

Zercon wisniewskii sp. n. a new species of mite from Russia
(Acari: Mesostigmata: Zerconidae)

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ABSTRACT. A new species of the family *Zerconidae* (Acari, *Mesostigmata*) is described from Russia. It belongs to the species group characterized by having the insertion of setae *I6* and *Z5* in close proximity.

In the material from Russia, received by courtesy of Prof. Dr. J. WIŚNIEWSKI (Chair of Forest and Environment Protection, Academy of Agriculture in Poznań) we found one new species of the genus *Zercon* C.L.KOCH, 1836.

Derivatio nominis: This species is dedicated to Prof. Dr. J. WIŚNIEWSKI.

Description of holotype: Adult: Female, length 490 μm , width 395 μm .

Dorsal side: (Fig.1). Setae: On podonotum, in row *i* seta *i1* barbed, remaining setae of row *i* and setae *z1, z2, s2, s3, r1, r2* short with burr at the extremity. Only seta *s1* short, smooth and obtuse. Setae *s4-s6, r4-r6* a little longer with burrs, *r3* barbed. Podonotal row *i, s* and *r* with six pairs of setae, row *z* with two pairs. On opisthonotum, in row *I* setae *I1-I3* (Fig.5) short, with burr at the extremity, *I4-I6* (Fig.6) thicker, barbed with a hyaline sheath. Seta *I4* extending beyond the insertion of seta *I5*; seta *I5* extending beyond the posterior margin of opisthonotum. Setae *I6* separated from each other by 162 μm . The insertions of setae *I6* and *Z5* are in close proximity. Setae *Z1* and *Z2* like seta *I1*. Setae *Z3* and *Z4* thicker, longer, similar in shape to setae *I5-I6*, seta *Z3* extending beyond the insertion of seta *Z4*, and seta *Z4* extending decidedly the posterior margin of the opisthonotum, seta *Z5* shorter with burr. In row *S* seta *S1* (Fig.7) thicker with burrs and hyaline sheath, *S2-S4* similar in shape to the seta *I5-I6*. Seta *S1* reaching to the insertion of seta *S2*. Margin of opisthonotum with seven pairs

of setae, setae *R1*, *R2* similar in shape to the seta *I4* and setae *R3-R7* to the setae *S1*. Besides seta *s1* all setae have delicately hyaline-like tip. Lengths of setae of opisthonotum and longitudinal distances between the insertions of setae in single rows are given in Table 1.

Table 1.

Seta	Length μm	Distance μm	Seta	Length μm	Distance μm	Seta	Length μm	Distance μm
<i>S1</i>	48-51	56	<i>Z1</i>	24	50-55	<i>I1</i>	22-24	44-45
<i>S2</i>	70-72	64	<i>Z2</i>	20	27-34	<i>I2</i>	22-24	33-34
<i>S3</i>	86	61	<i>Z3</i>	74-76	65-66	<i>I3</i>	19-21	27-29
<i>S4</i>	94-96		<i>Z4</i>	106	77	<i>I4</i>	54-56	31-34
			<i>Z5</i>	52		<i>I5</i>	105-108	98-100
						<i>I6</i>	120-121	

Pores: On podonotum pore *po1* situated near the centre of the line connecting setae *i2* and *s2*, *po2* lies behind the line connecting setae *i4* and *s4*, *po3* on line connecting setae *s5* and *z1*. On opisthonotum pore *Po1* situated anteroparaxially to the insertion of seta *Z1*, *Po2* on the line connecting setae *Z2* and *S2* but nearer to *Z2*, *Po3* above line connecting setae *Z4* and *I5*, *Po4* situated posteroparaxially to the insertion of seta *S4*.

Sculpture: Podonotum entirely covered with irregular tile-like sculpture. Front and middle part of opisthonotum covered with irregular tile-like sculpture, which disappears towards the posterior, where it is covered with irregular spots. Posterodorsal cavities are of star-like shape with rounded curvings.

Ventral side: Chaetotaxy and shape of the peritremal shields typical of the genus *Zercon*. Seta *p1* short and smooth, seta *p2* (Fig. 8) long, barbed with hyaline sheath. Anterior margin of ventroanal shield with four setae.

Tectum: Presented in Fig. 9.

Systematic position: This species resembles *Zercon bajcalensis* BŁASZAK, 1979 from which it differs in the features presented in Table 2.

On opisthonotum of one of the paratypes (female), appears an extra seta *Z2'* (Fig. 2)

There are some differences between female and male dorsal side.

Male: length 405 μm, width 305 μm.

Dorsal side: (Fig. 3) Setae: On podonotum in row *i* seta *i1* barbed, setae *i2-i4* short with burr at the extremity and setae *i5, i6* short, smooth, obtuse. In row *z* setae *z1-z2* short, smooth with sharp tip. In row *s* setae *s1, s2* short, smooth and obtuse, seta *s3*

Table 2

<i>Z. wisniewskii</i> sp. n.	<i>Z. bajcalensis</i> Błaszak, 1979
1. Seta I4 reaches almost half of its length over the insertion of the seta I5	1. Seta I4 reaches as far as half the distance to I5
2. Seta S1 long with hyaline sheath, is at least twice as long as the seta Z1	2. Seta S1 short and smooth is equal to seta Z1
3. Seta S1 reaching to the insertion of seta S2	3. The distance between the setae S1-S2 is almost three times longer than seta S1

similar *i4*, setae *s4-s6* (Fig. 10) with burrs and hyaline-like tip. In row *r* seta *r1* short, smooth and obtuse, seta *r2* (Fig. 11) similar to *i2-i4*, seta *r3* (Fig. 12) longer, barbed at the extremity with hyaline sheath, setae *r4-r6* similar to *s5,s6*. On opisthonotum setae *I1-I3* short, smooth with sharp tip, setae *I4,I5* a little shorter and thicker with burr. Seta *I6* similar to *I6* of the female, setae *I6* separated from each other by 126 μm . The insertion of setae *I6* and *Z5* are in close proximity. Setae *Z1,Z2* short, smooth with sharp tip, setae *Z3,Z4* similar to *Z4* of the female, seta *Z5* with burr. Setae *S1,S2* similar to seta *S1* of the female, and setae *S3,S4* similar to setae *S2-S4* of the female. Setae *Z3-Z4, S1-S4* proportional to the same setae of the female. Margin of opisthonotum with seven pairs of setae. Seta *R1* with burrs at the extremity and hyaline-like tip, setae *R2-R6* with burr and *R7* smooth with sharp tip. Lengths of setae of opisthonotum and longitudinal distances between the insertions of setae in single rows are given in Table 3.

Pores: Localization of pores is the same as in the female.

Sculpture: Similar to sculpture of the female.

Ventral side: Chaetotaxy and shape of the peritremal shield typical of the genus *Zercon* C.L. Koch. Seta *p1* short and smooth, seta *p2* (Fig. 13) barbed. Anterior margin of ventroanal shield with four setae.

Tectum: Presented in Fig. 114.

Deutonymph: length 375 μm , width 290 μm .

Dorsal side: (Fig. 4) Chaetotaxy almost the same as chaetotaxy of the male. Only setae *s2* (Fig. 15), *I2* and *I3* differ a little in shape from the same setae of the male. Setae *s2,I2,I3* short with burr. Setae *I6* separated from each other by 110 μm . The insertion of setae *I6* and *Z5* are in close proximity. Lengths of setae of opisthonotum and longitudinal distances between the insertions of setae in single rows are given in Table 4.

Table 3

Seta	Length μm	Distance μm	Seta	Length μm	Distance μm	Seta	Length μm	Distance μm
<i>S1</i>	35-36		<i>Z1</i>	16-17		<i>I1</i>	19	
		44-47			35-45			39
<i>S2</i>	52-55		<i>Z2</i>	15		<i>I2</i>	15-16	
		50-51			24-25			32-36
<i>S3</i>	66-68		<i>Z3</i>	61		<i>I3</i>	12-13	
		47-49			59-62			26-28
<i>S4</i>	79		<i>Z4</i>	73-79		<i>I4</i>	10	
					48-52			31
			<i>Z5</i>	41-42		<i>I5</i>	12	
						<i>I6</i>	94-102	63

Table 4

Seta	Length μm	Distance μm	Seta	Length μm	Distance μm	Seta	Length μm	Distance μm
<i>S1</i>	46		<i>Z1</i>	14-16		<i>I1</i>	17	
		47-49			29-34			31-32
<i>S2</i>	52-62		<i>Z2</i>	13		<i>I2</i>	14	
		41-44			24-26			26-27
<i>S3</i>	70-71		<i>Z3</i>	65-66		<i>I3</i>	9-10	
		53-57			52-60			27-30
<i>S4</i>	75-77		<i>Z4</i>	95-97		<i>I4</i>	11	
					62-64			25-26
			<i>Z5</i>	45-46		<i>I5</i>	11-12	
						<i>I6</i>	97	74-76

Pores: Localization of all pores the same as in the female and male. Only pore *po3* situated under the line connecting *s5-z1* and very close to the insertion of seta *s5*.

Sculpture: Similar to the sculpture of the female and male, a little more delicate.

Ventral side: chaetotaxy and shape of the peritremal shield typical of the genus *Zercon* C.L.KOCH. Anterior margin of ventroanal shield with four setae.

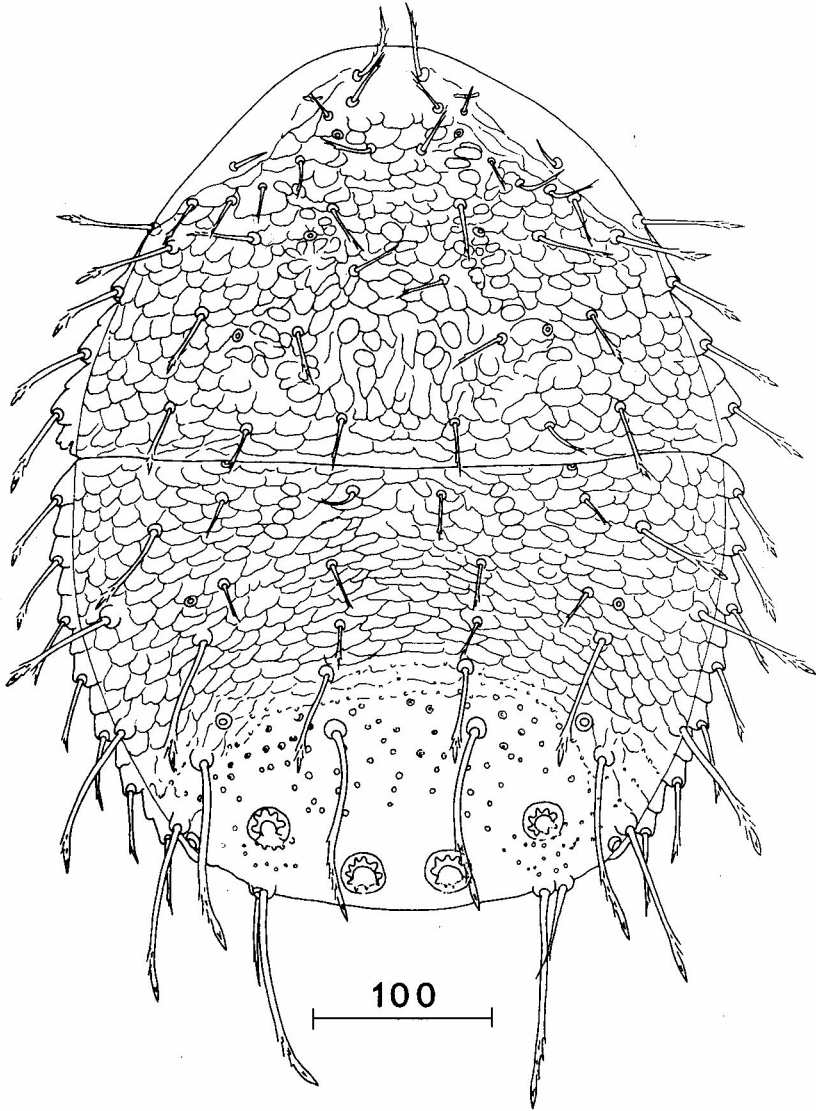
Tectum: Presented in Fig. 16

Type material: Holotype: Female, Russia, Autonomic Republic of Tuva; Uvs-Nuur Valley, Karachol, under bark of *Larix sibirica* LEDEB, 3 August 1990, collected by S. BŁAŻY and J. WIŚNIEWSKI. Paratypes: one female, two males and one deutonymph, the same collecting date and place; one female, Russia, Autonomic Republic of Tuva; mid stream of river Schewielig-Chem, under bark of *Populus* sp., 24 July 1990, collected by S. BŁAŻY and J. WIŚNIEWSKI.

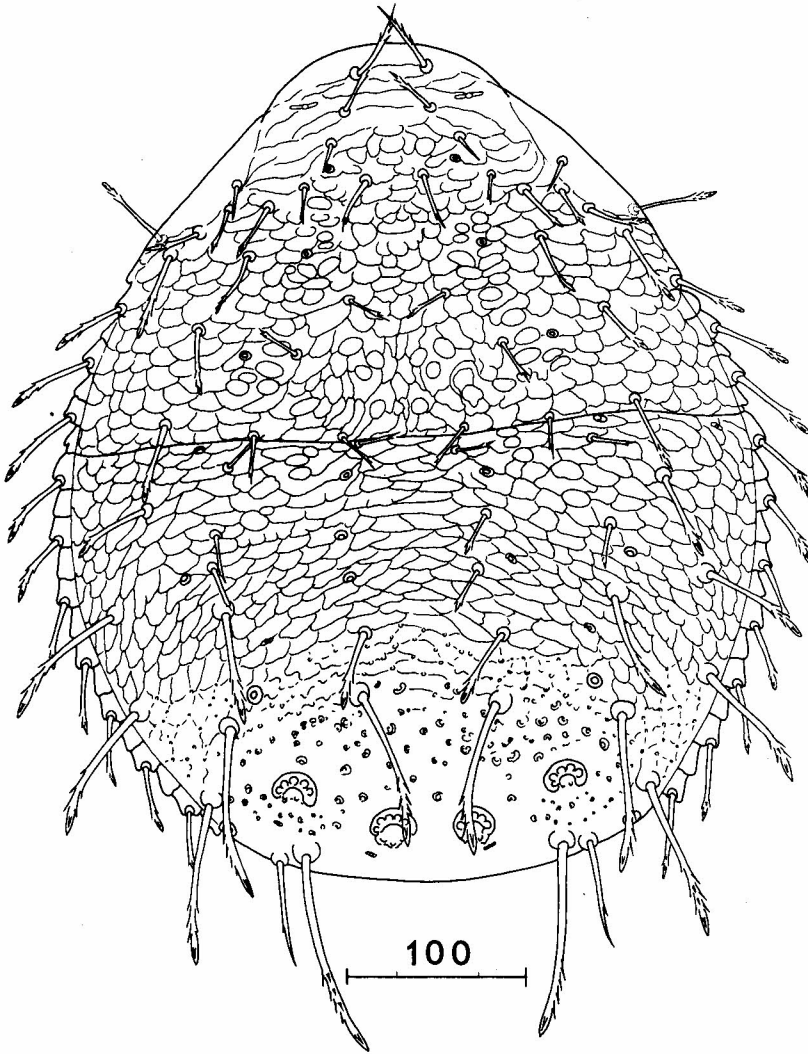
Holotype and paratypes are deposited in Academy of Agriculture in Poznań, Chair of Forest and Environment Protection, with registration number U-834 H (Holotype) and U-834 P, U-849 P (Paratypes).

REFERENCE

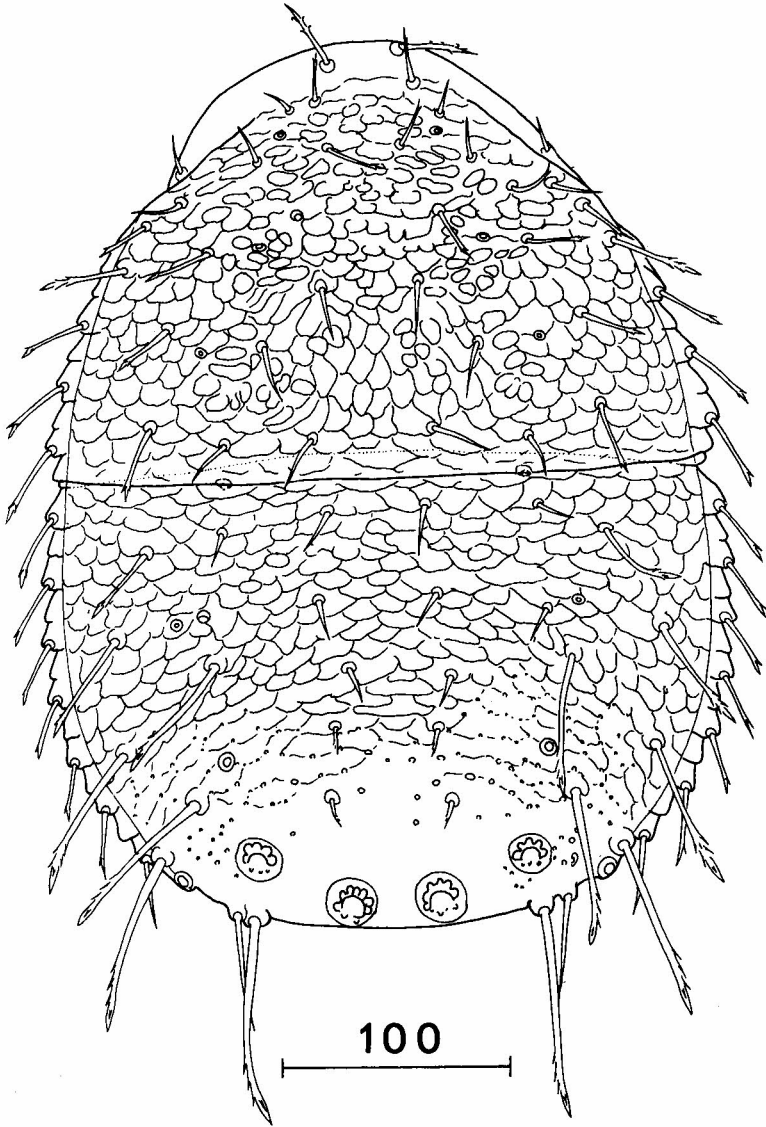
- BRASZAK, C., 1979. Systematic studies on the family *Zerconidae* IV. Asian *Zerconidae* (Acari, Mesostigmata), Acta Zool. Cracov. 24(1): 3-112.



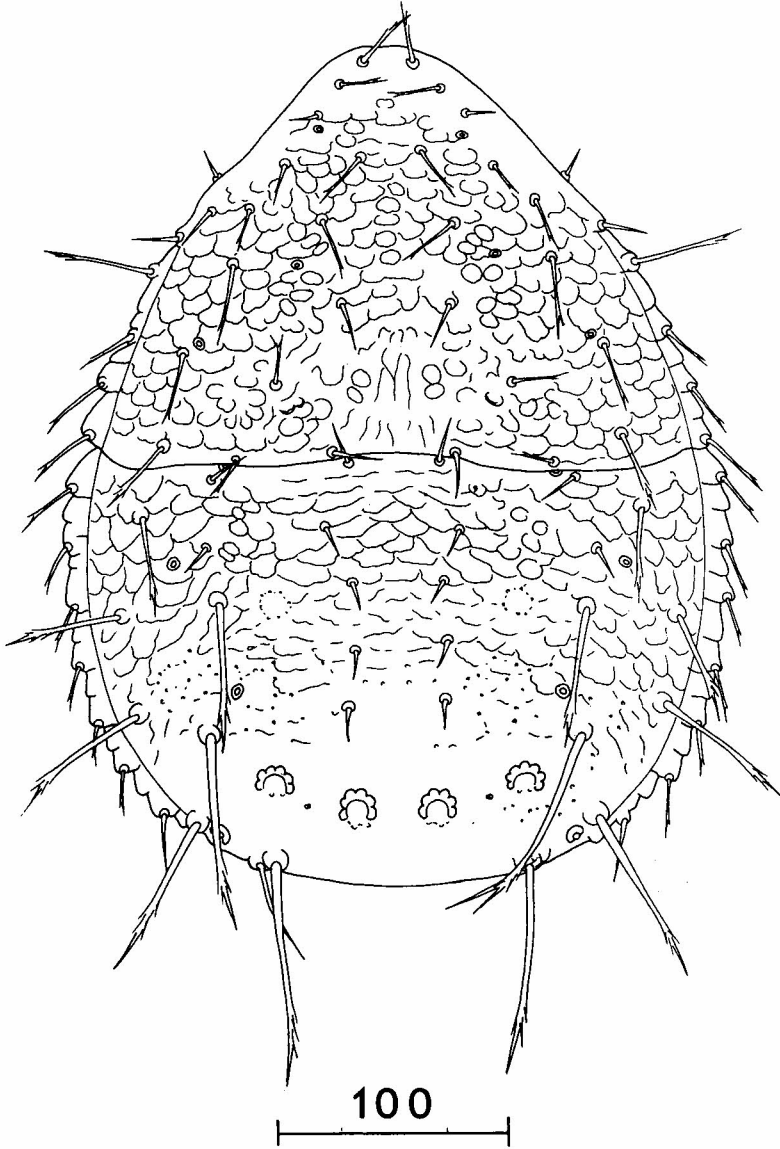
1. *Zercon wisniewskii* sp.n., dorsal side of the female (holotype)



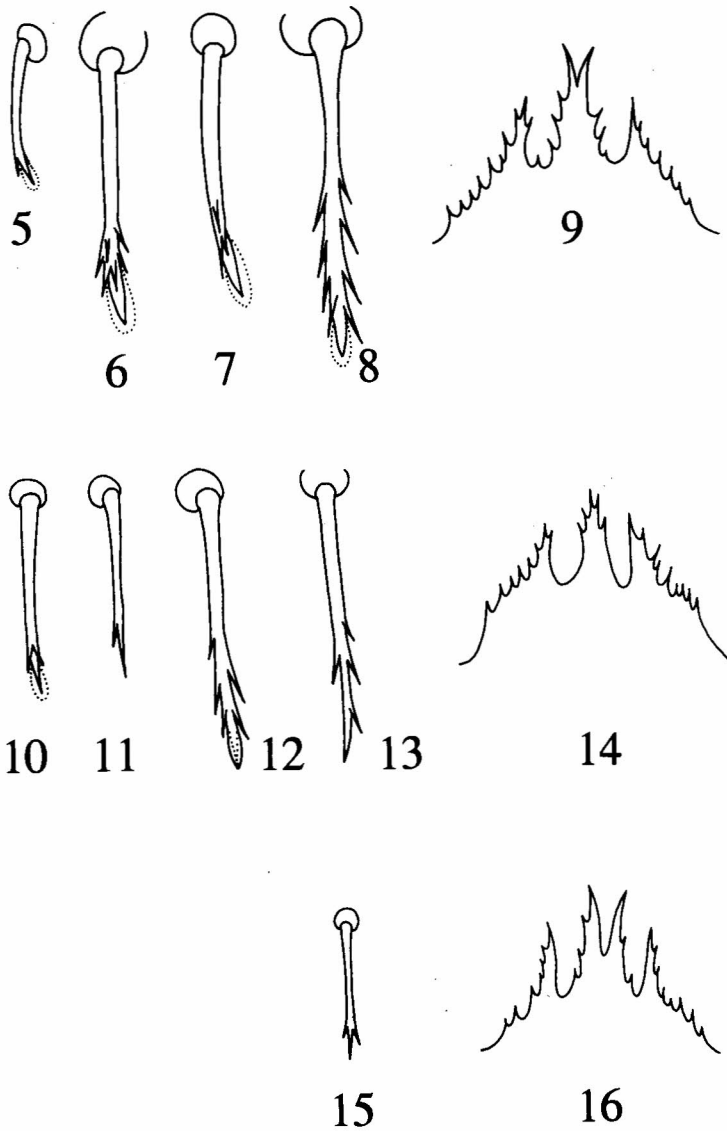
2. *Zercon wisniewskii* sp.n., dorsal side of the female (paratype)



3. *Zercon wisniewskii* sp.n., dorsal side of the male



4. *Zercon wisniewskii* sp.n., dorsal side of the deutonymph



5-16. *Zercon wisniewskii* sp. n. 5-9 - the female: 5 - seta I1, 6 - seta I4, 7 - seta S1, 8 - seta p2, 9 - tectum;
 10-14 - the male: 10 - seta s5, 11 - seta r2, 12 - seta r3, 13 - seta p2, 14 - tectum; 15-16 - the deutonymph:
 15 - seta s2, 16 - tectum