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Two new species of mites of the family *Zerconidae* from Turkey (*Acari*: *Mesostigmata*)

RAŞIT URHAN
Department of Biology, Faculty of Science and Letters, Pamukkale University, Denizli-Turkey.

ABSTRACT. Two new zerconid species , *Zercon ayyildizi* and *Z. trabzonensis*, from Turkey are described and illustrated.

Key words: Acarology, taxonomy, new species, *Zercon*, *Acari*, *Mesostigmata*, Turkey.

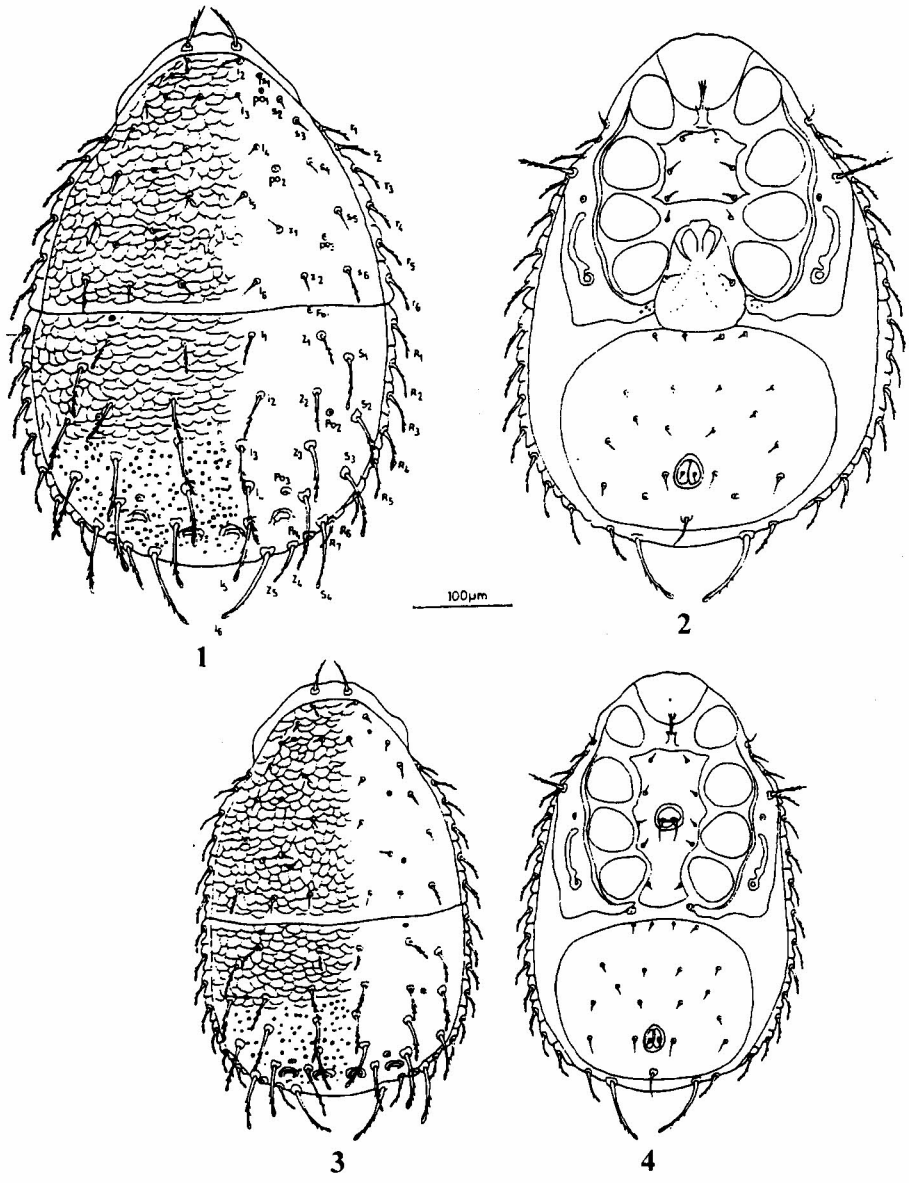
INTRODUCTION

The genus *Zercon* is the most speciose in the family *Zerconidae*. Until now, sixteen species of *Zercon* have been recorded from Turkey (BŁASZAK, 1979; Urhan and Ayyýldýz, 1994a, 1994b, 1995).

During the studies on the family *Zerconidae* in Turkey I found two new species of the genus *Zercon* C.L. KOCH, 1836. They are described in this paper. Morphological terminology used in the descriptions follows that of SELLNICK (1958) and BŁASZAK (1974). Type materials are deposited in the author's collection.

SYSTEMATICS

Family: *Zerconidae* CANESTRINI, 1891
Genus: *Zercon* C.L. KOCH, 1836
Type-species: *Zercon triangularis* C.L. KOCH, 1836



1-4. *Zercon ayyildizi* sp. nov.: 1-2 - Female: 1 - dorsal view of idiosoma, 2 - ventral view of idiosoma; 3-4 - Male: 3 - dorsal view of idiosoma, 4 - ventral view of idiosoma

***Zercon ayyildizi* sp. nov.**
(Figs 1-4)

Female (Figs 2) - Length of idiosoma (excluding gnathosoma) in holotype 543 µm, width 383 µm. Measurements of 20 paratypes; length 508 (490-543) µm, width 384 (377-393) µm. **Dorsal setae** (Fig. 1) - On podonotum setae i_1 and i_2 feathered. All marginal setae of podonotum, and seta s_6 terminally broadened with hyaline ending. The remaining setae of podonotum smooth. On opisthonotum all setae long, terminally broadened with hyaline ending. Seta I_2 reaches to the base of seta I_3. Seta I_5 exceeds posterior margin of opisthonotum. Setae I_6 117 µm apart. Seta Z_2 does not reach the base of seta Z_3. Seta Z_4 exceeds posterior margin of opisthonotum. Distance between setae Z_5 and I_6 30 µm. Seta S_2 reaches margin of opisthonotum. Seta S_3 exceeds opisthonotum margin of half length. All marginal setae of opisthonotum similar to marginal setae of podonotum. Length of opisthonotal setae and distances between setae within longitudinal rows are as follows:

S_1-47	**Z_1**-37	**I_1**-33
53	67	57
S_2-57	**Z_2**-43	**I_2**-47
57	57	47
S_3-63	**Z_3**-57	**I_3**-54
57	47	50
S_4-67	**Z_4**-67	**I_4**-57
	50	37
	Z_5-47	**I_5**-60
		40
		I_6-77

Pore Po_1 located anteroparaxially to the insertion of seta Z_1. Pore Po_2 lies below the line connecting setae Z_2-S_2. Pore Po_3 situated on the line connecting setae Z_4-I_4 shifted toward seta Z_4. Pore Po_4 lies in the middle of the line connecting setae S_4-Z_5. Ornamentation of dorsal shield shown in Fig. 1.

Chaetotaxy and shape of peritremal shields typical for the genus. Adgenital shields present. On the anterior margin of ventro-anal shield four setae (Fig. 2).

Male (Figs 3-4) - Idiosoma (excluding gnathosoma) in 3 specimens 407 (393-414) µm long, 290 (280-307) µm wide. Setae, pores and sculpture of podo- and opisthonotum as in female. Distances between setae I_6-I_6 and Z_5-I_6 92 µm and 24 µm, respectively. Length of opisthonotal setae and distances between setae within longitudinal rows are as follows:

S_1-37	**Z_1**-27	**I_1**-27
38	43	39
S_2-40	**Z_2**-34	**I_2**-31
36	31	29

S_3-43	Z_3-38	I_3-40
29	34	29
S_4-50	Z_4-48	I_4-40
	26	26
	Z_5-24	I_5-40
		29
		I_6-53

Type material - Holotype: female, paratypes 20 females, 3 males; Turkey, Burdur, İnsuyu cave, 1200 m, 3.5.1994. Sample of litter and soil under *Rosa canina* in a garden.

Remarks - The new species is closely related to *Zercon agnostus* BŁASZAK, 1979 from which it can be easily distinguished by the following features:

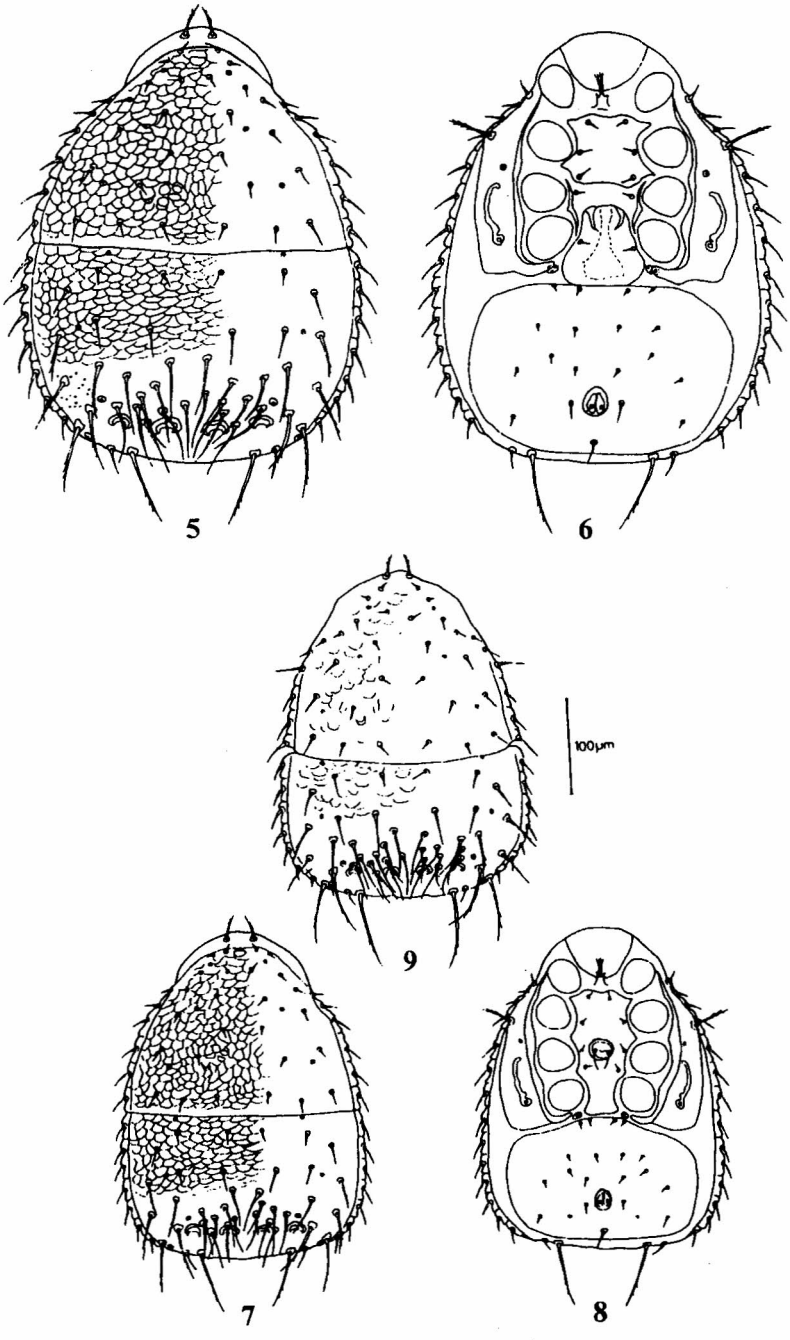
Zercon ayyildizi sp. nov.	*Zercon agnostus* BŁASZAK, 1979
1. Seta i_2 feathered.	1. Seta i_2 smooth.
2. Seta s_6 terminally broadened with hyaline ending.	2. Seta s_6 smooth.
3. Setae r_1-r_3 terminally broadened with hyaline ending.	3. Setae r_1-r_3 delicately feathered.
4. Setae I_1 and Z_1 long with hyaline ending.	4. Setae I_1 and Z_1 short and smooth.
5. Setae I_5 and Z_4 exceeding posterior margin of opisthonotum.	5. Setae I_5 and Z_4 not reaching posterior margin of opisthonotum.
6. Pore Po_3 on the line connecting setae Z_4-I_4.	6. Pore Po_3 above the line connecting setae Z_4-I_4.

Etymology - The new species is named in honour of the acarologist and my adviser, Prof. Dr. Nusret AYYILDIZ (Atatürk University, Erzurum, Turkey).

Zercon trabzonensis sp. nov.

(Figs 5-9)

Female (Fig. 5-6) - Length of idiosoma (excluding gnathosoma) in holotype 443 μm, width 357 μm. Measurement of 5 paratypes; length 446 (413-473) μm, width 356 (346-363) μm. Dorsal setae (Fig. 5) - Podonotal setae i_1 pilose, remaining setae on podonotum smooth. Opisthonotal setae: the distinctive feature of this species is the presence of three supplementary uneven setae, bewteen two rows of I pairs of setae, and also four or five such setae between I and Z rows. Setae I_1 and Z_1 short and smooth. Setae I_6, Z_3, Z_4, S_2-S_4 long and pilose. Seta S_1 does not reach the base of seta S_2. The remaining setae of the opisthonotum, including supplementary



5-9. *Zercon trabzonensis* sp. nov.: 5-6 - Female: 5 - dorsal view of idiosoma, 6 - ventral view of idiosoma; 7-8 - Male: 7 - dorsal view of idiosoma, 8 - ventral view of idiosoma; 9 - Deutonymph, dorsal view of idiosoma

ones very long, each extending the insertion of the next one. Distances between setae I_6-I_6 and Z_5-I_6 127 µm and 23 µm, respectively. Seta S_3 exceeds margin of opisthonotum. All marginal setae of opisthonotum long and smooth. Length of opisthonotal setae and distances between setae within longitudinal rows are as follows:

S_1-33	Z_1-17	I_1-13	Ix_{1-3} = 53
43	60	57	Zx_1 = 63
S_2-50	Z_2-33	I_2-40	Zx_{2-4} = 60
53	37	37	Zx_5 = 53
S_3-60	Z_3-57	I_3-63	
47	47	37	
S_4-70	Z_4-70	I_4-63	
	33	33	
	Z_5-23	I_5-50	
		50	
		I_6-83	

Pore Po_1 located anterior to insertion of seta Z_1. Pore Po_2 lies on the line connecting setae Z_2-S_2. Pore Po_3 lies above the line connecting setae Z_4-I_4 shifted toward seta Z_4. Pore Po_4 located behind seta S_4. Ornamentation of dorsal shield shown in Fig. 5.

Chaetotaxy and shape of peritremal shield typical for the genus. Adgenital shields present. Two pairs of setae arising at anterior margin of ventro-anal shield (Fig. 6).

Male (Figs 2 7-8) - Idiosoma (excluding gnathosoma) in 7 specimens 328 (317-333) µm long, 257 (243-267) µm wide. Setae, pores and sculpture of podo- and opisthonotum as in female. Opisthonotum with two or four supplementary setae between I and Z rows. Distances between setae I_6-I_6 and Z_5 and I_6 97 µm and 15 µm, respectively. Length of opisthonotal setae and distances between setae within longitudinal rows are as follws:

S_1-27	Z_1-16	I_1-13	Ix_1= 38
33	34	38	Ix_2= 34
S_2-39	Z_2-22	I_2-24	Ix_3= 42
33	28	23	
S_3-47	Z_3-46	I_3-44	Zx_1= 45
28	30	19	Zx_2= 40
S_4-58	Z_4-60	I_4-46	Zx_3= 40
	20	17	Zx_4= 38
	Z_5-19	I_5-37	
		32	
		I_6-71	

Deutonymph (Fig. 9) - Length of idiosoma (excluding gnathosoma) in 1 paratype; 360 µm, width 270 µm. On podonotum seta i_1 pilose, the remainder smooth. Opisthonotum with four or six supplementary setae between I and Z rows. Setae I_1 and Z_2 short and smooth. Setae I_6, Z_3, Z_4, S_2-S_4 long and pilose. The remaining setae of opisthonotum, including supplementary setae very long, each exceeding the insertion of the next one. Setae I_6 100 µm apart. Distances between seta I_6 and Z_5 13 µm. Seta S_2 exceeds margin of opisthonotum. Pore Po_3 lies anterior to the line connecting setae Z_4-I_4 shifted toward Seta Z_4. Length of opisthonotal setae and distance between setae within longitudinal rows are as follows:

S_1-33	Z_1-20	I_1-20	Ix_{1-3} = 47
37	40	40	
S_2-47	Z_2-33	I_2-43	Zx_1 = 57
40	27	27	Zx_{2-4} = 47
S_3-50	Z_3-57	I_3-53	Zx_5 = 43
33	40	20	Zx_6 = 37
S_4-73	Z_4-73	I_4-50	
	37	20	
	Z_5-20	I_5-43	
		50	
		I_6-83	

Type material - Holotype: female, paratypes; 5 females, 7 males and 1 deutonymph; Turkey, Trabzon, Maçka, 26.5.1991. Sample of litter and soil in a coniferous forest (mostly *Picea orientalis* and *Pinus* sp.)

Remarks - The new species is closely related to *Zercon aniellae* SOLOMON, 1984, from which it can be easily distinguished by the following features:

Zercon trabzonensis sp.nov.	*Zercon aniellae* SOLOMON, 1984
1. Between rows I and Z 3-6 supplementary setae (Zx).	1. Between rows I and Z no supplementary setae
2. Between rows I 3 supplementary setae (Ix).	2. Between rows I 2 or 3 supplementary setae.
3. Seta S_1 not reaching base of seta S_2.	3. Seta S_1 reaching base of seta S_2.
4. Distance between setae Z_5-I_6 23 µm.	4. Distance between setae Z_5-I_6 40 µm.
5. Pore Po_3 above the line connecting setae Z_4-I_4, shifted toward seta Z_4.	5. Pore Po_3 above the line connecting setae Z_4-I_5.

Etymology - The species is named after its locality which is Trabzon (Turkey).

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