

Notes on Two Crab Spiders (Araneae: Thomisidae) from Turkey

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Abstract: The spider species *Xysticus abramovi* MARUSIK & LOGUNOV, 1995 and *X. pseudoluctuosus* MARUSIK & LOGUNOV, 1995 (fam. Thomisidae) are recorded from Turkey for first time. First female description of *X. abramovi* is supplied based on specimens collected from Turkey. The characteristic features of this species are described and its general habitus and genital organs illustrated. Photographs of male palp of *X. pseudoluctuosus* is presented for first time. Data on collecting places and distribution all over the world of all species are also given.

Key words: Araneae, Thomisidae, *Xysticus*, Turkey

Introduction

Genus *Xysticus* C. L. KOCH, 1835, is represented by 43 species in Turkey (DEMİR 2008, DEMİR *et al.* 2006, DEMİR *et al.* 2008, DEMİR *et al.* 2008, DEMİR *et al.* 2008, 2009, 2010, LOGUNOV 2006, LOGUNOV, DEMİR 2006, TOPCU, DEMİR 2004, TOPCU *et al.* 2005, PLATNICK 2010). *Xysticus abramovi* MARUSIK & LOGUNOV, 1995 and *Xysticus pseudoluctuosus* MARUSIK & LOGUNOV, 1995 were described by MARUSIK, LOGUNOV (1995) on the base of a male specimen from Tajikistan. These species have not been reported from any locality in the world yet. *Xysticus abramovi* is here re-described based on 29 specimens of both sexes that were found in the southern part of Anatolia. *Xysticus pseudoluctuosus* also has secondly reported with a male specimen from Mersin province in Turkey.

and hand collecting. They were preserved in 70% ethanol and deposited in the collection of the Arachnology Museum of Niğde University (NUAM). All illustrations were made with a Nikon SMZ-U stereomicroscope with drawing tube. All measurements are in millimeters. Abbreviations used in the text and in the figures are as follows: ALE, anterior lateral eyes; AME, anterior median eyes; ap, apical; d, dorsal; MOA, median ocular area; MOA-L, length of MOA; MOA-WA, anterior width of MOA; MOA-WP, posterior width of MOA; PLE, posterior lateral eyes; PME, posterior median eyes; p, prolateral; r, retrolateral; v, ventral. Terminology of genitalia and leg spination follow ONO (1988). For identification of these species, the work of MARUSIK, LOGUNOV (1995) was consulted.

Materials and Methods

Most of the specimens were collected in East Mediterranean Region of Turkey by pit-fall trapping

Results

***Xysticus abramovi* MARUSIK & LOGUNOV, 1995**

Material examined: Turkey: 1♂, 1♀, Adana,

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Saimbeyli, Ayvıcık Village, 36°09'E 37°48'N, 1334 m, 18.X.2008, 1♂, 4♀♀, Adana, Tufanbeyli, Bozgüney Village, 36°19'E 38°15'N, 1584 m, 19.X.2008, 1♂, Adana, Tufanbeyli, İğdebel Village, 36°21'E 38°16'N, 1560 m, 19.X.2008, 1♂, 1♀, Adana, Tufanbeyli, Güzelim Village, 36°11'E 38°08'N, 1367 m, 19.X.2008, 2♂♂, Adana, Tufanbeyli, Pınarlar Village, 36°13'E 38°12'N, 1352 m, 19.X.2008, 1♂, 1♀, Adana, Saimbeyli, 36°05'E 37°59'N, 1005 m, 19.X.2008, 1♀, Adana, Saimbeyli, 36°06'E 37°58'N, 1492 m, 19.X.2008, 2♂♂, 3♀♀, Adana, Feke, Köleli Village, 35°48'E 37°52'N, 1269 m, 19.X.2008, 2♀♀, Adana, Feke, Çürükler Village, 35°57'E 37°52'N, 1522 m, 19.X.2008, 1♀, Kahramanmaraş, Andırın-Geben I, 36°26'E 37°38'N, 1389 m, 14.X.2008, 1♂, 1♀, Kahramanmaraş, Andırın-Geben II, 36°28'E 37°40'N, 1299 m, 14.X.2008, 3♀♀, Kahramanmaraş, Pazarcık, Karaağaç Village, 37°20'E 37°36'N, 1214 m, 21.X.2008, 1♂, Kahramanmaraş, Türkoğlu, Kaledibi Village, 36°38'E 37°17'N, 1098 m, 21.X.2008.

Male: Measurements (n=2). Carapace: 1.54–1.60 long, 1.59–1.63 wide. Abdomen: 1.63–1.168 long, 1.46–1.48 wide. Clypeus 0.10–0.13 long, chelicera 0.46–0.50 long. Eye sizes and inter distances: AME 0.10, ALE 0.20–0.22, PME 0.10, PLE 0.15, MOA–WA 0.38–0.40, MOA–WP 0.40–0.42, MOA–L 0.36–0.38, AME–AME 0.15–0.18, AME–ALE 0.07–0.09, PME–PME 0.23–0.25, PME–PLE 0.12–0.15. Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 4.27–4.39 (1.26–1.29+0.60–0.62+0.90–0.92+0.89–0.91+0.62–0.65), II 4.22–4.32 (1.25–1.27+0.65–0.66+0.95–0.97+0.77–0.80+0.60–0.62), III 2.99–3.10 (0.95–0.97+0.40–0.42+0.62–0.63+0.52–0.55+0.50–0.53), IV 2.76–2.88 (0.77–0.79 + 0.38–0.40+0.61–0.64+0.50–0.53+0.50–0.52).

Carapace dark brown with yellowish spots and yellow V-shaped mark. ALE and PLE tubercles white-coloured, margins of carapace black. Sternum brown with dark brown spots. Labium and maxillae brown. Chelicerae light brown with dark brown mottles. Legs; femora, patellae and tibiae I and II dark brown, metatarsi I and II light brown, tarsi I and II yellow, junctions of all segments cream-coloured. Legs III and IV light brown with numerous dark brown and white spots. Leg I spination: femur d 0–1–1–1, p and r 1–1–1, tibia v 2–2–2ap, p and r 1–1–1, metatarsus v 2–2–2ap, p and r 0–1–2ap.

Dorsum of abdomen brown and white marginal band apically and laterally, folium yellowish-coloured; venter of abdomen light brown with dark brown spots. Spinnerets yellow brown, branchial opercula light brown (Fig. 1A).

Palps: Tibia with ventral and retrolateral apophyses. Ventral apophysis strong, sideways-inclined; the retrolateral apophysis obtuse. Tegulum smooth and convex, apically giving rise to broad. Tip of embolus bends slightly to tutacular edge and partly hidden behind distal part of tegulum (Fig. 2A-B).

Female: Measurements (n=2). Carapace: 2.18–2.23 long, 2.03–2.09 wide. Abdomen: 2.63–2.68 long, 2.19–2.22 wide. Clypeus 0.18–0.22 long, chelicera 0.73–0.78 long. Eye sizes and inter distances: AME 0.10–0.12, ALE 0.19–0.20, PME 0.9, PLE 0.22–0.25, MOA–WA 0.48–0.50, MOA–WP 0.54–0.55, MOA–L 0.24–0.26, AME–AME 0.28–0.31, AME–ALE 0.08–0.12, PME–PME 0.32–0.34, PME–PLE 0.23–0.26. Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 4.80–4.94 (1.50–1.54+0.75–0.77+0.96–1.00+0.97–0.99+0.62–0.64), II 4.99–5.12 (1.44–1.47+0.69–0.70+1.12–1.15+0.97–1.00+0.77–0.80), III 3.66–3.76 (1.21–1.22+0.50–0.51+0.72–0.75+0.62–0.63+0.61–0.64), IV 3.84–3.94 (1.26–1.28+0.47–0.50+0.80–0.81+0.69–0.71+0.62–0.64).

Carapace brown with laterally light brown bands and yellow V-shaped mark. Eyes tubercles white. Sternum, labium and maxillae yellow. Chelicerae yellowish to light brown. Legs yellow with brown spots. Carapace and abdomen dorsally covered with numerous thick hairs. Leg I spination: femur d 1–1–1–1, tibia v 1–2–2–2ap, metatarsus v 2–2–2–2ap, p and r 0–1–2ap.

Dorsum of abdomen light brown with dark brown spots and cream-coloured marginal band laterally, folium yellowish-coloured; venter of abdomen light brown with small black spots. Spinnerets brownish, branchial opercula yellow (Fig. 1B).

Epigyne: Central part of epigynal plate slants gradually towards epigastric furrow; distinct sclerotised C-shaped rims enclose central part on each side. Elevated sclerotised rims with two dark rings on lower corners. Spermathecal structures show no variation (Figs. 2C, 3A-B).

Discussion: The female of *Xysticus abramovi* is not known. It, therefore, is described here.

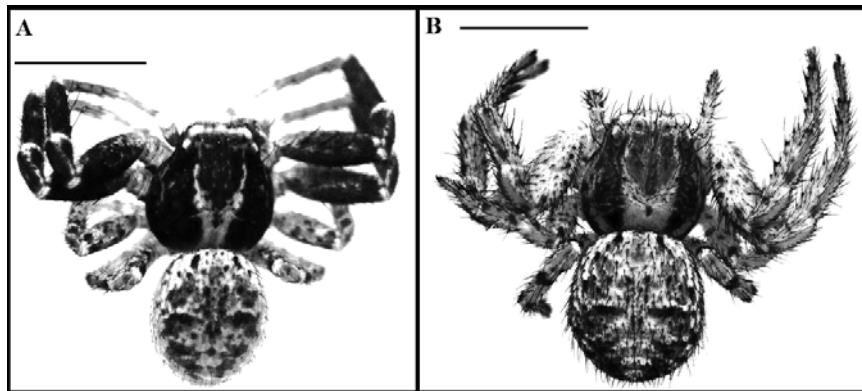


Fig. 1. *Xysticus abramovi* MARUSIK & LOGUNOV, 1995, A. male, B. female (scale bar = 2 mm).

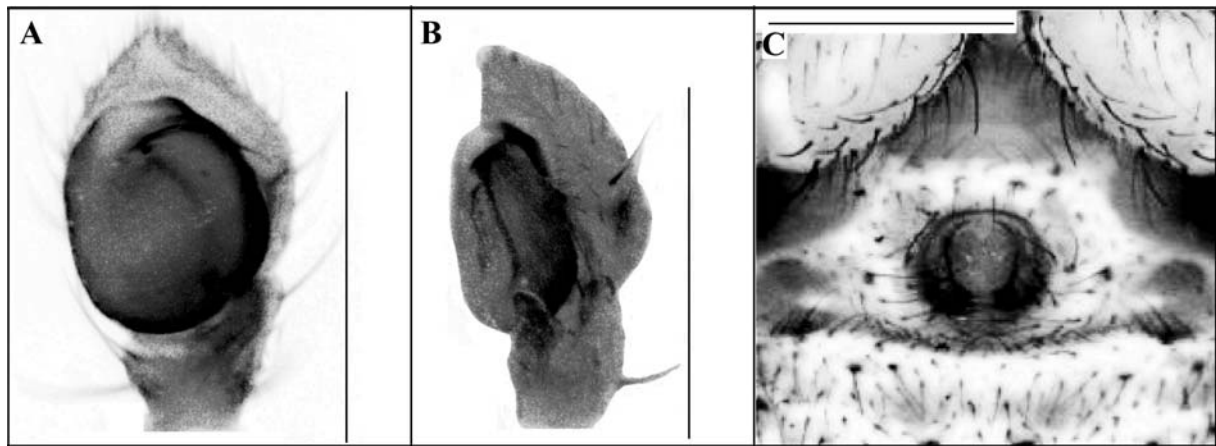


Fig. 2. *Xysticus abramovi* MARUSIK & LOGUNOV, 1995, left male palp, A: ventral view, B: retrolateral view, C: epigyne ventral view (scale bar = 0.5 mm).

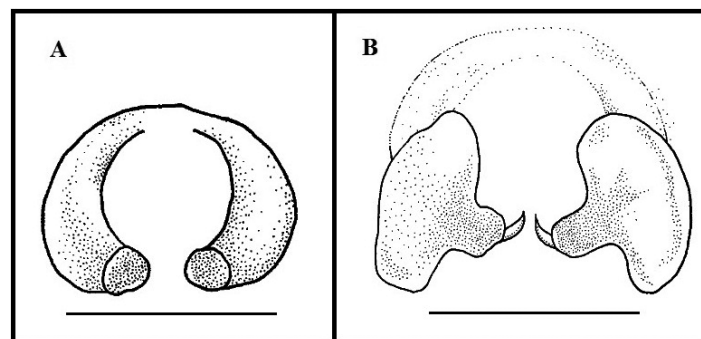


Fig. 3. *Xysticus abramovi* MARUSIK & LOGUNOV, 1995, A: epigyne ventral view, B: vulva dorsal view (scale bar = 0.25 mm).

Xysticus abramovi is distinctly differentiated from other *Xysticus* species in the tip of embolus bends slightly to tutacular edge and partly hidden behind distal part of tegulum of the palpus and in the form of the spermathecal structures of the female (Figs. 2A-C, 3A-B).

Distribution: Tajikistan (MARUSIK, LOGUNOV 1995), Turkey.

Habitat: Found under stones and on the ground, in grass or low vegetation.

Xysticus pseudoluctuosus MARUSIK & LOGUNOV, 1995

Material examined: 1♂, İçel, Kanlıdivane, 34°05'E 36°32'N, 619 m, 21.IV.2007.

Remarks: *X. pseudoluctuosus* was described by MARUSIK, LOGUNOV (1995) on the basis of only male sex from Tajikistan; with no further records having been reported so far. We record it from Mediterranean Region of Turkey. This species photographed due to being a new record to Turkey (Fig. 4A-B).

Distribution: Tajikistan (MARUSIK, LOGUNOV 1995), Turkey.

Habitat: Found under stone, in grass vegetation.

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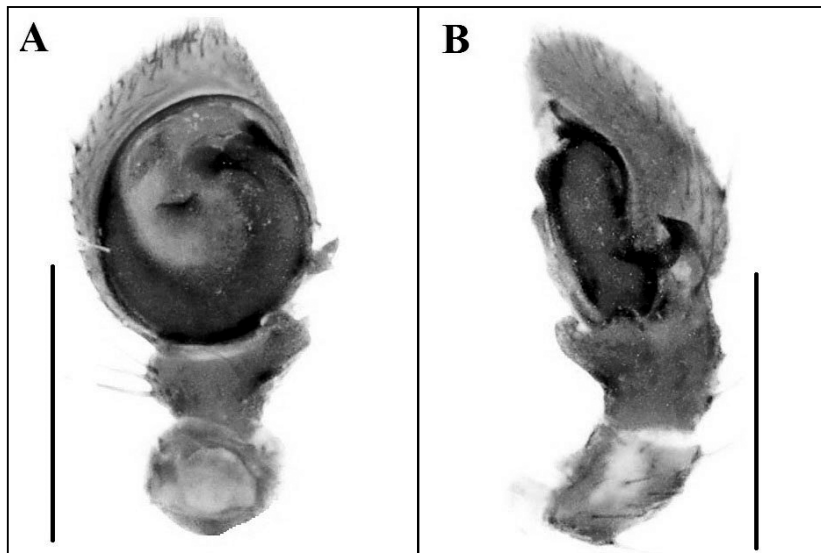


Fig. 4. *Xysticus pseudoluctuosus* MARUSIK & LOGUNOV, 1995, left male palp, A: ventral view, B: retrolateral view (scale bar = 0.5 mm).

References

- DEMİR H. 2008. An updated checklist of the Thomisidae (Araneae) of Turkey with zoogeographical remarks. – *Serket*, **11** (2): 37-50.
- DEMİR H., A. TOPÇU, T. TURKES 2006. A new species of the genus *Xysticus* C. L. Koch from Turkey (Araneae: Thomisidae). – *Zootaxa*, **1364**: 45-49.
- DEMİR H., M. AKTAŞ, A. TOPÇU 2008. *Xysticus anatolicus* n. sp. (Araneae: Thomisidae), a new species from Turkey. – *Entomological News*, **119** (3): 287-290.
- DEMİR H., M. AKTAŞ, A. TOPÇU 2009. New records of little-known species of *Xysticus* C. L. Koch, 1835 (Araneae: Thomisidae) in Turkey. – *Zoology in the Middle East*, **46**: 99-102.
- DEMİR H., M. AKTAŞ, A. TOPÇU 2010. Additional notes on crab spider of Turkey (Araneae: Thomisidae and Philodromidae). – *Serket*, **12** (1): 17-22.
- DEMİR H., M. AKTAŞ, O. SEYYAR 2008. The female of *Xysticus pseudorectilineus* (Wunderlich, 1995) (Araneae: Thomisidae) from Turkey. – *Zootaxa*, **1674**: 65-68.
- DEMİR H., O. SEYYAR, M. AKTAŞ 2008. A poorly known species of the spider genus *Xysticus* C. L. Koch (Araneae, Thomisidae) in Turkey. – *Archives of Biological Sciences, Belgrade*, **60** (4): 17-18.

- LOGUNOV D. V. 2006. Notes on *Xysticus kempeleni* Thorell, 1872 and two closely related spider species (Araneae, Thomisidae). – *Acta Arachnologica*, **55**: 59-66.
- LOGUNOV D. V., H. DEMIR 2006. Further faunistic notes on *Coryptila* and *Xysticus* from Turkey (Araneae, Thomisidae). – *Arachnologische Mitteilungen*, **31**: 38-43.
- MARUSIK Y. M., D. V. LOGUNOV 1995. The crab spiders of Middle Asia (Aranei, Thomisidae), 2. – *Beitrage zur Araneologie*, **4**: 133-175.
- ONO H. 1988. A revisional study of the spider family Thomisidae (Arachnida, Aranei) of Japan. National Science Museum, Tokyo, 252 p.
- PLATNICK N. I. 2010. The world spider catalog, version 10.5. American Museum of Natural History (online) at <http://research.amnh.org/entomology/spiders/catalog/THOMISIDAE.html>. (25.III.2010).
- TOPÇU A., H. DEMİR 2004. New crab spider (Araneae: Thomisidae) records for Turkey. – *Israel Journal of Zoology*, **50**: 421-422.
- TOPÇU A., H. DEMİR, O. SEYYAR 2005. A checklist of the spiders of Turkey. – *Serket*, **9**: 109-140.

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Бележки върху два вида крабовидни паяци (Araneae: Thomisidae) от Турция

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(Резюме)

За първи път се съобщават за Турция видовете *Xysticus abramovi* MARUSIK & LOGUNOV, 1995 и *X. pseudoluctuosus* MARUSIK & LOGUNOV, 1995 от семейство Thomisidae. За първи път се дава описание на женски екземпляр от *X. abramovi*, като са описани характерните му черти: хабитус и полови органи. Представени са снимки на мъжка палпа на *X. pseudoluctuosus*. Дадени са и сведения за разпространението на видовете в света.