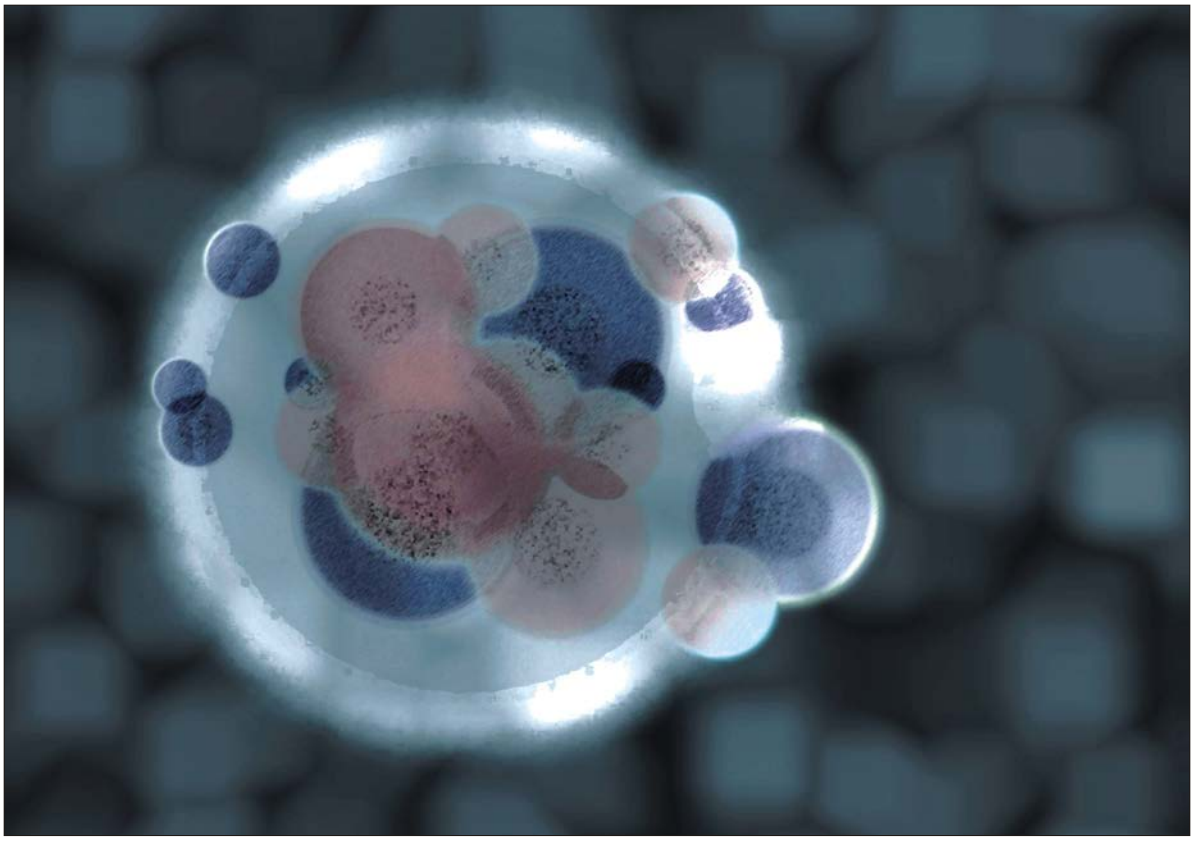

Journal of Biological Sciences

ISSN 1727-3048

science alert

ANSInet
an open access publisher
http://ansinet.com

Journal of Biological Sciences 7 (2): 448-450, 2007
ISSN 1727-3048

The Spider *Aulonia kratochvili* (Araneae: Lycosidae) New to the Turkish Fauna

Ismail Varol, Zübeyde Akan, Adile Özdemır, Faruk Kutbay and Mehmet Ozaslan
Department of Biology, University of Gaziantep, 27310, Gaziantep, Turkiye

Abstract: The spider *Aulonia kratochvili* (Dunin, Buchar, Absolon, 1986) is newly recorded for Turkey. The characteristic features, distribution, ecology, genital structure is described. The specimens were collected from North-East and South-Eastern parts of Turkey.

Key words: *Aulonia kratochvili*, Araneae, Lycosidae, new record, Turkey

INTRODUCTION

The Lycosidae or Wolf Spiders, as they are commonly called, are often seen dashing from under the grass trying to escape the lawn mower or doing freestyle in the pool, in spring and summer. The members of Lycosidae are real hunters and have very good eyesight. They move fast and hunt in the open ground and low vegetation during day and night. They are widespread throughout the world. Over 2262 species belonging to 99 genera have been described in Lycosidae (Platnick, 2004 -Version 5.0-). The taxonomical properties of the spider *A. kratochvili* (Dunin *et al*., 1986) is revealed in this study as a new record from Turkey.

Specimens were collected from Iğdır, Kars and Gaziantep provinces that are located in the Northeastern and Southestern Anatolian region. In this study, 10 female and 11 male collected from the research area. *A. kratochvili* was selected from the identified specimens for genitalia drawings.

MATERIALS AND METHODS

The male (♂) samples are collected from 1 km east of Yukarı Çarıkçı village of Küllük district of Iğdır province, altitude 910 m on 1.6.1997. One male (♂) sample is taken from 2 km west of Pazarcık district of Kars province, altitude 1254 m on 1.6.1997. Another one male (♂) sample is collected from 4 km east of Halıkışla village belonging to Digor district of Kars province, altitude 1040 m on 1.6.1997. One male (♂) is collected from 2 km west of Digor district of Kars province, altitude 1350 m on 1.6.1997. Six male (♂) samples are collected from 2 km south of Belkıs village belonging to Nizip district of Gaziantep province, altitude 530 m on 20.4.2002. One female (♀) sample is taken from 5 km west of Ağabey village belonging to Tuzluca district of Iğdır province, altitude 990 m on 2.6.1997. Nine female (♀) samples are collected from 2 km south of Belkıs village belonging to Nizip district of Gaziantep province, altitude 530 m on 20.4.2002 (Fig. 1).

Fig. 1: Map of research area Gaziantep, Kars and Igdır provinces

The description of the spiders made according to the key list of Heimer and Nentwig (1991). The papers of Locket and Millidge (1951; 1953), Roberts (1985; 1995) and Tyschchenko (1971) were also used for detailed characterization and description of the spider genus and the species.

RESULTS

At the end of this study; Aulonia kratochvili Dunin, Buchar, Absolon, 1986 were determined as a new record for Turkish Spider fauna. The results are given according to the each critical criteria for such a new record descriptions as the following;

Descriptions: Prosoma anteriorly narrow, hardly wider than the eye region. Carapace attenuated in front, head long. No light central or lateral bands. Dorsally dark, legs bright, femur I dark, patella of palps light yellow or white (in both sexes), the rest darkened. Chelicera with apices somewhat attuenuated. Anterior row eyes strongly procurved, as seen from in front, not reaching outside

Corresponding Author: Dr. Mehmet Ozaslan, Department of Biology, University of Gaziantep, 27310, Gaziantep, Turkiye

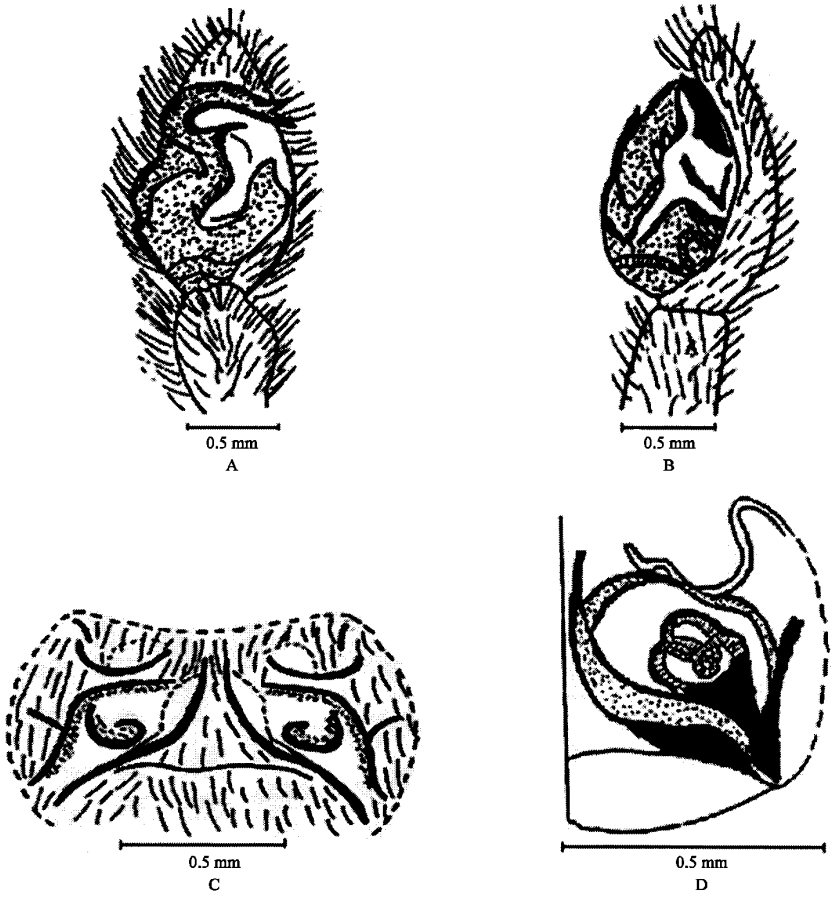

Fig. 2: *Aulonia kratochvili*: Palp, ventral view (A), Palp, retrolateral view (B), Epigyne, ventral view (C) and Vulva (D)

edges of posterior medians. Abdomen posterior spinners the longest, with basal segment wider apically than at base. *Aulonia* makes a small silk retreat at ground level with a filmsy web around the opening.

Male: Measurements (LYAu1♂3): Total length: 3.53 mm. Prosoma: length 1.56 mm, width 0.9 mm; Opisthosoma: length 1.97 mm, width 1.24 mm. Prosoma brown, radial-strips almost unclear. Whitish hair forms an unclear median longitudinal band. Clypeus brown. Legs yellow, only coxa and femur I brown, to the difference of the female notably more brightly. Also, coxa II-IV, particularly on the back-sides brownish. Femur II-IV with per a light grey-brownish ventral band: on the femur II retrolateral on which femur III-IV localized prolateral, even less spotted; at the masters leg IV, at the fewest leg II. The measurements of the legs of male *Aulonia kratochvili* on Table 1 - *Palp:* Femur of pedipalpus brown, patella with clear white line. The embolus is only unclear in ventral, as a tiny, behind which retrolateral part of the tegulum stepping forward uvula, recognizably (Fig. 2A and B).

Female: Measurements (LYAu1♀1): Total length: 4.48 mm. Prosoma: length 1.90 mm, width 1.10 mm. Opisthosoma: length 2.58 mm, width 1.76 mm. Color and form of the prosoma as male. Clypeus brown, rear fold-edge with three equally big teeth. Legs as male, only femur I dark-brown. Pedipalpus dark-brown, only femur and patella yellow. The measurements of the legs of female *Aulonia kratochvili* which ten female and eleven male have done examined of rate average (Table 1).

Table 1: The measurements of rate average of the legs for male and female *Aulonia kratochvili*

		I	II	III	IV	Pedipalpus
Femur	♂	1.52	1.29	1.37	1.67	0.53
	♀	1.60	1.25	1.29	1.90	0.61
Patella	♂	0.46	0.49	0.49	0.72	0.42
	♀	0.72	0.46	0.49	0.72	0.30
Tibia	♂	1.63	1.06	0.91	1.52	0.38
	♀	1.48	1.06	1.10	1.75	0.34
Metatarsus	♂	1.29	1.22	1.18	1.98	- -
	♀	1.29	1.10	1.33	2.13	- -
Tarsus	♂	1.06	0.72	0.68	0.84	0.84
	♀	1.14	0.68	0.72	0.99	0.80
Total	♂	5.96	4.78	4.63	6.73	2.17
	♀	6.26	7.32	4.93	7.49	2.05

Epigynum: Epigyne insignificantly hairy. Trench adjoining side reaches the anterior humps the biggest height. The rear pair of the humps connects directly to the septum and forms a conspicuous, structure, particularly at the anterior edge crosses. In the humps, the receptaculum shine through turned 180°. The vulva, through one pair of receptaculum, that is in a very spacious cavity (Fig. 2C and D).

Ecology: All the specimens were found on or under stones and dry leaves, on sandy place, in dry fields, steppes and grassland. The spider may be found running actively in the sunshine (Dunin *et al*., 1986). In this study, the spiders were collected during the day. The altitude of the collection sites varied between 910 and 1350 m of North-East, 530 m South-East regions. The adults were collected in June and April.

Distribution: The first record with *A. kratochvili* has been reported from Azerbaijan (Dunin et al., 1986). It has also been recently found in European countries (Kronestedt, 1997).

We collected *A.kratochvili* in the northeast and southeast of Turkey.

DISCUSSION

Roewer (1959) reported *Aulonia* under subfamily Hippasina as a new genus. In this research, the distance between eyes was reported to be equal to eye's diamater. In Central European populations, total eye area in *A. albimana* accounts of 81% when it is calculated according to the widtheast area of carapace. *Anomalomma rhodesianum* (Roewer, 1960) is similar to that of *A. albimana* and total area of eyes encounters 60% when measured according to the widtheast area of carapace. In the case of length, *A. albimana* is similar to that of *Anomalomma rhodesianum* (Dunin and Fet, 1985). *A. kratochvili*, was described by Dunin and Fet (1985) as a new species and the total eye area is 85% when calculated according to the widtheast area of carapace. *A. conspicuous* and *A. werneri* have same colours and design with that of *A. Albimana* which spreads in Egypt.

Aulonia kratochvili differ from *A. werneri* with leg types. Roewer portrayed part of *A. kratochvili* and according to these drawings, receptaculum that stands close approximately at the rear, reaches up to half of the epigyne and this differ from those of the other types.

In males, the copulatory organs, especially the tegular apophyses, has clear differences. In *A. albimana,* tegular apophyses is small and pointed, however in A. *kratochvili*, it is big, Forcet-tongued and dagger shaped, as reported by Roewer (1960).

REFERENCES

Dunin, P.M. and V.Y. Fet, 1985. *Dysdera transcaspica* sp. n. (Aranei, Dysderidae) from Turkmenia. Zool. Zh., 64: 298-300.

Dunin, P.M., J. Buchar and K. Absolon, 1986. Die dritte palaarktische Aulonia-Art: *Aulonia kratochvili* sp.n. (Arachneida, Lycosidae). Vest. cs. spolec. Zoology, 50: 28-32.

Heimer, S. and W. Nentwig, 1991. Spinnen von Mitteleuropa. Verlag Paul Parey. Berlin, pp: 628.

Kronestedt, T., 1997. First record of *Aulonia kratochvili* (Araneae, Lycosidae) from Europe. Arachnologische Mitteilungen, 14: 51-54.

Locket, G.H. and A.F. Millidge, 1951. British spiders. Vol. I. The Ray Society. London, pp: 436.

Locket, G.H. and A.F. Millidge, 1953. British spiders. Vol. II. The Ray Society. London, pp: 398.

Platnick, N.I., 2004. The World Spider Catalog, Version 5.0 -http://research.amnh.org/entomology/index.html.

Roberts, M.J., 1985. The Spiders of Great Britain and Ireland. Vol. 1-3. Harley Books. Cochester, pp: 951.

Roberts, M.J., 1995. Spiders of Great Britain and Northern Europe. Collins, Harley Books. Cochester, pp: 682.

Roewer, C.F., 1959. Araneae Lycosaeformia II (Lycosidae). Explor. Parc natn. Upemba Miss. G. F. de Witte, 55: 1-518.

Roewer, C.F., 1960. Araneae Lycosaeformia II (Lycosidae) (Fortsetzung und Schluss). Explor. Parc natn. Upemba Miss. G. F. de Witte, 55: 519-1040.

Tyschchenko, V.P., 1971. Identification Key to Spiders of the European USSR, Opred Faune USSR 105, Leningrad, pp: 281 (In Russian).