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DESCRIPTION OF SOME ASCID MITES FROM EGYPT
(ACARI : ASCIDAE)

BY A. K. NASR and B. A. ABOU-AWAD *

EGYPTIAN ANIMAL FAUNA

ABSTRACT : Three new species, *Lasioseius lindquisti*, *L. peritremus*, and *L. sewai* collected from soil and debris under different plants in Egypt, are described and illustrated. *L. bispinosus* Evans, is recorded for the first time and a key to the known Egyptian species is given.

FAUNE D’EGYPTE


INTRODUCTION

Members of the family Ascidae are considered important due to their widespread occurrence in all locations. It includes about three hundred and fifty species which belong to 22 genera of three subfamilies; some species are fungivorous, probably pollen feeders, predator on young saprophytic mites, insects, and nematodes (Ryke, 1954; Moser & Roton, 1971; Moser, 1975; Kinn, 1983; Afifi et al., 1984; ABOU-AWAD & NASR, 1984). Genus *Lasioseius* includes more than 70 species from all over the world. An adequate review of its generic concepts was given by Lindquist & Evans (1965). It can be distinguished from the other genera of the family Ascidae by: female with 12 to 23 pairs of setae on anterior region of dorsal shield (*s5* consistently present) and 10 to 15 pairs on posterior region (*Z1* and *J2* present); genital shield usually truncate posteriorly; ventral setae *Zv*, and *Jv5* present; movable chela usually tridentate; genu II and III usually with 11 and 9 setae respectively, *Pv* — 1 usually present.

In Egypt, two species had been recorded by NASR (1978). However, in the present study three new species are added to genus *Lasioseius* which are *L. lindquisti*, *L. peritremus*, and *L. sewai*; in addition to, *L. bispinosus* Evans (Evans, 1958a) is recorded for the first time. As well as a key to the known Egyptian species is given. All measurements are in microns (µm). Type specimens are deposited in the collection of N.R.C.

KEY TO EGYPTIAN SPECIES OF THE GENUS *LASIOSEIUS*
(BASED ON FEMALES)

1. Dorsal shield with 22 to 23 pairs of setae; ventrianal shield with 6 pairs of preanal setae.............. 2
   Dorsal shield with 36 pairs of setae; ventrianal shield with 2 or 4 pairs of preanal setae.............. 3

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2. Dorsal shield with 22 pairs of setae; lateral membrane of dorsum with 4 pairs of setae
(Figs. 1-2) L. lindquisti sp. n.
Dorsal shield with 23 pairs of setae; lateral membrane of dorsum with 6 pairs of setae
(Fig. 3) L. peritremus sp. n.

3. Ventrianal shield with 2 pairs of preanal setae; anterior pair of sternal setae thick, thorn-like
L. bispinosus Evans, 1958
Ventrianal shield with 4 pairs of preanal setae; anterior pair of sternal setae simple
4

4. With on pair of submarginal setae (UR4), sternal shield indistinct anteriorly
(Fig. 4) L. sewai sp. n.
Without submarginal setae, sternal shield distinct anteriorly
5

5. First sternal setae longer than the others; postanal seta subequal to para-anals; genua and tibiae of leg IV with macrosetae
L. zaheri Nasr. 1978
First sternal setae subequal to others; postanal seta longer than para-anals; genua and tibiae of leg IV without macrosetae
L. africanus Nasr, 1978

Lasioseius lindquisti sp. n.
Figs. 1-2)

Female: Dorsal shield 353-395 long, 200-232 wide (4 specimens); moderately reticulate over entire space except area posterior Z4 to J5; bearing 22 pairs of robust, stout and pilose setae, 12 pairs on anterior region, which are: j2-j6, z2, z5, s2, s4, s5, r2 and r3 (45 long); posterior region bears 10 pairs of setae which are: J2, J4, J5, Z1, Z3 (50 long), Z4 (54 long), Z5 (63 long) and S3, S4, S5; 4 pairs of short and simple setae on lateral membrane which are: r5, R1, R2 and R5 (about 1 1/2 times as long as R2); submarginal setae absent; position of pores as show in fig. 1-A. Tristosternum normal as in fig. 1-F. Presternal area reticulated. Sternal shield (112 long), with 3 pairs of subequal and simple setae, 2 pairs of pores present, linedate along lateral margins. Third pair of sternal pores with fourth pair of sternal setae on metasternal plates. Endopodal plate small, triangular formed between coxae III and IV. Genital shield (67 wide) lineate along lateral margins, posterior margins, truncate. All setae of sternal, metapodal, and genital shields are subequal and simple. Postgenital strip not formed into platelets. Two pairs of metapodal plates. Ventrianal shield triangular, wide, nearly extending over areas of the opisthogastric region, strongly lineated transversely, with few interconnections laterally; bearing 6 pairs of simple ventral setae plus the anal setae which are: Jv1-Jv4, Zv2 and Zv3; anal opening not enlarged and normal; paraanal setae slightly shorter than the postanal which is thicker and coarsly piloses; one pair long Jv5 of ventral setae on membrane, pilose, robust and born on tubercule. Peritremes extending to level of vertex, converged and connecting by a line, fused posteriorly to expodal plate, with a continuous strip beside coxae II-III-IV. Anterior margin of tectum truncate and denticulate. Spermatheca with atrium bulb-shaped, cervix V-shaped, minor duct short. Fixed chela with a row of 12-13 teeth and short, the median teeth very robust from others; movable chela tridentate. Deutosternum with 7 transverse rows of denticles; anterior five rows with 3-5 teeth of each; sixth row widened, with 10-13 teeth; seventh row with 7-9 teeth. Corniculi normally formed, parallel, spaced; medio of corniculi, hypostome terminating with a pair of small membranous processes with acuminata apices, ventral of the internal malae. Internal malae extending slightly beyond tip of corniculi. All hypostomal setae simple. Apotele of palpatarsus two-tined. Length of legs I-IV, 427, 306, 302, and 436 respectively. Leg chaetotactic formulae normal for the genus; some dorsal setae of legs finely pilose. Genua, tibiae, basitarus, and telotarsus, each bearing a macroseta.

Male: (Fig. 2). Dorsal shield 265-290 long, 173-190 wide (three specimens), with ornamentation and setation as on female, lateral membrane with 2 pairs of setae including r5 anteriorly and R1 posteriorly; R2 and R5 absent. Nature of dorsal setae as in female. Sternogernital shield clearly reticulated along lateral margins, faintly on middle region, with 5 pairs of setae and 3 pairs of pores. Ventrianal shield wide, extending over areas occupied by metapodal plates, transversely lineate medially, reticulate laterally, bearing 5
Fig. 1: Lasioseius lindquisti sp. n. female.

A. — Dorsal shield; B. — Ventral shields; C. — Tectum; D. — Chelicera; E. — Gnathosoma, ventral view; F. — Tritosternum; G. — Genu, tibia, tarsus IV; H, I. — Spermatheca.
pairs of ventral setae \((Jv4\) and \(Zv2\) absent) plus the anal seta; free from sternogenital, peritremetal, and exopodal shields. Peritremes, peritremetal and exopodal shields as in female. Fixed chela with a row of 11-13 teeth; movable chela unidentate, with moderately long, bulbed terminal spermadactyle, with pulvillus on the internal side. The other features of gnathosoma as in female.

**Remarks**: This species is closely related to *L. parberlesei* Bhattacharrya (Bhattacharrya, 1968) and *L. youcefi* Athias-Henroit (1959), but it could be separated from them in the following...
respects: all dorsal setae robust and pilose; two pairs of metapodal plates present; chaetotaxy of dorsal shield in male varied.

Holotype, Allotype, 4 females and 2 males were collected from soil and debris, under peanut, Badr village, El-Tahrir Province. Additional records 2 females and one male from El-Orman garden, Giza Province, Under *Ficus* spp.

**Lasioseius peritremus** sp. n.

(Fig. 3)

- **Female**: Dorsal shield 360-395 long, 205-215 wide (3 specimens); moderately reticulate over entire surface, 23 pairs of setae, thick and serrate, slightly tricarinate distally; 12 pairs on anterior region: j2-j6, z2, z5, s2, s4-s6 and r3 (45 long); 11 pairs on posterior region: J2, J4, J5, Z1, Z3, Z4, Z5 (65 long), and S2-S5; 6 pairs of simple setae on lateral membrane: r5, R1-R5; setae R5 longer than the others, about 1 1/2 times as long as R4. Tritosternum normal, with moderately pilose laciniae. Preternal area lineate. Sternal shield with 3 pairs of simple setae and 2 pairs of pores, lineate along lateral margins, reticulated nearly entire surface, but smooth postero-medially, with conspicuous strip of reticula anteromedially, anterior margin distinct and striate, posterior margin slightly concave. Third pair of sternal pores with fourth pair of sternal setae metasternal plates. Endopodal plates normally formed between coxae III and IV. Genital shield (72 wide) lineate laterally with fine punctuation formed reticulation medially, widened behind genital setae, posterior margin truncate. Postgenital strip divided into well-defined platelets. Two pairs of metapodal plates. Ventrianal shield (172 long, 126 wide) strongly reticulate; bearing 6 pairs of preanal setae plus the anal; anal opening not enlarged; para-anal seta 3/4 as long as postanal, all setae simple. One pair of ventral Jv5 (53 long) on membrane postero-lateral to ventrianal shield, born on tubercle and serrate. Peritremes extending anteriorly to vertex in curving and contacting. Peritrematal shield broadly connected posteriorly to exopodal plate, curving behind coxa IV, well united anteriorly with dorsal shield and humeral seta (r2). Exopodal plate a continuous strip beside coxae II-III-IV, with separate anterior fragment between coxae I and II. Spermathecal structures membranous, not clearly discernible. Anterior region of tectum denticulate. Fixed chela with a row of 15 teeth, movable chela tridentate. Deutosternum with 7 tranverse row of denticles, anterior five rows each with 7-10 teeth, sixth row slightly widened, with 11-13 teeth. Corniculi normally, parallel, spaced; mediad of corniculi, hypostome terminating with a pair of small membranous processes with acuminate apices, ventrad of the internal malae. Internal malae extending much beyond tip of corniculi. All hypostomal setae simple, capitular setae short, never reaching the bases of external setae of hypostome. Length of legs I-IV: 383, 302, 303, and 418 respectively. Chaetotactic formulae normal. All setae of legs simple. Genae, basitarsi and telotarsi each with a macroseta, length 36, 51, and 60 respectively.

- **Male**: Unknown.

**Remarks**: *L. peritremus* can be distinguished from the closely allied species, *L. mcgregory* Chant and *L. phytoseioides* Chant (CHANT, 1963) by dorsal shield setae thick, serrate, and slightly tricarinate distally; lateral membrane of dorsum having 6 pairs of setae; tectum round and denticulate.

Holotype, Paratype, 3 females were collected from debris, under *Citrus* spp., Ehnsasia village, Beni-Sewef Province.

**Lasioseius sewai** sp. n.

(Fig. 4)

- **Female**: Dorsal shield 360-379 long, 177-183 wide (3 specimens), heavily sculptured, shorter than idiosoma; with 36 pairs of setae, 21 pairs on anterior region, 15 pairs on posterior region 10 pairs on lateral membrane; (j-J), (z-Z), (s-S) series of setae complete, first 3 pairs of marginal (r) setae (r2-r4) on humeral region of shield;
FIG. 3: Lasioseius peritremus sp. n., female
A. — Dorsal shield; B. — Ventral shields; C. — Gnathosoma, ventral view; D. — Tectum; E, F. — Dorsal setae; G. — Genu, tibia, tarsus IV.
FIG. 4: *Lasioseius sewai* sp. n. female.
A. — Dorsal shield; B. — Ventral shields; C. — Gnatosoma, ventral view; D. — Chelicera; E. — Tectum; F. — Genu, tibia, tarsus IV; G. Spermatheca.
remaining 9 pairs of (r-R) marginals on lateral membrane; submarginal series represented by one pair (UR4) posteroventrally. Setae on dorsal shield moderately long; j2-j4, J2-J4, s6-s3, z2-z4 subequal and as successive distances between their bases; Z3, Z4, S4, S5 longer, serrate and about 1 1/2 times as long as the previous setae: Z5 the longest (54 long) and serrate; setae z1, s2 and r2 smooth and short; J5 the shortest and serrate, remaining dorsal shield setae, smoothly tricinate; all marginal setae on lateral membrane relatively short, simple and reaching to successive bases of setae; setae R7 (33 long). Tritosternum normal, with moderately pilose laciniae. Presternal area lineated and ornamented. Sternal shield with 3 pairs of setae and two pairs of pores, lineated along lateral margins, finely punctate over most of the surface, with conspicuous strip of reticula antero-medially; anterior margin of shield indistinct, posterior margin slightly concave. Third pair of sternal pores with fourth pair of sternal setae on metasternal plate. Genital shield (66 wide) finely punctated over entire surface, winded behind genital setae, with posterior margin truncate. Postgenital strip divided into 4 well-defined platelets. Two pairs of metapodal plates. Ventrianal shield (127 long, 141 wide) strongly lineated transversely, with few interconnection laterally; lateral margins of shield concave at level of anterior extremity of anal opening; shield with four pairs of ventral setae plus anal setae; postanal seta slightly longer than para-anals, all setae simple. Four pairs of ventral setae on membrane around ventrianal shield: Zv1, Zv3 Jv4, and Jv5; the latter long (53), smooth and borne one a tubercle. Peritremes extending forward near vertical setae. Peritrematal shield broadly connected posteriorly to exopodal plate, curving behind coxa V. Exopodal plate a continuous strip beside coxa II-III-IV, separately anterior fragment between coxae I and II. Spermatheca with narrow elongate tubular cervix and different in wall thickness, minor duct conspicuous. Tectum with four pronges, denticulate. Fixed chela with a row of about 20 teeth and a short pilus dentilis; movable chela tridentate. Deutosternum with 7 connected transverse rows of denticles; anterior five rows with 7-10 teeth of each; sixth row slightly widened, with 13 teeth; seventh row with 10 teeth. Corniculi normally formed; internal malae extending to level of tip of coniculi. All hypostomal setae simple, capitular seta born on small tubercule, not surpassing base of external rostral setae. Length of legs I-IV: 392, 315, 315, and 440 respectively. Chaetotactic formulae normal. All setae of legs simple, the majority of them born on tubercles. Genua and tibia IV without clear macrosetae, basitarsus and telotarsus each with a macroseta, 63 and 67 long respectively.

**Male**: Unknown

**Remarks**: *L. sewai* could be compared with *L. analis* Evans (EVANS, 1958b) and *L. neometes* McGraw & Farrier (MCGRAW & FARRIER, 1969). Length and shape of seta j2 and movable chela differentiate it from the former, whereas shape of setae J5 and seta Jv5, number setae of the submarginal series and tectum separate it from the latter.

Holotype, paratype, 3 females were collected from debris of grapevines, Sewa, New Valley Province.

*Lasioseius bispinosus* Evans


This species is recorded for the first time in Egypte.

Dorsal shield, 475 long, 280 wide, slightly reticulate, bearing 36 pairs of setae. Sternal shield deeply excavated posteriorly, with only two pairs of setae. Genital shield unusually sculptured, with genital setae. Ventrianal shield rectangulate, with two pairs of preanal setae. Fixed digit of chelicera multidentate; movable digit with three teeth.

Locality: One female collected from stored union bulb, Girga city, Sohag Province.
REFERENCES


