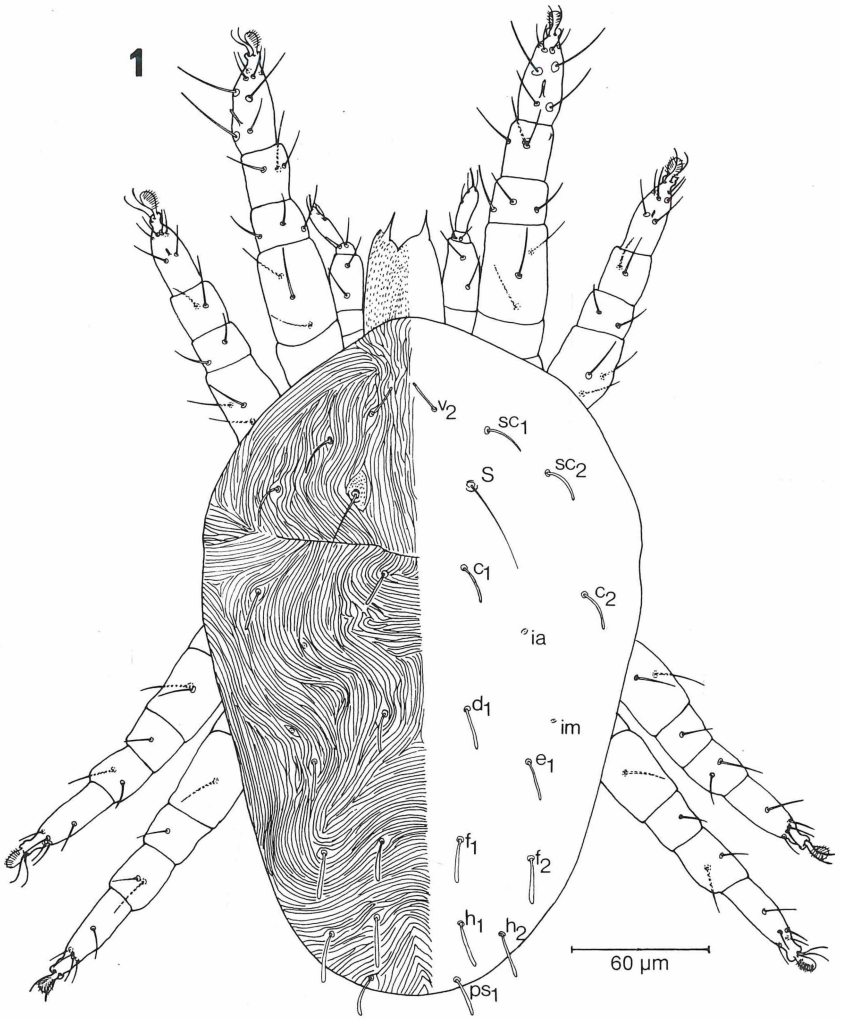


Fig. 1. *Lorryia paraobliqua* sp. n., female: dorsum.

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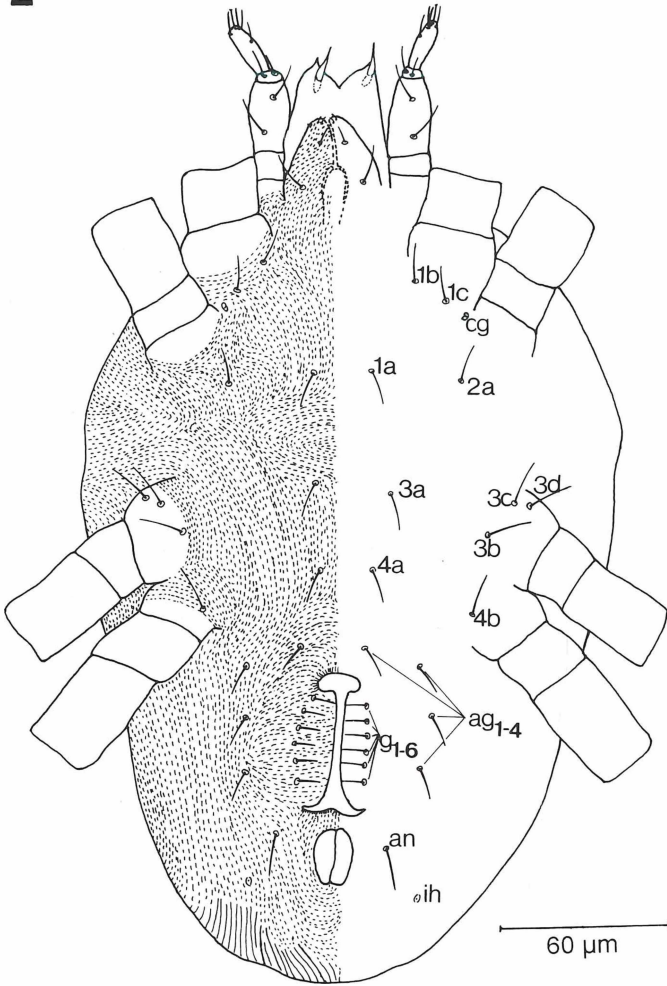


Fig. 2. *Lorryia paraobliqua* sp. n., female: venter.

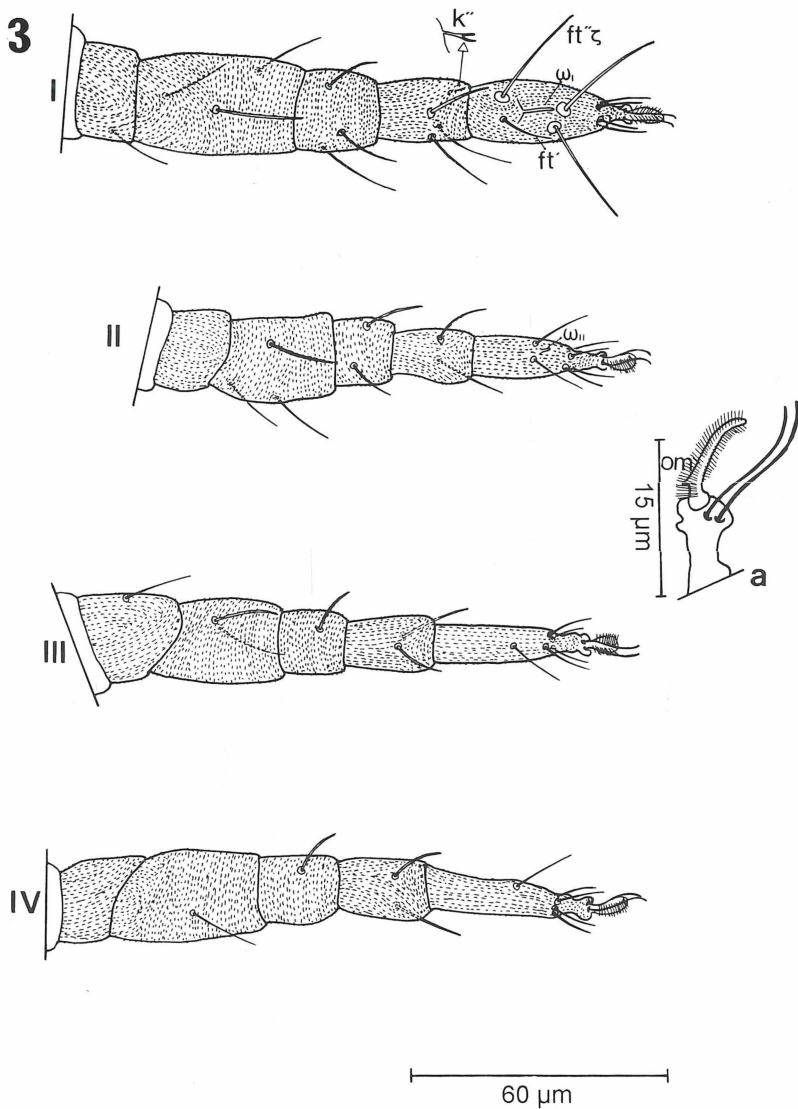
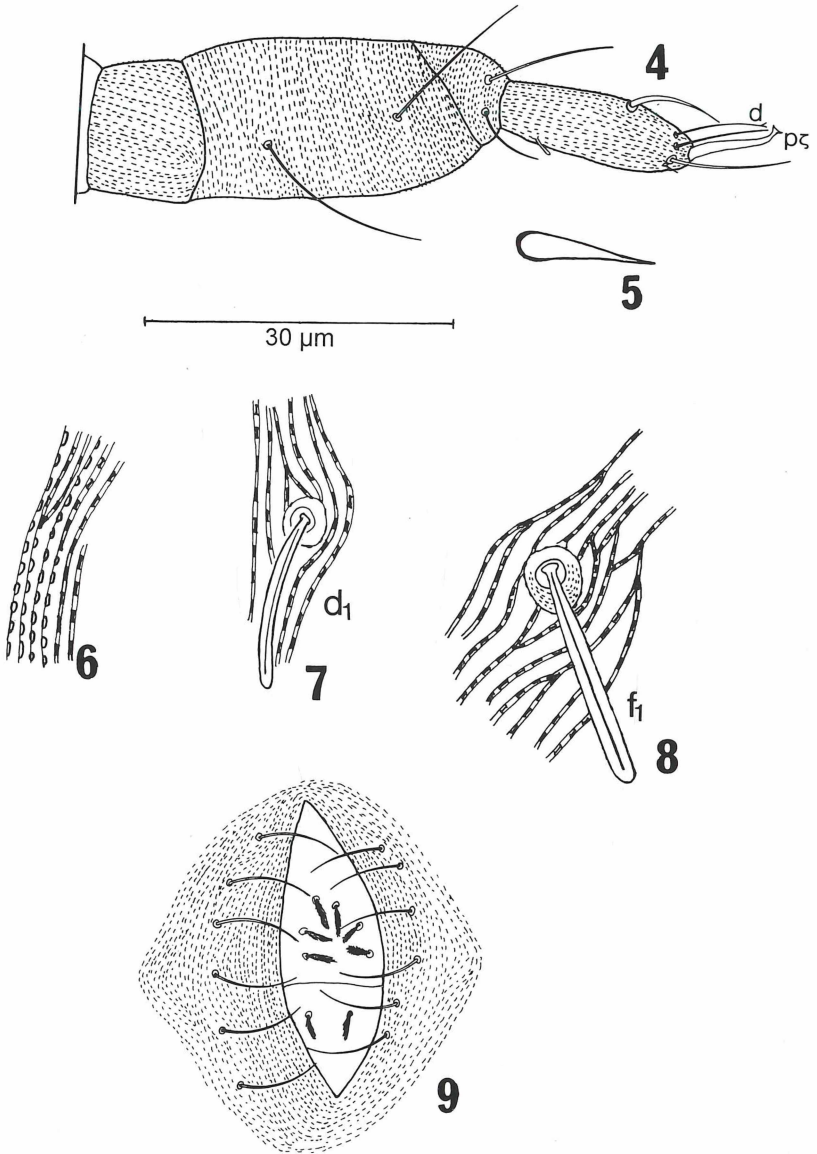


Fig. 3. *Lorryia paraobliqua* sp. n., female: legs I-IV (a - apotele).



Figs 4-9. *Lorryia paraobliqua* sp. n. (4-8: female): 4 - palp, 5 - cheliceral stylet, 6 - detail of striation pattern, 7 - dorsal body seta d_1 , 8 - dorsal body seta f_1 , 9 (male) - genital area.

V e n t e r (Fig. 2) - Covered with fine striation; striae between 3a and 4a longitudinal. Coxal gland (*cg*) on coxa I behind seta 1c, 8-shaped. Epimeral formulae (3-1-4-2). Genital organotaxy (0-6-4).

G n a t h o s o m a - Protruding and visible from above. Cheliceral stylets shorter than palptarsus (Figs 4, 5). Palp with setal formula 6 (1)-2-2-0 (solenidion $\bar{\omega}$ in parenthesis). Eupathidium $p\zeta$ straight, getting narrowed towards the T-shaped tip (Fig. 4). Seta *d* on palptarsus forked at the end. Measurements as follows: cheliceral stylets 12, palptarsus 19, eupathidium 8.

L e g s (Fig. 3) - Measurements of legs (from the base of the proximal setae to the end of pretarsus): leg I 166, II 144, III 144, IV 157. Chaetotaxy of legs typical for the genus (sensu Kazmierski 1989). Empodial claws (*om*) present but rather small (Fig. 3). Famulus k'' on tibia I forked.

Dorsal leg setae slightly rough. Solenidion $\bar{\omega}_I$ rodlike, 6 long; $\bar{\omega}_{II}$ small, 2 long. Length of tarsus I 40, breadth 17; ft' 14, $ft''\zeta$ 28.

MALE (Fig. 9). All features similar to female except genital area. Genital organotaxy (4-6-4). Length of body 236-251, breadth 153-164.

TYPE MATERIAL - The holotype female and allotype male, on *Prunus cerasus* L., Lambiri, Co. Aetoloakarnania, Greece, 12.06.1994, are deposited in the Zoological Museum Hamburg (Reg. No. A38/96). One paratype male (on *Cornus* sp., Souli, Co. Thesprotia, 22.05.1994) in the Acari collection, Laboratory of Agricultural Zoology & Entomology, Agricultural University of Athens, Greece. All specimens are collected by N.G. Emmanouel.

ETYMOLOGY - The new species is named *paraobliqua* (παρα = para = alike), because of the similarity with *Lorryia obliqua* (Kuznetsov, 1973).

R e m a r k s

This species is similar to *Lorryia obliqua* (Kuznetsov, 1973). The main differences between the two species are given below.

<i>Lorryia obliqua</i> (Kuznetsov)	<i>Lorryia paraobliqua</i> sp. n.
1. Dorsal idiosomal setae slightly serrate	1. Dorsal idiosomal setae nude
2. Dorsal propodosomal setae sharply ended	2. Dorsal propodosomal setae rodlike
3. Opisthosomal setae rodlike	3. Opisthosomal setae clublike
4. Sensory setae slightly serrate	4. Sensory setae nude
5. Cheliceral stylets equal to length of palptarsus	5. Cheliceral stylets shorter than palptarsus

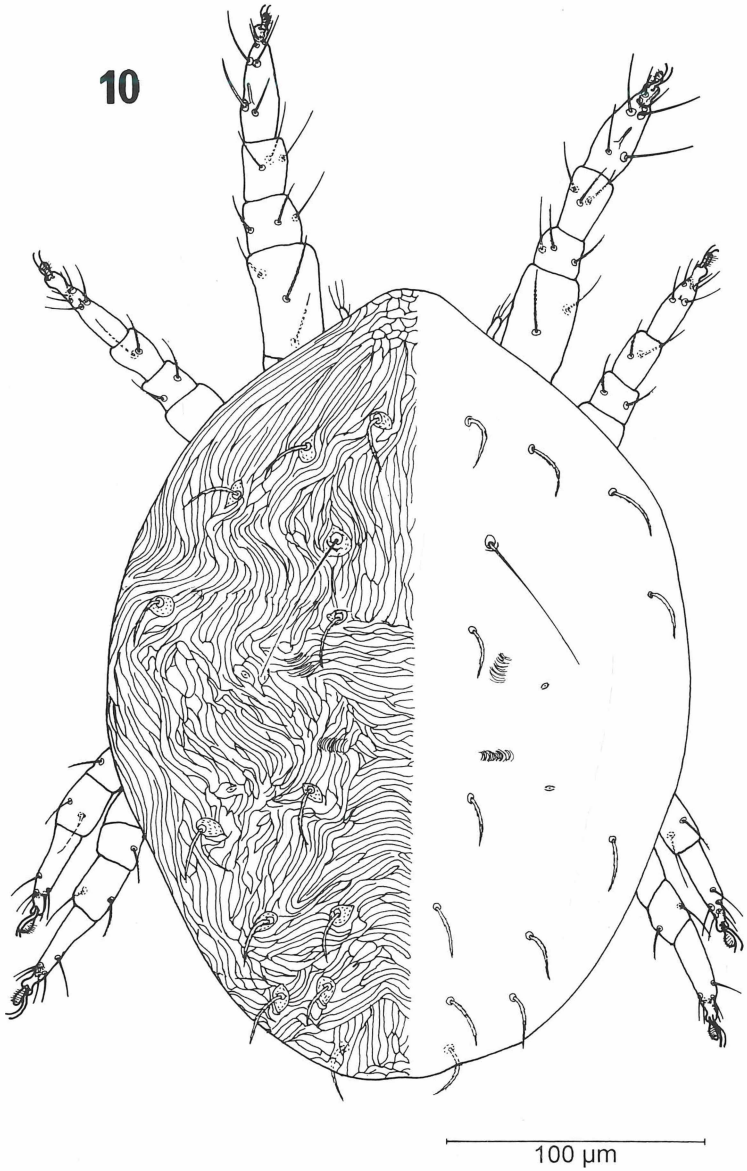


Fig. 10. *Lorryia alykaenae* sp. n., female: dorsum.

Lorryia alykaenae sp. n.
(Figs 10-17)

FEMALE (Figs 10-16) - Dimensions of holotype: length of idiosoma 292, breadth 216.

Dorsum (Fig. 10) - A distinct reticulate area is present in the front of propodosoma; rest of idiosoma not densely striated and forming small, more or less reticulated areas in the vicinity of d_1 , e_1 , f_2 , h_1 and h_2 . Striae with "Roman-I" shaped formations which in lateral view appear to be small elevations (Figs 15, 16). Two pairs of rosette-like areas observed between setae c_1 - d_1 . Dorsal idiosomal setae serrate, curved, equal in length and set on distinct areas (Fig. 16); ps_1 are in a ventral position. Sensory setae simple, slender, three times longer than other idiosomal setae. Measurements as follows: v_2 20, sc_1 21, sc_2 23, c_1 21, c_2 22, d_1 22, e_1 22, f_1 22, f_2 22, h_1 22, h_2 22, ps_1 22, S 61. Lyrifissura *ia* lies posterolaterally to c_1 while *im* laterally to d_1 .

Venter (Fig. 11) - Finely striated, striae with dots. Striation pattern between 3a and 4a almost transverse. Epimeral formulae (3-1-4-2). Circular opening to coxal gland (*cg*) on coxa I. Genital organotaxy (0-6-4).

Gnathosoma - Covered by anterior projection of the propodosoma and not visible from above. Cheliceral stylets 1,5 times longer than palptarsus (Figs 13, 14). Palp with setal formula 6(1)-2-2-0. Palpal eupathidium rodlike, rounded distally, relatively thick, long and straight. Measurements as follows: cheliceral stylets 25, palptarsus 15, eupathidium $p\zeta$ 14.

Legs (Fig 12) - Measurements of legs (from the base of the proximal setae to the end of pretarsus): leg I 155, II 131, III 122, IV 142. Chaetotaxy of legs typical for the genus (sensu Kaźmierski 1989). Empodial claws (*om*) present (Fig. 12). Famulus k'' on tibia I, 2 long.

Dorsal leg setae serrate as in dorsum but thinner. Solenidion $\bar{\omega}_I$ and $\bar{\omega}_{II}$ rodlike, 9 and 3 respectively. Length of tarsus I 35, breadth 14, ft' 19, ft'' ζ 24.

MALE (Fig. 17) - Similar to female except for the genital area. Genital organotaxy (4-6-4).

TYPE MATERIAL - The holotype female, on unidentified alpine plant, mountain Oeti, Co. Phthiotis, 20.09.1993, coll. N. G. Emmanouel, is deposited in the Zoological Museum Hamburg (Reg. No. A39/96), while the allotype male with the same data and one male paratype, in moss, Kardaras, Co. Arkadia, 26.03.1994, coll. A. Papanikolaou are deposited in the Acari Collection, Laboratory of Agricultural Zoology and Entomology, Agricultural University of Athens, Greece.

ETYMOLOGY - The name of the new species is derived from "Alykaena", a peak of mountain Oeti on which it was found.

Remarks

The new species is closely related to *Lorryia nuncia* (Livshitz, 1973) and to *L. grandisignia* Kaźmierski, 1991. The main differences are given below.

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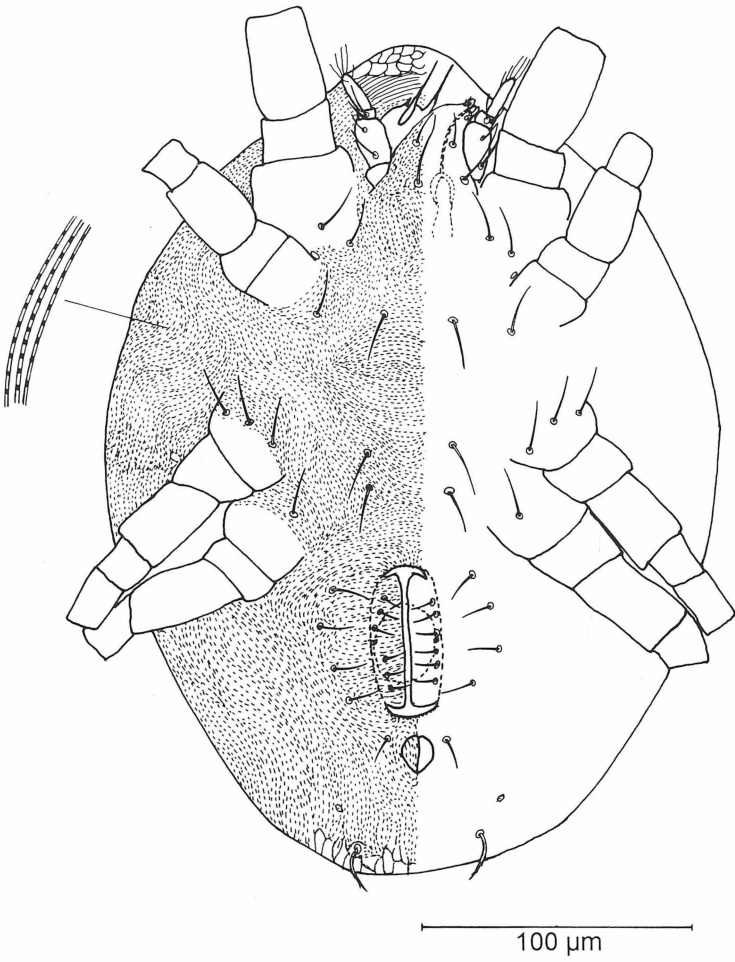


Fig. 11. *Lorryia alykaenae* sp. n., female: venter.

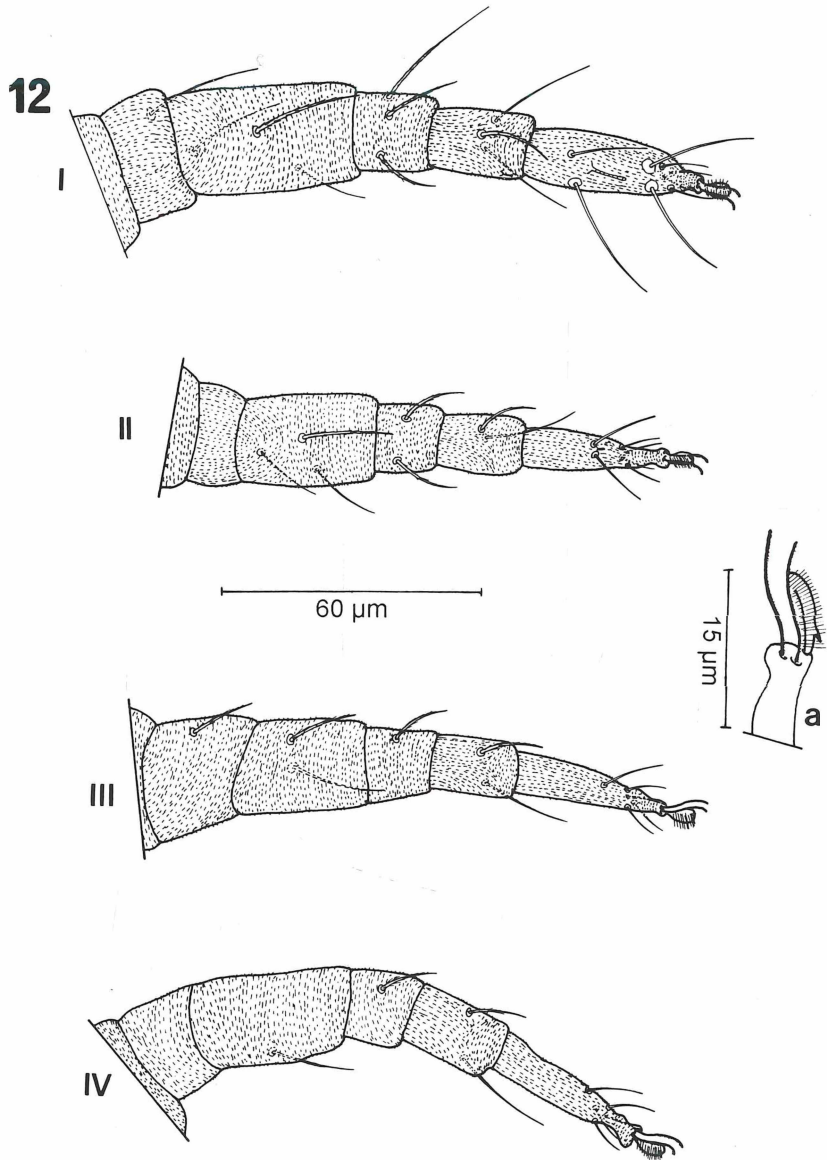
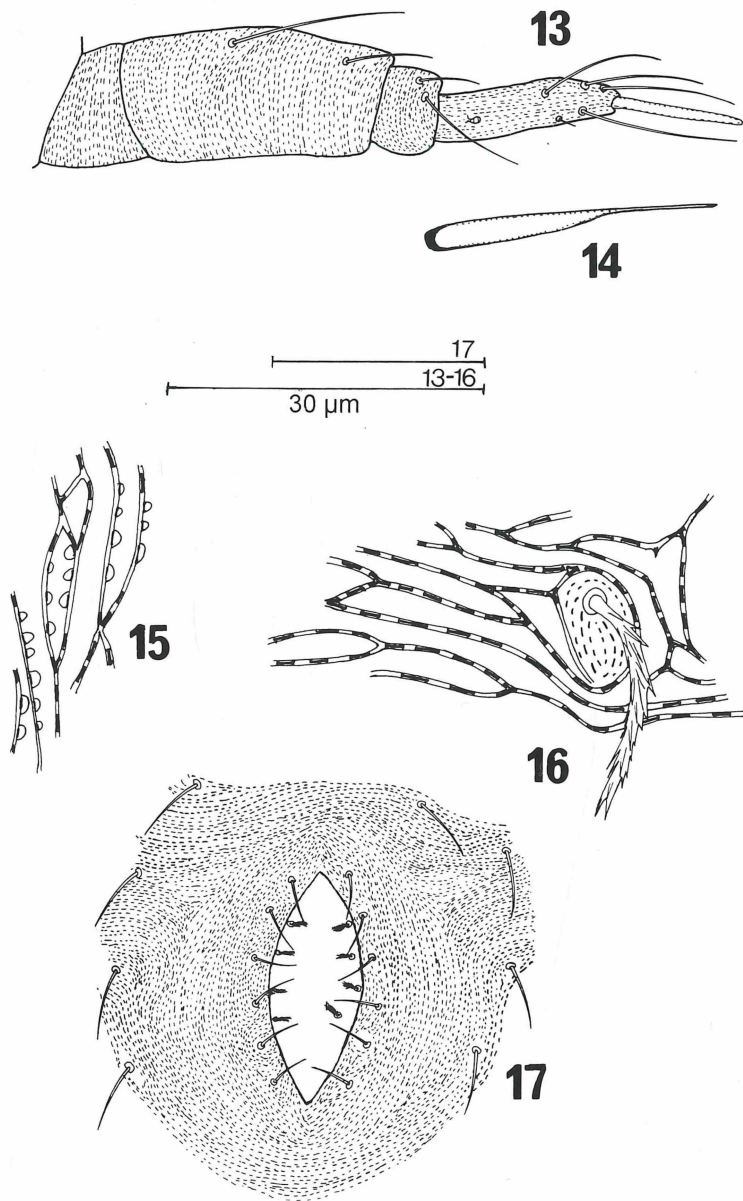


Fig. 12. *Lorryia alykaenae* sp. n., female: legs I-IV (a - apotele).



Figs 13-17. *Lorryia alykaenae* sp. n. (13-16: female), 13 - palp, 14 - cheliceral stylet, 15 - detail of striation pattern, 16 - dorsal body seta, 17 (male) - genital area.

<i>Lorryia nuncia</i> (Livshitz)	<i>Lorryia alykaenae</i> sp. n.	<i>Lorryia grandisignia</i> Kaźmierski
1. Dorsum densely striated, without small, sparsely reticulated areas	1. Dorsum not densely striated, with small, sparsely reticulated areas in the vicinity of d_1 , e_1 , f_2 , h_1 and h_2	1. Dorsum densely striated, without small, sparsely reticulated areas
2. Dorsal setae serrate	2. Dorsal setae strongly serrate	2. Dorsal setae strongly serrate
3. Striae between 3a-4a transverse	3. Striae between 3a-4a almost transverse	3. Striae between 3a-4a V-shaped
4. Striation in the vicinity of d_1 undulate	4. Striation in the vicinity of d_1 transverse	4. Striation in the vicinity of d_1 longitudinal

Acknowledgement

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Zusammenfassung

Es werden zwei neue Milbenarten aus der Familie Tydeidae, *Lorryia paraobliqua* sp. n. und *L. alykaenae* sp. n., beschrieben. Beide Taxa wurden in Griechenland gefunden.

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