

**The spiders and scorpions inhabiting
Ustyurt Plateau and Mangyshlak Peninsula
(South-Western Kazakhstan)**

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RIASSUNTO

Sono state censite 131 specie di ragni appartenenti a 80 generi inclusi in 27 famiglie. Una famiglia (*Cithaeronidae*), tre generi (*Koreodrassus*, *Gnaphosidae*; *Cithaeron*, *Cithaeronidae*; *Geolycosa*, *Lycosidae*) e tre specie risultano citate per la prima volta per il territorio dell'ex URSS. 6 famiglie, 23 generi e 42 specie (32,1%) sono citate per la prima volta per il Kazakhstan. 41 specie, cioè il 31,1% non sono state identificate e sono probabilmente nuove.

L'analisi zoogeografica mostra che 28 specie (21,4%) sono endemismi centro asiatici e 25 (17,6%) rientrano tra le specie Paleo-Mediterranee.

Gli scorpioni comprendono solo tre specie, *Mesobetulus cupeus*, *M. caucasicus* e *Orthochirus scrobiculosus*, tutte paleo-mediterranee.

Parole chiave: Ustyurt, Mangyshlak, Ragni, Scorpioni.

SUMMARY

The above mentioned 151 spiders species belong to 80 genera from 27 families. One family (*Cithaeronidae*), three genera (*Koredrassus*, *Gnaphosidae*; *Cithaeron*, *Cithaeronidae*; *Geolycosa*, *Lycosidae*) and three species are registered as new for the territory of the former USSR. 6 families, 23 genera and 42 species (32,1 per cent) are firstly registered in Kazakhstan. 41 species, or 31,1 per cent, are not identified: all of them presumably are new.

A zoogeographic analysis has showed that 20 species, or 21,4 per cent belong to the Middle Asian endemics: 25, or 17,6 per cent belong to Ancient Mediterranean species.

Among the scorpions only three species are registered (*Mesobuthus cupeus*, *M. caucasicus* and *Orthochirus scrobiculosus*): all of them belong to Ancient Mediterranean ones.

Key words: Ustyurt, Mangyshlak, Spiders, Scorpion.

Until recently all the information about the spider fauna of Ustyurt Plateau and Mangyshlak Peninsula was restricted by the report of SCHMIDT (1895) who found the species *Hogna radiata* (Latr.) (Lycosidae) on Mangyshlak. Lately on the base of our materials MARUSIK and LOGUNOV (1990) reported about 7 species of the family Thomisidae (3 of these proved to be a new); PLATNICK and OVTSHARENKO (1991); OVTSHARENKO *et al.* (1991, 1992) registered here 3 species of the family Gnaphosidae. A new lycosid species belonging to a new genus (*Oculycosa supermirabilis*) is described in this region (ZYUZIN, in print).

During our investigations we have found 134 species of spiders which belong to 98 genera from 28 families, and 3 species of scorpions from the family Buthidae. A list of species and the data on their relative abundance are given in the Table. A majority of the spider species (83 or 61,9%) belongs to rare one (isolated). At the same time, many species are rather abundant (25 species, or 18,7%). The most usual and constant species were *Stegodyphus lineatus* (Eresidae), *Titanoeca lehtineni* (Titanoeidae), *Cyrba ocellata*, *Mogrus antoninus* (Salticidae), *Nomisia conigera*, *Sosticus loricatus* (Gnaphosidae), *Thomisus onustus*, *Synema plorator* (Thomisidae), *Cheiracanthium* sp. (Clubionidae), *Latrodectus ? lugubris*, *Steatoda paykulliana*, *Lithyphantes albomaculatus*, *Theridion varians*, *Enoplognatha turkestanica* (Theridiidae), *Oxyopes maracandensis* (Oxyopidae), *Agelena labyrinthica*, *A. tadhika* (Agelenidae), *Lycosa nordmanni*, *Evippa brunneopicta* (Lycosidae), *Argyope lobata*, *Neoscona adianta* (Araneidae).

The usual dominants were *Mogrus antoninus* (Salticidae), *Lithyphantes albomaculatus* (Theridiidae), *Oxyopes maracandensis* (Oxyopidae), *Lycosa nordmanni*, *Evippa brunneoptica* (Lycosidae), *Argyope lobata*, *Neoscona adianta* (Araneidae). The species *Hogna radiata* (Latr.) registered by SCHMIDT (1895) at Mangyshlak Peninsula was not included in the list as this author dealt with the juvenile specimens only.

The following families seem to be the largest ones: Gnaphosidae (25 species, or 18,7% of the total number of species), Salticidae (19-14.2), Lycosidae (14-10.5), Theridiidae (12-9.0), Thomisidae (10-7,5), Linyphiidae (8 species, 6,0%). The largest generic diversity seems to be within the families Gnaphosidae (17 genera), Salticidae (14), Thomisidae and Lycosidae (8 genera each), Theridiidae (7), Linyphiidae (6 genera). The representatives of the family Cithaeronidae, as well as the

species *Mogrus neglectus*, *Koreodrassus koreanus* and *Evippa brunneoptica* proved to be the new for the fauna of the former USSR.

The representatives of six families (Oecobiidae, Oonopidae, Hersiliidae, Corinnidae, Filistatidae, Mimetidae) and 22 genera: *Ambika*, *Uroctea* (Oecobiidae), *Zaitunia* (Filistatidae), *Nigma* (Dictynidae), *Cedicus* (Amaurobiidae), *Dysderina* (Oonopidae), *Hersiliola* (Hersiliidae), *Langona* (Salticidae), *Synaphosus*, *Phaeoecelus*, *Fedotovia*, *Aphantaulax*, *Prodidomus* (Gnaphosidae), *Ebo* (Philodromidae), *Monaeses* (Thomisidae), *Trachelas*, *Castianeira* (Corinnidae), *Mimetus* (Mimetidae), *Crustulina* (Theridiidae), *Acanthinozodium* (Zodariidae), *Bathyphantes*, *Pelecopsis* (Linyphiidae), as well as 38 species from 16 families (28,4% of the total number of species: see the Table). The species *Acanthinozodium surprisum* previously was considered to be the endemic of Tadzhikistan. Forms designated as "sp." (42 species from 16 families, or 31,3% presumably are the new species.

A considerable part of the species inhabiting Ustyurt Plateau and Mangyshlak Peninsula constitute geobionts (spiders living in soil and on its surface): 102 species, or 76,1% of the total: these are the representatives of the families Filistatidae, Oecobiidae, Amaurobiidae, Titanocidae, Pholcidae, Dysderidae, Palpimanidae, Oonopidae, Hersiliidae, Salticidae (except the genera *Ballus*, *Synageles*, *Mogrus*, *Marpissa*, *Heliophanus*), Gnaphosidae (except the genus *Tibellus*), Liocranidae, Corinnidae, Mimetidae, Cithaeronidae, Theridiidae, Zodariidae, Agelenidae, Lycosidae, Linyphiidae (except *Microlinyphia*) and genera *Eresus* (Eresidae), *Devade*, *Argenna* (Dictynidae), "*Ozyptila*", *Xysticus*, *Proxysticus* (Thomisidae).

The most geobionts constitute the species hiding away from the direct sun under stones and other objects: these are the representatives of the families Filistatidae, Oecobiidae, Amaurobiidae, Titanocidae, Dysderidae, Palpimanidae, Pholcidae, Oonopidae, Hersiliidae, Gnaphosidae, Cithaeronidae, Liocranidae, Mimetidae, Theridiidae, Zodariidae, Linyphiidae and genera *Cyrba* (Salticidae), *Xysticus*, *Proxysticus* (Thomisidae), *Trachelas* (Corinnidae).

At the same time, some geobionts are active during the day time: these are representatives of the families Salticidae, Philodromidae (except the genus *Tibellus*) and genera *Castianeira* (Corinnidae), *Pirata*, *Evippa*, *Pardosa* (Lycosidae). A peculiar group of geobionts is represented by the burrowing species spending the main part of their life in the deep burrows: we call them "trypobionts" (Greek word "trypa" which

means "burrow"). These are the representatives of the genera *Lycosa*, *Allohogna*, *Oculycosa* (Lycosidae) and *Eresus* (Eresidae). The burrows of *Eresus* ? *niger* are braid with the dense web and supplied with a canopy-like catching net which completely conceals a burrow. The nidicolous species constantly living in the derelict holes of rodents and reptiles are represented by *Agelena tadhika* (Agelenidae); the facultative nidicolous species are represented by *Latrodectus* ? *lugubris* and *Steatoda paykulliana* (Theridiidae).

Some species of geobionts show the strict stial and biotopic arrangement. The clay soil is preferred by the representatives of the genera *Aelurillus*, *Sitticus*, *Chalcoscirtus*, *Phlegra*, *Pellenes* (Salticidae), "*Ozyptila*" (Thomisidae), *Pardosa* and the species *Evippa* sp., *Oculycosa* ssp., *Lycosa* sp.1, 2 (Lycosidae), *Thanatus kitabebersis* (Philodromidae): all these possess light grey or whitish-yellow cryptic colour. A button-like setae covering the body of "*Ozyptila*" *lugubris* (Thomisidae) keep the clay well: this clay completely masks the females of this species. Psammobionts (spider inhabiting sand deserts) are represented by *Evippa brunneoptica* (Lycosidae) having yellow, a little variegated body pattern.

Phytobionts (Plant inhabitants) are mainly represented by hortobionts (grass inhabitants): these are *Brigittea latens* (Dictynidae), *Marpissa nivoyi*, *Ballus depressus*, *Synageles ramitus*, *Heliophanus* ssp. (Salticidae), *Tibellus maritimus* (Philodromidae), *Thomisus* ssp., *Runcinia tarabayevi*, *Heriaeus sareptanus*, *Monaeses israilensis*, *Synema plorator* (Thomisidae), *Aculepeira* ssp., *Neoscona adianta* (Araneidae), *Microlinyphia pusilla* (Linyphiidae).

The species *Marpissa nivoyi*, *Ballus depressus* (Salticidae), *Tibellus maritimus* (Philodromidae), *Monaeses israilensis* (Thomisidae), *Castianeira* sp. (Corinnidae), *Mesiotepus* sp. (Liocranidae) South-West of Ustyurt Plateau prefer dense bur reed (*Phragmites communis* L.) near the springs.

Thamnobionts (inhabitants of bushes and low trees) are represented by the species *Stegodyphus lineatus* (Eresidae), *Mogrus* spp. (Salticidae), *Cheiracanthium* spp. (Clubionidae), *Oxyopes maracandensis* (Oxyopidae), *Archaeodictyna* sp. (Dictynidae), *Uloborus walckenaerius* (Uloboridae), *Aphantaulax seminigra* (Gnaphosidae), *Argyope lobata* (Araneidae). The typical synanthropic species (house inhabitants) widespread in Central Asia is *Ambika nadiae* (Oecobiidae).

A zoological analysis of 92 determined species has shown the following results. 31 species (23,1% of the total number of species) belong to the Turan Central Asian within the limits of the former Soviet Union endemics; 11 species (8,2%) belong to ancient Mediterranean ones; 14 species (10,4%) are central ancient Mediterranean; 4 species (3,0%) are east ancient Mediterranean, including China-Mongolian ones; 10 species (7,5%) belong to euro-ancient Mediterranean ones; 7 (5,25%) - to transpalaeartic species; 5 (3,7%) - to the Holarctic species; 2 species (1,5%) belong to Afrotropical ones; 1 species (0,8%) belongs to Indo-malayan-Transpalaeartic. The remaining 6 species are widespread over the whole world (see Table).

Table - Specific composition and relative abundance of spiders and scorpions.

ORDO ARANEAE		Relative abundance	Pattern of distribution
Families and species			
	*1. FILISTATIDAE		
1.	* <i>Zaitunia</i> sp.	+4	
	2. DYSDERIDAE		
2.	<i>Dysdera</i> sp.	+3	
	*3. OONOPIDAE		
3.	* <i>Dysderina loricata</i> (Sim.)	++4	EAM
	4. ERESIDAE		
4.	<i>Eresus ? niger</i> (Pet.)	+1,3	AM
5.	<i>Stegodyphus lineatus</i> (Latr.)	++4	AM
	5. PHOLCIDAE		
6.	<i>Pholcus phalangioides</i> (Fuessl)	+3	CP
7.	<i>Ph. sp. (pr. crassipalpis</i> Spas.)	++4	
	6. PALPIMANIDAE		
8.	* <i>Palpimanus sogdanius</i> Charit.	+4	TE
9.	<i>P. sp.</i>	+4	
	*7. OECOBIIDAE		
10.	* <i>Ambika nadiae</i> (Spas.)	++2,3,4	TE
11.	* <i>Uroctea ? limbata</i> (C.L. Koch)	+4	ATAM
	8. DICTYNIDAE		
12.	<i>Archaeodictyna</i> sp.	+2	
13.	<i>Brigittea latens</i> (Fabr.)	++1	EAM
14.	* <i>Nigma</i> sp.	+4	
15.	* <i>Devade hirsutissima</i> (Sim.)	+2	AM
16.	<i>Argenna</i> sp.	+3	

	9. AMAUROBIIDAE		
17.	* <i>Cedicus</i> sp.	+3	
	10. TITANOECIDAE		
18.	<i>Titanoeca veteranica</i> Herm.	+2	AM
19.	<i>T. lehtineni</i> Fet	+++	TE
20.	* <i>T. albomaculata</i> (Luc.)	+4	EAM
21.	<i>Nurscia albosignata</i> Sim.	+1	CAM
	11. ULOBORIDAE		
22.	<i>Uloborus walckenaerius</i> Latr.	+1,3	EAM
	*12. HERSILIIDAE		
23.	* <i>Hersiliola macullata</i> (Duf.)	+++	AM
	13. SALTICIDAE		
24.	<i>Ballus depressus</i> (Walck.)	+3	EAM
25.	<i>Cyrba ocellata</i> (Kroneb.)	+2+++	TE
26.	* <i>Synageles ramitus</i> Andr.	+4	TE
27.	<i>Pellenes</i> sp.	+4	
28.	<i>Philaeus chrysops</i> (Poda)	+++	EAM
29.	<i>Aelurillus concolor</i> Kulcz.	+++	CAM
30.	<i>A.</i> sp.	+4	
31.	* <i>Langona tartarica</i> (Charit.)	+3	TE
32.	* <i>Phlegra ? sogdiana</i> Charit.	+++	TE
33.	<i>Ph. fasciata</i> (Hahn)	+2	EAM
34.	<i>Mogrus antoninus</i> Andr.	+++3	TE
35.	** <i>M. neglectus</i> (Sim.)	+3	CAM
36.	<i>Sitticus</i> sp.	+4	
37.	<i>Chalcoscirtus</i> sp. 1	+3,4	
38.	<i>Ch.</i> sp. 2	+++	
39.	<i>Marpissa nivoyi</i> (Luc.)	+3	EAM
40.	<i>Heliophanus curvidens</i> (O.P.-C.)	+3	AM
41.	<i>H. potanini</i> Schenk.	+++	EaAM
42.	gen. sp.	+3	
	14. GNAPHOSIDAE		
43.	<i>Gnaphosa mongolica</i> Sim.	+++	TP
44.	* <i>Nomisia conigera</i> Spas.	+++	CAM
45.	<i>Berlandina</i> sp.	+2	
46.	* <i>Leptodrassus memorialis</i> Spas.	+++	CAM
47.	<i>Drassodes</i> sp. (pr. <i>lapidosus</i>)	+4	
48.	<i>Haplodrassus</i> sp.	+++	
49.	* <i>Synaphosus</i> sp. 1	+2	
50.	<i>S.</i> sp. 2	+++	
51.	** <i>Koreodrassus koreanus</i> Paik	+2	EaAM
52.	<i>Talanites fagei</i> Spas.	+++	TE
53.	* <i>T. ? atsharica</i> Mch.	+3	CAM
54.	<i>T.</i> sp.	+3	

55.	* <i>Phaeocedus braccatus</i> (L. Koch)	+4	EAM
56.	* <i>Ph. ? rufescens</i> (Kroneb.)	+4	TE
57.	<i>Sosticus loricatus</i> (L. Koch)	++4	TP
58.	<i>Trachyzelotes jaxartensis</i> (Kroneb.)	+4	CP
59.	<i>Zelotes</i> sp. 1 (pr. <i>caucasicus</i>)	++1	
60.	<i>Z.</i> sp. 2 (pr. <i>puritanus</i>)	+4	
61.	* <i>Fedotovia uzbekistanica</i> Charit.	+3	TE
62.	* <i>Aphantaulax seminigra</i> Sim.	+3++1	EAM
63.	* <i>Prodidomus redickorsevi</i> Spas.	+4	TE
64.	<i>Micaria rossica</i> Thor.	+1, 2, 3	TP
65.	<i>M. albimana</i>	+1	CAM
66.	<i>M. septempunctata</i> O.P.-C.	+4	CAM
67.	<i>M. lenzi</i> Boes.	+3	TP
	15. PHILODROMIDAE		
68.	<i>Philodromus</i> sp.	++3	
69.	* <i>Thanatus kitabensis</i> Charit.	++1,3	TE
70.	<i>Th.</i> sp.	++3	
71.	* <i>Ebo</i> sp.	+3	
72.	<i>Tibellus maritimus</i> (Men.)	+3	TP
	16. THOMISIDAE		
73.	<i>Thomisus onustus</i> Walck.	++1, 3	AT
74.	<i>T. zyzuni</i> Marus., Log.	+1	TE
75.	<i>Runcinia tarabayevi</i> Marus., Log.	+1	TE
76.	" <i>Ozyptila</i> " <i>lugubris</i> (Kroneb)	+3	CAM
77.	* <i>Heraieus sareptanus</i> Loer.	+2	CAM
78.	* <i>Monaeses israilensis</i> Levy	+3	CAM
79.	<i>Synema plorator</i> (O.P.-C.)	++1	AM
80.	<i>Proxysticus lalandei</i> (Sav., Aud.)	++2	AM
81.	<i>P. turanicus</i> Charit.	+2	TE
82.	<i>Xysticus urgumchak</i> Marus., Log.	+3	TE
	17. CLUBIONIDAE		
83.	<i>Cheiracanthium</i> sp.	++3, 4	
	**18. CITHAERONIDAE		
84.	** <i>Cithaeron</i> sp.	+3	
	19. LIOCRANIDAE		
85.	<i>Mesioletus</i> sp.	+3	
	*20. CORINNIDAE		
86.	* <i>Trachelas</i> sp.	+3	
87.	* <i>Castianeira</i> sp.	+3	
	* 21. MIMETIDAE		
88.	* <i>Mimetus laevigatus</i> (Keys.)	+3	AM
	22. THERIDIIDAE		
89.	<i>Theridion varians</i> Hahn	++1, 3	EAM
90.	* <i>Latrodectus lugubris</i> (Duf.)	+++1	AM

91.	<i>Steatoda paykulliana</i> (Walck.)	++4	AM
92.	<i>S. castanea</i> (Cl.)	++1,4	HOL
93.	<i>S. triangulosa</i> (Walck.)	+4	HOL
94.	<i>S. sp.</i>	++3	
95.	<i>Lithyphantes albomaculatus</i> (De Geer)	+++1, 4	
96.	<i>L. sp.</i>	+4	
97.	* <i>Crustulina sp.</i>	+3	
98.	* <i>Enoplognatha turkestanica</i> Carit.	++1, 4	TE
99.	<i>E. sp.</i>	+4	
100.	* <i>Euryopsis ? saukea</i> Levi	+4	HOL
	23. OXYOPIDAE		
101.	<i>Oxyopes maracandensis</i> Charit.	+++1, 3	TE
	24. ZODARIIDAE		
102.	* <i>Zodarion bactrianum</i> Kroneb.	+4	TE
103.	* <i>Z. vlasovi</i> Sytsh.	+4	TE
104.	* <i>Acanthinozodium ? surprisum</i> (Andr., Tyst.)	+4	TE
	25. AGELENIDAE		
105.	<i>Agelena labyrinthica</i> (Cl.)	+++1	TP
106.	* <i>A. tadhika</i> Andr.	++1	TE
	26. LYCOSIDAE		
107.	<i>Lycosa nordmanni</i> (Thor.)	+4, +++1	CAM
108.	<i>L. sp. 1</i>	++3	
109.	<i>L. sp. 1</i>	+3	
110.	<i>Allohogna singoriensis</i> (Laxm.)	+2	CAM
111.	<i>Oculicosa supermirabilis</i> Zyuz.	++3	TE
112.	<i>O. sp.</i>	+4	
113.	<i>Alopecosa sp.</i>	+4	
114.	* " <i>Alopecosa</i> " <i>kronebergi</i> Andr.	+4	TE
115.	* <i>Pirata piraticus</i> (Cl.)	+4	THI
116.	** <i>Evippa brunneoptica</i> (Lok.)	+++1, 2, 3	EaAM
117.	<i>E. sp.</i>	++4	
118.	<i>Trochosa ruricola</i> (De Geer)	+4	TP
119.	<i>Pardosa italica</i> Tong.	+1, 4	AM
120.	<i>P. jergeniensis</i> Ponom.	++4	CAM
	27. ARANEIDAE		
121.	<i>Araneus tartaricus</i> (Kroneb.)	+2	EaAM
122.	<i>Argyope lobata</i> (Pall.)	+++1	AT
123.	<i>Aculepeira armida</i> (Sav., Aud.)	+1	AM
124.	* <i>A. ? victoria</i> (Thor.)	++3	CAM
125.	<i>Neoscona adianta</i> (Walck.)	+++1	ITP
126.	<i>Larinia pubiventris</i> Sim.	+3	TE
	28. LINYPHIIDAE		
127.	<i>Microlinyphia pusilla</i> (Sund.)	+1	HOL

128.	* <i>Agyneta (Meioneta) kopetdaghensis</i> Tanas.	+3	TE
129.	<i>A. (M.)</i> sp.	+2	
130.	<i>Lepthyphantes</i> sp. 1 (pr. spasskyi)	+++	
131.	<i>L.</i> sp. 2	+3	
132.	* <i>Bathyphantes gracilis</i> (Blackw.)	+3	TP
133.	* <i>Pelecopsis laptevi</i> Tanas.	+3	TE
134.	<i>Acartauchenius scurrilis</i> (O.P. - C.)	+2	EAM

Total: 134 species, 28 families, 98 genera

ORDO SCORPIONES

	Families and species	Relative abundance	Pattern of distribution
BUTHIDAE			
1.	<i>Mesobuthus eupeus</i> (C.L. Koch)	+1 +++2, 4	CAM
2.	<i>M. caucasicus</i> (Nordm.)	+4	CAM
3.	<i>Orthochirus scrobiculosus</i> (Gr.)	+2 +++3, 4	CAM

Conventional signs:

- + rare species (isolated findings)
- ++ usual species (sometimes abundant locally)
- +++ dominants

Figures signify the following:

- 1 - Northern Ustyurt (Aktyubinsk Area)
- 2 - Mangyshlak Peninsula
- 3 - Karynzhyryk depression
- 4 - Southwestern Ustyurt

Asterisk signify taxons new for Kazakhstan.

Double asterisk signify taxons new for the fauna of the former USSR.

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