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Articles

New records of lithobiid centipedes (Chilopoda: Lithobiomorpha) from Middle Asia

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The following taxa are new to the fauna of Uzbekistan: *Australobius* Chamberlin, 1920, *A. magnus* (Trotzina, 1894), *Hessebius* Verhoeff, 1941, *H. plumatus* Zalesskaja, 1978, *Lithobius praeditus* Zalesskaja, 1975, and *L. javanicus* (Zalesskaja, 1978). Order Lithobiomorpha is new to the Qashqadaryo and Surxondaryo regions of Uzbekistan; *A. magnus* is new to the Talas, Jalal-Abad, Chuy, and Batken regions of Kyrgyzstan. All the records are mapped.

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Keywords

Australobius, biodiversity, fauna, *Hessebius*, Kyrgyzstan, Lithobiidae, new records, Uzbekistan

Introduction

A recent checklist (Dyachkov et al. 2022) contains 49 species arranged in 10 genera and 3 families from Middle Asia; it is also shown that not all the regions are studied evenly. This paper provides new faunistic records of lithobiid centipedes from poorly studied regions of Uzbekistan and Kyrgyzstan.

Material and methods

Specimens were taken by hand and preserved in 70% ethanol. The materials are deposited in ASU and ZISP (see abbreviations below).

Localities are indicated similar to those in the original labels; additional information is provided in square brackets. “Shiblyak” is a shrubland biome, typically consisting of densely growing xerophilous shrubs. Localities were mapped (Figs 1–4) with SimpleMappr (Shorthouse 2010).

Abbreviations: ad. – adult, AF – A.A. Fomichev, Afg – Afghanistan, AK – A.N. Kirichenko, ASU – Altai State University (Barnaul), B – Barschevsky, coll. – collector, fragm. – fragment, juv. – juvenile, K – Korzhynsky, Kg – Kyrgyzstan, LB – L. Berg, M – Molchanov, sad. – subadult, Tj – Tajikistan, Tu – Turkmenistan, Uz – Uzbekistan, YD – Yu.V. Dyachkov, ZISP – Zoological Institute of the Russian

Academy of Sciences (Saint Petersburg).

Results

Genus *Australobius* Chamberlin, 1920

***Australobius magnus* (Trotzina, 1894)**

Figure 1.

Material. 1 sad. ♀, 1 juv. ♀ (ASU No. 435), Uzbekistan, Surxondaryo Region, 28 km SE from Denau City, Babatag Mt. Range, N38°06'57", E68°11'54", *Pistacia* woodland and dry river bottom, in soil, under stones, 900–1200 m, 29–30 April 2022, coll. YD; 1♂, 3♀♀, 1 juv. ♀ (ASU No. 475), 35 km NW from Denau City, Baysun-Tau Mt. Range, Sangardakdarya River Valley, N38°31'31", E67°36'27", stony shiblyak with rocks, 1200 m, 4 May 2022, coll. AF; 4♂♂, 5♀♀, 4 juv. ♂, 7 juv. ♀ (ASU No. 439), 6♂♂, 5♀♀, 3 juv. (ASU No 451), 2♂♂, 4♀♀, 1 juv. ♀ (ASU No. 466), 5 km N from Derbent City, Baysun-Tau Mt. Range, N38°15'03", E67°01'13", stony shiblyak with rocks, under stones, 1100–1400 m, 5 May 2022, coll. YD, AF; 11♂♂ (ASU No. 447), 14♂♂, 4 juv. (ASU No. 460), Kugitangtau Mt. Range, vicinity of Neftchi summer camp, stony *Juniperus* woodland, under stones, N37°51'32", E66°38'04", 1700–2000 m, 7–9 May 2022, coll. YD; 3♂♂ (ASU No. 472), 2♀♀ (ASU No. 463), vicinity of Neftchi summer camp, stony *Juniperus* woodland, under stones, N37°51'41", E66°37'38", 1700–2000 m, 6–7 May 2022, coll. AF; 5♂♂, 2♀♀ (ASU No. 456), Tupalangdarya River Valley, 7 km NNE from Gisarak Kishlak, stony shiblyak with rocks, under stones, N38°37'58", E67°49'32", 1100–1300 m, 1–2 May 2022, coll. YD; 3 juv. ♀, 1 fragm. (ASU No. 452), Qashqadaryo Region, Kyzyldarya River Valley, vicinity of Suvlisay Kishlak, N38°49'37", E67°06'21", stony shiblyak with rocks, under stones, 1200 m, 8–10 May 2022, coll. YD; 1♀ (ZIN chilo-31), Kishlak Shut [ca. N39°8'47", E67°33'56"], 5 June 1896, coll. B; 1♂ (ZIN chilo-22), [Kyrgyzstan], [Osh Region, Chong-Alay District], Daraut-Kurgan [Daroot-Korgon, ca. N39°33'12", E72°12'0"], 29 March 1913, coll. M; 1♀ (ZIN chilo-26), [Jalal-Abad Region, Suzak District], Fergana, Kögart River Valley [ca. N41°8'6", E73°37'39"], 6100 ft. [ca. 1980 m], under stones, 5 August 1895, coll. K; 1♂ (ZIN chilo-28), 1♂ (ZIN chilo-32), [Batken Region], Andarak [ca. N39°45'0", E69°27'36"], 17 and 25 June 1906, coll. LB; 1♂, 2♀♀ (ZIN chilo-24), [Talas Region], NW slope of Aleksandrovsky [Kyrgyz Ala-Too] Mt. Range, Makbal Mt. Pass [ca. N42°44'45", E72°4'58"], 9870 ft. [ca. 3000 m], 2–3 June 1910, coll. AK; 1 juv. ♂ (ZIN chilo-10), Chüy Region, Ala-Archa [national park, ca. N42°38', E74°28'], 800 m, 28 April, year and coll. unknown.

Distribution. Southern Kazakhstan, Kyrgyzstan, Tajikistan (Trotzina 1894; Attems 1904; Zalesskaja 1978; Eason 1997; Dyachkov et al. 2022), Uzbekistan (new), Western China (Karakorum) (Eason 1997; Ma et al. 2014), and Eastern Nepal (Eason 1989, 1997).

Remarks. This species and genus *Australobius* are new to the fauna of Uzbekistan and to the Jalal-Abad, Talas, Chüy, and Batken regions of Kyrgyzstan.

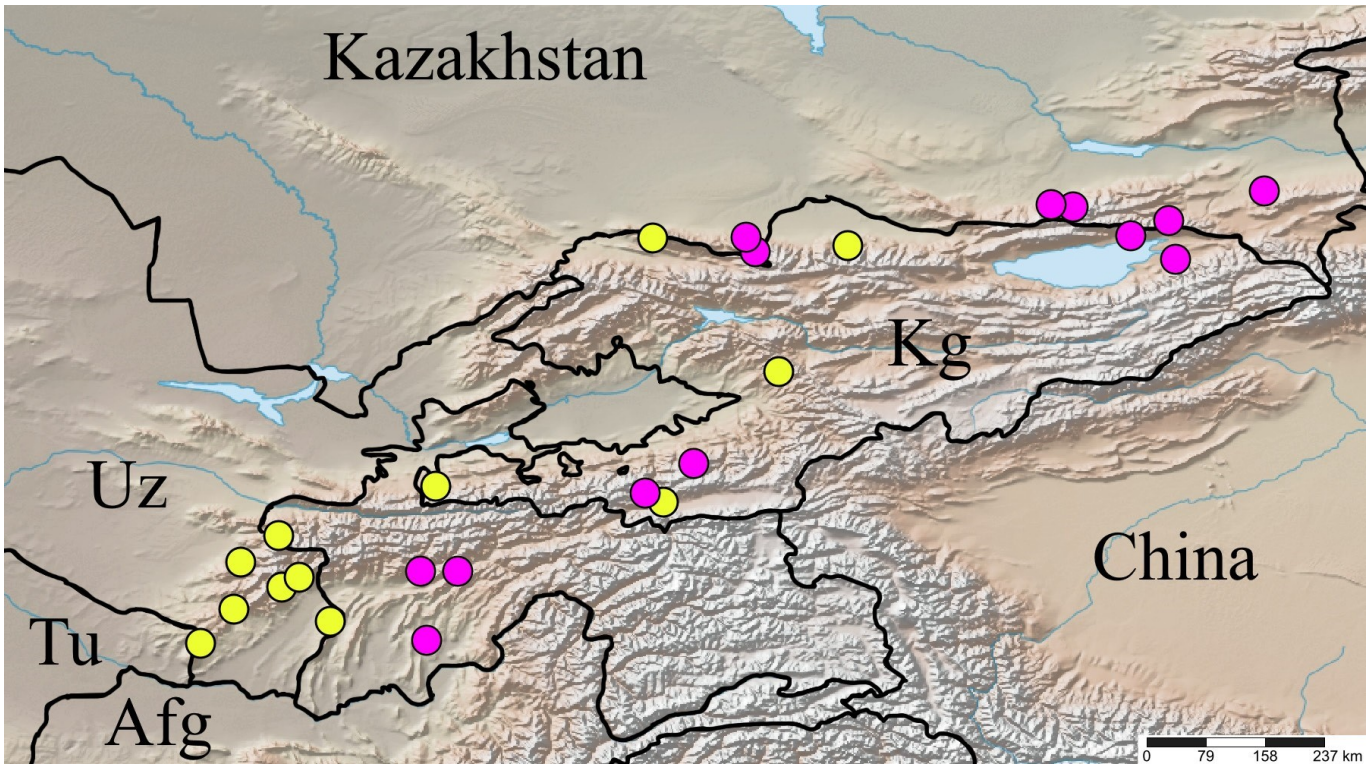

Figure 1. *Distribution of Australobius magnus (Trotzina, 1894) in Middle Asia: yellow circle – new data, violet one – literature data.*

Genus *Hessebius* Verhoeff, 1941

***Hessebius plumatus* Zalesskaja, 1978**

Figure 2.

Material. 2♀♀ (ASU No. 431), Uzbekistan, Surxondaryo Region, 28 km SE from Denau City, Babatag Mt. Range, N38°06'57", E68°11'54", *Pistacia* woodland and dry river bottom, in soil, under stones, 900–1200 m, 29–30 April 2022, coll. YD; 3♀♀ (ASU No. 438), Baysun-Tau Mt. Range, 5 km N from Derbent City, N38°15'03", E67°01'13", stony shiblyak with rocks, under stones, 1100–1400 m, 5 May 2022, coll. YD; 2♀♀ (ASU No. 446), Kugitangtau Mt. Range, vicinity of Neftchi summer camp, N37°51'32", E66°38'04", stony *Juniperus* woodland, under stones, 1700–2000 m, 7–9 May 2022, coll. YD; 2♂♂ (ASU No, 470), N37°51'41", E66°37'38", 6–7 May 2022, coll. AF; 1♂ (ZIN chilo-7), [Qashqadaryo Region], Kishlak Shut [ca. N39°8'47", E67°33'56"], 5 June 1896, coll. B.

Distribution. Middle Asia: Kazakhstan, Tajikistan, Kyrgyzstan (Zalesskaja 1978; Bragina et al. 2020; Dyachkov 2019a, 2020; Dyachkov et al. 2022), and Uzbekistan (new).

Remarks. This species and genus *Hessebius* are new to the fauna of Uzbekistan.

Figure 2. *Distribution of Hessebius plumatus Zalesskaja, 1978 in Middle Asia: yellow circle – new data, violet one – literature data, green circle – uncertain locality (see Dyachkov et al. 2022: 168).*

Genus *Lithobius* Leach, 1814

***Lithobius* (*Ezembius*) *praeditus* Zalesskaja, 1975**

Figure 3.

Material. 5♂♂, 4♀♀ (ASU No. 478), Uzbekistan, Surxondaryo Region, 35 km NW from Denau City, Baysun-Tau Mt. Range, Sangardakdarya River Valley, N38°31'31", E67°36'27", stony shiblyak with rocks, under stones, 1200 m, 4 May 2022, coll. YD; 6♂♂, 14♀♀, 3 juv. ♀ (ASU No 482), Tupalangdarya River Valley, 7 km NNE from Gisarak Kishlak, N38°37'58", E67°49'32", stony shiblyak with rocks, under stones, 1100–1300 m, 1–2 May 2022, coll. YD.

Distribution. Tajikistan (Zalesskaja 1975, 1978; Dyachkov et al. 2022) and Uzbekistan (new).

Remarks. This species is new to the fauna of Uzbekistan.

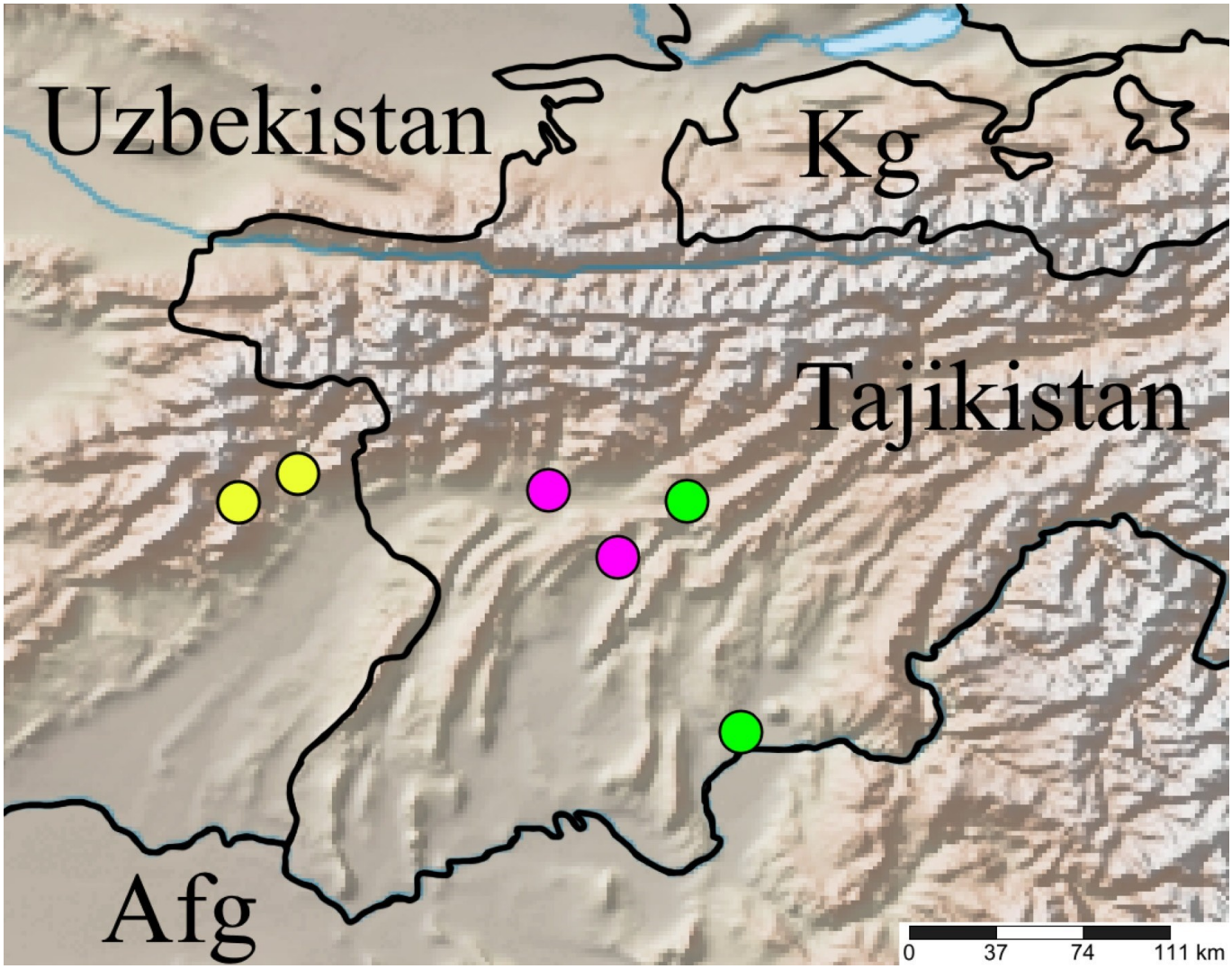

Figure 3. *Distribution of Lithobius praeditus Zalesskaja, 1975 in Middle Asia: yellow circle – new data, violet one – literature data, green circle – uncertain locality (see Dyachkov et al. 2022: 169).*

Lithobius **(** ***Monotarsobius*** **)** ***javanicus*** **(Zalesskaja, 1978)**

Figure 4.

Material. 2♀♀ (ASU No. 462), Uzbekistan, Surxondaryo Region, 28 km SE from Denau City, Babatag Mt. Range, N38°06'57", E68°11'54", *Pistacia* woodland and dry river bottom, in soil, under stones, 900–1200 m, 29–30 April 2022, coll. YD.

Distribution. Tajikistan (Zalesskaja 1978; Dyachkov et al. 2022) and Uzbekistan (new).

Remarks. This species is new to the fauna of Uzbekistan.

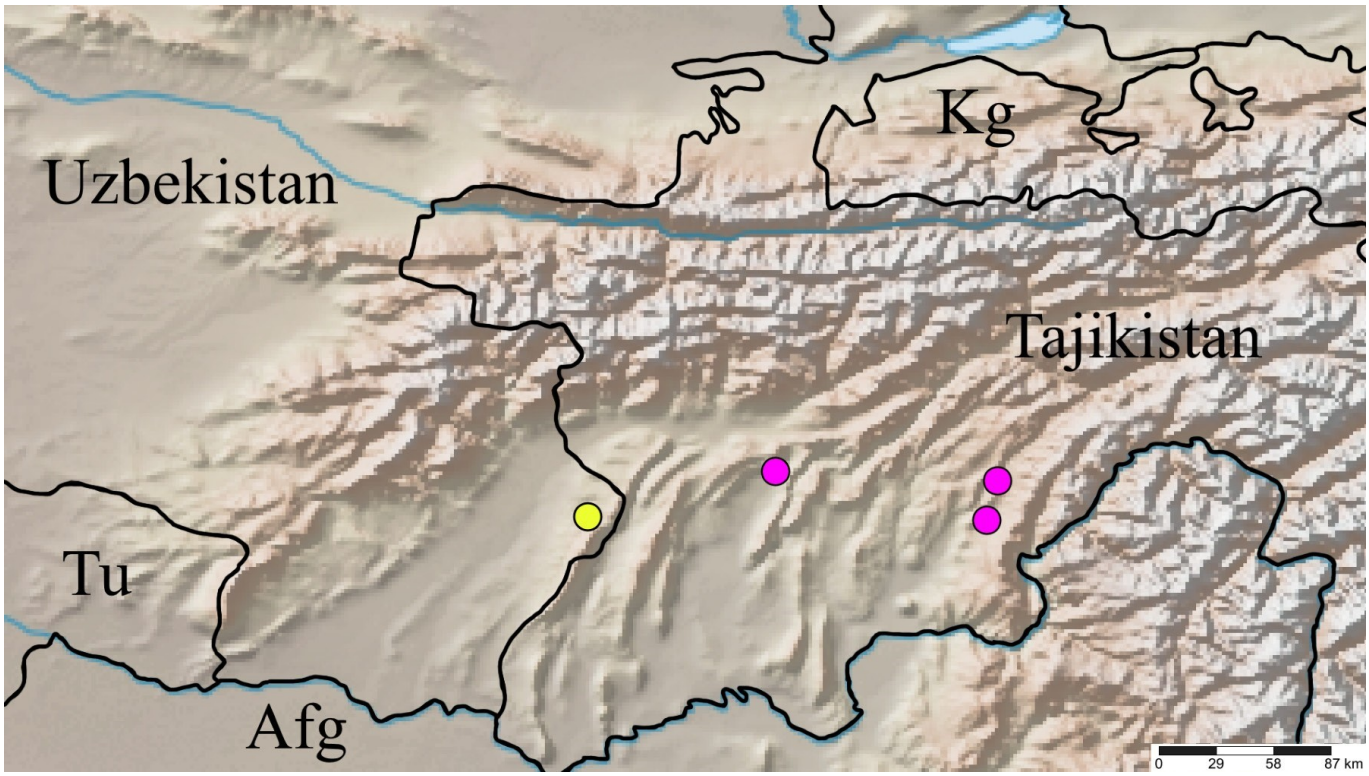

Figure 4. *Distribution of Lithobius javanicus (Zalesskaja, 1978) in Middle Asia: yellow circle – new data, violet one – literature data.*

Conclusions

Thus, at least 26 species arranged in 15 genera, 8 families, and 4 orders of Chilopoda are known from Uzbekistan (Kessler 1874; Sseliwanoff 1879, 1881a, 1881b, 1884; Pocock 1891; Attems 1904; Lignau 1929a, 1929b; Verhoeff 1930; Titova 1969, 1975, 1978; Zalesskaja 1972, 1975, 1978; Dobroruka 1979; Würmli 1975; Zalesskaja & Schileyko 1991, 1992; Dyachkov 2019b; Dyachkov & Nedoev 2021; Dyachkov & Bonato 2022; Dyachkov et al. 2022).

It should be recognized that our knowledge of Middle Asian lithobiomorph species is still far from being complete.

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