

**TWO NEW SPECIES OF PHYTOSEIID MITES  
(MESOSTIGMATA: PHYTOSEIIDAE) FROM ISRAEL\***

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**ABSTRACT**

Descriptions are given for *Eharius hermonensis* n.sp. collected on *Mar-rubium* sp. on Mt. Hermon, and *Nabiseius rivnayae* n.sp. found on *Tamarix* sp. near the Dead Sea.

**INTRODUCTION**

Mites were stored in 70% ethyl alcohol, cleared in Nesbitt's solution and mounted in Hoyer's fluid. The setal terminology of Garman (1948) and of Nesbitt (1951) was followed.

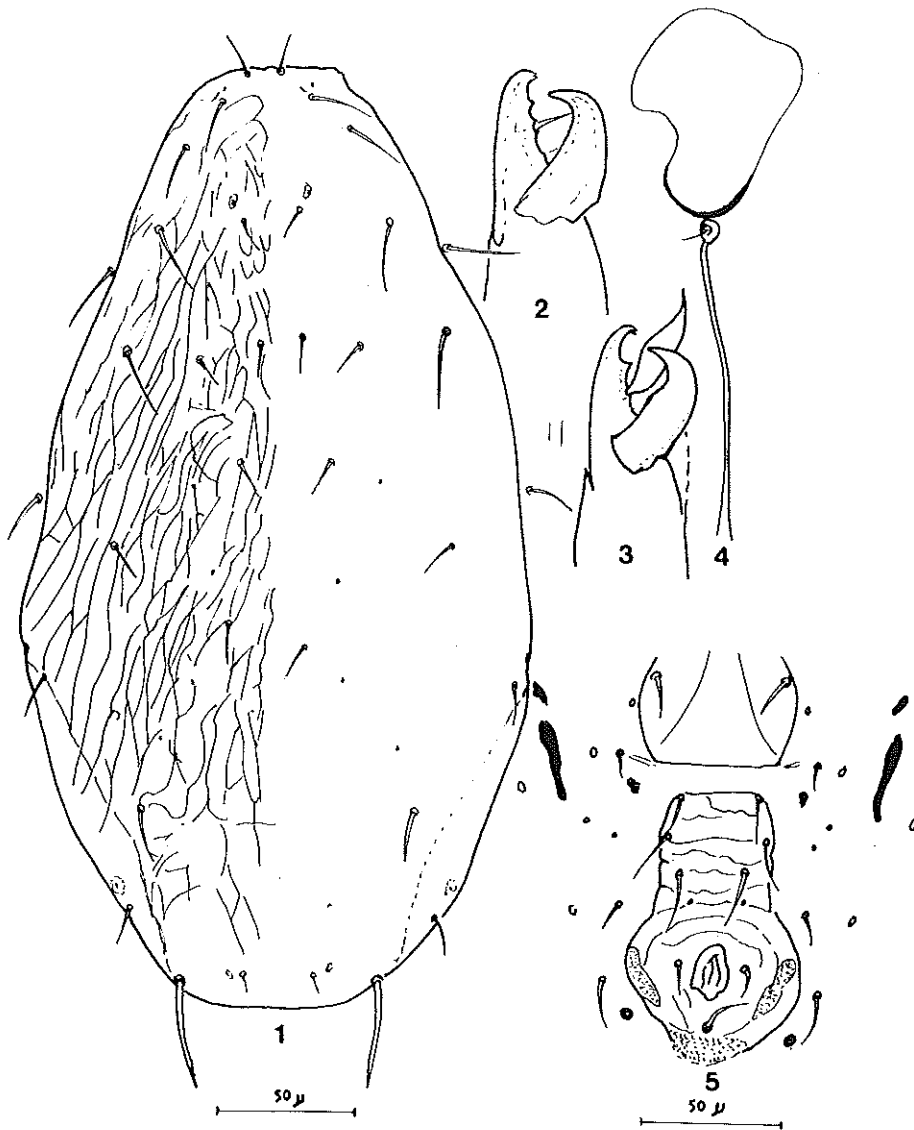
Type series are deposited in the Division of Entomology, Agricultural Research Organization, Bet Dagan, Israel.

*Eharius hermonensis* n.sp. (Figs. 1—8)

*Female:* Dorsal shield (Fig. 1) strongly sclerotised; reticulated all over, besides the area caudal to the bases of setae  $M_2$  which is smooth, or with few striae or cells. Dorsal shield carries 16 pairs of setae: 6D, 2M, 8L; setae  $L_8$  very slightly serrated, others smooth. Solenostomes on the dorsal shield not prominent.

Sternal shield slightly chhinated; its anterior margin convex, lateral ones concave; it bears setae v1, v2, v3 and poroides pv1, pv2; setae v4 and poroides pv3 are placed on metasternal platelets. Genital shield (Fig. 5) chitinised, smooth; its anterior margin rounded; its posterior margin almost straight, much narrower than the width of the

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Figs. 1-5. *Eharius* spp. 1,3,4,5. *E. hermonensis* n. sp., Female. 1 – dorsal shield; 3 – chelicera; 4 – spermatheca; 5 – ventrianal shield, metapodal plates and posterior part of the genital shield. 2. *E. chergui* (Athias-Henriot), Female, chelicera.

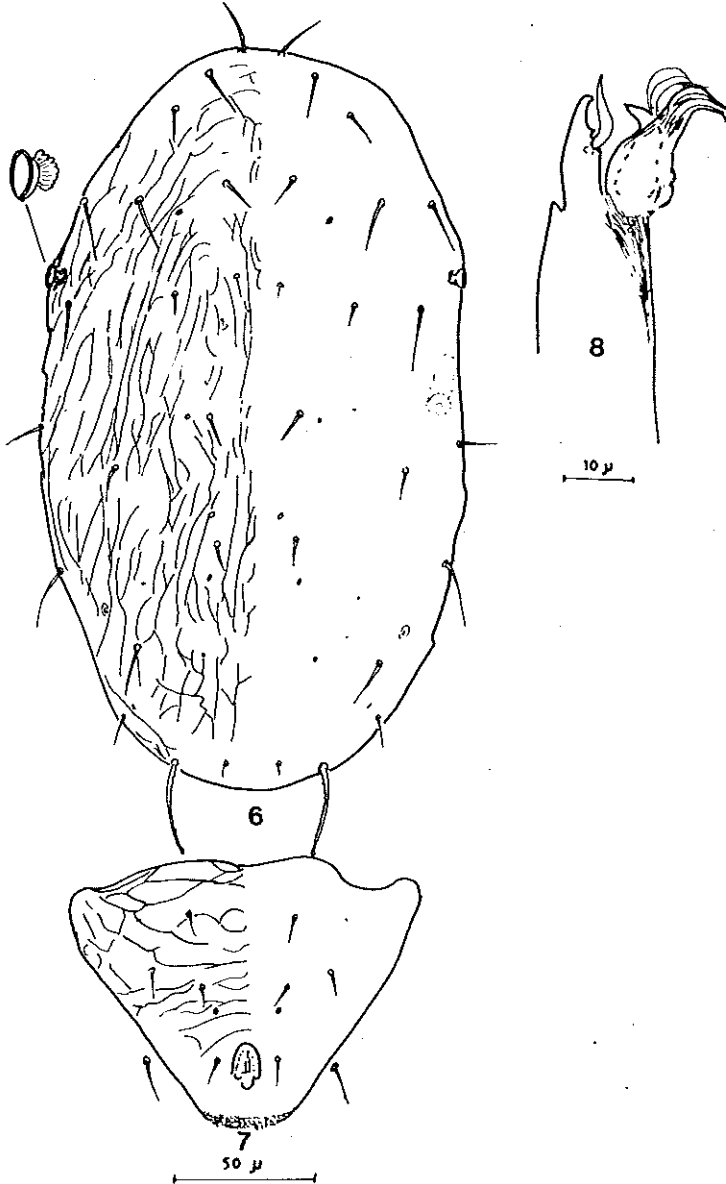
shield across the setae; lateral margins of the shield constricted lateral to setae v5; V-line prominent. Two large projections on the anterior part of the shield are prominent in a few paratypes. Ventrianal shield (Fig. 5) chitinised, striated, vase-shaped, broad at the anal level; solenostomes (ian pores) present; it carries three pairs of preanal setae; ratio of length/width = 1.51–1.63; rA = 1.35–1.40. Two pairs of setae, besides VL<sub>1</sub>, surrounding the ventrianal shield. The ventral interscutal membrane bears two pairs of

metapodal plates; the minute secondary ones are bacillus-like. Peritreme very short, its apex reaching coxae III.

In the spermatheca (Fig. 4) the cervix is cup-shaped; atrium adjacent to the cervix; major duct cylindrical, elongate; minor duct discernible.

In the chelicerae (Fig. 3) the fixed digit bears one tooth and a robust *pilus dentilis*; the movable digit has a small protuberance (not tooth, apex bifid).

Macrosetae on hind legs not differentiated.



Figs. 6-8. *Eharius hermonensis* n. sp. — Male. 6 — dorsal shield; 7 — ventrianal shield; 8 — chelicera.

*Measurements* (in microns):  $D_8 = 333(329-366)$ ;  $L_{va} = 94(88-103)$ ;  $l_{va} = 61(58-68)$ ; primary metapodal plate =  $28(25-30)$ ; secondary metapodal plate =  $8(5-10)$ ;  $D_1 = 15.5(15-17)$ ;  $D_2 = 12.5(10-15)$ ;  $D_3, D_4 = 8(7-10)$ ;  $D_5 = 12(10-13)$ ;  $L_1 = 25(23-28)$ ;  $L_2 = 20(18-22)$ ;  $L_3 = 23(20-28)$ ;  $L_4 = 26(23-30)$ ;  $L_5 = 15(13-17)$ ;  $L_6 = 17(15-22)$ ;  $L_7 = 12.5(12-13)$ ;  $L_8 = 38(33-45)$ ;  $M_1 = 9(8-12)$ ;  $M_2 = 17(15-22)$ ;  $VL_1 = 17(13-18)$ ;  $S_1 = 28(25-30)$ ;  $S_2 = 16(13-18)$ .

*Male*: Dorsal shield (Fig. 6) heavily sclerotised, reticulated all over. Dorsal shield carries 18 pairs of setae: 6D, 2M, 8L,  $S_1, S_2$ ;  $S_2$  sometimes on the interscutal membrane; setae  $L_8$  slightly striated, others smooth.

Genitosternal shield chitinised, slightly striated on the posterior half; bearing five pairs of setae and three pairs of poroides. Ventrianal shield (Fig. 7) subtriangular, striated all over, in some places the striation passing into reticulation; it bears three pairs of preanal setae (in some specimens a preanal seta is missing on one side) and a few pairs of poroides; ratio of length/width = 0.78–0.92. Peritremes very short. One pair of setae ( $VL_1$ ) on the membrane surrounding the ventrianal shield.

Macrosetae absent on the hind legs.

Fixed digit of the chelicerae (Fig. 8) bears one tooth and a large pilus dentilis, and the movable digit is smooth. The spermatodactyl is shown in Fig. 8.

*Measurements* (in microns):  $D_8 = 272(262-279)$ ;  $L_{va} = 105(101-110)$ ;  $l_{va} = 125(110-141)$ ;  $D_1 = 15(13-17)$ ;  $D_2, D_3, D_4, M_1 = 11.5(10-13)$ ;  $D_5 = 13(12-15)$ ;  $L_1 = 20$ ;  $L_2 = 17.5(17-18)$ ;  $L_3 = 20(18-22)$ ;  $L_4 = 23(20-25)$ ;  $L_5 = 16(15-17)$ ;  $L_6 = 18(17-20)$ ;  $L_7 = 12.5(12-13)$ ;  $L_8 = 34(32-37)$ ;  $M_2 = 20(18-22)$ ;  $VL_1 = 18$ ;  $S_1 = 25(23-27)$ ;  $S_2 = 17$ .

**MATERIAL EXAMINED.** Holotype ♀ (No. 2696a), ISRAEL, Mt. Hermon (1,450m above sea level), on *Marrubium* sp. (Labiatae), June 27, 1978, A. Rubin. Paratypes 7 ♀♀ and 6 ♂♂ same data as holotype.

**TAXONOMIC NOTES.** *Eharius hermonensis* n. sp. belongs to the genus *Eharius* Tuttle and Muma, 1973. It can easily be distinguished from *E. chergui* (Athias-Henriot, 1960), the only species previously known in this genus, by the characters given in Table 1.

TABLE 1. Morphological Differences Between *Eharius hermonensis* and *E. chergui*

Character	<i>E. hermonensis</i>	<i>E. chergui</i>
<i>Pilus dentilis</i>	large, robust (Fig. 3)	normal (Fig. 2)
Base of movable digit in the chelicera	as wide as mid-part of the digit (Fig. 3)	much wider than mid-part of the digit (Fig. 2)
Setae on sternal shield	3 pairs	2 pairs
Preanal setae + setae surrounding ventrianal shield	6 pairs	5 pairs

*Nabiseius rivnayae* n. sp. (Figs. 9–15)

*Female*: Dorsal shield (Fig. 9) suboval, heavily sclerotised; strongly reticulated, except for the faintly ornamented medial areas; muscle marks very prominent. Dorsal shield carries 17 or 18 pairs of setae: 6D, 3M, 7L, S<sub>1</sub>, sometimes S<sub>2</sub>; all setae smooth, L<sub>7</sub> very slightly pectinate or smooth. Solenostomes of the dorsal shield unprominent.

Anterior and posterior margins of the smooth, slightly chitinised sternal shield (Fig. 13) concave; it bears two pairs of setae; one pair of metasternal setae placed on

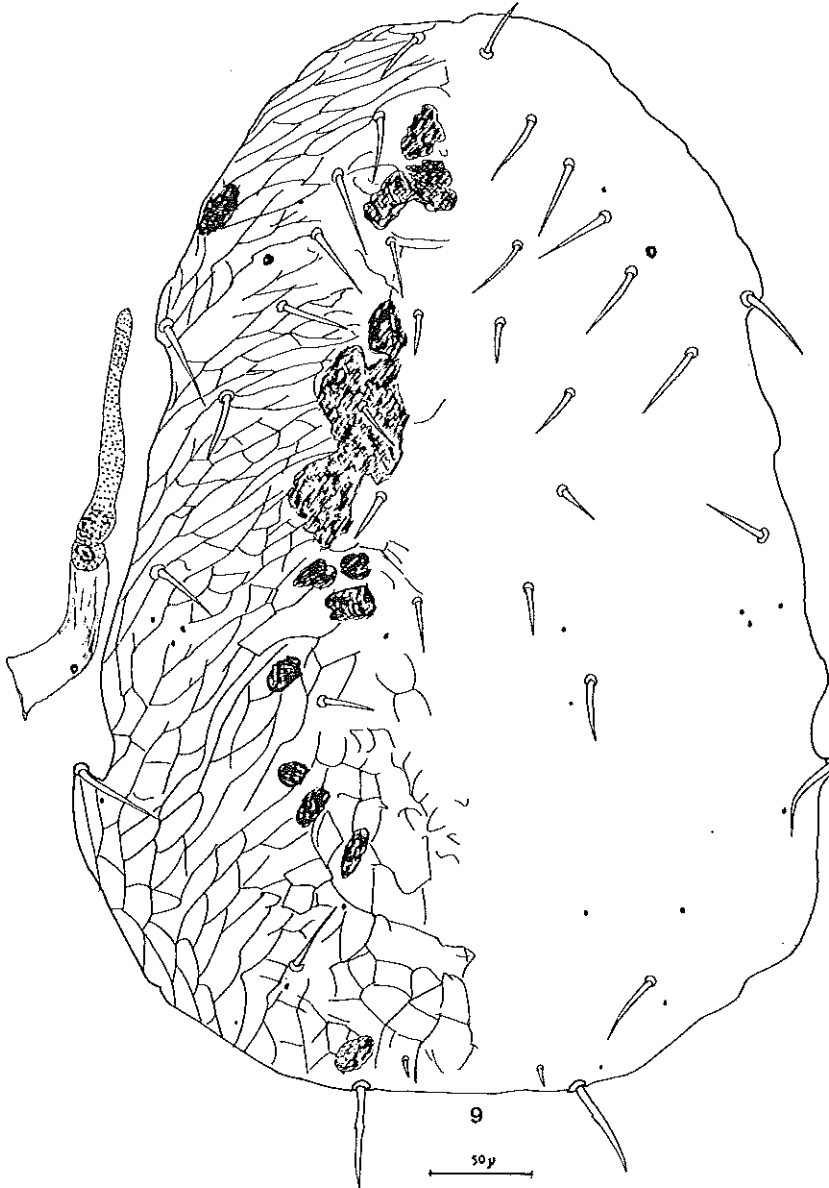
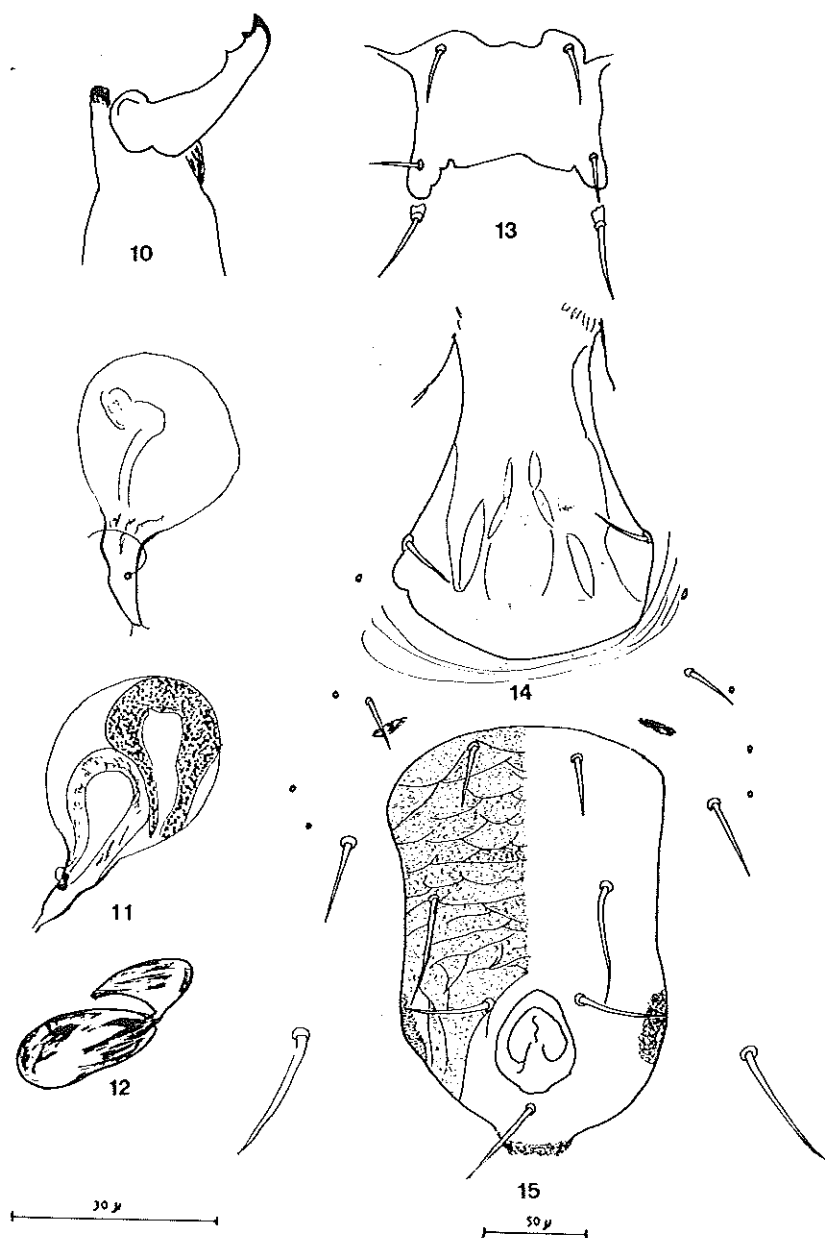


Fig. 9. *Nabiseius rivnayae* n. sp. – Female – dorsal shield.

small platelets. Genital shield (Fig. 14) chitinised; its anterior margin rounded or subtriangular; its posterior one round or straight, narrower than the width of the shield across the setae; lateral margins of the shield constricted anterior and caudal to setae  $V_5$ ; V-line prominent. Ventrianal shield (Fig. 15) chitinised, reticulated, subtriangular; solenostomes (ian pores) absent; it carries two pairs of preanal setae. Two pairs of



Figs. 10-15. *Nabiseius rivnayae* n. sp. Female. 10 - chelicera; 11 - spermatheca; 12 - metapodal plates; 13 - sternal shield; 14 - genital shield; 15 - ventrianal shield.

setae, besides VL<sub>1</sub>, surrounding the ventrianal shield. Primary and secondary metapodal plates are joined by a bridge (Fig. 12). Peritreme very short, its apex reaches the base of seta S<sub>1</sub>, or slightly anterior to it.

In the spermatheca (Fig. 11) cervix funnel-shaped, atrium incorporated in the cervix, major duct narrow, minor duct prominent.

In the hind leg five setae (one on femur, four — on genu) prominently longer and stouter than adjacent setae.

In the chelicerae (Fig. 10) the movable digit carries two subapical teeth; the fixed one is reduced in size.

*Measurements* (in microns): Ds = 511 (501–523); Lva = 158; lva = 128 (116–136); D<sub>1</sub>, D<sub>2</sub> = 27 (25–30); D<sub>3</sub> (22–25); D<sub>4</sub> = 20 (17–23); D<sub>5</sub> = 24 (23–25); L<sub>1</sub>, M<sub>3</sub> = 35 (32–42); L<sub>2</sub>, L<sub>5</sub> = 38 (30–42); L<sub>3</sub> = 39 (37–42); L<sub>4</sub> = 40; L<sub>6</sub> = 37 (33–42); L<sub>7</sub> = 49 (47–52); M<sub>1</sub> = 22.5 (22–23); M<sub>2</sub> = 26 (25–27); S<sub>1</sub> = 42 (38–45); S<sub>2</sub> = 44 (42–48); VL<sub>1</sub> = 56 (42–60).

*Male*: unknown.

**MATERIAL EXAMINED.** Holotype ♀ (no. 2497), ISRAEL, En Samar (near the Dead Sea), August 1972, Tova Rivnay. Paratypes, 7 ♀♀, same data as holotype.

**TAXONOMIC NOTES.** The genus *Nabiseius* Chant and Lindquist, 1965, was assigned to the subfamily Otopheidomeninae, but according to Wainstein (1972) it belongs to the subfamily Treatinae. Only one species was described in the genus *Nabiseius* — *N. duplicisetus* Chant and Lindquist, 1965. *N. rivnayae* n. sp. differs from the latter by the following characters: number and form of metapodal plates (primary and secondary plates joined by a bridge in *N. rivnayae*, primary plates only described in *N. duplicisetus*); number of setae on the dorsal shield (17, 18 pairs in *N. rivnayae*; 19 pairs in *N. duplicisetus*); number of setae surrounding the ventrianal shield (three pairs in *N. rivnayae* four in *N. duplicisetus*).

*Nabiseius duplicisetus* was removed from a nabid bug found on grapes from Chile, intercepted in the U.S.A. (Chant and Lindquist, 1965).

This species is named for our colleague Mrs. Tova Rivnay.

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