

The spiders (Arachnida: Araneae) of the Lagodekhi Reserve, Georgia: faunistic results of a transect study and an updated checklist

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Abstract

In the largest systematic spider collection effort in a single location in the Caucasus Ecoregion, across several altitudinal zones and throughout the entire vegetation period of one year, 426 juvenile and 359 adult spiders belonging to 69 species from 48 genera and 19 families were collected in the Lagodekhi Reserve, Georgia, in 2014, using Malaise traps on a transect with seven study plots between 666 and 2559 m a.s.l. in the montane, subalpine, and alpine vegetation zones. *Phoroncidia pilula* (Karsch, 1879) is recorded in the Western Palaearctic for the first time. Thirty-eight species are recorded in the Lagodekhi Reserve for the first time, raising the number of spider species of this reserve to 202, five additions are first records for the Caucasus Ecoregion and ten species are first records for Georgia. Diagnostic drawings and analyses are provided for 13 species, including *Megalephyphantes pseudocollinus* Saaristo, 1997, *Phoroncidia paradoxa* (Lucas, 1846), *P. pilula* (Karsch, 1879), and *Trochosa cachetiensis* Mcheidze, 1997. An updated checklist of the spiders in the Lagodekhi Reserve is provided.

Keywords: biodiversity • Caucasus • Georgia • new record • redescription

Introduction

The Lagodekhi Reserve was established in 1912 as the first protected area in the Caucasus Ecoregion (henceforth Caucasus, *sensu* Williams *et al.* 2006) and nowadays holds the status of a Strict Nature Reserve. Spanning altitudes of approximately 500 to 3500 m a.s.l., the Lagodekhi Reserve exhibits a high diversity of natural landscapes and is one of the world's best preserved pristine areas. It is located in the northeastern part of Georgia, close to the borders with Azerbaijan and Dagestan (Russia), on the southern slopes of the Greater Caucasus chain. The Lagodekhi Reserve consists of the Lagodekhi Nature Reserve (19,749 ha) and the Lagodekhi Managed Reserve (4702 ha) (APA 2016). The mountain forests, meadows, rivers, and alpine ecosystems of the Lagodekhi Reserve are very rich in habitat types and harbour numerous plant and animal species, a number of them endemic to the Caucasus, Georgia, or the reserve itself (Kikodze *et al.* 2007).

At 400–1800 m a.s.l., forests near and within the Lagodekhi Reserve mostly consist of montane beech (*Fagus*

orientalis Lipsky) and hornbeam (*Carpinus caucasica* Grob.); subalpine forests at 1800–2250 m a.s.l. are dominated by beech, oak (*Quercus macranthera* Fisch. & C.A.Mey. ex Hohen.), maple (*Acer trautvetteri* Medw.), birch (*Betula litwinowii*) and rhododendron (*Rhododendron caucasicum* Pall.), interspersed with subalpine grasslands and meadows (Kvachakidze 1999). According to this author, the alpine habitats at 2500–3000 m a.s.l. are typically developed as grasslands, rhododendron meadows, and herb carpets. Subnival vegetation above 3000 m a.s.l. consists of small patches of grass and herbs.

The Lagodekhi Reserve is the best studied single area in Georgia for arachnology. Before our study, occurrence data for 169 species had been published in 33 studies between 1895 and 2015 (see Appendix), indicating this protected area's significance as a refuge for a number of rarely recorded, endemic and specialist species. The occurrence of two species of the rather primitive mygalomorph family Nemesiidae, *Raveniola zaitzevi* (Charitonov, 1948) and *R. recki* (Mcheidze, 1983), in Lagodekhi Reserve also highlights its importance for the protection of numerous species, including Tertiary relicts.

In an extensive transect study in the Lagodekhi Reserve undertaken in 2014, using Malaise traps and aiming at assessing the diversity of insects (e.g. Aslan., Mumladze & Japoshvili 2017; Japoshvili *et al.* 2017), a significant number of spiders were collected as bycatch, providing the basis for new insights into the spider fauna of the Lagodekhi Reserve. The aim of this paper is to present the arachno-faunistic results of this study, to note first or rare species records in the Caucasus Ecoregion, Georgia, or the Lagodekhi Reserve, to provide improved information and drawings for poorly known or otherwise interesting species and to compile a new checklist of the spiders of the Lagodekhi Reserve.

Material and methods

This study is based on the material collected in the Lagodekhi Reserve, using Malaise traps along an altitudinal transect on the Kudigora Ridge (Fig. 1) during the entire vegetation season of 2014. Malaise traps (obtained from BandN Entomological services <http://www.entomology.org.uk>) were set up on bushes at each altitude (one trap at each site) to collect spiders and other invertebrates. Plant associations are named based on Kvachakidze (2009). Trap sites were: H1: 41.85248°N 46.28777°E, 666 m a.s.l., mixed lower montane forest with dominant beech and hornbeam (Carpineto-Fagetum festucosum), samples N1–N18; H2: 41.85585°N 46.29273°E, 847 m a.s.l., mixed intermediate montane forest with dominant beech (Fagetum nudum), samples N19–N36; H3: 41.87147°N 46.31153°E, 1351 m a.s.l., mixed intermediate montane forest with dominant beech (Fagetum galiosum), samples N37–N54; H4: 41.88273°N 46.32185°E, 1841 m a.s.l., broad-leaved upper montane forest with dominant beech and maple with rubus underbrush (Fageto-Aceretum rubosum), samples N55–N73; H4/5: 41.88558°N 46.32412°E, 1902 m a.s.l., broad-leaved upper montane forest with dominant maple (Aceretum rubosum), samples N74–N83; H5: 41.89805°N

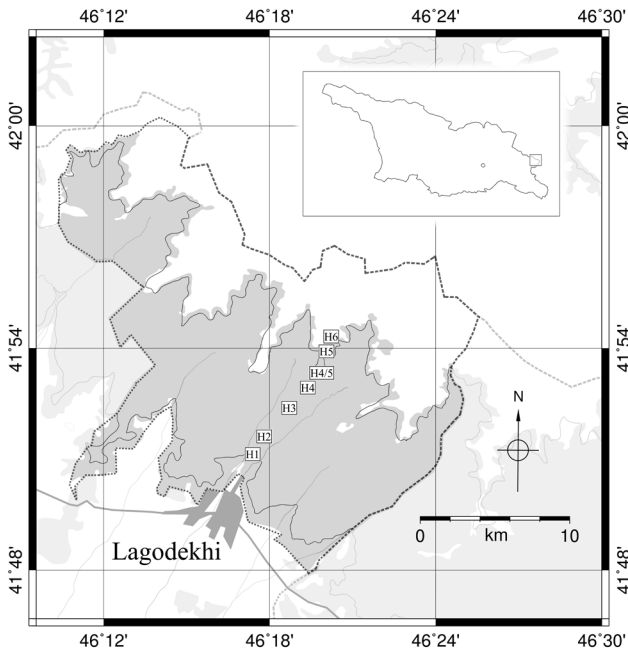


Fig. 1: Map of Lagodekhi Reserve in Georgia showing trap sites H1–H6 on Kudigora Ridge: shaded area = forest cover, contour lines at 600 and 2000 m a.s.l., dashed line = state border of Dagestan and Azerbaijan, dotted line = border of Lagodekhi Reserve.

46.33388°E, 2230 m a.s.l., subalpine zone with juniper (*Juniperetum*), samples N84–N95; H6: 41.90618°N 46.33340°E, 2559 m a.s.l., alpine grassland (*Alchemilletum*), samples N96–N110.

General collecting started on 2 April 2014 and lasted until 7 November 2014, although in alpine and subalpine areas collecting started later (subalpine 5 May 2014; alpine 25 May 2014) and completed earlier (6 October 2014), due to weather conditions and altitude. Material was collected every 10 (± 2) days (depending on the weather) and conserved in 96% ethanol and sorted. Identification was done by the first author using his reference collection and literature sources on Caucasian spiders (see list in Otto 2015) as well as Nentwig *et al.* (2017) and sources listed therein.

Voucher specimens are deposited in the Entomological collection of the Agricultural University of Georgia (Tbilisi) and in the comparative collection of the first author. Synonymy follows the World Spider Catalog (= WSC17). Distribution information is derived from

Mikhailov (2013), Otto (2015), Nentwig *et al.* (2017), and the WSC17.

All observations and measurements were made using a Zeiss Stemi SV6 with an Axiocam 105 colour camera and ZEN 2 software. All drawings were made by the first author based on microscope photographs and using a Wacom Intuos Pro digital drawing tablet with the programs Krita (version 2.9.7) and Gimp (version 2.8.16). Drawings always show the left male palpus; perspective and scale bars are given in the plates and their captions. All measurements are in mm. All altitudes are given in metres above sea level.

Abbreviations: Caucasus = Caucasus Ecoregion; TmI range = ratio between a and b, with a being the distance between the proximal end of metatarsus I and the insertion point of the dorsal trichobothrium on this leg segment and b being the length of metatarsus I; WSC17 = World Spider Catalog (2017).

Results

In total, 426 juvenile and 359 adult spiders (221 males, 138 females) were collected during the sampling period, comprising 68 species from 47 genera (plus two females of an unidentified *Agyneta* species, Linyphiidae) and 19 families (see Appendix).

The 38 species listed below are recorded in the Lagodekhi Reserve for the first time, among them five first records in the Caucasus and ten first records in Georgia.

First records in the Caucasus

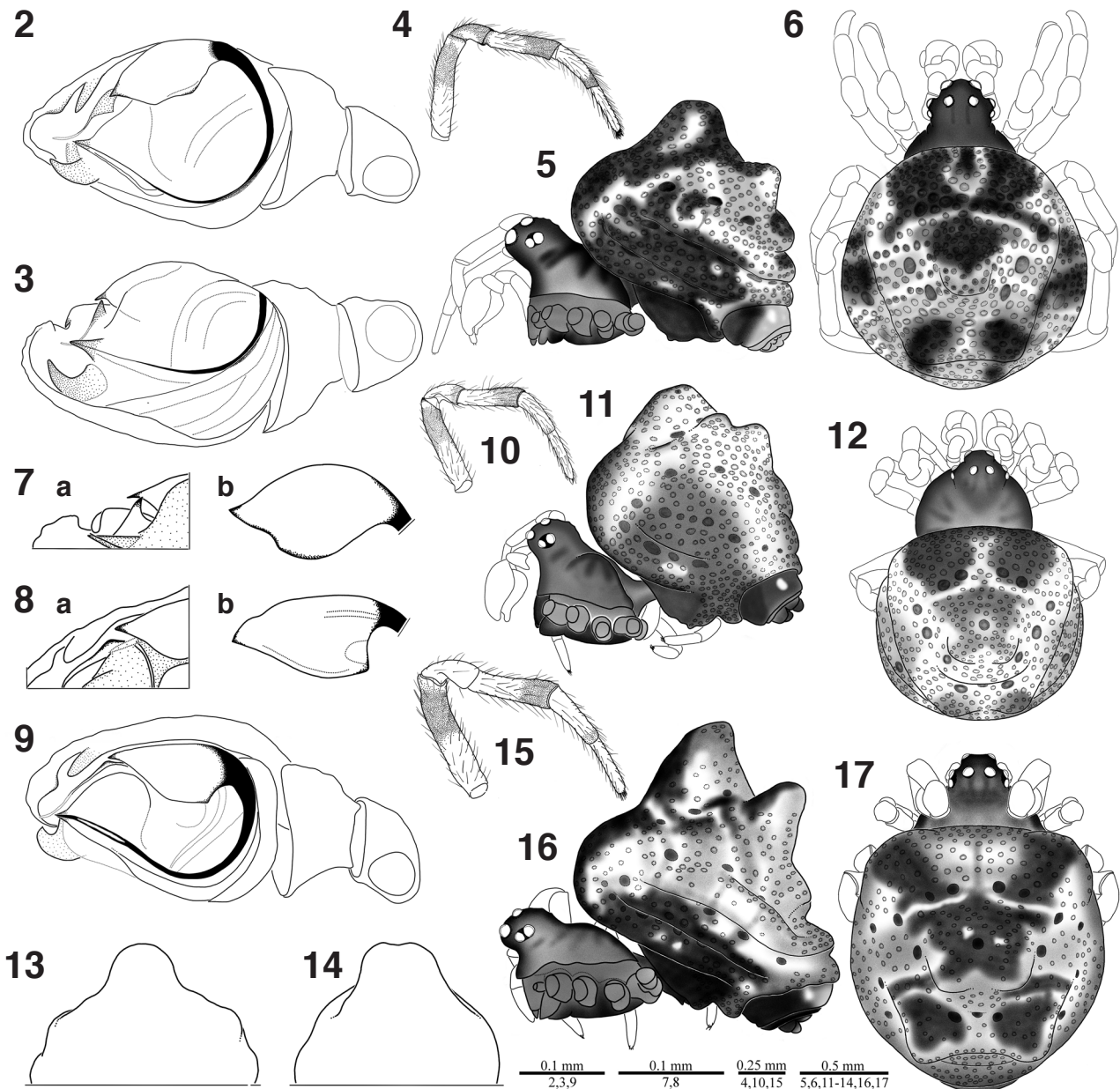
Amaurobius sp. (Amaurobiidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.87147°N 46.31153°E, 1351 m a.s.l., mixed montane forest, *Fagetum galiosum*, Malaise trap [H3/N37], 12–23 April 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 452). 1♂, same location, Malaise trap [H3/N38], 23 April–3 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KBS 258). 1♂, same location, Malaise trap [H3/N39], 5–15 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KBS 259).

The male palpal structure of the collected specimens is somewhat similar to the structures in *A. antipovae* Marusik & Kovblyuk, 2004 which was recently described from the

	<i>Phoroncidia pilula</i> (Karsch, 1879)	<i>Phoroncidia paradoxa</i> (Lucas, 1846)
dorsal tubercle on abdomen (frontal view)	lacking median indentation (Fig. 13)	with median indentation (Fig. 14)
inner edge of embolus base	with smooth edge lacking a pronounced step (Fig. 7b)	with perpendicular step (Fig. 8b)
small apophysis between basal tip of embolus base and tip of apical end of embolus proper	of high triangular shape and with a sharp tip (Fig. 7a)	flat and blunt (Fig. 8a)
length:width ratio of embolus loop	11:10 or 12:10 (Fig. 2)	12:8 (Fig. 9)
loop shape	rather circular	longish
characters shared by males of both species	distal theridiid paracymbium; carapace length:width = 0.68–0.72:0.63–0.65; abdomen length = 1.20–1.28; body length = 1.57–1.67; femur unmarked or distal half darkened (Figs. 4, 10, 15); patella unmarked or partly darkened; tibia with distal third/half darkened; metatarsus unmarked or distal margin darkened; tarsus unmarked	

Table 1: Characters differentiating the males of *Phoroncidia paradoxa* and *P. pilula*.



Figs. 2–17: *Phoroncidia pilula* (male from Lagodekhi, KVS 427, 2–7,13). **2** palpus, ventral view; **3** palpus, medioventral view; **4** left leg IV, anterior view; **5** habitus, lateral view; **6** habitus, dorsal view; **7a** apophysis near embolus base; **7b** embolus base; **13** dorsal tubercle on abdomen, frontal view. *Phoroncidia paradoxa* (male from Switzerland, NMB-ARAN-25761, 8–12, 14). **8a** apophysis near embolus base; **8b** embolus base; **9** palpus, ventral view; **10** left leg IV, anterior view; **11** habitus, lateral view; **12** habitus, dorsal view; **14** dorsal tubercle on abdomen, frontal view. *Phoroncidia paradoxa* (female from Italy/Trieste, 15–17). **15** left leg IV, anterior view; **16** habitus, lateral view; **17** habitus, dorsal view.

Caucasus. It is interesting that the spider collection at the Janashia Museum in Tbilisi contains specimens collected by D. Charitonov and labeled as: “*Amaurobius caucasicus*, 25 June, 38, Lagodekhi”, referring to a never formally described species, which is probably conspecific with our specimens. Due to the lack of data at this point we decided to make this question the topic of another paper (Marusik *et al.* in prep.).

Cinetata gradata (Simon, 1881) (Linyphiidae)

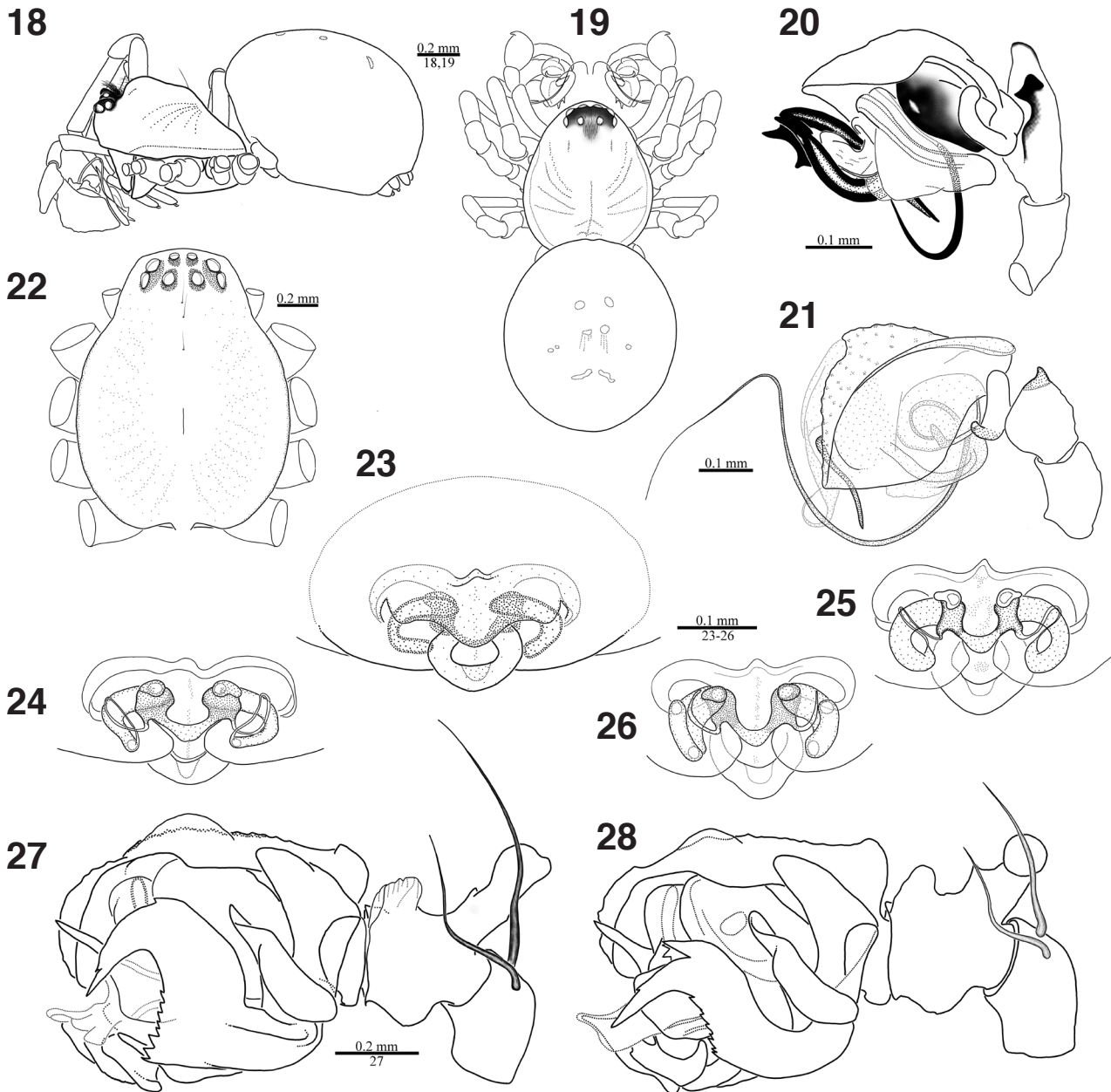
1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.88558°N 46.32412°E, 1902 m a.s.l., montane forest, broad-leaved upper montane forest, *Aceretum rubosum*, Malaise trap [H4–5/N81], 27 September–6 October 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 464), Figs. 18–20.

The single recorded male has a body length of 1.48, its carapace is dark clay coloured and tinged black with a black line pattern. The abdomen is dark grey. Legs are clay coloured and tinged black with tinging being weakly developed or lacking at the proximal and distal ends of the distal leg segments. Habitus and palp are developed as in European specimens (Figs. 18–20).

This rarely found species has so far been recorded mostly in Central Europe, with its easternmost records in Slovakia and Bulgaria (Blick & Goßner 2006; Blagoev, Deltshv & Lazarov. 2015; van Helsdingen 2016). Our record of this species extends its range to the Caucasus.

Phoroncidia pilula (Karsch, 1879) (Theridiidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85248°N 46.28777°E, 666 m a.s.l., mixed montane forest, Fageto-Carpinetum-Festucosum, Malaise trap [H1/



Figs. 18–28: *Cinetata gradata* (male, 18–20). **18** habitus, lateral view; **19** habitus, dorsal view; **20** palpus, retrolateral view. *Pocadicnemis juncea* (male). **21** palpus, retrolateral view. *Centromerita* sp. (females). **22** carapace habitus, dorsal view (KVS 321); **23** epigyne, ventral view (KVS 321); **24** vulva, dorsal view (KVS 321); **25** vulva, dorsal view (KBS 328); **26** vulva, dorsal view (KBS 327). *Megalethyphantes* cf. *pseudocollinus* (male from Lagodekhi, KVS460). **27** palpus, retrolateral view. *M. pseudocollinus* (male from Russia/Voronezh). **28** palpus, retrolateral view (drawing from photo, courtesy of A. Tanasevitch, without scale).

N2], 12–23 April 2014, leg. Japoshvili & Kirkitadze. Coll. Otto (KVS 427), Figs. 2–7, 13.

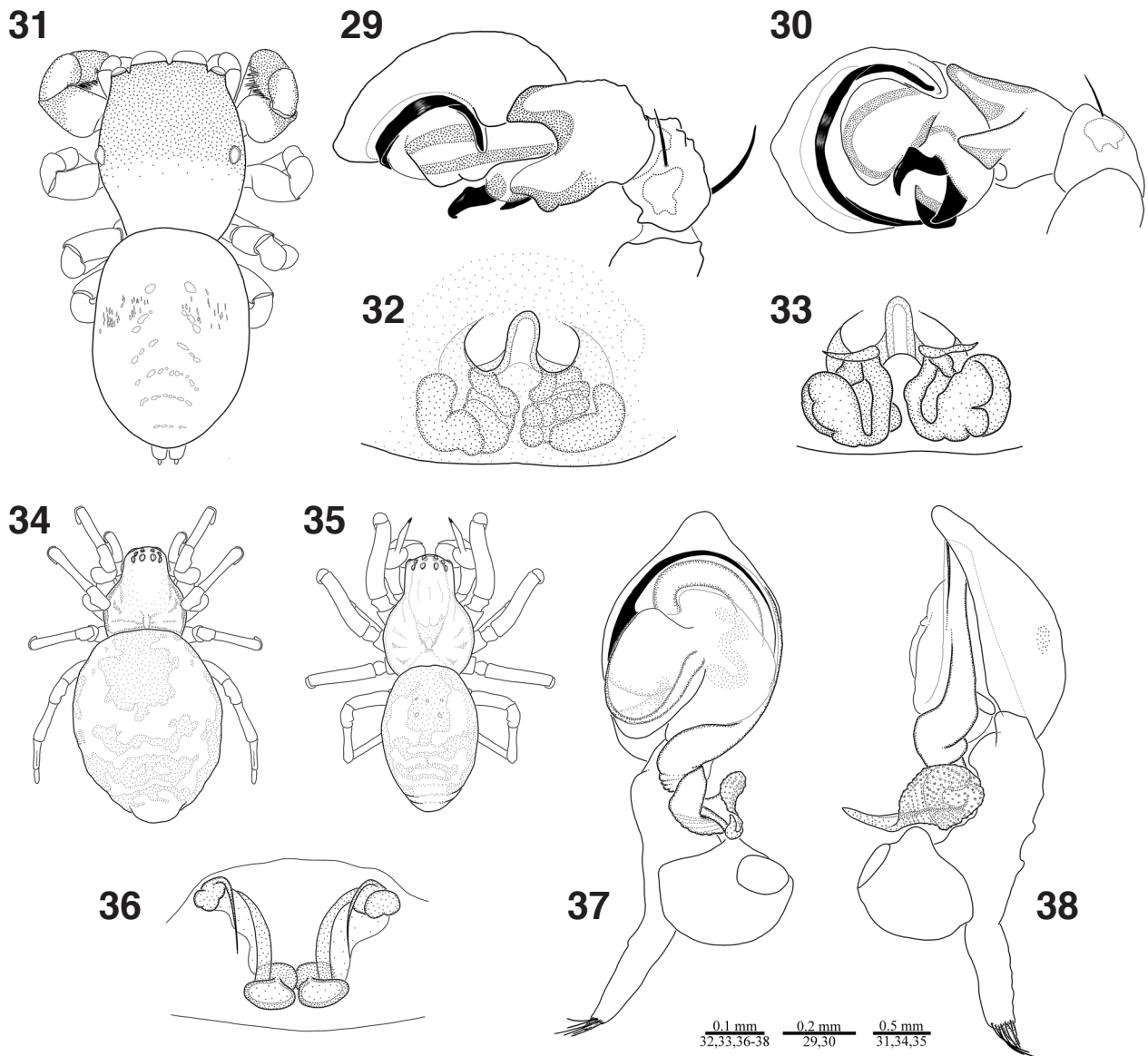
Comparative material: *Phoroncidia pilula* (= *Ulesanis minschana* Schenkel, 1936; = *Phoroncidia borea* Logunov & Marusik, 1992) 1♂, 1♀ (syntypes), Naturhistorisches Museum Basel, catalogue no. 1467a, label: “*Ulesanis minschana* Schkl, S Kansu, K13, coll. Hummel?”.

Phoroncidia paradoxa (Lucas, 1846)

1♂ (dried specimen), Italy, Garda Mountains, Monte Brione, 45.888056°N 10.873611°E, 250 m a.s.l., 27 August 2005, leg. et det. et Coll. B. Knoflach. 1♀, Italy, Trieste, Aurisina, 45.75°N 13.67°E, ~200 m a.s.l., 16 December 1994, leg. Bertrandi, det. et Coll. B. Knoflach, Figs. 15–17. 1♂, Switzerland, Ticino, vill. Claro (Al Razzi), 46.25117°N 9.03043°E, 412 m a.s.l., 6 September

2011, Naturhistorisches Museum Basel, catalogue no. NMB-ARAN-25761, det. A. Hänggi (see collection details in Hänggi *et al.* 2014), Figs. 8–12, 14. 1♂, France, Rhône Alps, Ardèche, Thueyts, 44.67639°N 4.22139°E, ~500 m a.s.l., 9–13 October 1986, leg. P. Poot, Coll. Senckenberg Museum Frankfurt, catalogue no. SMF 59538.

Phoroncidia minuta (Spassky, 1932) is the only species of the genus, which has been recorded from the Caucasus so far, and all records were based on females (Spassky 1937; Mcheidze 1964; Logunov & Marusik 1992). We carefully examined and compared the single male collected from Lagodekhi with the European species *P. paradoxa* (Lucas, 1846) and with *P. pilula* (Karsch, 1879), which was known from the Far East only. Despite some similarities with *P. paradoxa*, our specimen shared more characters with the syntype male of *Ulesanis minschana* Schenkel, 1936, which



Figs. 29–38: *Xysticus pseudolanio* (H4/KVS 461, male, 29–30). **29** palpus, retrolateral view; **30** palpus, ventral view. *Sibianor tantulus* (female, 31–33). **31** habitus, dorsal view (body colour overall black, not depicted here); **32** epigyne, ventral view; **33** vulva, dorsal view. *Dictyna otto* (H3/KBS 265, female, 34, 36). **34** habitus, dorsal view; **36** vulva, dorsal view. *Dictyna otto* (H2/KBS 241, male, 35, 37–38). **35** habitus, dorsal view; **37** palpus, ventral view; **38** palpus, retrolateral view.

has since been synonymized with *P. pilula* (Karsch, 1879). This identification is further supported by a second opinion (Y. Marusik, pers. comm.). Since *P. paradoxa* has been reported from nearby Turkey and characters differentiating the males of the two species have not yet been published, it seems reasonable to compare these species in more detail. Based on comparison of the material listed above, and literature sources, we derived some, in our opinion, reliable characters, and present them in Table 1 and Figs. 2–14. Thaler & Noflatscher (1990: 173) pointed out some palp characteristics typical for *P. paradoxa* which, in our specimen, were either hardly or not visible, e.g. the guiding ridge of the radix (“Führungsleiste der Radix”), or they differed in the form and proportions heavily depending on viewing perspective, e.g. the distal median apophysis (“Radixabschnitt mit kräftiger Endkralle”). Perspective was also important when viewing the embolus base and the more or less hook-shaped median apophysis (compare Figs. 2–3, 7b with Figs. 8b–9).

Details of the female habitus of *P. paradoxa* are also given in Figs. 15–17 to show intraspecific variability and because published drawings have so far not shown the habitus in detail.

Phoroncidia pilula is distributed in the southeastern part of Russia, northeast China, Korea, and Japan (Marusik, Mikhailov & Omelko 2015; WSC17). Our first record of this species in the Caucasus suggests either a much larger distribution range or a new case of Caucasian–Far East disjunctive range in spiders (Marusik, Mikhailov & Guseinov 2006).

Pocadicnemis juncea Locket & Millidge, 1953 (Linyphiidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.88558°N 46.32412°E, 1902 m a.s.l., broad-leaved upper montane forest, *Aceretum rubosum*, Malaise trap [H4–5/N75], 25 June–5 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 463), Fig. 21.

The single collected male shows the typical habitus and palpus structure (Fig. 21) including the rather long and curved median bulbal apophysis of this species (Roberts 1987; Nentwig *et al.* 2017). *Pocadicnemis juncea* is distributed throughout Europe, with its easternmost records in Bulgaria (Blagoev, Deltshv & Lazarov. 2015) and the Ukraine (Mikhailov 2013). Our record of this species extends its range from Europe to the Caucasus.

Xysticus pseudolanio Wunderlich, 1995 (Thomisidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.88273°N 46.32185°E, 1841 m a.s.l., broad-leaved upper montane forest, Aceretum rubosum, Malaise trap [H4/N57], 15–25 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 461), Figs. 29–30. 1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.89805°N 46.33388°E, 2230 m a.s.l., subalpine zone, Juniperetum, Malaise trap [H5/N86], 4–14 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.90618°N 46.33340°E, 2559 m a.s.l., alpine grassland, Alchemilletum, Malaise trap [H6/N102], 5–15 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

The three collected males clearly differ from related species like *X. ukrainicus* Utochkin, 1968 (cf. Utochkin 1968; Mcheidze 1997, 2014) and closely resemble the species description of *X. pseudolanio* (Figs. 29–30), with some minor differences concerning the cymbium, median apophysis and distal embolus (J. Wunderlich, pers. comm.). *Xysticus pseudolanio* has been described from Turkey and only its male sex is known (Wunderlich 1995). The type locations in northeast and northwest Turkey were situated in forests between 1000 and 1100 m a.s.l., whereas our three specimens were collected in mountain forest, the subalpine zone and on alpine mats between ~1800 and 2600 m. Vegetation types of lower altitudes are known to reach higher in the Eastern Caucasus and can even be found in isolated spots well above their usual upper border, e.g. the so called subalpine mountain steppe of the Eastern Caucasus Major, e.g. in the Lagodekhi Reserve (Kvachakidze 1999; Nakhutsrishvili 2013). Therefore, despite significant differences in altitudes, environmental conditions of *X. pseudolanio* in the Lagodekhi Reserve might be quite similar to the locations in Turkey. It should be kept in mind, too, that older records of similar looking species in the Caucasus, like records of *X. lanio* by T. Mcheidze, might actually belong to *X. pseudolanio* (Marusik, pers. comm.).

First records in Georgia

Cheiracanthium montanum L. Koch, 1877 (Eutichuridae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.87147°N 46.31153°E, 1351 m a.s.l., mixed montane forest, Fagetum galiosum, Malaise trap [H3/N38], 23 April–3 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♂, same location, Malaise trap [H3/N46], 15–25 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.89805°N 46.33388°E, 2230 m a.s.l., subalpine zone, Juniperetum, Malaise trap [H5/N84], 25 May–4 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 3♂♂, 2♀♀, same location, Malaise trap [H5/N86], 4–14 June 2014, leg. Japoshvili & Kirkitadze,

Coll. Otto. 2♂♂, same location, Malaise trap [H5/N88], 25 June–5 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

This species has so far only been recorded from near the Caspian Sea in Dagestan (Ponomarev, Khalidov & Aliev 2008; Ponomarev *et al.* 2011a,b; Abdurakhmanov & Alieva 2011; Ponomarev & Abdurakhmanov 2014). Our records are the first of this species from Georgia.

Dictyna otto Marusik & Koponen, 2017 (Dictynidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85248°N 46.28777°E, 666 m a.s.l., mixed montane forest, Carpineto-Fagetum festucosum, Malaise trap [H1/N6], 25 May–4 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 2♂♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85585°N 46.29273°E, 847 m a.s.l., mixed montane forest, Fagetum nudum, Malaise trap [H2/N21], 5–15 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KBS 241), Figs. 35, 37–38. 5♂♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.87147°N 46.31153°E, 1351 m a.s.l., mixed montane forest, Fagetum galiosum, Malaise trap [H3/N40], 15–25 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (3♂♂), Coll. Agr. Univ. Tbilisi (2♂♂). 1♂, same location, [H3/N42], 4–14 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♀, same location H3, trap N43, 15–25 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♀, same location H3/N45, 5–15 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KBS 265), Figs. 34, 36.

Comparative material: 1♂, Georgia, Khevsureti, Giorgitsminda, 42.563833°N 45.088472°E, 1700 m a.s.l., montane meadow, under rocks, 24 June 2009, leg. et Coll. Otto (KVS 135).

This species is close to *D. armata* Thorell, 1875 and has only recently been described from specimens collected in Azerbaijan (Marusik & Koponen 2017). Since the description only included photographs of this species, we present drawings of the habitus and copulatory organs of both sexes (Figs. 34–38).

Our records are the first of this species in Georgia, but it is very probable that all earlier records of *D. armata* in Georgia actually refer to *D. otto* (cf. Marusik & Koponen 2017).

Dipoena braccata (C. L. Koch, 1841) (Theridiidae)

2♀♀, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85248°N 46.28777°E, 666 m a.s.l., mixed montane forest, Carpineto-Fagetum festucosum, Malaise trap [H1/N8], 15–25 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 2♀♀, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85585°N 46.29273°E, 847 m a.s.l., mixed montane forest, Fagetum nudum, Malaise trap [H2/N26], 25 June–5 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

This species is distributed in Europe and the Mediterranean (WSC17). In the Caucasus it has so far been recorded twice, from Adygea and from North Ossetia-Alania (Ponomarev & Mikhailov 2007; Ponomarev *et al.* 2012).

Lathys humilis (Blackwall, 1855) (Dictynidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85248°N 46.28777°E, 666 m a.s.l., mixed montane forest, Carpineto-Fagetum festucosum, Malaise trap [H1/N2], 12–23 April 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

This species has so far been recorded from a number of locations in the North Caucasus and Azerbaijan (e.g. Dunin 1988; Guseinov 1999; Ponomarev & Volkova 2013; see further references in Otto 2015). It seems to be wide-spread and abundant in the Caucasus. Our record is the first of this species from Georgia.

Megalephyphantes cf. *pseudocollinus* Saaristo, 1997 (Linyphiidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.87147°N 46.31153°E, 1351 m a.s.l., mixed montane forest, Fagetum galiosum, Malaise trap [H3/N53], 27 September–6 October 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 460), Fig. 27.

Comparative material: 1♂, Russia, Voronezh Oblast, Savalskoe Lesnichestvo near Ternovka railway station, 51.67383°N 41.54173°E, 150 m a.s.l., forest, 1980, leg. K. Mikhailov, Coll. A. Tanasevitch, Fig. 28.

Megalephyphantes pseudocollinus has been recorded twice in the Caucasus Ecoregion, from Krasnodar Kray (Russia), near the Crimea (Ponomarev & Mikhailov 2007) and from North Ossetia-Alania (Ponomarev & Komarov 2013).

The single collected male shows close affinity to *M. pseudocollinus* Saaristo, 1997, despite having a rather broad lamella characteristic (Fig. 27) instead of the usual slender one (cf. Saaristo 1997). Variation seems to be quite large within this species as shown in a specimen from Voronezh, Russia (Fig. 28) and there are more yet undiscovered species to be expected in (and living close to) the Caucasus, as indicated by a number of single females collected, which have so far not been attributed to any of the extant species in the genus *Megalephyphantes* (Coll. Otto; A. Tanasevitch, pers. comm.). We think it is possible that our collected male actually belongs to one of these yet undescribed species, but this question can only be answered based on newly collected pairs of males and females as well as a thorough study of the (few!) specimens of *M. pseudocollinus* already existing in private and institutional collections.

Nigma flavescens (Walckenaer, 1830) (Dictynidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85585°N 46.29273°E, 847 m a.s.l., mixed montane forest, Fagetum nudum, Malaise trap [H2/N19], 12–23 April 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♂, same location, Malaise trap [H2/N20], 23 April–4 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 4♂♂, same location, Malaise trap [H2/N21], 5–15 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

This species has been recorded from nine locations in the North Caucasus, Armenia, and Azerbaijan (Kulczyński 1895; Dunin 1988, 1989; Guseinov 1999; Ponomarev & Khatshikov 2009; Ponomarev & Volkova 2013). Our record is the first of this species from Georgia.

Philodromus albidus Kulczyński, 1911 (Philodromidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85248°N 46.28777°E, 666 m a.s.l., mixed montane forest, Carpineto-Fagetum festucosum, Malaise trap [H1/N4], 5–15 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♀, same location, Malaise trap [H1/N8], 15–25 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 437). 1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge,

41.85585°N 46.29273°E, 847 m a.s.l., mixed montane forest, Fagetum nudum, Malaise trap [H2/N22], 15–25 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

This species has so far only been recorded from a single location in Adygea in the North Caucasus (Ponomarev *et al.* 2012). Our records are the second example of this species in the Caucasus and the first from Georgia.

Sibianor tantulus (Simon, 1868) (Salticidae)

1♀, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.90618°N 46.33340°E, 2559 m a.s.l., alpine grassland, Alchemilletum, Malaise trap [H6/N102], 5–15 July 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KVS 468), Figs. 31–33.

The single collected female resembles *S. tantulus* very well, especially in the structure of the epigyne and vulva (Figs. 32–33), e.g. the insemination ducts lacking the first loop seen in related species (Logunov & Marusik 1991; Logunov 2001). However, according to these studies, leg colouration of our specimen is more similar to *S. aurocinctus*, especially the dark femur and tibia I with contrasting brighter patella (but femur I antero-laterally bright, cf. Fig. 31).

This species is distributed in the Palaearctic (Logunov 2001; Mikhailov 2013; WSC17) and has been recorded from the Caucasus in North Ossetia-Alania (Logunov 2001; Ponomarev & Komarov 2013). Our record is the first of this species from Georgia.

The records in North Ossetia-Alania are from the steppe, steppe meadows, and young oak forests. The occurrence of *S. tantulus* at such a comparably high altitude in our study might be attributed to climatic conditions and elements of steppe vegetation in the alpine zone of the Lagodekhi Reserve (see comments for *Xysticus pseudolanio* above).

Tenuiphantes teberdaensis Tanasevitch, 2010 (Linyphiidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.88273°N 46.32185°E, 1841 m a.s.l., upper montane forest, Fageto-Aceretum rubosum, Malaise trap [H4/N72], 27 September–6 October 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

In the Caucasus, *T. teberdaensis* has so far been recorded five times from Adygea and Karachay-Cherkessia (Tanasevitch 2010; Ponomarev *et al.* 2012; Martynovchenko & Mikhailov 2014; Ponomarev & Chumachenko 2014). Our record is the first of this species from Georgia.

Xysticus kulczynskii Wierzbicki, 1902 (Thomisidae)

2♂♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.85248°N 46.28777°E, 666 m a.s.l., mixed montane forest, Carpineto-Fagetum festucosum, Malaise trap [H1/N4], 5–15 May 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 2♂♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.87147°N 46.31153°E, 1351 m a.s.l., mixed montane forest, Fagetum galiosum, Malaise trap [H3/N39], 5–15 May 2014, leg. Japoshvili & Kirkitadze, Coll. Agr. Univ. Tbilisi. 2♀♀, same location, Malaise trap [H3/N41], 25 May–4 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto. 1♀, same location, Malaise trap [H3/N42], 4–14 June 2014, leg. Japoshvili & Kirkitadze, Coll. Otto.

Genital characters of both males and females clearly distinguish this species from similar taxa such as *X.*

ferrugineus Menge, 1876 or *X. spasskyi* Utochkin, 1986. *X. kulczyński* has so far only been recorded from a few locations in the Eastern parts of Azerbaijan (Logunov, Marusik & Koponen 2002). Our record is the first of this species from Georgia.

Further additions to the checklist of Lagodekhi Reserve

The following 23 species have previously been recorded from Georgia and are now recorded from the Lagodekhi Reserve for the first time. Detailed collection data can be found in the Appendix.

1. *Araniella opisthographa* (Kulczyński, 1905) (Araneidae)
 2. *Clubiona brevipes* Blackwall, 1841 (Clubionidae)
 3. *Clubiona corticalis* (Walckenaer, 1802) (Clubionidae)
 4. *Cheiracanthium mildei* L. Koch, 1864 (Eutichuridae)
 5. *Drassodes lapidosus* (Walckenaer, 1802) (Gnaphosidae)
 6. *Scotophaeus scutulatus* (L. Koch, 1866) (Gnaphosidae)
 7. *Pelecopsis crassipes* Tanasevitch, 1987 (Linyphiidae)
 8. *Trichoncus affinis* Kulczyński, 1894 (Linyphiidae)
 9. *Philodromus cespitum* (Walckenaer, 1802) (Philodromidae)
 10. *Philodromus dispar* Walckenaer, 1826 (Philodromidae)
 11. *Pisaura novicia* (L. Koch, 1878) (Pisauridae)
 12. *Heliophanus dubius* C. L. Koch, 1835 (Salticidae)
 13. *Pseudicius encarpatus* (Walckenaer, 1802) (Salticidae)
 14. *Segestria bavarica* C. L. Koch, 1843 (Segestriidae)
 15. *Sibianor aurocinctus* (Ohlert, 1865) (Salticidae)
- The single collected female exhibits the conspicuous "first loop" of the insemination ducts and colouration of leg I, typical for *S. aurocinctus* (cf. Logunov 2001); but as females of *S. aurocinctus* and *S. turkestanicus* Logunov, 2001 are barely separable, males from the Lagodekhi reserve are needed in order to verify (or correct) our determination.
16. *Sittipub relictarius* (Logunov, 1998) (Salticidae)
 17. *Anelosimus vittatus* (C. L. Koch, 1836) (Theridiidae)
 18. *Neottiura bimaculata* (Linnaeus, 1767) (Theridiidae)
 19. *Theridion varians* Hahn, 1833 (Theridiidae)
 20. *Diaea livens* Simon, 1876 (Thomisidae)
 21. *Xysticus gallicus* Simon, 1875 (Thomisidae)
 22. *Trachelas minor* O. Pickard-Cambridge, 1872 (Trachelidae)
 23. *Zora spinimana* (Sundevall, 1833) (Zoridae)

Notes on other rarely collected or poorly known species:

Centromerita sp. (Linyphiidae)

1♀, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.90618°N 46.33340°E, 2559 m a.s.l., alpine grassland, Alchemilletum, Malaise trap [H6/N107], 15–25 July I 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KBS 327), Fig. 26. 1♀, same location, Malaise trap [H6/N108], 25 August–4 September 2014, leg. Japoshvili & Kirkitadze, Coll. Otto (KBS 328), Fig. 25. 1♀, Georgia, Tusheti region, near vill. Diklo, 42.39701°N 45.69386°E, 2100 m a.s.l., subalpine pasture, 4 September 2009, leg. F. Walther, Coll. Otto (KVS 321), Figs. 23–24.

The two females from our study and a conspecific female from a collection in a neighboring Georgian mountain region

show close affinity to *Centromerita bicolor* (Blackwall, 1833) when comparing habitus, body size and TmI range. However, the epigyne and vulva differ somewhat from the characters in this species (Figs. 23–26) as well as from the much smaller *Centromerita concinna* (Thorell, 1875). We and a colleague (T. Blick, pers. comm.) therefore judge our specimens probably not to be conspecific with these two species. As no males have been found in this study and the likely *C. bicolor* has not yet been recorded in the Caucasus, we decided to present drawings of the specimens collected and leave the question of our material's species determination open until more material, including males, has been found in the Caucasus. This should be more likely during winter months because other species in this genus, including the two mentioned above, are winter active (T. Blick, pers. comm.).

Clubiona caucasica Mikhailov & Otto, 2017 (Clubionidae)

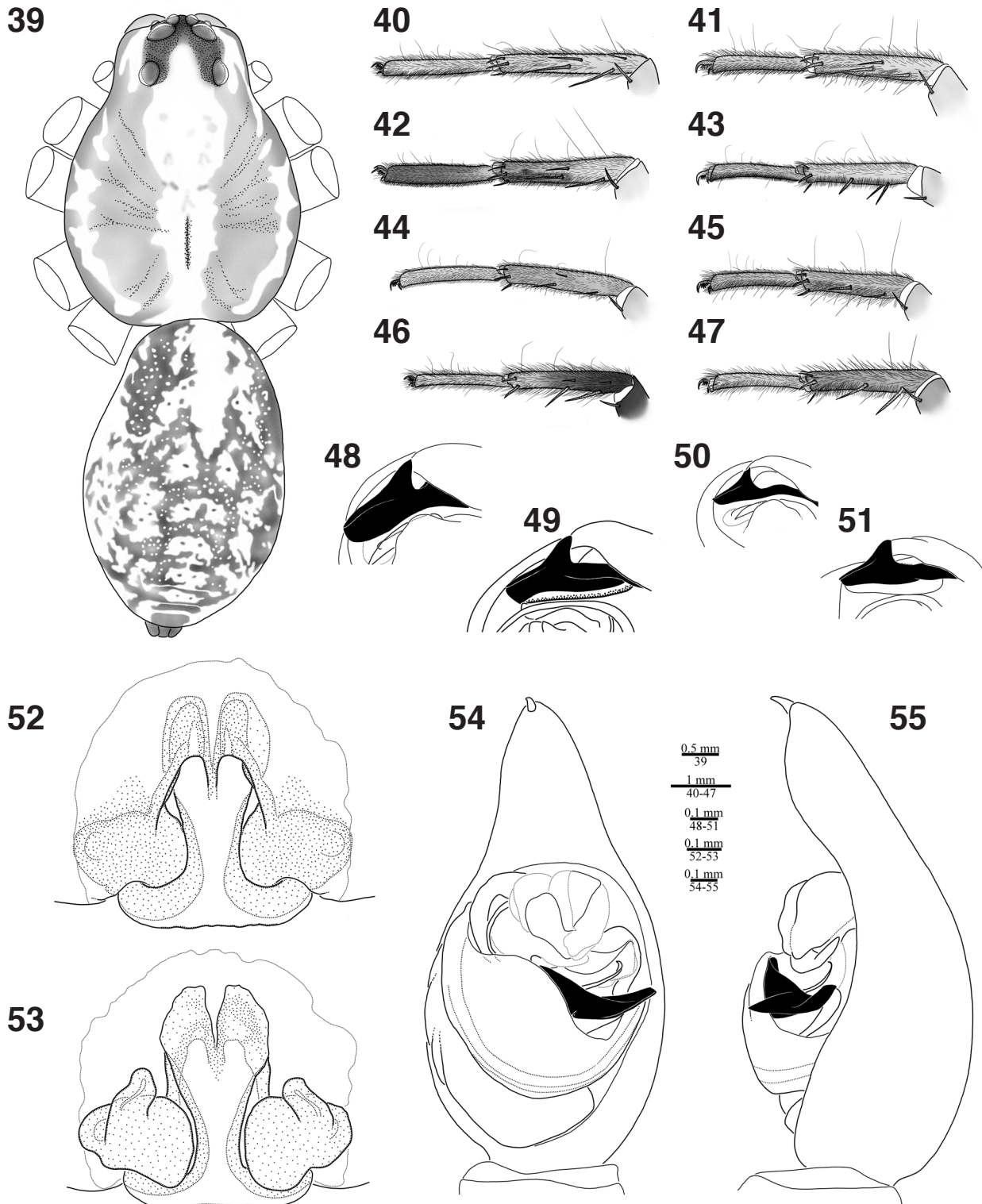
Twenty-five males and 20 females of a species vaguely resembling *C. caerulescens* L. Koch, 1867 were found in the samples. Further analysis revealed it to be a new species which was subsequently described in Mikhailov *et al.* (2017). All records of *C. caerulescens* in Lagodekhi by Mikhailov (1990) thus refer to this species.

Trochosa cachetiensis Mcheidze, 1997 (Lycosidae)

1♂, Georgia, Lagodekhi Reserve, Kudigora Ridge, 41.87147°N 46.31153°E, 1351 m a.s.l., mixed montane forest, Fagetum galiosum, Malaise trap [H3/N39], 5–15 May 2014, leg. Japoshvili & Kirkitadze, deposited at Naturhistorisches Museum Basel, catalogue no. NMB 27262 (ex Coll. Otto, KVS 454, Figs. 39, 40, 48, 54, 55). 1♀, same location, Malaise trap [H3/N40], 15–25 May 2014, leg. Japoshvili & Kirkitadze, Naturhistorisches Museum Basel, catalogue no. NMB 27263 (ex Coll. Otto, KVS 455, Figs. 41, 52, 53). 1♂, same location, Malaise trap [H3/N42], 4–14 June 2014, leg. Japoshvili & Kirkitadze, Naturhistorisches Museum Basel, catalogue no. NMB 27264 (ex Coll. Otto, KBS 262).

Comparative material: *Trochosa robusta*: ♂, Austria, Steiermark, Zöbing, Pollhammer, 15°44'25"E 47°01'18"N, 20 May–2 June 2008, leg. Frieß, Coll. C. Muster (Figs. 42, 49), ♀, Austria, Burgenland, Seewinkel, Kleine Neubruchlacke, 16°49'57"E 47°46'47"N, 20–30 April 1994, ex Coll. N. Milasowszky, KNL74C2 (Fig. 43); *Trochosa ruricola*: ♂, ♀, Germany, Hannover Vahrenheide, Kugelfangtrift, 15 April 2005, leg. P. Sprick, Coll. Otto, Lyc16VS (Figs. 44–45, 50); *Trochosa hispanica*: ♂, ♀, Switzerland, Tessin, Bissone, 21 April–7 June 1984, leg. A. Pedroli, Naturhistorisches Museum Basel, catalogue no. NMB 2373r (Figs. 46–47, 51).

Despite having been recorded in the Caucasus more than twenty times, this species remains poorly known because the diagnosis and drawings of *Trochosa cachetiensis* in Mcheidze (1997, 2017) are not detailed, and the type material from the Janashia Museum is not available for study. In order to facilitate further taxonomic studies on this species, we provide a short description of the somatic and genital characters together with diagnostic drawings as well as a discussion of differential characters concerning related species. Terminology of epigyne and vulva structure follows Hepner & Milasowszky (2006).



Figs. 39–55: **39** *Trochosa cachetiensis* male habitus, dorsal view. **40–47** right leg, prolateral view, of *Trochosa* spp. **40** *T. cachetiensis* male; **41** *T. cachetiensis* female; **42** *T. robusta* male; **43** *T. robusta* female; **44** *T. ruricola* male; **45** *T. ruricola* female; **46** *T. hispanica* male; **47** *T. hispanica* female. **48–51** bulb median apophysis, apical view, of *Trochosa* spp. **48** *T. cachetiensis*; **49** *T. robusta*; **50** *T. ruricola*; **51** *T. hispanica*. **52–55** *T. cachetiensis*. **52** epigyne, ventral view; **53** vulva, dorsal view; **54** left bulb, ventral view; **55** left bulb, retrolateral view.

Males (n = 2) Body length 8.60/8.20, carapace length 4.30/4.55, width 3.20/3.42, yellow to clay coloured, with median band bordered by broad brown lateral bands; carapace edge with irregular brown fringe. Brown fringe and brown lateral bands separated from each other by bright irregular thin band (Fig. 39). Clypeus thin. Eyes with black fringe on brown background connected to the brown lateral bands. Bright median band behind ocular region with faint

paired brown spots. Fovea thin, black. Chelicera dark brown, fang smooth, brown-red, lacking a hump, inner and outer row of cheliceral furrow each with 3 teeth; medium tooth in each row largest, apical tooth smallest. Sternum bright yellow (in one specimen fringed brown), labium and gnathocoxae brown. Legs light brown with pale femora and coxae. Annulation weak and better visible on femora. Opisthosoma dorsum with dark brown pattern on clay

coloured background, heart region with lanceolate bright mark and pairwise arranged bright spots behind, each with small dark spot inside. Sides with dark brown irregular markings. Venter bright, laterally bordered by a row of dark brown spots. Cymbium and palpal tibia brown, darker than patella and femur. Cymbium with apical claw. Embolus tip hook-like (Figs. 48, 54, 55), median apophysis rather thick (Fig. 48).

Female ($n = 1$) Body length 12.61, carapace length 5.31, width 4.05. Habitus as in male, but fovea rather thick, short, black. Sternum bright yellow with broad brown fringe. Pedipalpus tip with claw. Epigyne with rounded helmet-shaped broadenings and copulatory ducts visible through cuticula (Fig. 52). Vulva with large and bulging copulatory ducts lacking small apical appendices (Fig. 53).

Despite the small number of specimens collected, their similarity with the description of *Trochosa cachetiensis* Mcheidze, 1997 and the marked differences from the other species in question are striking. The habitus given in Mcheidze (1997) shows the same reduced pairwise carapace marks as all three newly collected specimens, which only rarely occurs in this reduced variation in the other European species. The large and bulging basal parts of the copulatory ducts of the female specimen (Fig. 53) are markedly different from the other relevant species and very similar to the drawing given in Mcheidze (1997). This is also the case with the helmet-shaped markings, which appear rounded, when looked at through the epigynal cuticula (Fig. 52). No specific characters link the male specimens to the description of *T. cachetiensis* because the published drawing is too schematic and no relevant information was given in the text. A tarsal claw is absent in Mcheidze's drawing. The hook-like embolus is characteristic for *T. robusta* (Simon, 1876), but the specimens differ from this species in the shape of the median apophysis (Figs. 48–49) and the tarsus of the first leg (Fig. 40), which is stout and thick in male *T. robusta* (Fig. 42). The first leg of *T. ruricola* (De Geer, 1778) (Fig. 44) shows no marked differences compared with the new specimens, but they differ in the shapes of the median apophysis and embolus (Fig. 50). Males of *T. hispanica* Simon, 1870 differ in embolus shape, median apophysis and patterns of the first leg (Figs. 46, 51). In females, the legs show no characteristics valuable in distinguishing the species (Figs. 41, 43, 45, 47). The specimens also differ from the recently described Caucasian species *T. hirsuta* Ponomarev, 2009 (not studied), both in characteristics of the male bulb structure, relative length of the tarsus of the first leg and epigynal structure.

Our collected specimens from the type locality of *T. cachetiensis* differ distinctly from all other species in Europe and the Caucasus (Hepner & Milasowszky 2006; M. Hepner and A. Hänggi, pers. comm.), exhibit some of the more distinct characters given in the species description by Mcheidze (1997), and a second opinion (A. Ponomarev, pers. comm.) further strengthens our conclusion that the specimens from Lagodekhi indeed belong to *T. cachetiensis*. We hope that this question can be studied more thoroughly, when more specimens are collected and Tamara Mcheidze's type material becomes available for study in the Janashia Museum in Tbilisi.

Discussion

Despite not having been initially planned as an arachnological study *per se* and with a number of other studies having contributed a larger total sum of specimens and species, this initially entomological study with a focus on hymenopterans and beetles turned out to be the most systematic, industrious and thorough arachnological field study ever undertaken in the Caucasus as well, comprising seven trap sites at altitudes between 666 and 2559 m a.s.l. and a collection period between April and November with a fortnightly sampling scheme. Not surprisingly, the results reflect this systematic and thorough collection effort: 69 collected species, 38 species new to the Lagodekhi Reserve, five species new to the Caucasus Ecoregion, 10 species new to Georgia, at least one new species to science and a fair amount of faunistic as well as aut- and synecological data rarely collected in this quantity and quality in the Caucasus before; all of these forming the basis for this paper and a number of arachnological follow-up publications to this transect study, which had not even been specifically designed as a spider study.

These results exemplify the importance of systematic and long-term collections of invertebrates for a thorough assessment of species diversity in medium to highly diverse taxa such as spiders and insects. Traditionally, and especially in the Caucasus, collections are made by hand during the daytime or more rarely using pitfall traps by collectors visiting regions of interest for a couple of weeks, only. Systematic collections and transect studies using ground- and arboricolous traps are almost non-existent in the arachnological study history of the Caucasus Ecoregion (but see Mikhailov & Mikhailova 2002). As seen in this paper, a single transect with Malaise traps, spanning several altitudinal zones and lasting the whole vegetation season in the Caucasus Ecoregion can easily extend the species lists of a study area, a country, the Caucasus Ecoregion and even add new species to science—not to mention the significant amount of never-before collected data on local species abundance, altitudinal and habitat preferences of spider species, phenology data etc.—even if it is the arachnologically best studied area in Georgia.

The admittedly huge effort of trap placement, fortnightly maintenance and post-collection sorting is easily mitigated by the amount and quality of data collected for several taxa—in one combined effort of systematic collecting! The 2014 transect study in the Lagodekhi Reserve has so far not only yielded this faunistic overview on the spider fauna of the Lagodekhi Reserve and initial to answers to other ecological and taxonomic questions concerning the spider fauna of the Caucasus (Otto & Japoshvili, in prep.) but also studies of the obtained insect specimens are starting to be published (Aslan, Mumladze & Japoshvili 2017; Japoshvili & Kostjukov 2016; Japoshvili, Kostjukov & Kosheleva 2016; Japoshvili *et al.* 2017).

Therefore, we stress the importance of systematic and long-term collections using traps becoming the norm rather than remaining the exception in studying and monitoring invertebrate species diversity in the Caucasus Ecoregion. Only by such elaborate collecting efforts can biodiversity—which is essentially the diversity of invertebrate taxa—in

the Caucasus Ecoregion be adequately assessed and efforts in nature and environmental protection be based on meaningful and exhaustive data.

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Appendix: Checklist of the spiders in Lagodekhi Reserve

No.	Species	Author	References of records in Lagodekhi Reserve and comments	Synonyms and misspellings	Previous Caucasus records	Distribution
Agelenidae						
1	<i>Eratigena agrestis</i>	(Walckenaer, 1802)	Mcheidze (1997)	<i>Tegenaria agrestis</i>	10	Holarctic
2	<i>Tegenaria domestica</i>	(Clerck, 1757)	Mcheidze (1964)		82	Cosmopolitan
Amaurobiidae						
3	<i>Amaurobius pallidus</i>	L. Koch, 1868	Mcheidze (1997)		8	Europe–Caucasus
4	<i>Amaurobius similis</i>	(Blackwall, 1861)	Mcheidze (1997)		9	Holarctic
5	<i>Amaurobius</i> sp.		this study (first record Caucasus)		–	
6	<i>Pireneitega spasskyi</i>	(Charitonov, 1946)	Mcheidze (1964, 1997), Kovblyuk, Kastrygina & Marusik (2013), this study	<i>Coelotes spasskyi</i>	68	Caucasus
Anyphaenidae						
7	<i>Anyphaena accentuata</i>	(Walckenaer, 1802)	Mcheidze (1997), this study		19	Palaeartic
Araneidae						
8	<i>Aculepeira ceropegia</i>	(Walckenaer, 1802)	Marusik (1987a), Mcheidze (1964, 1997)	<i>Araneus ceropegius</i>	50	Palaeartic
9	<i>Araneus diadematus</i>	Clerck, 1757	Mcheidze (1964), this study		143	Holarctic
10	<i>Araneus grossus</i>	(C. L. Koch, 1844)	Mcheidze (1997)		31	Palaeartic
11	<i>Araneus marmoreus</i>	Clerck, 1757	Mcheidze (1964, 1997)		53	Holarctic
12	<i>Araneus quadratus</i>	Clerck, 1757	Marusik (1987a), Mcheidze (1997), this study		33	Palaeartic
13	<i>Araneus svanetiensis</i>	Mcheidze, 1997	Mcheidze (1997)		5	Georgia
14	<i>Araniella alpica</i>	(L. Koch, 1869)	Mcheidze (1997)	<i>Araneus alpicus</i>	3	Europe–Caucasus
15	<i>Araniella cucurbitina</i>	(Clerck, 1757)	Mcheidze (1997)	<i>Araneus cucurbitinus</i>	85	Palaeartic
16	<i>Araniella inconspicua</i>	(Simon, 1874)	Mcheidze (1997)	<i>Araneus incaspicus</i>	5	Palaeartic
17	<i>Araniella opisthographa</i>	(Kulczyński, 1905)	this study (first record in Lagodekhi Reserve)		13	Palaeartic
18	<i>Argiope bruennichi</i>	(Scopoli, 1772)	Mcheidze (1997)		82	Palaeartic
19	<i>Larinioides cornutus</i>	(Clerck, 1757)	Mcheidze (1997)	<i>Araneus cornutus</i>	28	Holarctic
20	<i>Larinioides suspicax</i>	(O. Pickard-Cambridge, 1876)	Wershbitsky (1902), Mcheidze (1997)	<i>Araneus folium</i>	17	Palaeartic
21	<i>Mangora acalypha</i>	(Walckenaer, 1802)	Marusik (1987a), this study		106	Palaeartic
22	<i>Neoscona adianta</i>	(Walckenaer, 1802)	Mcheidze (1964, 1997)	<i>Araneus adiantus</i> , <i>A. bisantinus</i>	102	Palaeartic
23	<i>Neoscona subfusca</i>	(C. L. Koch, 1837)	Mcheidze (1997)	<i>Araneus dalmaticue</i>	23	Palaeartic
24	<i>Nuctenea umbratica</i>	(Clerck, 1757)	Mcheidze (1997)	<i>Araneus umbraticus</i>	56	Europe–Caucasus
25	<i>Parazygiella montana</i>	(C. L. Koch, 1834)	Mcheidze (1997)	<i>Zigiella montana</i>	25	Palaeartic
26	<i>Singa hamata</i>	(Clerck, 1757)	Mcheidze (1997)		12	Palaeartic
27	<i>Singa lucina</i>	(Audouin, 1826)	Mcheidze (1997)		8	Palaeartic
28	<i>Singa nitidula</i>	C. L. Koch, 1844	Mcheidze (1997)		19	Palaeartic
29	<i>Zygiella x-notata</i>	(Clerck, 1757)	Mcheidze (1997)	<i>Zigiella x-notata</i>	9	Holarctic
Clubionidae						
30	<i>Clubiona alpicola</i>	Kulczyński, 1882	Mikhailov (1990)		23	Palaeartic
31	<i>Clubiona brevipes</i>	Blackwall, 1841	this study (first record in Lagodekhi Reserve)		8	Palaeartic
32	<i>Clubiona caucasica</i>	Mikhailov & Otto, 2017	Mikhailov (1990), this study	formerly misidentified as <i>C. caerulescens</i> L. Koch, 1867	24	Caucasus, Turkey

No.	Species	Author	References of records in Lagodekhi Reserve and comments	Synonyms and misspellings	Previous Caucasus records	Distribution
Clubionidae (cont.)						
33	<i>Clubiona corticalis</i>	(Walckenaer, 1802)	this study (first record in Lagodekhi Reserve)		11	Palaeartic
34	<i>Clubiona golovatchi</i>	Mikhailov, 1990	Mikhailov (1990), this study		33	Caucasus
35	<i>Clubiona lutescens</i>	Westring, 1851	Mikhailov (1990, 1997), this study		63	Holarctic
36	<i>Clubiona neglecta</i>	O. Pickard-Cambridge, 1862	Mcheidze (1997)		49	Palaeartic
37	<i>Clubiona pseudosimilis</i>	Mikhailov, 1990	Mikhailov (1990), this study		21	Europe–Caucasus
38	<i>Clubiona similis</i>	L. Koch, 1867	Mcheidze (1997)		28	Europe
Dictynidae						
39	<i>Dictyna otto</i>	Marusik & Koponen 2017	this study (first record in Georgia)		4	Europe–Caucasus
40	<i>Lathys humilis</i>	(Blackwall, 1855)	this study (first record in Georgia)		17	Palaeartic
41	<i>Nigma flavescens</i>	(Walckenaer, 1830)	this study (first record in Georgia)		9	Europe
Dysderidae						
42	<i>Cryptoparachtes fedotovi</i>	(Charitonov, 1956)	Zaitzev (1948), Charitonov (1956), Dunin (1992), Mcheidze (1997)	<i>Harpactocrates fedotovi</i>	10	Caucasus
43	<i>Dysdera bogatschevi</i>	Dunin, 1990	Dunin (1992)		10	Caucasus
44	<i>Dysdera crocata</i>	C. L. Koch, 1838	Mcheidze (1964, 1968, 1997)		50	Cosmopolitan
45	<i>Dysdera hungarica</i>	Kulczyński, 1897	Dunin (1992), Mcheidze (1979, 1997)		30	Europe
46	<i>Dysdera richteri</i>	Charitonov, 1956	Mcheidze (1997)		9	Caucasus
47	<i>Harpactea zaitzevi</i>	Charitonov, 1956	Zaitzev (1948), Charitonov (1956), Dunin (1992)		9	Caucasus
Eutichuridae						
48	<i>Cheiracanthium erraticum</i>	(Walckenaer, 1802)	Mcheidze (1997)	<i>Chiracanthium[sic] erraticum</i>	28	Palaeartic
49	<i>Cheiracanthium mildei</i>	L. Koch, 1864	this study (first record in Lagodekhi Reserve)		32	Holarctic
50	<i>Cheiracanthium montanum</i>	L. Koch, 1877	this study (first record in Georgia)		6	Palaeartic
Gnaphosidae						
51	<i>Drassodes albicans</i>	(Simon, 1878)	Mcheidze (1997)		2	Europe
52	<i>Drassodes lapidosus</i>	(Walckenaer, 1802)	this study (first record in Lagodekhi Reserve)		89	Palaeartic
53	<i>Gnaphosa dolosa</i>	Herman, 1879	Ovtsharenko, Platnick & Song (1992)		13	Palaeartic
54	<i>Gnaphosa mcheidzeae</i>	Mikhailov, 1998	Mcheidze (1997)	<i>Gnaphosa caucasica</i>	1	Georgia
55	<i>Gnaphosa modestior</i>	Kulczyński, 1897	Ovtsharenko, Platnick & Song (1992)		6	Europe–Caucasus
56	<i>Micaria formicaria</i>	(Sundevall, 1831)	Mikhailov (1987)		16	Palaeartic
57	<i>Micaria silesiaca</i>	L. Koch, 1875	Mikhailov (1987)		6	Palaeartic
58	<i>Scotophaeus scutulatus</i>	(L. Koch, 1866)	this study (first record in Lagodekhi Reserve)		20	Palaeartic
59	<i>Zelotes longipes</i>	(L. Koch, 1866)	Mcheidze (1997)	<i>Zelotes serotinus</i>	26	Palaeartic
60	<i>Zelotes subterraneus</i>	(C. L. Koch, 1833)	Mcheidze (1997)		23	Palaeartic
Linyphiidae						
61	<i>Allomengea scopigera</i>	(Grube, 1859)	Tanasevitch (1987)		1	Holarctic
62	<i>Bisetifer cephalotus</i>	Tanasevitch, 1987	Tanasevitch (1987)		11	Europe–Caucasus
63	<i>Bolyphantes alticeps</i>	(Sundevall, 1833)	Mcheidze (1997), this study		14	Palaeartic
64	<i>Bolyphantes lago-dekhensis</i>	(Tanasevitch, 1990)	Tanasevitch (1990)		2	Georgia
65	<i>Caviphantes dobrogicus</i>	(Dumitrescu & Miller, 1962)	Tanasevitch (1987)	<i>Caviphantes dobrogica</i>	5	Europe–Caucasus
66	<i>Centromerita</i> sp.	Dahl, 1912 (Centromerita)	this study		–	
67	<i>Ceratinella scabrosa</i>	(O. P.-Cambridge, 1871)	Tanasevitch (1987)		18	Palaeartic
68	<i>Cinetata gradata</i>	(Simon, 1881)	this study (first record in the Caucasus)		–	Europe
69	<i>Erigone dentipalpis</i>	(Wider, 1834)	Mcheidze (1997)		36	Holarctic
70	<i>Erigone longipalpis</i>	(Sundevall, 1830)	Mcheidze (1997)		5	Palaeartic
71	<i>Frontinellina frutetorum</i>	(C. L. Koch, 1834)	Tanasevitch (1987), this study		86	Palaeartic
72	<i>Incestophantes amotus</i>	(Tanasevitch, 1990)	Tanasevitch (1990)	<i>Lepthyphantes amotus</i>	11	Central Asia
73	<i>Linyphia hortensis</i>	Sundevall, 1830	Mcheidze (1997), this study		30	Palaeartic
74	<i>Linyphia triangularis</i>	(Clerck, 1757)	Mcheidze (1964, 1997), this study	<i>Liniphia triangularis</i>	63	Holarctic
75	<i>Megalepthyphantes</i> cf. <i>pseudocollinus</i>	Saaristo, 1997	this study (first record in Georgia)		2	Palaeartic
76	<i>Microlinyphia pusilla</i>	(Sundevall, 1830)	Mcheidze (1997)	<i>Linyphia pusilla</i>	34	Holarctic

No.	Species	Author	References of records in Lagodekhi Reserve and comments	Synonyms and misspellings	Previous Caucasus records	Distribution
Linyphiidae (cont.)						
77	<i>Microneta viaria</i>	(Blackwall, 1841)	Tanasevitch (1987), this study		90	Holarctic
78	<i>Minicia alticola</i>	Tanasevitch, 1990	Tanasevitch (1990)		1	Georgia
79	<i>Nerieni emphana</i>	(Walckenaer, 1841)	Mcheidze (1997), this study	<i>Linyphia emphana</i>	51	Palaeartic
80	<i>Nerieni peltata</i>	(Wider, 1834)	Tanasevitch (1987), Mcheidze (1997)		37	Palaeartic
81	<i>Nerieni radiata</i>	(Walckenaer, 1841)	Mcheidze (1997), this study	<i>Linyphia marginata</i>	13	Holarctic
82	<i>Pelecopsis crassipes</i>	Tanasevitch, 1987	this study (first record in Lagodekhi Reserve)		12	Central Asia
83	<i>Pocadicnemis juncea</i>	Locket & Millidge, 1953	this study (first record in the Caucasus)		–	Europe
84	<i>Tenuiphantes contortus</i>	(Tanasevitch, 1986)	Tanasevitch (1986), Mcheidze (1997)	<i>Leptyphantes</i> [sic] <i>lagodechensis</i> , <i>Leptyphantes contortus</i>	21	Caucasus
85	<i>Tenuiphantes menzei</i>	(Kulczyński, 1887)	Tanasevitch (1987), this study	<i>Leptyphantes menzei</i>	91	Palaeartic
86	<i>Tenuiphantes teberdaensis</i>	Tanasevitch, 2010	this study (first record in Georgia)		5	Caucasus
87	<i>Tenuiphantes tenuis</i>	(Blackwall, 1852)	Tanasevitch (1987)	<i>Leptyphantes tenuis</i>	29	Palaeartic
88	<i>Trichoncus affinis</i>	Kulczyński, 1894	this study (first record in Lagodekhi Reserve)		1	Europe
Lycosidae						
89	<i>Alopecosa albofasciata</i>	(Brullé, 1832)	Schmidt (1895)	<i>Lycosa albofasciata</i>	14	Palaeartic
90	<i>Alopecosa cuneata</i>	(Clerck, 1757)	Mcheidze (1997)		16	Palaeartic
91	<i>Alopecosa pulverulenta</i>	(Clerck, 1757)	Mcheidze (1964, 1997)	<i>Tarentula pulverulenta</i>	58	Palaeartic
92	<i>Arctosa cinerea</i>	(Fabricius, 1777)	Schmidt (1895), Wershbitsky (1902)	<i>Lycosa cinerea</i>	17	Palaeartic
93	<i>Arctosa lagodechiensis</i>	Mcheidze, 1997	Mcheidze (1997)		1	Georgia
94	<i>Geolycosa charitonovi</i>	(Mcheidze, 1997)	Mcheidze (1997)	<i>Alopecosa charitonovi</i>	27	Caucasus
95	<i>Hogna radiata</i>	(Latreille, 1817)	Mcheidze (1964)	<i>Lycosa radiata</i> , <i>Tarentula radiata</i>	71	Palaeartic
96	<i>Lycosa piochardi</i>	Simon, 1876	Mcheidze (1997)		4	Central Asia
97	<i>Lycosa praegrandidis</i>	C. L. Koch, 1836	Mcheidze (1997)	<i>Lycosa nordmanni</i>	11	Europe–Caucasus
98	<i>Mustelicoso dimidiata</i>	(Thorell, 1875)	Mcheidze (1997)	<i>Trochosa dimidiata</i>	24	Palaeartic
99	<i>Pardosa agrestis</i>	(Westring, 1861)	Mcheidze (1964)	<i>Pardosa arenicola pseudomonticola</i>	83	Palaeartic
100	<i>Pardosa agricola</i>	(Thorell, 1856)	Mcheidze (1997)	<i>Pardosa arenicola</i>	17	Palaeartic
101	<i>Pardosa amentata</i>	(Clerck, 1757)	Mcheidze (1964)		30	Palaeartic
102	<i>Pardosa bifasciata</i>	(C. L. Koch, 1834)	Mcheidze (1997)	<i>Pardosa calida</i>	30	Palaeartic
103	<i>Pardosa hortensis</i>	(Thorell, 1872)	Mcheidze (1964)		46	Palaeartic
104	<i>Pardosa lugubris</i>	(Walckenaer, 1802)	Mcheidze (1964)	<i>Pardosa chelata</i>	45	Palaeartic
105	<i>Pardosa ninigoriensis</i>	Mcheidze, 1997	Mcheidze (1997)		1	Georgia
106	<i>Pardosa plumipes</i>	(Thorell, 1875)	Mcheidze (1997)		2	Palaeartic
107	<i>Pardosa pontica</i>	(Thorell, 1875)	Zyuzin & Logunov (2000)		45	Europe–Caucasus
108	<i>Pardosa wagleri</i>	(Hahn, 1822)	Mcheidze (1997)		4	Palaeartic
109	<i>Piratula knorri</i>	(Scopoli, 1763)	Mcheidze (1997)	<i>Pirata knorri</i>	6	Europe
110	<i>Trochosa cachetiensis</i>	Mcheidze, 1997	Mcheidze (1997), this study		23	Caucasus
111	<i>Trochosa ruricola</i>	(De Geer, 1778)	Mcheidze (1964)		61	Holarctic
112	<i>Trochosa terricola</i>	Thorell, 1856	Schmidt (1895), Mcheidze (1997)	<i>Lycosa terricola</i>	46	Holarctic
Nemesiidae						
113	<i>Raveniola recki</i>	(Mcheidze, 1983)	Mcheidze (1983, 1997)	<i>B. zaitzevi</i>	4	Georgia
114	<i>Raveniola zaitzevi</i>	(Charitonov, 1948)	Charitonov (1948), Zaitzev (1948), Mcheidze (1964)		4	Caucasus
Nesticidae						
115	<i>Carpathonesticus eriashvili</i>	Marusik, 1987	Marusik (1987b)		1	Georgia
116	<i>Carpathonesticus mamajevae</i>	Marusik, 1987	Marusik (1987b)		1	Georgia
Oxyopidae						
117	<i>Oxyopes heterophthalmus</i>	(Latreille, 1804)	Mcheidze (1997)	<i>O. heterophthalmus</i> [sic]	26	Palaeartic
118	<i>Oxyopes lineatus</i>	Latreille, 1806	Mcheidze (1964), this study		76	Palaeartic
119	<i>Oxyopes ramosus</i>	(Martini & Goeze, 1778)	Mcheidze (1997)		6	Palaeartic

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Philodromidae						
120	<i>Philodromus albidus</i>	Kulczyński, 1911	this study (first record in Georgia)		1	Europe
121	<i>Philodromus aureolus</i>	(Clerck, 1757)	Mcheidze (1997), this study		46	Europe
122	<i>Philodromus cespitum</i>	(Walckenaer, 1802)	this study (first record in Lagodekhi Reserve)		21	Holarctic
123	<i>Philodromus dilutus</i>	Thorell, 1875	Mcheidze (1997)		6	Europe–Caucasia
124	<i>Philodromus dispar</i>	Walckenaer, 1826	this study (first record in Lagodekhi Reserve)		26	Holarctic
125	<i>Philodromus rufus</i>	Walckenaer, 1826	Mcheidze (1997), this study		10	Holarctic
126	<i>Rhysodromus histrio</i>	(Latreille, 1819)	Mcheidze (1997)	<i>Philodromus histrio</i>	11	Holarctic
127	<i>Tibellus macellus</i>	Simon, 1875	Mcheidze (1997)		22	Palearctic
Pholcidae						
128	<i>Pholcus phalangioides</i>	(Fuesslin, 1775)	Mcheidze (1964)		70	Cosmopolitan
Pisauridae						
129	<i>Pisaura mirabilis</i>	(Clerck, 1757)	Mcheidze (1997)		92	Palearctic
130	<i>Pisaura novicia</i>	(L. Koch, 1878)	this study (first record in Lagodekhi Reserve)		27	Palearctic
Salticidae						
131	<i>Attulus goricus</i>	(Ovtsharenko, 1978)	Logunov (1998), this study	<i>Sitticus goricus</i>	8	Caucasia
132	<i>Attulus penicillatus</i>	(Simon, 1875)	Logunov & Guseinov (2002), this study	<i>Sitticus penicillatus</i>	5	Palearctic
133	<i>Ballus chalybeius</i>	(Walckenaer, 1802)	Logunov & Rakov (1998), this study		37	Palearctic
134	<i>Chalcoscirtus pseudoinfimus</i>	Ovtsharenko, 1978	Logunov & Marusik (1998)		8	Europe
135	<i>Chinattus caucasicus</i>	Logunov, 1999	Logunov (1999)		45	Central Asia
136	<i>Euophrys frontalis</i>	(Walckenaer, 1802)	Mcheidze (1997)	<i>Evophrys</i> [sic] <i>frontalis</i>	45	Palearctic
137	<i>Evarcha arcuata</i>	(Clerck, 1757)	Logunov & Guseinov (2002), Logunov (2015)		91	Palearctic
138	<i>Heliophanus cupreus</i>	(Walckenaer, 1802)	Rakov & Logunov (1996), this study		80	Palearctic
139	<i>Heliophanus dubius</i>	C. L. Koch, 1835	this study (first record in Lagodekhi Reserve)		9	Palearctic
140	<i>Heliophanus patagiatus</i>	Thorell, 1875	Mcheidze (1997)		4	Palearctic
141	<i>Marpissa zaitzevi</i>	Mcheidze, 1997	Mcheidze (1997)		2	Georgia
142	<i>Myrmarachne formicaria</i>	(De Geer, 1778)	Logunov & Guseinov (2002)		32	Holarctic
143	<i>Philaeus chrysops</i>	(Poda, 1761)	Logunov & Rakov (1998), Logunov & Guseinov (2002)		102	Palearctic
144	<i>Phintella castriesiana</i>	(Grube, 1861)	Logunov & Guseinov (2002)		34	Palearctic
145	<i>Phlegra fasciata</i>	(Hahn, 1826)	Logunov (1996)		26	Palearctic
146	<i>Pseudicius encarpatus</i>	(Walckenaer, 1802)	this study (first record in Lagodekhi Reserve)		14	Palearctic
147	<i>Sibianor aurocinctus</i>	(Ohlert, 1865)	this study (first record in Lagodekhi Reserve)		4	Palearctic
148	<i>Sibianor tantulus</i>	(Simon, 1868)	this study (first record in Georgia)		–	Palearctic
149	<i>Sittipub pubescens</i>	(Fabricius, 1775)	Mcheidze (1997)	<i>Sitticus pubescens</i>	1	Holarctic
150	<i>Sittipub relictarius</i>	Logunov, 1998	this study (first record in Lagodekhi Reserve)	<i>Sitticus relictarius</i>	15	Palearctic
Segestriidae						
151	<i>Segestria bavarica</i>	C. L. Koch, 1843	this study (first record in Lagodekhi Reserve)		39	Europe
Tetragnathidae						
152	<i>Metellina mendei</i>	(Blackwall, 1869)	Marusik (1987a)		5	Palearctic
153	<i>Metellina merianae</i>	(Scopoli, 1763)	Marusik (1987a)		28	Palearctic
154	<i>Metellina segmentata</i>	(Clerck, 1757)	Mcheidze (1964, 1997), this study	<i>Meta segmentata</i>	62	Holarctic
155	<i>Pachygnatha clercki</i>	Sundevall, 1823	Mcheidze (1997)	<i>Pachygnatha clarki</i>	10	Holarctic
156	<i>Pachygnatha listeri</i>	Sundevall, 1830	Mcheidze (1997)		13	Palearctic
157	<i>Tetragnatha montana</i>	Simon, 1874	Mcheidze (1997)		36	Palearctic
158	<i>Tetragnatha pinicola</i>	L. Koch, 1870	Mcheidze (1997)		13	Palearctic
Theridiidae						
159	<i>Anelosimus vittatus</i>	(C. L. Koch, 1836)	this study (first record in Lagodekhi Reserve)		9	Palearctic
160	<i>Dipoena braccata</i>	(C. L. Koch, 1841)	this study (first record in Georgia)		2	Europe

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Theridiidae (cont.)						
161	<i>Enoplognatha ovata</i>	(Clerck, 1757)	Mcheidze (1997), this study		60	Holarctic
162	<i>Euryopsis flavomaculata</i>	(C. L. Koch, 1836)	Mcheidze (1997)		5	Palaeartic
163	<i>Heterotheridion nigro-variegatum</i>	(Simon, 1873)	Mcheidze (1997), this study	<i>Theridion tuberculatum</i>	17	Palaeartic
164	<i>Neottiura bimaculata</i>	(Linnaeus, 1767)	this study (first record in Lagodekhi Reserve)		13	Holarctic
165	<i>Parasteatoda lunata</i>	(Clerck, 1757)	Mcheidze (1997)	<i>Theridium lunatum</i>	44	Palaeartic
166	<i>Phoroncidia pilula</i>	(Karsch, 1879)	this study (first record in the Caucasus)		–	Palaeartic
167	<i>Phylloneta impressa</i>	(L. Koch, 1881)	Mcheidze (1997)	<i>Theridium impressum</i>	68	Holarctic
168	<i>Phylloneta sisyphia</i>	(Clerck, 1757)	Mcheidze (1997)	<i>Theridium sisiphium</i>	4	Palaeartic
169	<i>Platnickina tincta</i>	(Walckenaer, 1802)	Mcheidze (1964, 1997)	<i>Theridium tinctum</i>	30	Holarctic
170	<i>Robertus scoticus</i>	Jackson, 1914	Mcheidze (1997)		1	Palaeartic
171	<i>Simitidion simile</i>	(C. L. Koch, 1836)	Mcheidze (1997)	<i>Theridium simile</i>	10	Holarctic
172	<i>Steatoda bipunctata</i>	(Linnaeus, 1758)	Mcheidze (1997), this study		28	Holarctic
173	<i>Steatoda castanea</i>	(Clerck, 1757)	Mcheidze (1964, 1997)	<i>Teutana castanea</i>	74	Holarctic
174	<i>Steatoda triangulosa</i>	(Walckenaer, 1802)	Mcheidze (1997)	<i>Teutana triangulosa</i>	63	Cosmopolitan
175	<i>Theridion albipes</i>	L. Koch, 1878	Mcheidze (1997)	<i>Theridium albipes</i>	12	Caucasus
176	<i>Theridion melanurum</i>	Hahn, 1831	Mcheidze (1997)	<i>Theridium denticulatum</i>	14	Holarctic
177	<i>Theridion varians</i>	Hahn, 1833	this study (first record in Lagodekhi Reserve)		18	Holarctic
Thomisidae						
178	<i>Diaea dorsata</i>	(Fabricius, 1777)	Mcheidze (1997)		13	Palaeartic
179	<i>Diaea livens</i>	Simon, 1876	this study (first record in Lagodekhi Reserve)		2	Holarctic
180	<i>Ebrechtella tricuspadata</i>	(Fabricius, 1775)	Mcheidze (1997)	<i>Misumenops tricuspatus</i>	74	Palaeartic
181	<i>Misumena vatia</i>	(Clerck, 1757)	Mcheidze (1964, 1997)		90	Holarctic
182	<i>Ozyptila conostyla</i>	Hippa, Koponen & Oksala, 1986	Marusik (1989)	<i>Oxyptila conostyla</i>	5	Palaeartic
183	<i>Ozyptila orientalis balkarica</i>	Ovtsharenko, 1979	Marusik (2008)		13	Caucasus
184	<i>Ozyptila praticola</i>	(C. L. Koch, 1837)	Mcheidze (1997)	<i>Oxyptila praticola</i>	11	Holarctic
185	<i>Ozyptila trux</i>	(Blackwall, 1846)	Mcheidze (1997)	<i>Oxyptila trux</i>	14	Holarctic
186	<i>Runcinia grammica</i>	(C. L. Koch, 1837)	Mcheidze (1997)	<i>Runcinia lateralis</i>	47	Palaeartic
187	<i>Synema caucasicum</i>	Utochkin, 1960	Mcheidze (1997)	<i>Synaema caucasicum</i>	10	Georgia
188	<i>Tmarus punctatissimus</i>	(Simon, 1870)	Mcheidze (1997)	<i>T. horvathi</i>	6	Palaeartic
189	<i>Xysticus acerbus</i>	Thorell, 1872	Mcheidze (1997)		12	Palaeartic
190	<i>Xysticus bacurianensis</i>	Mkheidze, 1971	Logunov & Demir (2006)		31	Europe–Caucasus
191	<i>Xysticus gallicus</i>	Simon, 1875	this study (first record in Lagodekhi Reserve)		33	Palaeartic
192	<i>Xysticus kochi</i>	Thorell, 1872	Mcheidze (1997)		96	Palaeartic
193	<i>Xysticus kulczynskii</i>	Wierzbicki, 1902	this study (first record in Georgia)		4	Central Asia
194	<i>Xysticus lantio</i>	C. L. Koch, 1835	Mcheidze (1997)		21	Palaeartic
195	<i>Xysticus nubilus</i>	Simon, 1875	Mcheidze (1997)		2	Europe
196	<i>Xysticus pseudolanio</i>	Wunderlich, 1995	this study (first record in the Caucasus)		–	Europe
Titanoecidae						
197	<i>Titanoeca nivalis</i>	Simon, 1874	Mcheidze (1997)		26	Holarctic
Trachelidae						
198	<i>Trachelas minor</i>	O. P.-Cambridge, 1872	this study (first record in Lagodekhi Reserve)		9	Palaeartic
Uloboridae						
199	<i>Hyptiotes paradoxus</i>	(C. L. Koch, 1834)	Zawadski (1902)		19	Palaeartic
200	<i>Octonoba yesoensis</i>	(Saito, 1934)	Marusik (1987a), Mcheidze (1997)	<i>Uloborus georgicus</i>	5	Palaeartic
201	<i>Uloborus plumipes</i>	Lucas, 1846	Mcheidze (1997)		20	Cosmopolitan
Zoridae						
202	<i>Zora spinimana</i>	(Sundevall, 1833)	this study (first record in Lagodekhi Reserve)		20	Palaeartic