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

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

ASCIDAE TAXONOMY EGYPT

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 TAXONOMIE ÉGYPTE

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; Affifi, 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


membrane; \((j-J), (z-Z), (s-S)\) series of setae complete, first 3 pairs of marginal \((r)\) setae \((r_1-r_3)\) on humeral region of shield; remaining 8 pairs of \((r-R)\) marginals on lateral membrane; submarginal series represented by one pair \((UR)\) laterally. Setae on dorsal shield moderately long; \(j_1-j_4, z_2, z_3\) and \(z_6\) subequal in length \((27 \mu m)\); \(s_3-s_6, Z_1, S_1-S_3\) subequal in length \((33 \mu m)\); setae \(Z_2-Z_5\) and \(S_2-S_3\) longer and serrate; \(Z_5\) the longest \((50 \mu m)\); setae \(z_1, z_5, r_3\) and \(r_4\) simple and short; \(J_4\) short \((11 \mu m)\) and serrate; remaining dorsal shield setae, smoothly tricarinate; all marginal setae on lateral membrane relatively short, simple \((20 \mu m)\) except setae \(r_5\) and \(R_1\) long \((29 \mu m)\) and tricarinate distally.

Tritosternum normal, with moderately pilose laciniae. Pre sternal 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 \(49 \mu m\), with posterior margin truncate. Postgenital strip divided into 4 well-defined platelets. Two pairs of metapodal plates. Ventral shield \((130 \mu m\) long, 168 \(\mu m\) wide) strongly lineated transversely, with few interconnections laterally; shield with four pairs of ventral setae \((J_3, J_4, Z_3, Z_4)\) plus anal setae. Postanal setae \((29 \mu m\) long) about twice as long as para-anals; all setae simple. Five pairs of ventral setae on membrane around ventrianal shield, \(Z_5, Z_6, J_3, J_4, Z_4\); the latter long \((35 \mu m)\) 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 prongs 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 \(\mu m\) 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 \(\mu m\) long, 172-179 \(\mu m\) wide (four specimens), reticulated as in female, with 38 pairs of setae, anterior region with 23 pairs (including \(r_2-r_3\) on shield; posterior region with 15 pairs of setae \((J, Z, S\) series with 5 pairs of setae); \(R\) series 3 pairs only \((R_2, R_3\) and \(R_4)\) on membrane laterally; submarginal series absent. Sterno genital shield lineate along lateral margins, with 5 pairs of setae and 3 pairs of pores.

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**FIG. 1**: _Lasioseius athiasae_ sp. n., female, dorsal shield.
Fig. 2: *Lastoseius athiae* sp. n., female.


G. — Spermatheca.
FIG. 3: *Lasioseius athiasae* sp. n., male.

Ventrianal 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* and *Zv* absent) plus the anal setae, setae *Jv* 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 spermadactyl. Other features of gnathosoma as in female.

**Remarks:** This species appears to belong to the subgenus *Borinquilaelaps* (syn. *Crinidens* Karg) and similar to *L. sewai* Nasr & Abou-Awad, 1987, but differs mainly in having setae *UR*; setae *r* short and simple; the shape of spermatheca; tectum with three prongs, 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


