Artikel: Two new species of the genus Stigmaeus (Acari: Stigmaeidae) from Turkey

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Two new species of the genus *Stigmaeus* (Acari: Stigmaeidae) from Turkey

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Abstract

Two new species from Turkey, Stigmaeus seferihisarensis *and* Stigmaeus urhani *are described based on males and females.*
Keywords: *Acari, Stigmaeidae,* Stigmaeus, *new species, Turkey.*

Résumé

Deux nouvelles espèces du genre Stigmaeus (Acari: Stigmaeidae) originaires de Turquie

Deux nouvelles espèces orginaires de Turquie, Stigmaeus seferihisarensis *et* Stigmaeus urhani *sont décrites sur la base des mâles et femelles.*
Mots-clés: *Acari, Stigmaeidae,* Stigmaeus, *nouvelles espèces, Turquie.*

Introduction

The genus *Stigmaeus* is one of the largest groups of the family Stigmaeidae. They live in the soil and on plants, and are usually predators of mites. A few prey on scale insects or parasitize flies (Gerson and Smiley 1990). To date only six species are known from Turkey (Koç and Ayyildiz 1997; Dogan and Ayyildiz 2003).

In this paper two new species from Turkey, *Stigmaeus seferihisarensis* and *Stigmaeus urhani* are described. The terminology used is based on Grandjean (1944) and Kethley (1990). All measurements are given in micrometers (µm). Type and paratype specimens are deposited in the Zoological Museum of Celal Bayar University, Manisa, Turkey.

Stigmaeus *Koch, 1836*

Type-species- *Stigmaeus cruentus* Koch, 1836.

Dorsum with 10-16 shields and ornamented in most species. Propodosomal shield with three or four pairs of setae. Setae *sce* on a small auxiliary shield. Hysterosoma with two median shields, central and suranal; with three to five pairs of smaller, usually paired shields, humerals, marginals, median zonals, lateral zonals and intercalaries. Dorsum with 13-14 pairs of setae.

Stigmaeus seferihisarensis *sp. nov.*

Female. (Figs. 1-10) HOLOTYPE – (minimum, maximum followed by measurements of holotype): Length of body (including gnathosoma) 406-442 (416), width: 255-296 (270).

Gnathosoma- Length of gnathosoma 83-104 (104). Ventrally with two pairs of adoral setae and two pairs of subcapitular setae, dimensions of subcapitular setae: m: 21-26, n: 21. Chelicera 104-114 (114) (including digits). Palpi 83-94 (94), counts of setae and solenidia on palpi (femur to tarsi): 3, 2, 2+1 claw +1 accessory claw, 5+1 ω + 1 tridentate eupathidium.

Dorsum- Propodosomal shield with three pairs of setae, one pair of eyes located between setae *ve* and *sci* . Setae *sce* located on small auxiliary shields.

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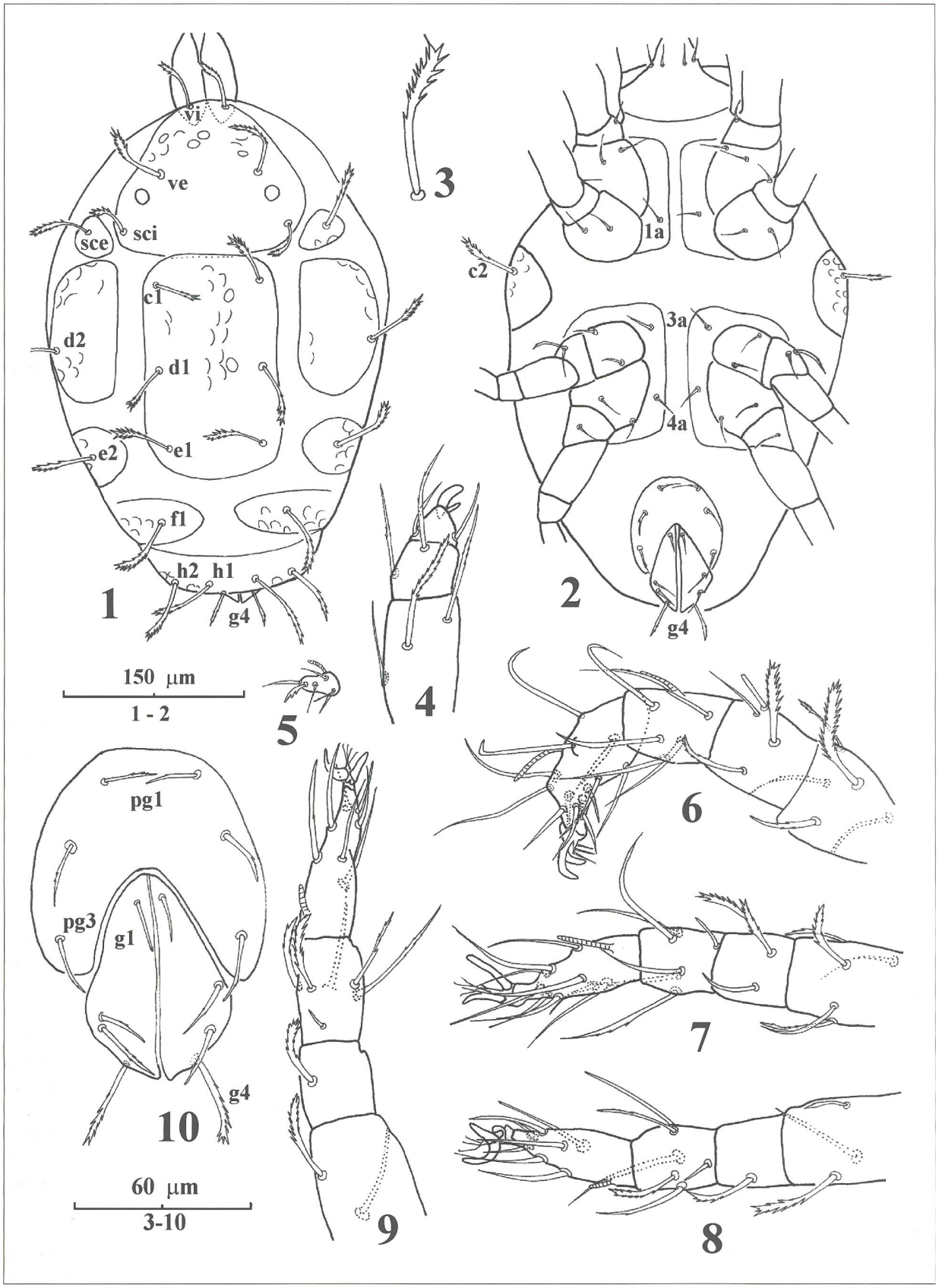


FIGS. 1-10.

Stigmaeus seferihisarensis *sp. nov. (Female)- 1. Dorsal view, 2. Ventral view, 3. Seta c_1, 4. Palpus, 5. Tarsus of palpus, 6. Leg I, 7. Leg II, 8. Leg III, 9. Leg IV, 10. Genital region.*

Central shield with three pairs of setae, c_1, d_1 and e_1. Setae c_2 on small shields ventrolaterally. Marginal shield with setae d_2. Lateral zonal shield with setae e_2. Intercalary shields divided, with setae f_1. Suranal shield entire, with two pairs of setae, h_1 and h_2. Dorsal body setae of hysterosoma all similar in form and length, basal half smooth, distal half spinulate. Dimensions of setae as follows: *vi*: 42-47 (47), *ve*: 47-57 (57), *sci*: 36-36 (36), *sce*: 47-52 (52), c_1: 36-47 (47), c_2: 42-52 (52), d_1: 47-52 (47), d_2: 47-52 (52), e_1: 47-52 (52), e_2: 52-57 (52), f_1: 47-57 (52), h_1: 47-52 (52), h_2: 42-52 (52). Distances between setae as follows: *vi-vi*: 26-31 (31), *vi-ve*: 57 (57), *ve-ve*: 78-83 (78), *ve-sci*: 52-57 (57), *sci-sci*: 130-140 (140), c_1-c_1: 78-83 (83), c_1-d_1: 68-78 (73), c_1-d_2: 88-109 (109), d_1-d_2: 83-88 (88), d_1-d_1: 78-88 (88), d_1-e_1: 62-68 (68), e_1-e_1: 73-83 (83), e_1- e_2: 57-68 (62), e_2- e_2: 182-218 (208), f_1-f_1: 78-104 (104), f_1-h_1: 52-62 (62), h_1-h_1: 42 (42), h_1-h_2: 26-31 (31), h_2-h_2: 88-99 (99). Dorsal shields with polygonal dimples incompletely developed; dimples show plainly as deep invaginations.

Venter- Coxisternal shields divided, bearing 1a, 3a and 4a. Aggenital setae three pairs, pg_1: 21 (21), pg_2: 21-26 (26), pg_3: 26 (26). Anogenital covers with four pairs of setae, g_2: 16-21 (21), g_3: 21-26 (26), g_4: 26-31 (31). Seta g_1 minute. Aggenital setae slightly spinulate. Anogenital setae, g_4 long and strongly spinulate.

Legs- Leg I 156-182 (172), leg II 135-156 (156), leg III 120-146 (140), leg IV, 156-172 (166). Number of setae (solenidia in parentheses) on leg segments as follows: tarsi 13 (+ω)-9 (+ω)-7 (+ω)-7 (+ω), tibiae 5 (+Φ+Φp)- 5 (+Φp)-5 (+Φp)-5 (+Φp), genua 4 (k)-3-1-1, femora 5-5-3-2, trochantera 1-1-2-1, coxae 2-2-2-2. Genua II without solenidion *k*. Genu I bearing long solenidia *k*.

Male. (Figs. 11-15) ALLOTYPE – Length of body (including gnathosoma): 322-346, width: 166-208.

Gnathosoma – Length of gnathosoma 83-104, with two pairs of adoral setae and two pairs of subcapitular setae. Chelicera 88-104 (including digits). Palpi 78-88, counts of setae and solenidia on palpi (femur to tarsus): 3, 2, 3+1 claw and 1 accessory claw, 5+1 ω +1 tridentate eupathidium.

Dorsum – General features of setae and dorsal ornamentation as in female. Dimensions of setae as follows: *vi*: 36, *ve*: 42-47, *sci*: 26-31, *sce*: 42-47, c_1: 36-42, c_2: 47, d_1: 36-42, d_2: 42-52, e_1: 36-42, e_2: 47-52, f_1: 47-52, h_1: 31-36, h_2: 36-47. Distances between setae: *vi-vi*: 26, *vi-ve*: 36-47, *ve-ve*: 52-62, *ve-sci*: 36-42, *sci-sci*: 94-104, c_1-c_1: 52-57, c_1-d_1: 52, c_1-d_2: 52-57, d_1- d_2: 57, d_1-d_1: 57, d_1-e_1: 47-52, e_1-e_1: 42-47, e_1-e_2: 36-42, e_2- e_2: 114, f_1-f_1: 42-57, f_1-h_1: 26-42, h_1-h_1: 26, h_1-h_2: 26, h_2-h_2: 78.

Venter – Coxisternal shields divided, bearing 1a, 3a and 4a. Aggenital shield with three pairs of setae. Anogenital covers bearing three pairs of minute setae.

Legs – Leg I 156-182, leg II 120-151, leg III 130, leg IV 125-146. Number of setae (solenidia in parentheses) on leg segments as follows: tarsi 13 (+ω+ω♂)-9 (+ω+ω♂)-7 (+ω+ω♂)-7 (+ω+ω♂), tibiae 5 (+Φ+Φp)- 5 (+Φp)- 5 (+Φp)- 5 (+Φp), genua 3 (+k)-3 (+k)- 1-1, femora 6-5-3-2, trochantera 1-1-2-1, coxae 2-2-2-2. All tarsi bearing additional and long solenidia ω♂.

Type materials- Holotype female, allotype male, three paratype females and one paratype male from soil and litter under *Tamarix* sp., at coast, Seferihisar, Izmir, 02.V.2004.

Etymology- This species is named after the type locality (Seferihisar, Izmir).

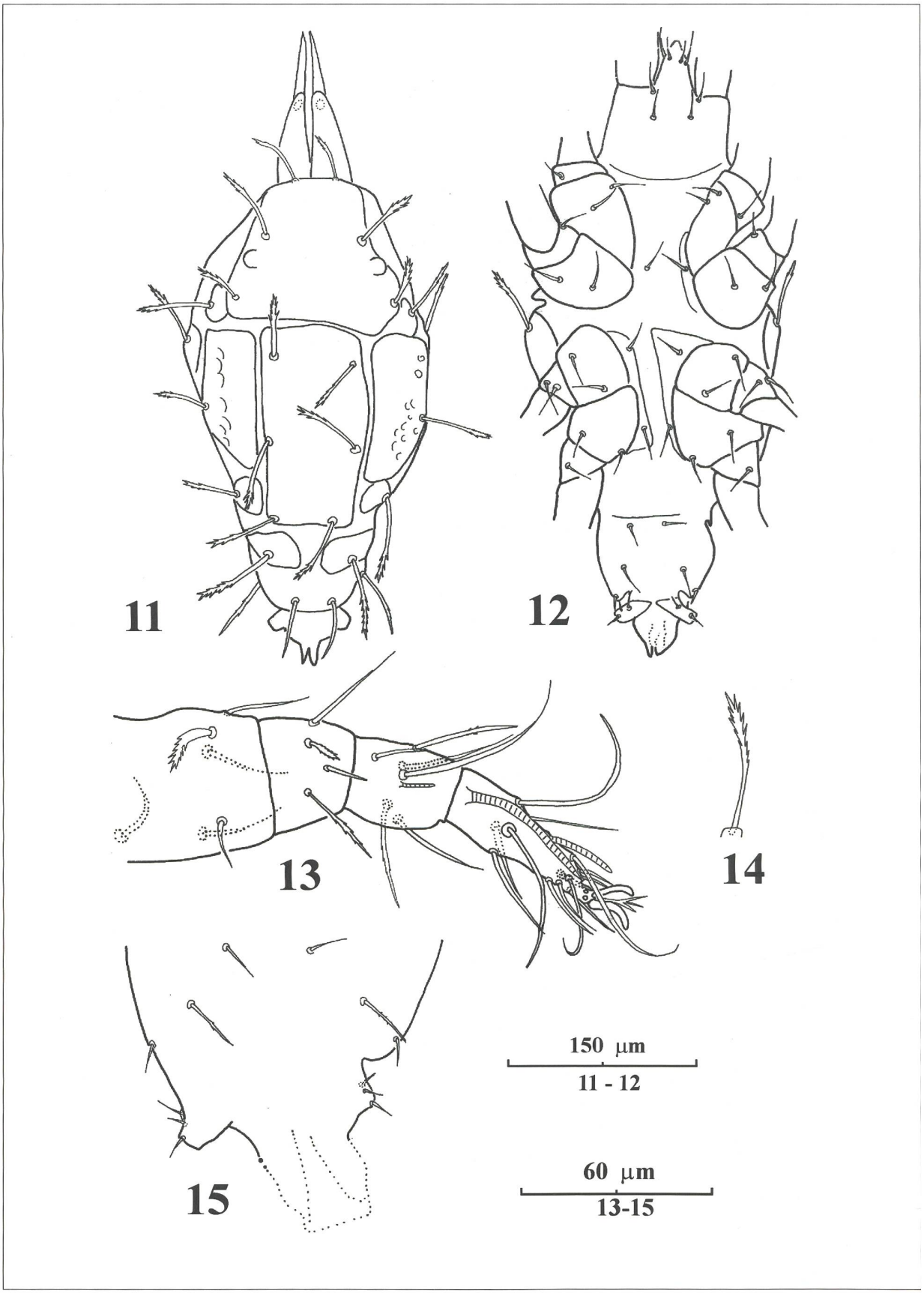
Remarks- This new species resembles *S. sphagneti* (Hull 1918) (Summers 1962) in that central shield bears three pairs of setae and a long solenidion *k* on genu I. However, it can be separated from the latter by femur I bearing five setae and genu II without solenidion *k*.

Stigmaeus urhani *sp. nov.*

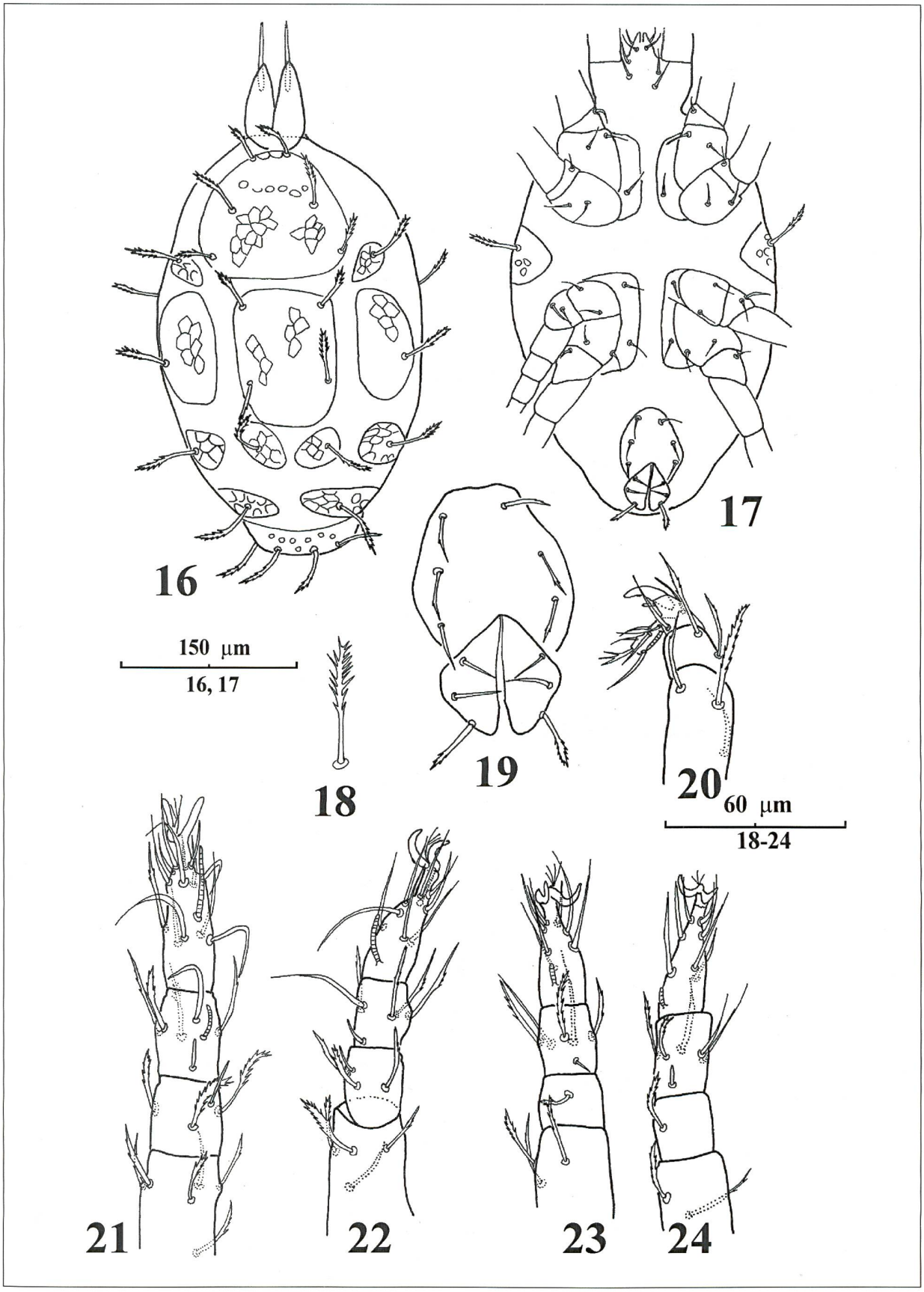
Female. (Figs. 16-24) HOLOTYPE – (measurements of holotype followed by that of paratype): Length of body (including gnathosoma) 400 (442), width: 218 (244).

Gnathosoma- Length of gnathosoma 57 (62). Ventrally with two pairs of adoral setae and two pairs of subcapitular setae, dimensions of subcapitular setae: m: 21-26, n: 21. Chelicera 99 (94) (including digits). Palpi 94 (94), counts of setae and solenidion on palpi (femur to tarsi): 3,2,2+1 claw +1 accessory claw, 5+1 ω + 1 tridentate eupathidium.

Dorsum- Dorsal shield with thick reticulum. Propodosomal shield with three pairs of setae, one pair of eyes located between setae *ve* and *sci* . Setae *sce* located on small auxiliary shields. Central shield with two pairs of setae, c_1, d_1. Setae c_2 on small shield ventrolaterally. Setae e_1 located on small shields. Marginal shield with setae d_2. Lateral zonal shield with setae e_2. Intercalary shields divided, with setae f_1. Suranal shield entire, with two pairs of setae, h_1 and h_2. Dorsal body setae of hysterosoma similar to that of *S. seferihisarensis*. Dimensions of setae as follows: *vi*: 31 (36), *ve*: 44 (47), *sci*: 31 (36), *sce*: 41 (47), c_1: 36 (36), c_2: 42 (42) d_2: 42 (47), d_1:



FIGS. 11-15.
Stigmaeus seferihisarensis *sp. nov. (Male)- 11. Dorsal view, 12. Ventral view, 13. Leg I, 14. Seta ve, 15. Venter of genital region.*



FIGS 16-24.

Stigmaeus urhani *sp. nov. (Female)- 16. Dorsal view, 17. Ventral view, 18. Seta c1, 19. Genital region, 20. Palpus, 21. Leg I, 22. Leg II, 23. Leg III, 24. Leg IV.*

36 (42), e_1: 42 (42), e_2: 52 (52), f_1: 52 (52), h_1: 42 (42), h_2: 42 (42). Distances between setae: *vi-vi*: 31 (31), *vi-ve*: 52 (52), *ve-ve*: 68 (62), *ve-sci*: 47 (31), *sci-sci*: 104 (104), c_1-c_1: 68 (62), c_1-d_1: 62 (68), c_1-d_2: 83 (88), d_1-d_2-: 78 (78), d_1-d_1: 68 (62), d_1-e_1: 57 (57), e_1-e_1: 57 (57), f_1-f_1: 78 (68), f_1-h_1: 42 (42), h_1-h_1: 21 (21), h_1-h_2: 26, h_2-h_2: 73.

Venter- Coxisternal shields divided, bearing 1a, 3a and 4a. Aggenital setae three pairs, with minute spinules (pg_1-pg_3). Anogenital covers with three pairs of setae (g_1- g_3). Aggenital setae slightly spinulate. Anogenital setae, g_3 long and strongly spinulate.

Legs- Length of legs I-IV (from femur to tip of tarsal claw): 177 (166)-130 (120)-120 (120)-130 (146). Number of setae (solenidia in parentheses) on leg segments as follows: tarsi 13 (+ω)-9 (+ω)-7 (+ω)-7 (+Φ), tibiae 5 (+Φ+Φp)- 5 (+Φp)-5 (+Φp)-5 (+Φp), genua 4 (k)-4 (k)-1-1, femora 6-4-3-2, trochantera 1-1-2-1, coxae 2-2-2-2. Genua I and II with solenidion *k*.

Type materials- Holotype female, one paratype female from soil and litter under *Tamarix* sp., at coast, Seferihisar, Izmir, 02.V.2004.

Etymology- The specific name honours Dr. Rasit URHAN, Pamukkale University, Denizli, Turkey.

Remarks- This new species resembles *S.petrophilus* Kuznetzov and Petrov (1979), in that central shield bears two pairs of setae and in the setal formula of genua 4-4-1-1. However, it can be distinguished from the latter by femur II bearing four setae, setae g_1 and g_2 smooth, setae *ve* not reaching the posterior margin of propodosomal shield and in that setae c_2 are similar other dorsal setae.

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