

LASIOSEIUS ATHIASAE, A NEW SPECIES FROM EGYPT (MESOSTIGMATA : ASCIDAE)

BY M. S. NAWAR * and A. K. NASR **

ASCIDAE ABSTRACT : *Lasioseius athiasae* n. sp., a new species collected from debris under citrus trees in the farm of Faculty of Agriculture, Cairo University, Giza, Egypt, is described and illustrated.

ASCIDAE RÉSUMÉ : Une espèce nouvelle, *Lasioseius athiasae* n. sp., récoltée dans des débris sous les citronniers de la ferme de la Faculté d'Agriculture, à Giza, Université du Caire, Égypte, est décrite et illustrée.

INTRODUCTION

Mites of the genus *Lasioseius* Berlese, seem to have a world-wide distribution, and representatives have been found in every continent except Antarctica. Some species of this genus inhabit the nests and shelters of birds, mammals and other arthropods where they probably feed on fungi and saprophytic arthropods, while other species occur in soil and humus and on plants where they prey on other invertebrates or feed on fungi and pollen. EVANS & SHEALS, 1959, described three new species of this genus from the spiracular depressions of polydesmoid millipedes, and noted that the body outlines of the mites conformed closely to the shape of the depressions in which they were found. Several species have been described by many authors (EVANS, 1958 a & b ; ATHIAS-HENRIOT, 1959 ; EVANS & SHEALS, 1959 ; CHANT, 1963 ; DE LEON, 1963 ; WESTERBOER, 1963 ; VAN ASWEGEN & LOOTS, 1969 ;

KARG, 1971 & 1980 ; LINDQUIST, 1971 ; and KANDIL, 1980).

In Egypt, this genus was represented by 7 species (NASR, 1978 ; AFIFI, 1982 and NASR & ABOU-AWAD, 1987). However, in the present study the new species *Lasioseius athiasae* is described and illustrated. The generic concepts and the system of chaetotaxy for the idiosoma are based on the review of LINDQUIST & EVANS (1965). The symbols used for leg chaetotaxy follow EVANS, 1963.

Lasioseius athiasae n. sp.

(Figs. 1-3)

FEMALE : Dorsal shield 432-443 μm long, 221-228 μm wide (3 specimens), heavily sculptured, shorter than idiosoma, with 36 pairs of setae, 21 pairs on anterior region, 15 pairs on posterior region ; in addition 10 pairs situated on lateral

* Agric. Zool. Dept., Fac. of Agric., Cairo Univ., Giza, Egypt.

** Plant Prot. Lab., National Res. Centre, Dokki, Egypt.

membrane ; (j - J), (z - Z), (s - S) series of setae complete, first 3 pairs of marginal (r) setae (r_2 - r_4) on humeral region of shield ; remaining 8 pairs of (r - R) marginals on lateral membrane ; submarginal series represented by one pair (UR_2) laterally. Setae on dorsal shield moderately long ; j_1 - J_4 , z_2 , z_5 and z_6 subequal in length (27 μm) ; s_3 - s_6 , z_3 - z_4 , Z_1 and S_1 - S_3 subequal in length (33 μm) ; setae Z_3 - Z_5 and S_4 - S_5 longer and serrate ; Z_5 the longest (50 μm) ; setae z_1 , s_2 , r_2 and r_4 simple and short ; J_5 short (11 μm) and serrate ; remaining dorsal shield setae, smoothly tricarinate ; all marginal setae on lateral membrane relatively short, simple (20 μm) except setae r_5 and R_7 long (29 μm) and tricarinate distally.

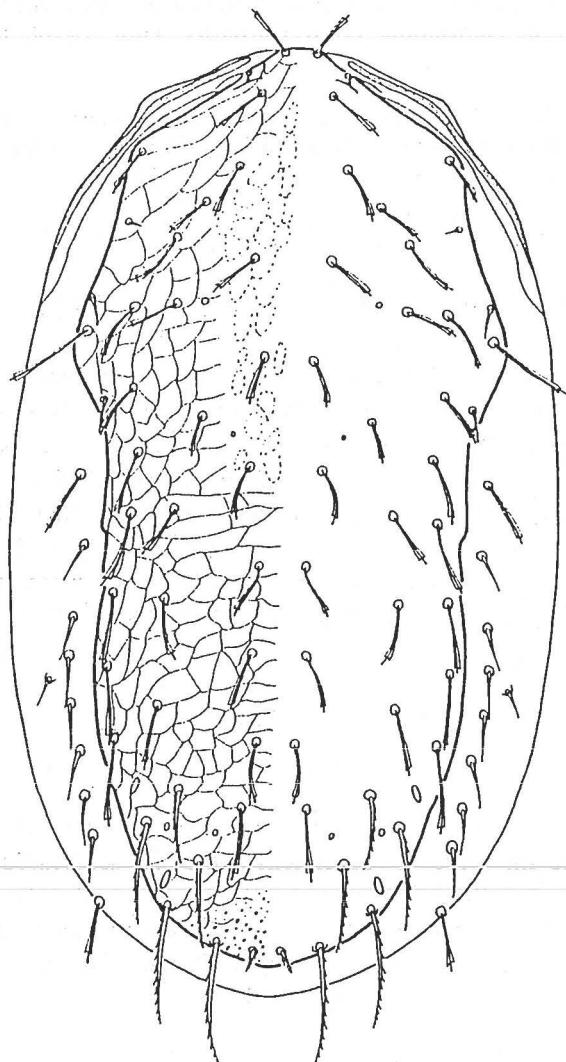


FIG. 1 : *Lasioseius athiasae* sp. n., female, dorsal shield.

Tritosternum normal, with moderately pilose laciniae. Presternal area lineate and punctate. Sternal shield with 3 pairs of setae and two pairs of pores, lineated along lateral margins, finely punctate over most surface, with conspicuous strip of reticula antero-medially ; anterior margin of shield poorly distinct, posterior margin slightly concave. Third pair of sternal pores with fourth pair of sternal setae on ovate metasternal plates. Genital shield finely punctated over entire surface, distance between genital setae 49 μm , with posterior margin truncate. Postgenital strip divided into 4 well-defined platelets. Two pairs of metapodal plates. Ventral shield (130 μm long, 168 μm wide) strongly lineated transversely, with few interconnections laterally ; shield with four pairs of ventral setae (Jv_1 - Jv_3 and Zv_2) plus anal setae (29 μm long) about twice as long as para-anals ; all setae simple. Five pairs of ventral setae on membrane around ventrianal shield, Zv_1 , Zv_3 , Zv_4 , Jv_4 and Jv_5 ; the latter long (35 μm) and tricarinate. Peritremes extending forward up to subvertical setae (z_1). Peritrematal shield broadly connected posteriorly to exopodal plate, curving behind coxa IV. Exopodal plate a continuous strip beside coxae II-III-IV. Spermatheca as figured. Tectum with three pronges and denticulate. Fixed chela with a row of about 11-13 teeth and a short pilus dentilis ; movable chela tridentate. Deutosternum with 7 connected transverse rows of denticles. Corniculi normally formed ; internal malae extending to level of tip of corniculi. All hypostomal setae simple, hypostomal setae h_2 , about as long as capitular setae. Length of legs I-IV : 387, 287, 275 and 400 μm respectively. Chaetotactic formulae normal. All setae of legs simple. Genua and tibia IV without macrosetae, basitarsus with S-shaped macroseta.

MALE : Dorsal shield 295-307 μm long, 172-179 μm wide (four specimens), reticulated as in female, with 38 pairs of setae, anterior region with 23 pairs (including r_5 - r_6) on shield ; posterior region with 15 pairs of setae (J series, Z series and S series with 5 pairs of setae) ; R series 3 pairs only (R_2 , R_5 and R_6) on membrane laterally ; submarginal series absent. Sternogenital shield lineate along lateral margins, with 5 pairs of setae and 3 pairs of pores.

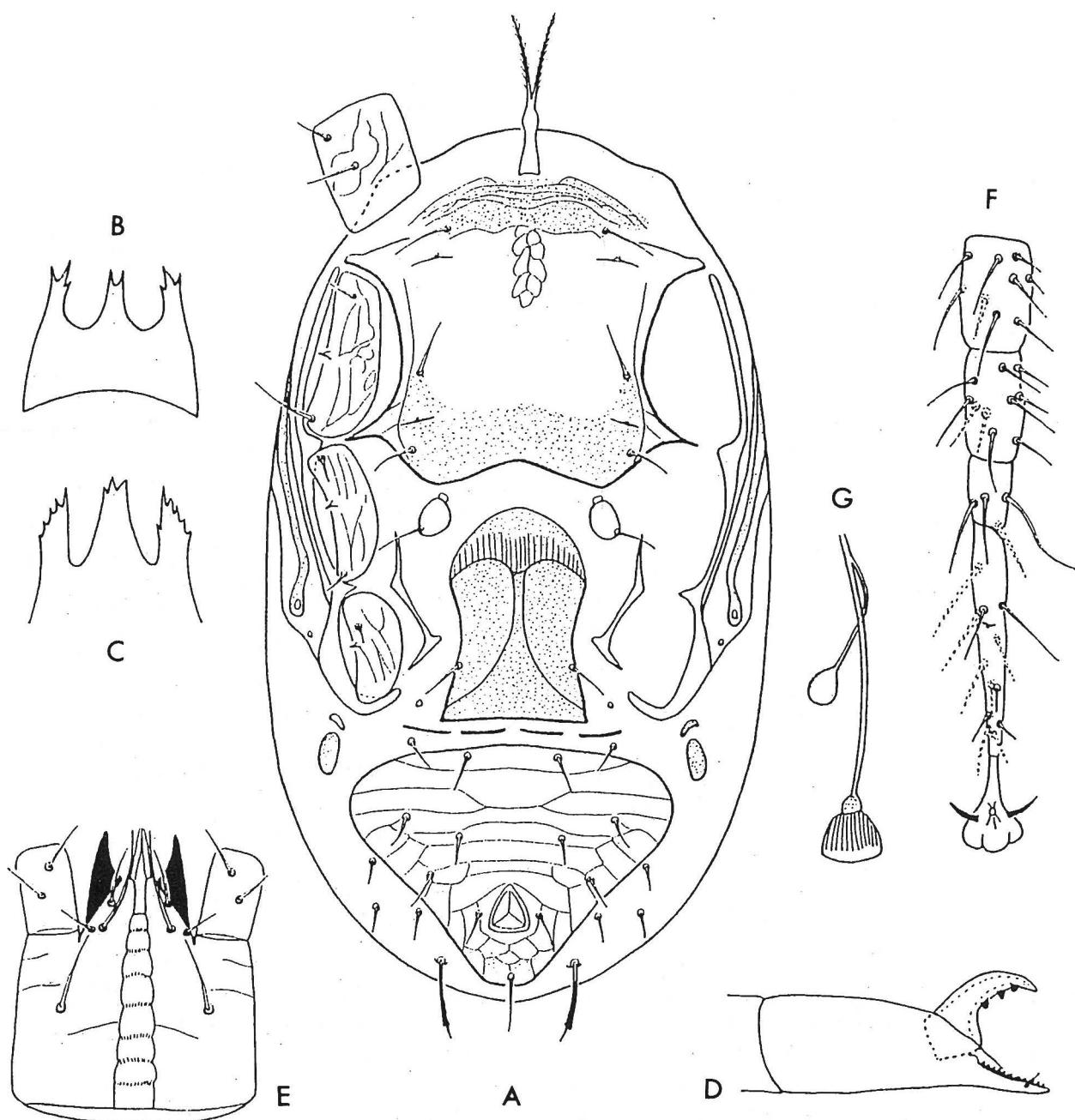


FIG. 2 : *Lasioseius athiase* sp. n., female.

A. — Ventral shields. B, C. — Tectum. D. — Chelicera. E. — Gnathosoma, ventral view. F. — Genu, tibia, tarsus of leg IV.
G. — Spermatheca.

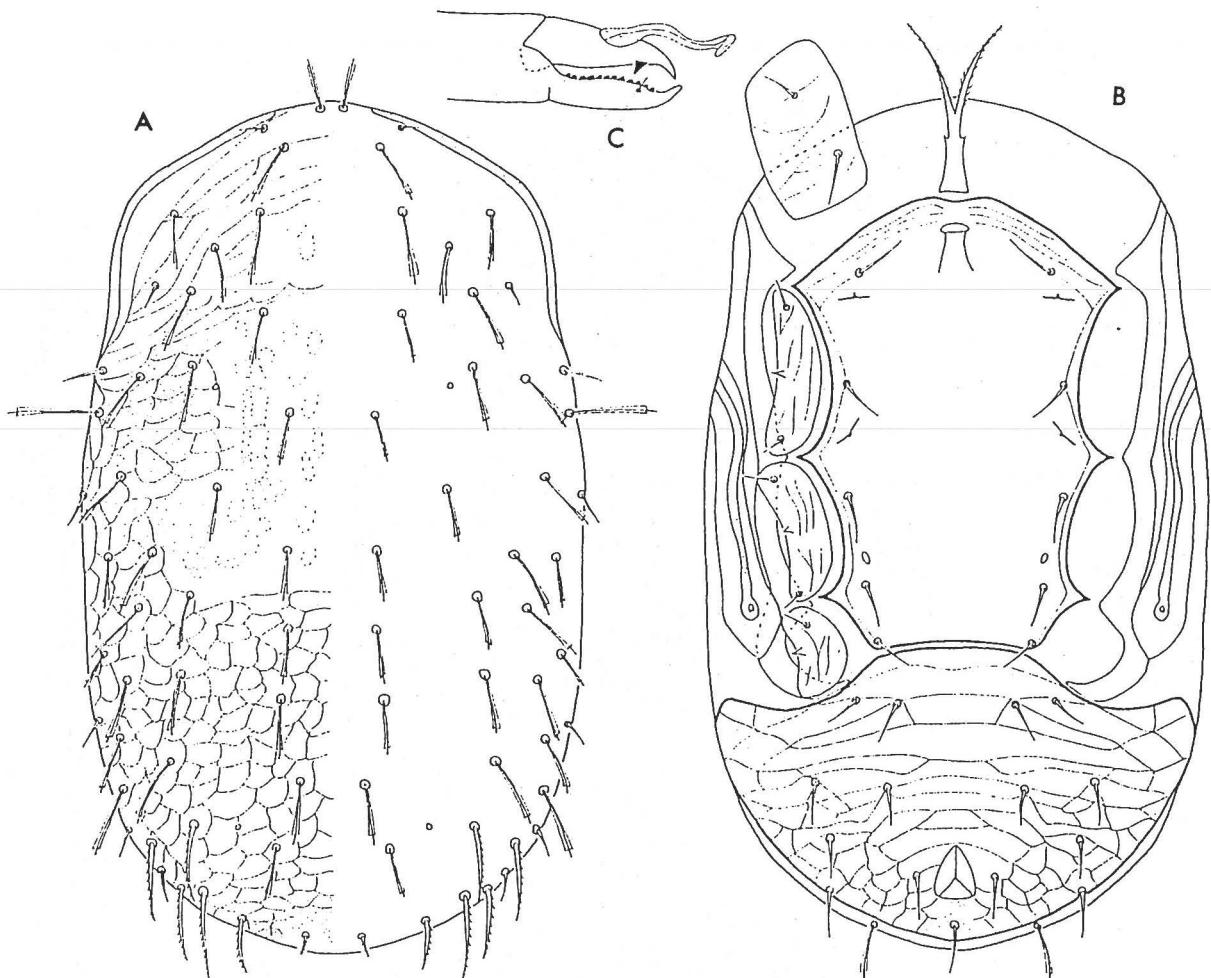


FIG. 3 : *Lasioseius athiasae* sp. n., male.
A. — Dorsal shield. B. — Ventral shields. C. — Chelicera.

Ventral shield (110 μm long, 159 μm wide), extending over areas occupied by metapodal plates, transversely lineate or reticulate over entire surface, slightly punctate on anal region, with six pairs of ventral setae (Jv_4 and Zv_2 absent) plus the anal setae, setae Jv_5 simple. Peritremal and exopodal plates nearly as in female. Tectum as in female. Fixed chela as in female, while the movable unidentate, with moderately long, sinuate and a head spermatadactyl. Other features of gnathosoma as in female.

REMARKS : This species appears to belong to the subgenus *Borinquilaeps* (syn. *Crinidens* Karg) and similar to *L. sewai* Nasr & Abou-Awad, 1987, but differs mainly in having setae UR_2 ; setae r_4 short and simple; the shape of spermatheca; tectum with three pronges, and fixed chela with row of 11-13 teeth.

Holotype, Allotype and Paratypes : 3 females and 4 males were collected from debris under citrus trees on the farm of Faculty of Agriculture, Cairo University, Giza, Egypt.

REFERENCES

- AFIFI (A. M.), 1982. — *Lasioseius aegypticus* à new species from Egypt with notes on its biology (Acari : Gamasida : Ascidae). — Proc. Egypt's National Conf. Ent., 1 : 453-461.
- ATHIAS-HENRIOT (C.), 1959. — Phytoseiidae et Aceosejidae (Acarina : Gamasina) d'Algérie — III. Contribution aux Aceosejinae. — Bull. Soc. Hist. nat. Afri. Nord., 50 : 158-195.
- CHANT (D. A.), 1963. — The subfamily Blattisocinae Garman (= Aceosejinae Evans) (Acarina : Blattisocidae Garman) (= Aceosejidae Baker and Wharton) in North America, with descriptions of new species. — Canad. J. Zool., 41 : 243-305.
- DE LEON (D.), 1963. — A new genus and twelve new species of mites from Mexico and south-east United States (Acarina : Blattisocidae). — Fla. Ent., 46 : 197-207.
- EVANS (G. O.), 1958 a. — A revision of the British Aceosejinae (Acarina : Mesostigmata). — Proc. Zool. Soc. London, 131, 177-229.
- EVANS (G. O.), 1958 b. — Some mesostigmatid mites from a nest of social spiders in Uganda. — Ann. Mag. Nat. Hist., Ser., 13 : 580-590.
- EVANS (G. O.), 1963. — Observations on the chaetotaxy of the legs in the free-living Gamasina (Acari : Mesostigmata). — Bull. Br. Mus. (nat. Hist.), Zool., 10 : 275-303.
- EVANS (G. O.), & SHEALS (J. G.), 1959. — Three new mesostigmatic mites associated with millipedes in Indonesia. — Ent. Ber., 19 : 107-111.
- KANDIL (M. M.), 1980. — Three new *Lasioseius* species from Hungary (Acari : Mesostigmata, Podocinidae). — Folia Ent. Hung. Rovartani Kozlemények, 61 (33) : 75-86.
- KARG (W.), 1971. — Acari (Acarina) Milben. Unterordnung Anactinochaeta (Parasitiformes). Die Freilebenden Gamasina (Gamasides). Raubmilben. — Die Tierwelt Deutschlands, Jena, Teil. 59 : 1-475.
- KARG (W.), 1980. — Die Raubmilbengattung *Lasioseius* Berlese, 1916. — Zool. Jahrb. Abt. Syst. Oekol. Geogr. Tiere, 107 : 244-367.
- LINDQUIST (E. E.), 1971. — New species of Ascidae (Acarina : Mesostigmata) associated with forest insect pests. — Can. Ent., 103 : 919-942.
- LINDQUIST (E. E.) & EVAN (G. O.), 1965. — Taxonomic concepts in the Ascidae, with a modified setal nomenclature for the idiosoma of the Gamasina (Acarina : Mesostigmata). — Mem. ent. Soc. Can., 47 : 1-68.
- NASR (A. K.), 1978. — Taxonomical and biological studies on some ground mites in Egypt. — Ph. D. Thesis, Fac. of Agric., Ain Shams Univ., 217 p.
- NASR (A. K.) & ABOU-AWAD (B. A.), 1987. — Description of some ascid mites from Egypt (Acari : Ascidae). — Acarologia, 28, (1) : 27-35.
- VAN ASWEGEN (D. I. M.) & LOOTS (G. C.), 1969. — The genus *Lasioseius* (Mesostigmata : Acari) in the Ethiopian region. — Wetenskaplik Bydraes van die P. U. Vir. C. H. O., Reeks B. Naturwetenskappe, 3 : 1-25.
- WESTERBOER (I.), 1963. — Mesostigmata 1. — Beitr. Syst. Ökol. mitteleur. Acarina 2, Abschn. 4-5 : 804.

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