

New records of tydeid mites from Greece, with description of *Lorryia brachypous* sp. nov.

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(With 11 figures)

Abstract

Three species of tydeid mites: *Metalorryia delicata* (Kuznetzov), *Lorryia subularis* (Kuznetzov) and *Lorryia catenulata* (Thor) are recorded for the first time in Greece. *Lorryia brachypous* sp. nov. found on *Astragalus* sp., at Oeti mountain, Co. Phthiotis, Greece, is described and illustrated.

Introduction

During a survey on Tydeidae, a rather poorly known mite family in Greece, several species new to science were found. One of these belonging to the genus *Lorryia* Oudemans (sensu Kaźmierski 1989) is described and illustrated along with three new records for Greece.

For the description, the setal nomenclature of the dorsum is based on Lindquist (1985), of the venter and gnathosoma on Grandjean (1935, 1938, 1957) and Marshall (1970) and of lyrifissures and appendages on André (1981a, 1981b). All measurements are given in milimicrons (μm).

New records for Greece

1. *Metalorryia delicata* (Kuznetzov) nov. comb.
Lorryia delicata Kuznetzov, 1971: 1745.

Specimens examined - Rodopi mountain, Co. Drama, 1992 on Graminae; Oeti mountain, Co. Phthiotis, 1993 on unidentified plant; Milia and Agios Kostantinos, Co. Arkadia, 1994 in moss.

Previous records - The type specimen was collected in moss from Georgia, former U.S.S.R.

2. *Lorryia subularis* (Kuznetzov)

Paralorryia subularis Kuznetzov, 1972: 33-34.

Specimens examined - Agion Oros, Co. Agion Oros, 1993 from lichens; Lycabettus hill, Co. Attiki, 1993 in moss.

Previous records - The type specimen was collected on *Zelcova* sp. and *Cedrus libani* from Crimea, former U.S.S.R.

3. *Lorryia catenulata* (Thor)

Retetydeus catenulatus Thor, 1931: 91; 1933: 51; Grandjean 1938: 377; Willmann 1949.

Lorryia catenulata Baker, 1968: 1001-1002; Kuznetzov 1971: 1745; Ueckermann and Smith Meyer 1979: 49; Kaźmierski 1980: 89-94.

Specimens examined - Hymettos mountain, Co. Attiki, 1993 in moss; Agion Oros, Co. Agion Oros, 1993 in moss.

Previous records - This species was originally described from Norway where it was found in moss. It was also identified in Ireland in moss, in U.S.A. in leaf litter and mouse nest, in Africa (Algeria) in litter and soil humus and in Poland.

Description of the species

Lorryia brachypous sp. nov.

(Figs 1-11)

FEMALE (Figs 1-8) - Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body 259 (236-248), breadth 153 (130-147).

Dorsum (Fig. 1) - Without any reticulate pattern. Striation type "*Paralorryia*" sensu Baker (1965). Striae slender, as shown in Fig. 6, 7. Dorsal setae of two types: all propodosomal setae (v_2 , sc_1 , sc_2) as well as the first and second pair of dorsocentrals (c_1 , d_1) and first pair of dorsolaterals (c_2) very slender and smooth (Fig. 6), while those of posterior part of hysterosoma (d_2 , e_1 , e_2 , f_1 , f_2 , h_1) thicker and slightly "rough" (Fig. 7).

On propodosoma, a whorl-like pattern is present between sc_1 and sc_2 . Sensory setae slender, whip like, about three times longer than other body setae. Measurements of setae as follows: v_2 9 (9-10), sc_1 12 (9-11), sc_2 14 (12-13), c_1 10 (10-12), c_2 12 (10-12), d_1 11 (10-11), d_2 11 (10-11), e_1 13 (11-12), e_2 13 (12-13), f_1 14 (12-14), f_2 14 (12-14), h_1 14 (12-13), S 38 (36-37). Lirifissura ia lies posterolaterally to c_1 and im anterolaterally to d_2 .

Venter (Fig. 2) - Delicately striated; striae between 3a and 4a run longitudinally. All ventral setae simple and very slender. Epimeral formulae (3-1-4-2). Circular opening to coxal gland (cg) on coxa I behind seta 1c. Genital organotaxy (0-6-4).

Gnathosoma - Visible from above; cheliceral stylets equal to the length of palptarsus (Figs 4, 5). Palp five-segmented with setal formula 6(1)-2-2-0 (solenidion ω in parenthesis). Palpal eupathidium slightly bent, getting narrowed towards the T-shaped end. Seta d bifurcated at the top (Fig. 4). Measurements as follows: cheliceral

stylets 14 (14-15), palptarsus 14 (13-14) and eupathidium 8 (6-7).

L e g s (Fig. 3) - Measurements of legs (from the base of the proximal setae to the end of pretarsus): leg I 122 (112-117), II 101 (94-101), III 99 (92-101) and IV 108 (103-108). Empodial claws (*om*) present although weakly developed (Fig. 8). Chaetotactic formulae of legs typical for the genus (*sensu* Kaźmierski 1989): tarsi 8(1)-6(1)-5-5, tibiae 3+1-2-2-2, genua 3-2-1-1, femora 3-3-2-1, trochanters 1-0-1-0. Famulus *k'* on tibia I forked (Fig. 3).

Leg setae smooth and very slender; ventral leg setae on tibiae II, III, IV as well as *v'* of tibia I slightly thicker. Solenidion *w*, rod-like 7 (6-7) long. Length of *w*, 3. Length of tarsus I 25 (24-25), width 14 (12-14). Length of *ft'* 11 (9-11) and of *ft''J* 17 (16-17).

MALE (Fig. 9) - Length of body 236 (230-236), breadth 147 (141-161). Other features similar to female, except for genital area. Eugenital flap with three pairs of setae anteriorly and a single pair posteriorly.

TRITONYMPH (Figs 10-11) - Length of body 204-216, breadth 150-155. Other features similar to adults except for the striation pattern posterior to *c*. The striae differ in the details as well. The whorl-like pattern between *sc*, and *sc*, is not well formed.

TYPE MATERIAL - The holotype female, allotype male, 2 female and 4 male paratypes, *Astragalus* sp., Oeti mountain, Co. Phthiotis, Greece, 20.09.1993, are deposited in the Acari collection, Laboratory of Agr. Zoology & Entomology, Agr. University of Athens, Greece, while 1 female, 1 male and 2 tritonymph paratypes with the above collection data in the Zoological Museum Hamburg (ZMH, Reg. No. A35/95).

ETYMOLOGY - The name of this new species is derived from the Greek words βραχύ (brachy) = short and πούς (pous) = leg.

Remarks

This species is similar to *Lorryia ocellata* (Kuznetzov, 1972) but it can be distinguished by the structure of dorsal body setae. In *Lorryia brachypous* two types of setae exist, while in *L. ocellata* all setae are of the same type. Moreover, in *L. ocellata* all dorsal setae are serrate, while in *L. brachypous* only the opisthosomal setae are slightly "rough". The leg setae in these two species are also different. In *L. ocellata* dorsal setae of some leg segments are thick and strongly serrated, while in *L. brachypous* all leg setae are smooth and slender.

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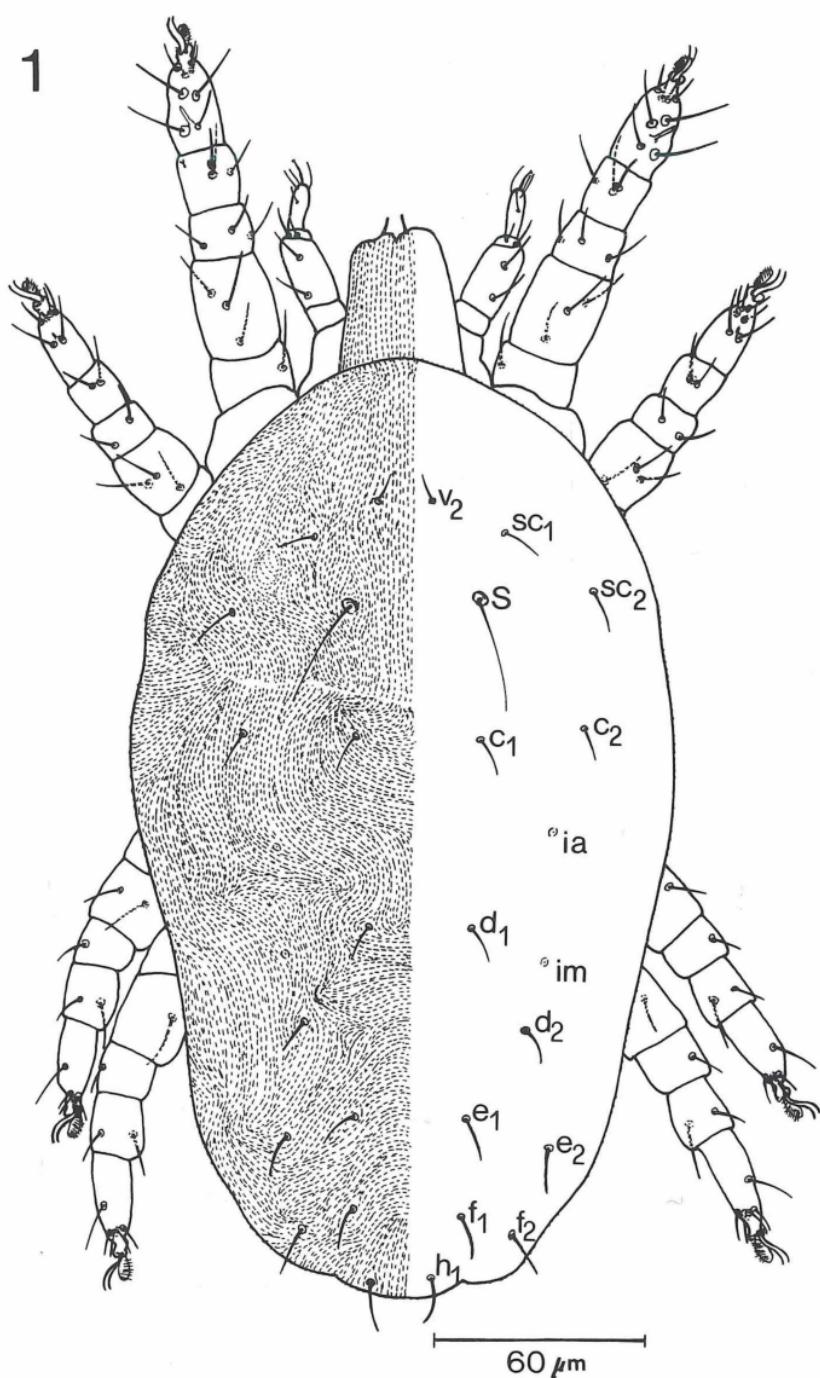


Fig 1. *Lorryia brachypous* sp.n., female: dorsum.

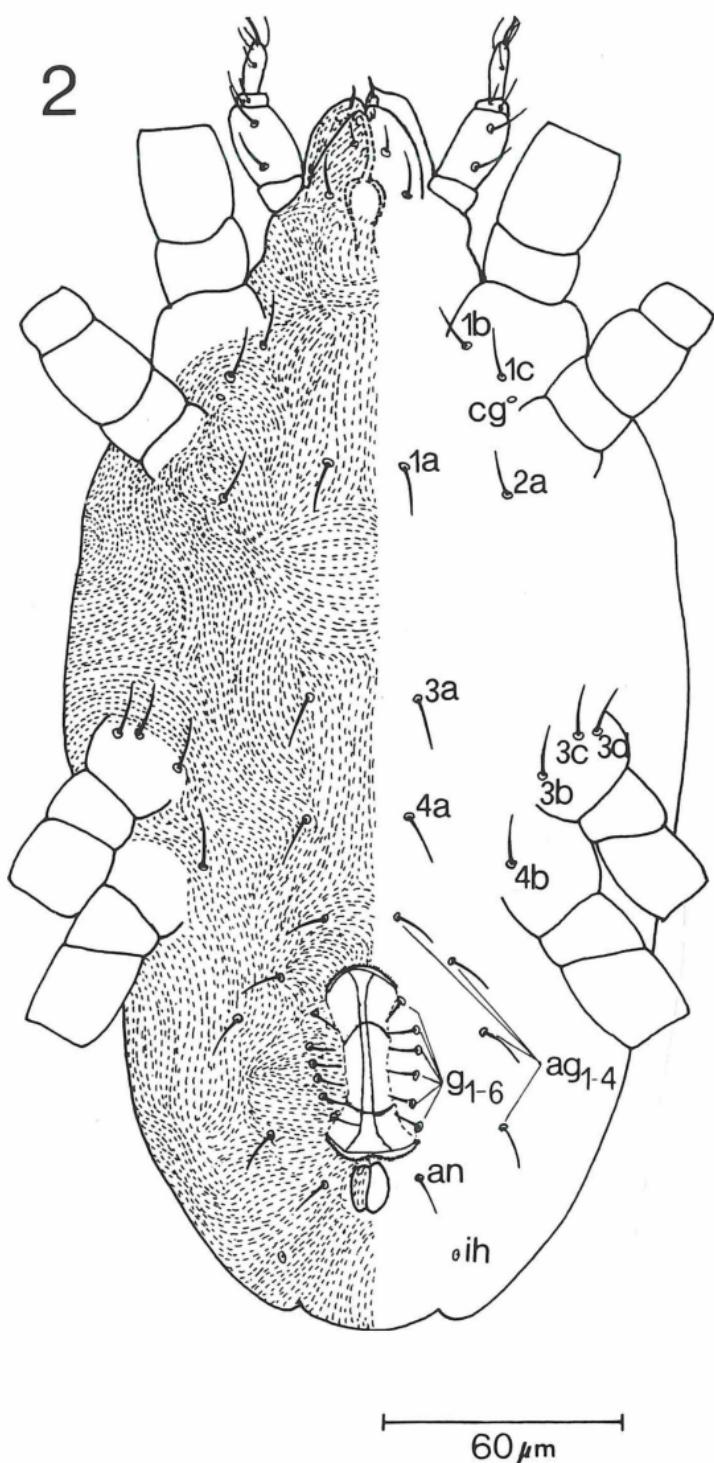


Fig. 2. *Lorryia brachypous* sp. n., female: venter.

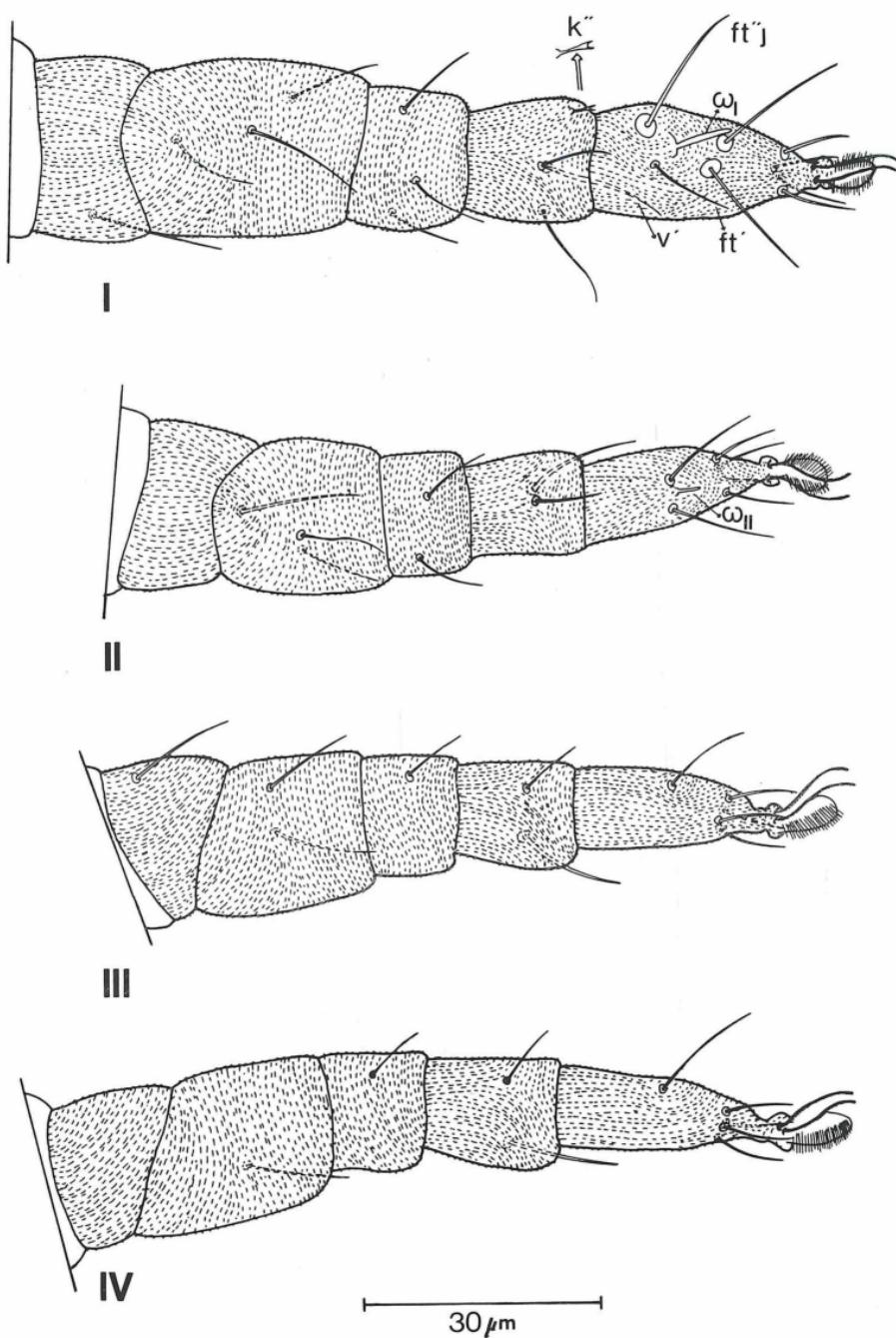
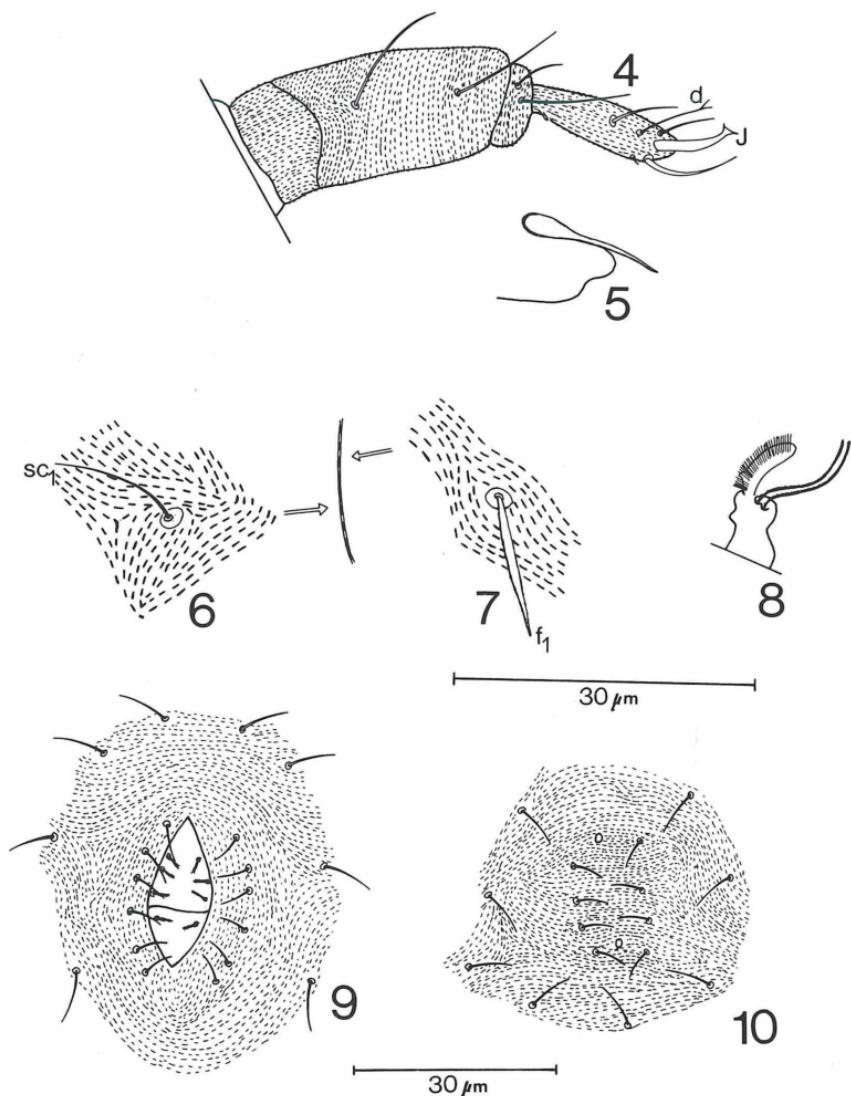


Fig. 3. *Lorryia brachypous* sp.n., female: legs I-IV.



Figs 4-10. *Lorryia brachypous* sp.n.: 4-8 (female): 4 - palp; 5 - cheliceral stylet; 6 - seta *sc₁*; 7 - seta *f₁*, 8 - apotele; 9 (male) - genital region; 10 (tritonymph) - genital region.

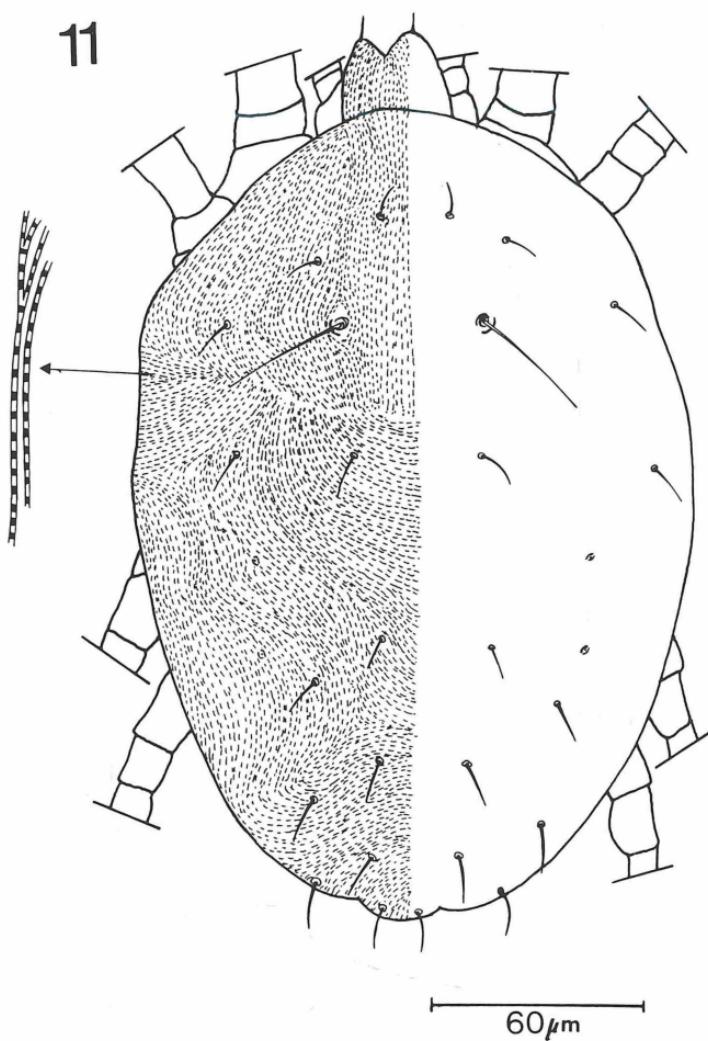


Fig. 11. *Lorryia brachypous* sp.n., tritonymph: dorsum.

Z u s a m m e n f a s s u n g

Drei Milben-Arten aus der Familie Tydeidae, *Metalorryia delicata* (Kuznetzov), *Lorryia subularis* (Kuznetzov) und *Lorryia catenulata* (Thor) sind neu für die griechische Fauna festgestellt worden. Eine neue Art *Lorryia brachypous* sp. n. wird von *Astragalus* sp. vom Berg Oeti (Phthiotis: Griechenland) beschrieben.

R e f e r e n c e s

- André, H. M., 1981a: A generic revision of the family Tydeidae (Acari: Actinedida). II. Organotaxy of the idiosoma and gnathosoma. - *Acarologia*, **22** (1): 31-46. Paris.
- André, H. M., 1981b: A generic revision of the family Tydeidae (Acari: Actinedida). III. Organotaxy of the legs. - *Acarologia*, **22** (2): 165-178. Paris.
- Baker, E. W., 1965: A review of the genera of the family Tydeidae (Acarina). - *Advances in Acarology*, **2**: 95-133. Ithaca, New York.
- Baker, E. W., 1968: The genus *Lorryia*. - *Ann. Entomol. Soc. Amer.*, **61** (4): 968-1008. College Park.
- Grandjean, F., 1935: Les poils des épimeres chez les Oribates (Acariens). - *Bull. Mus. Hist. nat.*, **6** (2): 504-512. Paris.
- Grandjean, F., 1938: Observation sur les Tydeidae (1^{re} série). - *Bull. Mus. Hist. nat.*, **10** (2): 377-384. Paris.
- Grandjean, F., 1957: L' infracapitulum et la manducation chez les Oribates et d'autres Acariens. - *Annls. Sci. nat. Zool.*, **19** (11): 233-281 Paris.
- Kaźmierski, A., 1980: Materials to the knowledge of Tydeidae (Acari, Prostigmata) in Poland. I. The genus *Lorryia* Oudemans. - *Pr. Kom. Biol. T.P.N.*, **54**: 87-129. Poznan.
- Kaźmierski, A., 1989: Revision of the genera *Tydeus* Koch sensu Andre, *Homeotydeus* Andre and *Orthotydeus* Andre with description of a new genus and four new species of Tydeidae (Acari: Actinedida: Tydeidae). - *Mitt. hamb. Zool. Mus. Inst.*, **86**: 289-314. Hamburg.
- Kuznetzov, N. N., 1971: Seven species of the genus *Lorryia* (Tydeidae) from Crimea and Georgia. - *Zool. Zh.*, **50**: 1740-1746. Moscow.
- Kuznetzov, N. N., 1972: Mites of the genus *Paralorryia* (Tydeidae) from the Crimea. - *Zool. Zh.*, **51** (1): 28-35. Moscow.
- Lindquist, E. E., 1985: Anatomy, phylogeny and systematics. 1.1.1. External anatomy: 3-28. - In: Helle, W. and Sabelis, M. W. (Eds.): *World crop pests 1A. Spider mites, their biology, natural enemies and control*, Elsevier, Amsterdam.
- Marshall, V. G., 1970: Tydeid mites (Acarina: Prostigmata) from Canada. I. New and redescribed species of *Lorryia*. - *Ann. Ent. Soc. Queb.*, **15**: 17-52. Quebec.
- Oudemans, A. C., 1925: *Acarologische Aanteekeningen LXXIX*. - *Entomol. Ber. nederl. Ver.*, **7**: 26-34. Leiden.
- Thor, S., 1931: *Norwegische Tydeidae I-VII, mit Kennzeichnung vier neuer Gattungen*. - *Zool. Anz.*, **94** (3/4): 89-104. Leipzig.

Thor, S., 1933: Acarina. Tydeidae, Ereynetidae. - In Schulze, F. E. and Kükenthal, W. (Eds). Das Tierreich, **60**: 1-84. Berlin & Leipzig.

Ueckermann, E. A. & M. K. P. Smith Meyer, 1979: African Tydeidae (Acari). I. The genus *Lorryia* Oudemans 1925. - Phytophylactica, **11**: 43-50. Pretoria.

Willmann, C., 1949: Beiträge zur Kenntnis des Salzgebietes von Ciechocinek. I. Milben aus den Salzwiesen und Salzmooren von Ciechocinek der Weichsel. - Veröff. Überseemus. Bremen, Reihe A, (1): 106-135. Bremen.

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