

## New species and additional records of *Ischnosoma* from Georgia (Coleoptera, Staphylinidae, Tachyporinae)

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**Abstract:** Four species of *Ischnosoma* STEPHENS, 1829 from Georgia are described and illustrated, all of them belonging to the *I. spelaenum* group: *Ischnosoma acre* nov.sp. (Southwest Georgia: Imereti region), a close relative of *I. solodovnikovi* SCHÜLKE, 2001 and *I. molle* ASSING & SCHÜLKE, 2017, *I. convergens* nov.sp. (Southwest Georgia: Adjara region: Meskheta Range) and *I. parallelum* nov.sp. (Southwest Georgia: Adjara region: Shavsheti Range), both closely allied to *I. myops* (EPPELSHEIM, 1880), and *I. cuspidatum* nov.sp. (Northeast Georgia: Kakheti region). For comparison, new illustrations of *I. solodovnikovi*, *I. molle*, and *I. myops* are provided. Additional records of four species are reported, among them the first confirmed record of *I. thoracicum* (EPPELSHEIM, 1880), a species with a most likely erroneous type locality. The distributions of the new species and of *I. solodovnikovi*, *I. molle*, *I. myops*, and *I. thoracicum* are mapped.

**Key words:** Coleoptera, Staphylinidae, Tachyporinae, *Ischnosoma*, Caucasus region, Georgia, taxonomy, new species, new records, distribution maps.

### Introduction

According to a recent study (ASSING & SCHÜLKE 2017), seven species of *Ischnosoma* STEPHENS, 1829 had reliably been recorded from Georgia, two widespread species of the *I. pictum* group and five species with more restricted distributions of the *I. spelaenum* group. Except for *I. myops*, which is rather widespread in the Caucasus region, all the species of the latter group are locally endemic. Material of this group is very rare even in major collections; several species are represented only by their respective type specimens, some even by unique holo- or lectotypes. The known distributions of the Caucasian species of the *I. spelaenum* group are mapped in ASSING & SCHÜLKE (2017).

The present study is based on material collected during three recent field trips, two conducted by Volker Brachat (Geretsried) and Heinrich Meybohm (Großhansdorf) in spring 2018 and 2019, and one by Michael Schülke (Berlin) and the author in summer 2019. This material included 310 specimens and eight species of *Ischnosoma*. Seven species belong to the *I. spelaenum* group. A comparison with the known taxa revealed that four of these species were undescribed.

## Material and methods

The material treated in this study is deposited in the following collections:

MNB ..... Museum für Naturkunde, Berlin (incl. coll. Schülke; J. Frisch, M. Schülke)

cAss..... author's private collection

cFel ..... private collection Benedikt Feldmann, Münster

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss), a Discovery V12 microscope (Zeiss), and a Jenalab compound microscope (Carl Zeiss Jena). The images were created using digital cameras (Nikon Coolpix 995, Axiocam ERc 5s), as well as Labscope and Picolay stacking software. The maps were created using MapCreator 2.0 (primap) software.

Body length was measured from the mandibles to the abdominal apex, the length of the forebody from the mandibles to the posterior margin of the elytra, head length along the middle from the anterior margin of the clypeus to the posterior constriction of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the median lobe of the aedeagus from the apex of the ventral process to the base of the capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

## Results

### *Ischnosoma pictum* species group

#### *Ischnosoma longicorne* (MÄKLIN, 1847)

**Material examined:** **GEORGIA:** 1♀, Imereti, Meskheta Range, N Sairme, 41°57'N, 42°46'E, 650 m, moist deciduous forest with predominant alder and chestnut, litter sifted, 21.VII.2019, leg. Assing (cAss); 1♂, Kakheti, Birkiani env., 42°16.01'N, 45°19.15'E, 1100 m, dry secondary forest, 31.VII.2019, leg. J. & B. Martens (cAss).

**Comment:** This Holarctic species is common also in the Caucasus region.

### *Ischnosoma spelaum* species group

#### *Ischnosoma molle* ASSING & SCHÜLKE, 2017 (Figs 13-14, 20-22, 28-29, Map 1)

**Material examined:** **GEORGIA:** Adjara: 1♀, Chakvistavi, 41°40'47"N, 41°52'19"E, 330 m, stream valley in deciduous forest, litter sifted, 17.V.2019, leg. Brachat & Meybohm (cAss); 1♀, W Chakvistavi, 41°41'27"N, 41°49'48"E, 150 m, beech forest with rhododendron, litter sifted, 18.V.2019, leg. Brachat & Meybohm (cAss); 2♂♂, 1♀, E Chakvistavi, 41°40'34"N, 41°52'30"E, 320 m, rhododendron litter sifted, 20.V.2019, leg. Brachat & Meybohm (cAss); 4♂♂, 2♀♀, E Chakvistavi, 41°40'34"N, 41°52'49"E, 360 m, road margin, deciduous forest margin, litter sifted, 20.V.2019, leg. Brachat & Meybohm (cAss); 1♂, Meskheta Range, NE Batumi, Mtirala National Park, 41°40'36"N, 41°52'23"E, 300 m, deciduous forest with predominant alder, chestnut, and rhododendron, litter sifted, 18.VII.2019, leg. Assing (cAss).

**Comment:** Based on available evidence, this recently described species is endemic to the extreme west of the Meskheta Range, Adjara region, Southwest Georgia (Map 1). Note that one of the paratypes which was collected further to the east in the Shavsheti

Range in the region to the southwest of Khulo is a female-based record and consequently requires confirmation.

***Ischnosoma acre* nov.sp. (Figs 1, 9-12, 17-19, 26-27, Map 1)**

**Type material:** Holotype ♂: "GEORGIA [44] - Imereti, S Bagdati, 42°00'50"N, 42°48'56"E, 270 m, deciduous forest margin, 21.VII.2019, V. Assing / Holotypus ♂ *Ischnosoma acre* sp. n. det. V. Assing 2019" (cAss). Paratypes 1♂: "N41°51'37 E42°46'59, Georgien Imeretien (54), Sairme S 1890 m, 19.5.2018, Brachat & Meybohm" (cAss); 1♂: "N42°00'50 E42°48'55, Georgien Imeretien (50), Baghdati 290 m 18.5.2018, Brachat & Meybohm" (cAss).

**E t y m o l o g y :** The specific epithet (Latin, adjective: acute) alludes to the acute apex of the ventral process of the aedeagus in ventral view.

**D e s c r i p t i o n :** Body length 4.7-5.0 mm; length of forebody 2.1-2.2 mm. Habitus as in Fig. 1. External characters as in *I. solodovnikovi* SCHÜLKE, 2001 and *I. molle* ASSING & SCHÜLKE, 2017. Distinguished only by the male primary and secondary sexual characters.

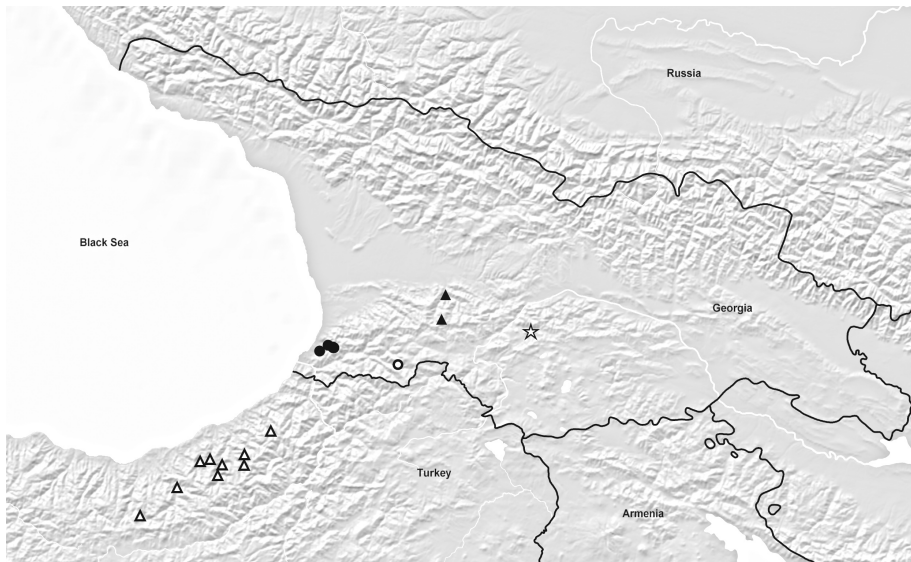
♂: sternite VII (Figs 17, 26-27) with a cluster of moderately dense thin setae in postero-median portion, posterior margin truncate; sternite VIII (Figs 18-19) with a cluster of moderately dense long and thin setae in postero-median portion, posterior margin shallowly triangularly excised; aedeagus (Figs 9-12) approximately 0.7 mm long; ventral process apically very acute in ventral view; internal structures shaped as in Figs 9-12.

**C o m p a r a t i v e n o t e s :** Based on the external and the male sexual characters, *I. acre* is undoubtedly closely allied to *I. solodovnikovi* from Northeast Turkey (Trabzon, Rize) and *I. molle* (Southwest Georgia: Adjara: western Meskheta Range). It is distinguished from these species as follows:

from *I. solodovnikovi* by smaller body size, longer and thin setae near the median portion of the truncate posterior margin of the male sternite VII, a shorter and less slender male sternite VIII with denser pubescence in the postero-median portion, and by a smaller aedeagus (*I. solodovnikovi*: 0.78-0.90 mm long; n = 6) with a significantly more acute apex of the ventral process (ventral view) and with less strongly sclerotized internal structures of different shapes (for comparison see Figs 15-16, 23-25, 30-31);

from *I. molle* by longer and less stout pubescence in the postero-median portion of the male sternite VII, a male sternite VIII with a smaller, less deep, and more triangularly shaped posterior margin (broadly concave in *I. molle*) and with a less distinctly delimited and less extensive cluster of much less dense and longer pubescence in the postero-median portion, and a slightly smaller aedeagus with an apically more acute ventral process (ventral view) and with sclerotized internal structures of slightly different shapes.

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** The type specimens were found in two localities in the north slope of the Meskheta Range, Imereti region, Southwest Georgia (Map 1) at altitudes of 270-290 and 1890 m. They were sifted from chestnut leaf litter, from litter near rocks (MEYBOHM pers. comm.), and from leaf litter in a deciduous forest margin.



**Map 1:** Distributions of the species allied to *Ischnosoma solodovnikovi* and of *I. thoracicum*: *I. solodovnikovi* (white triangles), *I. molle* (black circles; white circle: doubtful female-based record), *I. acre* (black triangles), and *I. thoracicum* (white star).

### *Ischnosoma thoracicum* (EPPELSHEIM, 1880)

**Material examined:** **GEORGIA:** 2♂♂, Samtskhe-Javakheti, Trialeti Range, N Bakuriani, E Tsaghveri, 41°47'25"N, 43°32'27"E, 1150 m, stream valley with mixed forest, litter near stream sifted, 8.VII.2019, leg. Schülke (MNB).

**Comment:** The original description is based on type material from "Helenendorf", a highly doubtful and most likely erroneous record based on mislabelled specimens; for a detailed argumentation see ASSING & SCHÜLKE (2017). Consequently, the true distribution was unknown. The above males represent the first record since the original description and the first record with a specified and confirmed locality. It suggests that the distribution of this species may be confined to the Trialeti Range in Southwest Georgia. However, additional records are required to confirm this.

### *Ischnosoma cuspidatum* nov.sp. (Figs 2, 47-51, Map 2)

**Type material:** Holotype ♂: "N42°12'19 E45°27'45, GG Kakheti Lechuri N, 830 m 9.5.2019, Brachat & Meybohm (2) / Holotypus ♂ *Ischnosoma cuspidatum* sp. n. det. V. Assing 2019" (cAss).

**Etymology:** The specific epithet (Latin, adjective: acute) alludes to the sharply acute apex of the ventral process of the aedeagus in ventral view.

**Description:** Body length 4.3 mm; length of forebody 1.9 mm. Habitus as in Fig. 2. Coloration: body reddish, with the antero-median portions of tergite IV-VI slightly darker; legs dark-yellow; antennae pale-reddish.

Eyes (Fig. 47) slightly longer than postocular region in lateral view, composed of some 40-50 ommatidia. Antenna 1.45 mm long.

Pronotum 1.15 times as broad as long and 1.83 times as broad as head; disc with moderately dense micropunctuation, mostly without microsculpture (nearly obsolete traces of microsculpture visible only near anterior margin).

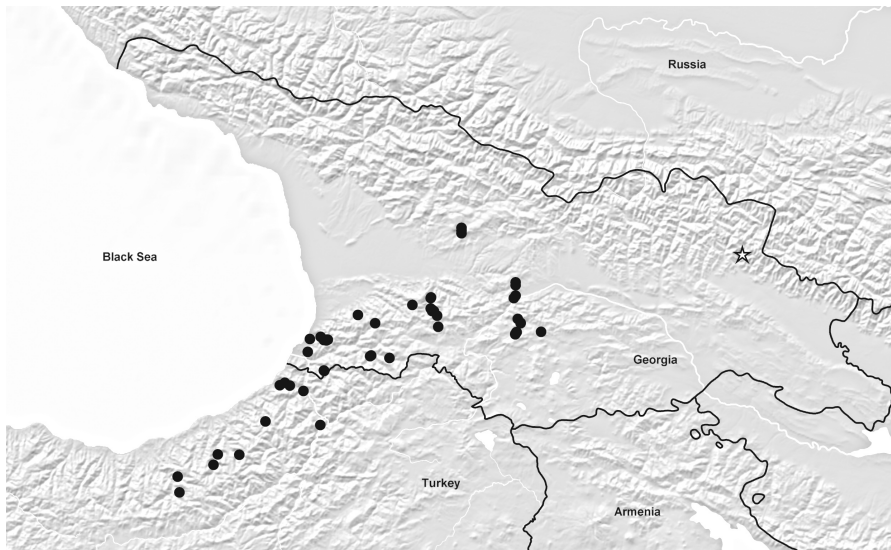
Elytra 0.82 times as long as pronotum, without microsculpture; sutural and lateral series each composed of six punctures.

Abdomen with rather coarse and dense punctation, punctures somewhat sparser in postero-medial portions of tergites; posterior margin of tergite VII without palisade fringe.

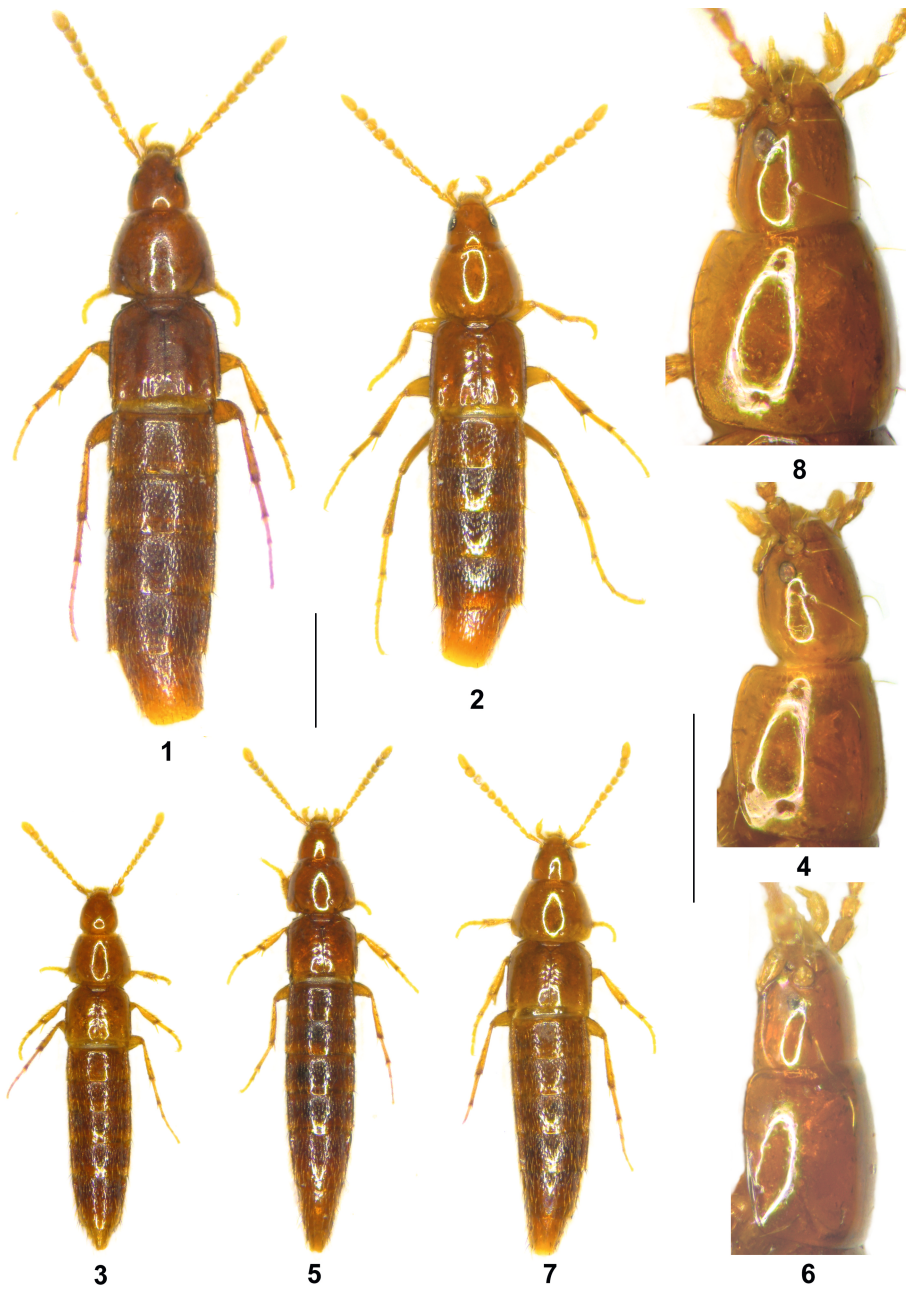
♂: sternite VII (Fig. 48) weakly transverse, with a distinct cluster of dense setae in postero-medial portion; sternite VIII (Fig. 49) distinctly oblong, in postero-medial portion with a cluster of moderately dense and rather short setae, posterior margin strongly concave; aedeagus (Figs 50-51) 0.68 mm long; ventral process apically extremely acute in ventral view; parameres with numerous setae in apical half.

**Comparative notes:** *Ischnosoma cuspidatum* is distinguished from *I. major*, its geographically closest micropterous congener (see map 2 in ASSING & SCHÜLKE 2017) by slightly larger body size, the (near) absence of microsculpture on the pronotum and the elytra, a male sternite VII with a truncate posterior margin and with a less extensive cluster of setae in the postero-medial portion, a more slender male sternite VIII with a more deeply concave posterior margin and a distinct cluster of dense setae in the postero-medial portion, and by a more acute and differently shaped apex of the ventral process of the aedeagus. For illustrations of *I. major* see KOČIAN (1997).

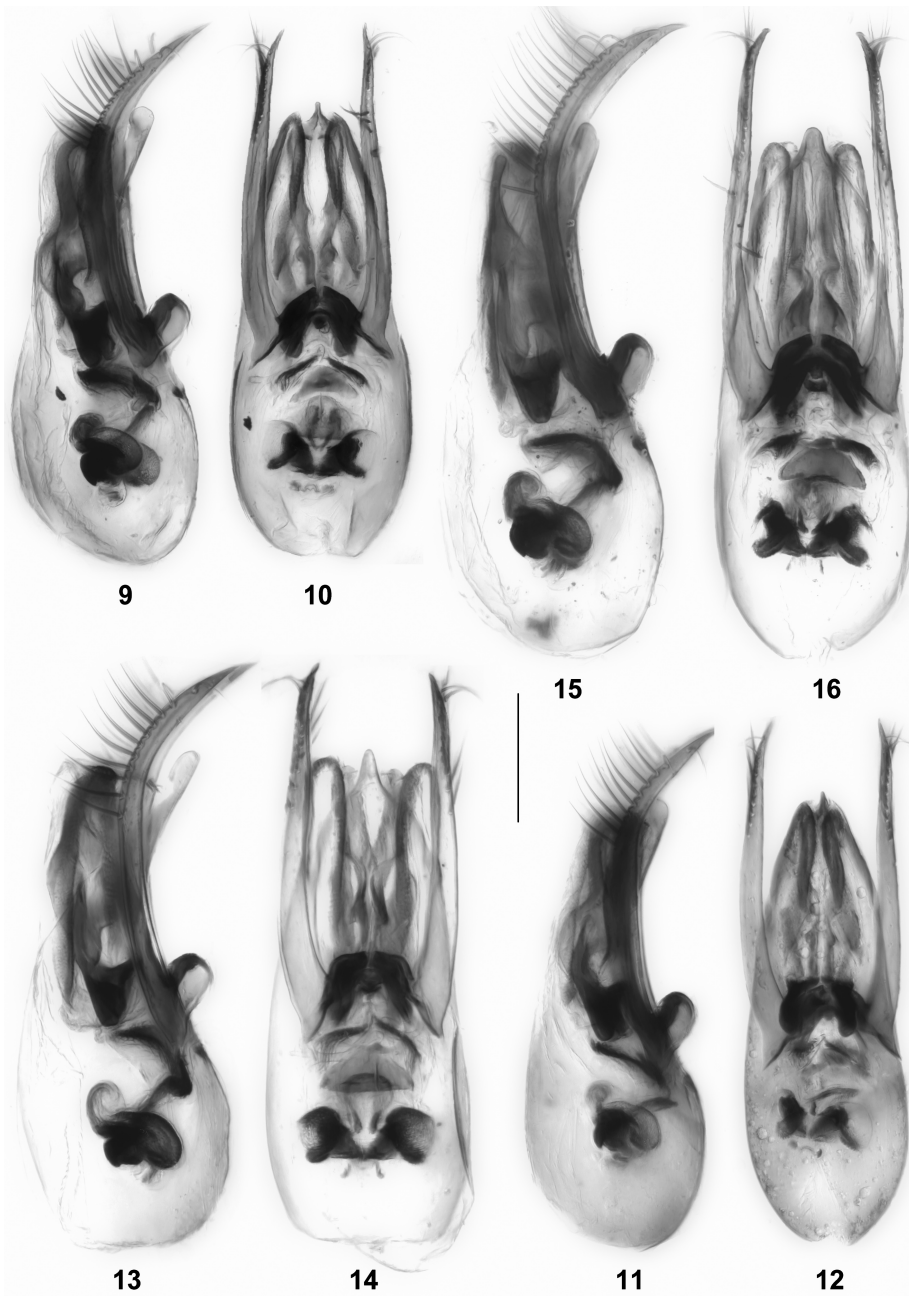
**Distribution and natural history:** The type locality is situated to the north of Lechuri in the southern slopes of the Greater Caucasus, Kakheti region, Northeast Georgia (Map 2). The holotype was sifted from leaf litter in a stream valley with deciduous forest at an altitude of 830 m (MEYBOHM pers. comm.).



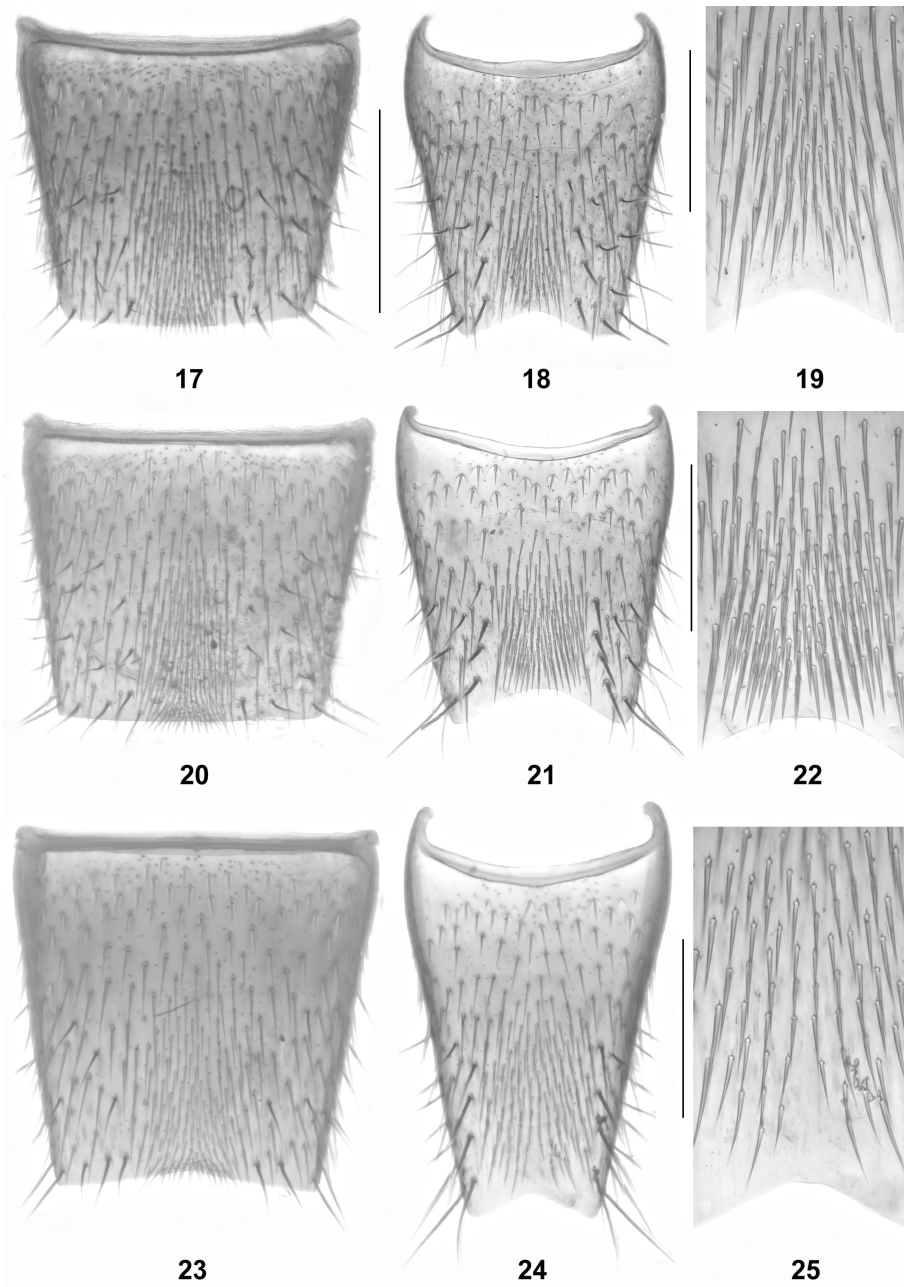
**Map 2:** Confirmed distribution of *Ischnosoma myops* (black circles) and type locality of *I. cuspidatum* (white star).



**Figs 1-8:** *Ischnosoma acre* (1), *I. cuspidatum* (2), *I. convergens* (3-4), *I. parallelum* (5-6), and *I. myops* (7-8): (1-3, 5, 7) habitus; (4, 6, 8) head and pronotum in lateral view. Scale bars: 1-3, 5, 7: 1.0 mm; 4, 6, 8: 0.5 mm.

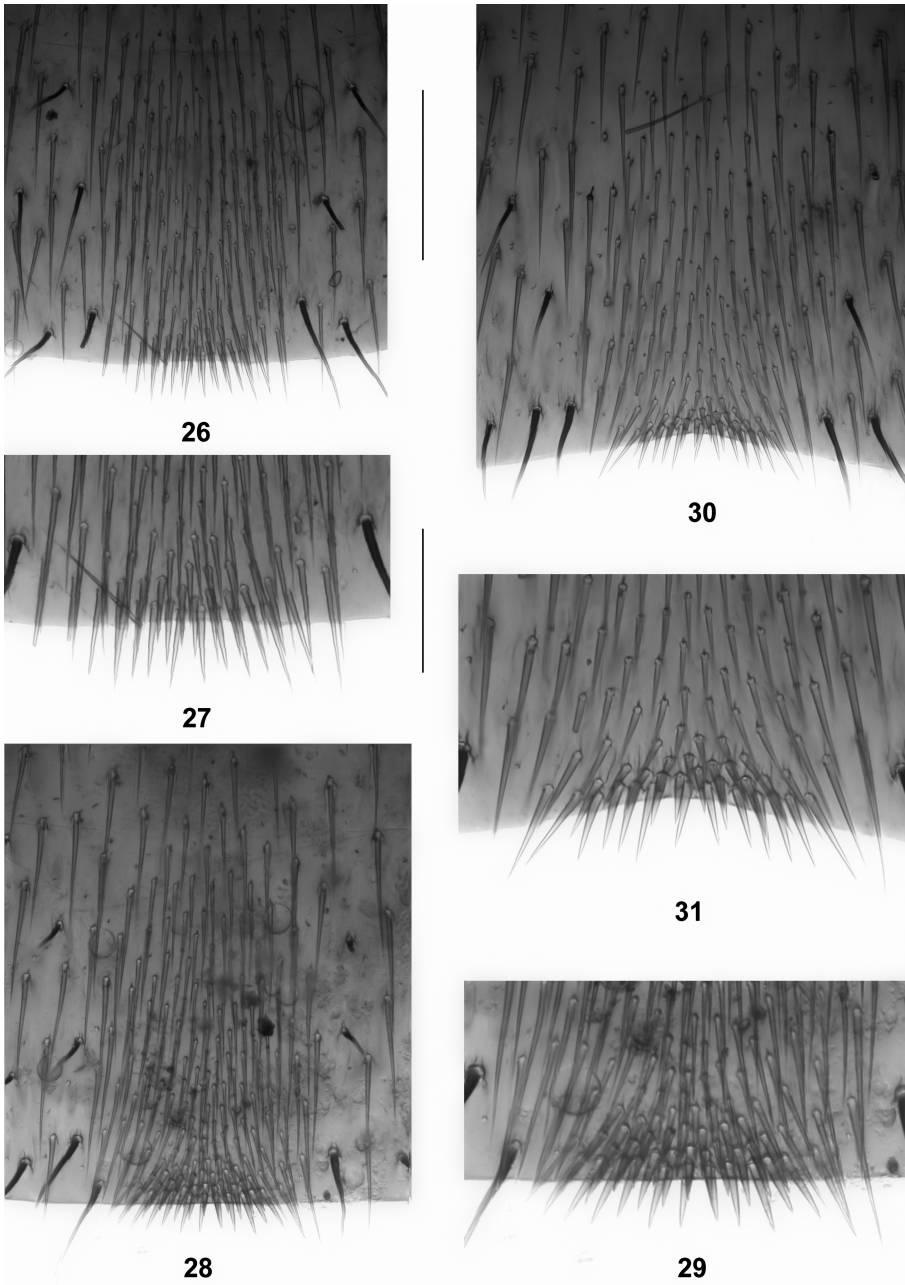


**Figs 9-16:** *Ischnosoma acre* (9-12; 9-10: holotype; 11-12: paratype), *I. molle* (13-14), and *I. solodovnikovi* (15-16): aedeagus in lateral and in ventral view. Scale bar: 0.2 mm.

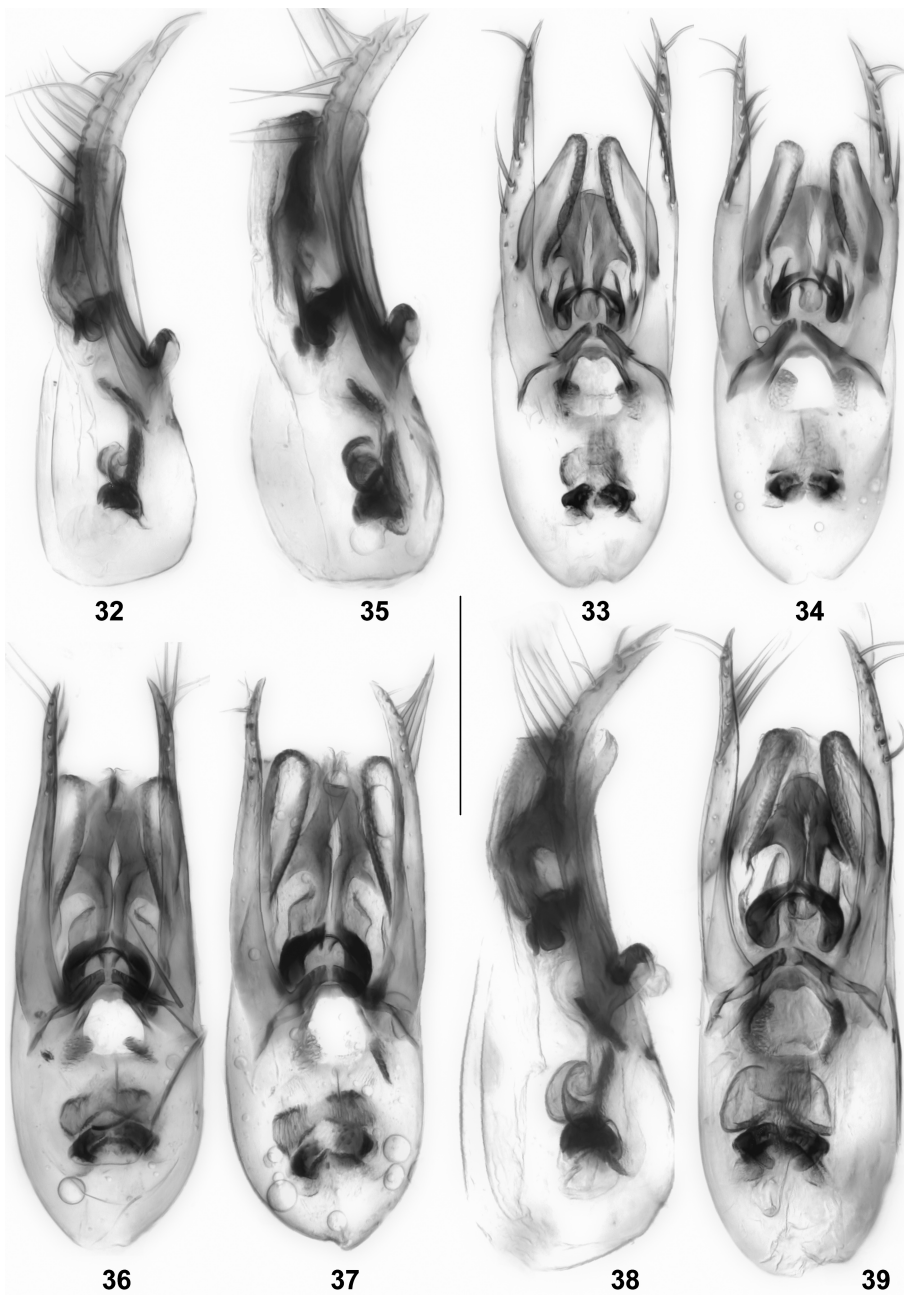


**Figs 17-25:** *Ischnosoma acre* (17-19), *I. molle* (20-22), and *I. solodovnikovi* (23-25): (17, 20, 23) male sternite VII; (18, 21, 24) male sternite VIII; (19, 22, 25) postero-median portion of male sternite VIII. Scale bars: 17-18, 20-21, 23-24: 0.5 mm; 19, 22, 25: 0.2 mm.

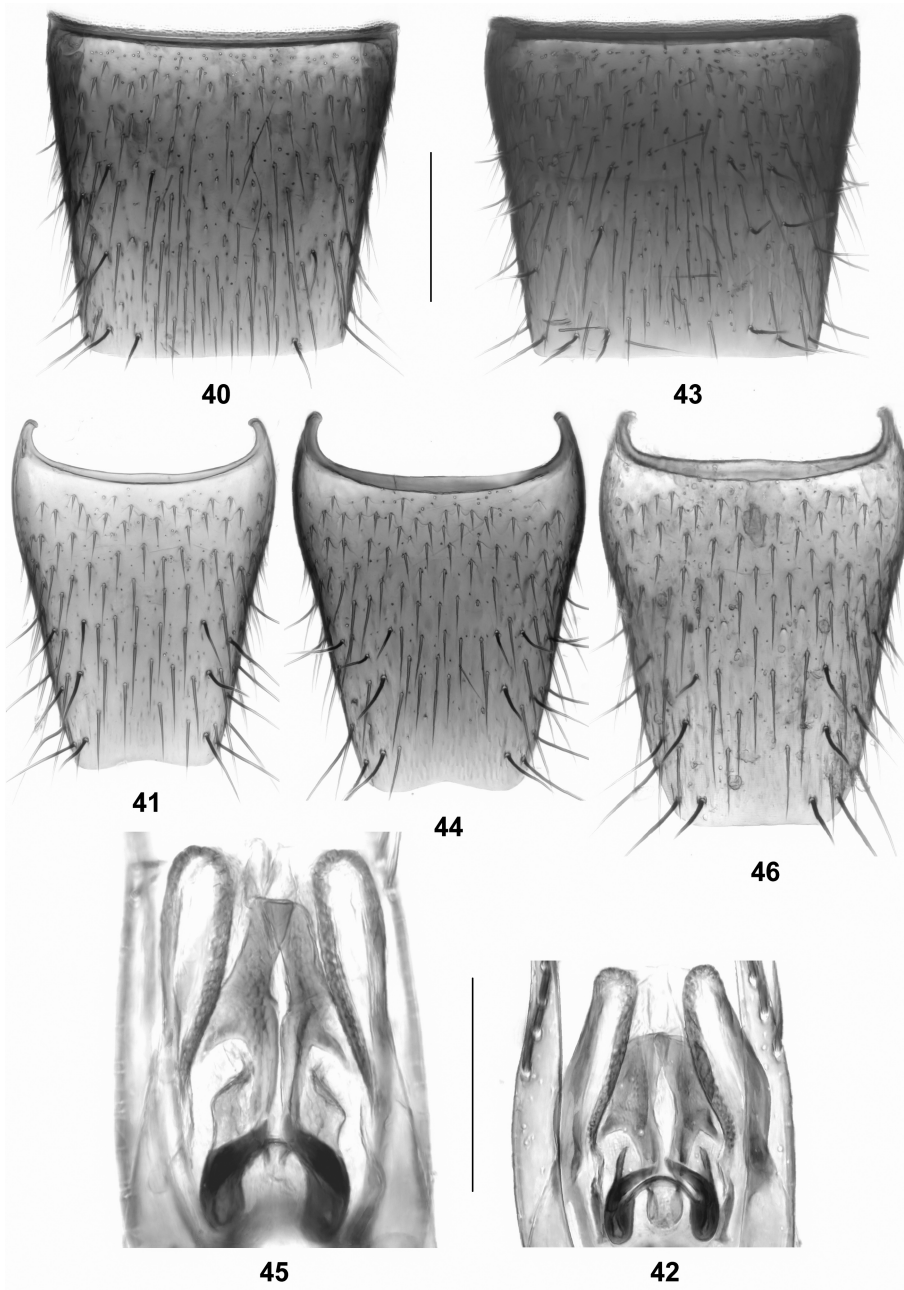




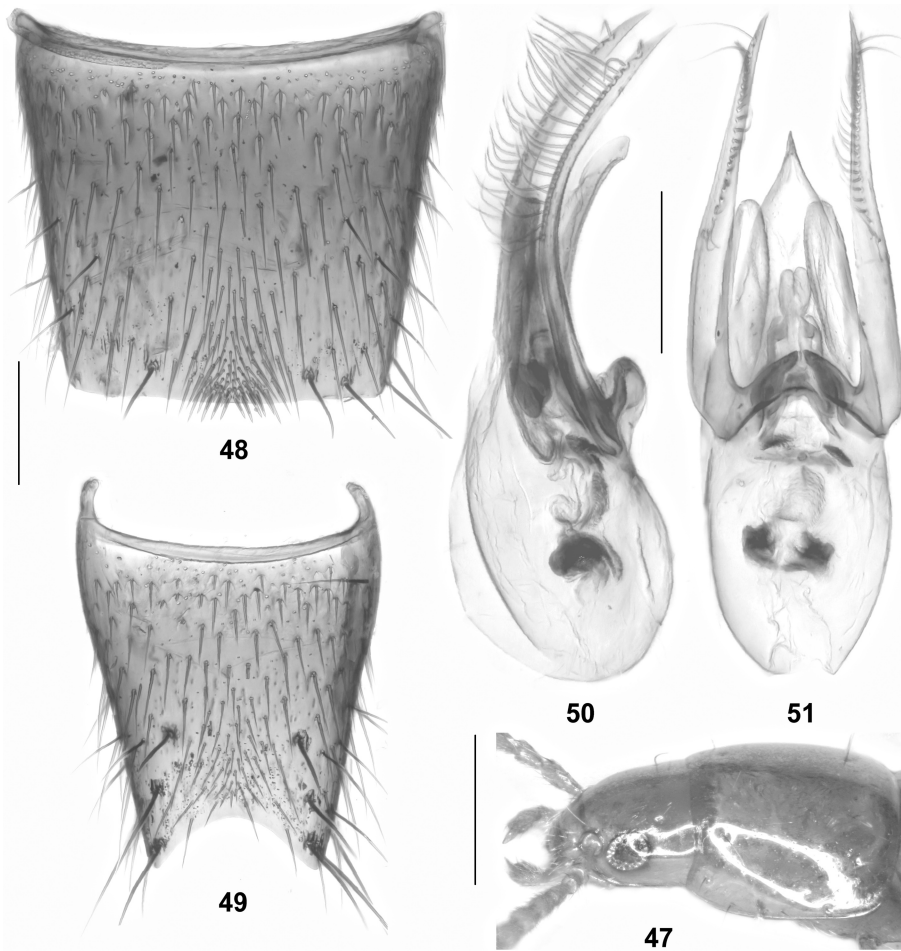
**Figs 26-31:** *Ischnosoma acre* (26-27), *I. molle* (28-29), and *I. solodovnikovi* (30-31): (26, 28, 30) postero-medial portion of male sternite VII; (27, 29, 31) close-up of postero-medial portion of male sternite VII. Scale bars: 26, 28, 30: 0.2 mm; 27, 29, 31: 0.1 mm.



**Figs 32-39:** *Ischnosoma convergens* (32-34), *I. parallelum* (35-37), and *I. myops* (38-39): aedeagus in lateral and in ventral view. Scale bar: 1.0 mm.



**Figs 40-46:** *Ischnosoma convergens* (40-42), *I. parallelum* (43-45), and *I. myops* (46): (40, 43) male sternite VII; (41, 44, 46) male sternite VIII; (42, 45) apical portion of median lobe of aedeagus in ventral view. Scale bars: 40-41, 43-44, 46: 0.2 mm; 42, 45: 0.1 mm.



**Figs 47-51: *Ischnosoma cuspidatum*:** (47) head and pronotum in lateral view; (48) male sternite VII; (49) male sternite VIII; (50-51) aedeagus in lateral and in ventral view. Scale bars: 47: 0.5 mm; 48-51: 0.2 mm.

***Ischnosoma myops* (EPPELSHEIM, 1880) (Figs 7-8, 38-39, 46, Map 2)**

**Material examined:** **GEORGIA:** Samtskhe-Javakheti: 2♀♀, Trialeti Range, SW Bakuriani, 41°43'54"N, 43°30'21"E, 1800 m, deciduous forest with predominant beech and alder, litter near small stream sifted, 7.VII.2019, leg. Assing & Schülke (MNB, cAss); 4♂♂, 1♀, same data, but 10.VII.2019, leg. Schülke (MNB); 3♂♂, 1♀, Trialeti Range, S Bakuriani, 41°43'08"N, 43°29'35"E, 1880 m, forest with predominant alder and *Tussilago* undergrowth, litter near small stream sifted, 7.VII.2019, leg. Assing & Schülke (MNB, cAss); 8♂♂, 10♀♀, Trialeti Range, S Bakuriani, 41°43'11"N, 43°29'41"E, 1870 m, forest with predominant alder, litter near small stream sifted, 7.VII.2019, leg. Assing (cAss); 2♂♂, 3♀♀, Trialeti Range, S Bakuriani, 41°43'22"N, 43°29'53"E, 1850 m, forest with predominant beech and alder, litter sifted, 7.VII.2019, leg. Assing & Schülke (cAss, MNB); 2♂♂, 3♀♀, Trialeti Range, N Bakuriani, E Tsaghveri, 41°47'25"N, 43°32'27"E, 1150 m, stream valley with mixed forest, litter near stream

sifted, 8.VII.2019, leg. Assing & Schülke (MNB, cAss); 7♂♂, 8♀♀, Trialeti Range, N Bakuriani, E Tsaghveri, 41°47'22"N, 43°32'29"E, 1170 m, mixed forest margin, litter on scree sifted, 8.VII.2019, leg. Assing & Schülke (MNB, cAss); 2♂♂, 1♀, Trialeti Range, SW Bakuriani, 41°43'14"N, 43°28'33"E, 1640 m, gallery forest (predominantly alder) and grassland with scattered trees, litter sifted, 10.VII.2019, leg. Schülke (MNB); 1♂, 2♀♀, Trialeti Range, SW Bakuriani, 41°43'54"N, 43°30'10"E, 1820 m, moist mixed forest (alder, pine), litter sifted, 10.VII.2019, leg. Assing (cAss). I m e r e t i : 1♂, N Sairme, 41°57'N, 42°46'E, 630 m, 18.V.2018, leg. Brachat & Meybohm (cAss); 6♂♂, 4♀♀, S Sairme, 41°53'N, 42°46'E, 1420 m, 20.V.2018, leg. Brachat & Meybohm (cAss); 2♂♂, 1♀, S Sairme, 41°53'N, 42°46'E, 1360 m, 20.V.2018, leg. Brachat & Meybohm (cAss); 74♂♂, 36♀♀, Meskheta Range, Zakari pass SE Sairme, 41°50'15"N, 42°49'27"E, 2290 m, moist slope with rhododendron and bushes, litter sifted, 20.VII.2019, leg. Assing & Schülke (MNB, cAss, cFel); 2♀♀, Meskheta Range, SE Sairme, 41°52'07"N, 42°46'53"E, 1820 m, degraded forest with predominant spruce, litter of *Acer* and *Sambucus* sifted, 20.VII.2019, leg. Assing & Schülke (MNB, cAss); 1♂, 1♀, Meskheta Range, N Sairme, 41°57'24"N, 42°46'10"E, 650 m, moist deciduous forest with predominant alder and chestnut, litter sifted, 21.VII.2019, leg. Assing (cAss); 19♂♂, 11♀♀, Meskheta Range, S Sairme, 41°52'46"N, 42°46'22"E, 1510 m, stream valley, moist deciduous forest margin, litter and herb roots sifted, 22.VII.2019, leg. Assing & Schülke (cAss, MNB); 1♂, 2♀♀, same data, but soil washing (cAss); 2♀♀, Meskheta Range, S Sairme, 41°52'10"N, 42°47'41"E, 1670 m, stream valley with predominant alder, ash, and *Tussilago* and fern undergrowth, litter sifted, 23.VII.2019, leg. Assing (cAss); 1♀, Meskheta Range, S Sairme, 41°52'29"N, 42°46'57"E, 1560 m, stream valley with predominant alder and *Tussilago* undergrowth, litter sifted, 23.VII.2019, leg. Assing (cAss). G u r i a : 1♀, Kvaghba-Zoti, 41°54'25"N, 42°25'44"E, 680 m, stream valley with water fall and with deciduous forest, litter sifted and soil-washing, 16.V.2019, leg. Brachat & Meybohm (cAss). A d j a r a : 1♂, Chakvistavi, 41°40'47"N, 41°52'19"E, 330 m, stream valley in deciduous forest, litter sifted, 17.V.2019, leg. Brachat & Meybohm (cAss); 1♂, W Chakvistavi, 41°41'48"N, 41°49'29"E, 90 m, stream valley with rhododendron, litter sifted, 18.V.2019, leg. Brachat & Meybohm (cAss); 1♂, 1♀, W Chakvistavi, 41°40'42"N, 41°51'10"E, 220 m, stream valley with deciduous forest (old alder and elm trees), litter sifted, 18.V.2019, leg. Brachat & Meybohm (cAss); 1♀, E Chakvistavi, 41°40'44"N, 41°53'09"E, deciduous forest, litter sifted, 400 m, 19.V.2019, leg. Brachat & Meybohm (cAss); 1♀, E Chakvistavi, 41°40'38"N, 41°52'38"E, 380 m, dry forest litter sifted, 19.V.2019, leg. Brachat & Meybohm (cAss); 2♂♂, E Chakvistavi, 41°40'34"N, 41°52'30"E, 320 m, rhododendron litter sifted, 20.V.2019, leg. Brachat & Meybohm (cAss); 1♂, 1♀, Gomismta, 41°50'21"N, 42°08'34"E, 1520 m, secondary forest with laurel, rhododendron, and *Carpinus*, litter sifted, 22.V.2019, leg. Brachat & Meybohm (cAss); 1♂, Chakvistavi, 41°41'N, 41°44'E, 170 m, 22.V.2018, leg. Brachat & Meybohm (cAss); 2♀♀, Shavsheti Range, SW Khulo, 41°34'38"N, 42°14'59"E, 1110 m, slope with walnut, hazelnut, and fern, herbs, and grass undergrowth, sifted, 13.VII.2019, leg. Assing (cAss); 1♂, Shavsheti Range, SW Khulo, 41°34'52"N, 42°15'35"E, 700 m, forest margin, litter and roots sifted, 13.VII.2019, leg. Assing (cAss); 10♂♂, 10♀♀, Meskheta Range, NNW Khulo, 41°47'19"N, 42°17'25"E, 2010 m, mixed beech and spruce forest, forest margin, beech litter, mushroom, and debris in ditch with *Tussilago* sifted, 14.VII.2019, leg. Assing & Schülke (MNB, cAss); 1♂, 2♀♀, Shavsheti Range, SE Batumi, Machakhela National Park, 41°28'55"N, 41°51'29"E, 680 m, stream valley with alder, hazelnut, chestnut, and rhododendron, litter sifted, 16.VII.2019, leg. Assing (cAss); 4♂♂, 2♀♀, Shavsheti Range, SE Batumi, Machakhela National Park, 41°28'47"N, 41°51'31"E, 700 m, stream valley with alder and rhododendron, litter sifted, 17.VII.2019, leg. Assing (cAss).

C o m m e n t : *Ischnosoma myops* is the most widespread and common Caucasian representative of the *I. spelaenum* group, its confirmed distribution ranging from Northeast Anatolia (Rize, Artvin) to Central Georgia, with the easternmost confirmed record at 43°43' eastern longitude (Map 2). The habitus, forebody (lateral view), and the male sexual characters are illustrated in Figs 7-8, 38-39, 46.

### ***Ischnosoma convergens* nov.sp. (Figs 3-4, 32-34, 40-42, Map 3)**

T y p e m a t e r i a l : Holotype ♂: "GEORGIA [40] - Adjara, NE Batumi, Mtirala National Park, 41°40'36"N, 41°52'23"E, 300 m, 18.VII.2019, V. Assing / Holotypus ♂ *Ischnosoma*

*convergens* sp. n. det. V. Assing 2019" (cAss). **Paratypes:** 1♀: same data as holotype (cAss); 1♀: same data as holotype, but leg. Schülke (MNB); 1♂, 1♀: same data as holotype, but "[40a]" (cAss); 6♂♂, 1♀ [partly slightly teneral]: "N41°40'47 E41°42'19, GG Adjara Chakvistavi, 330 m 17.5.2019, Brachat & Meybohm (19)" (cAss); 1♀: "N41°41'27 E41°49'48, GG Adjara Chakvistavi W, 150 m 18.5.2019, Brachat & Meybohm (20)" (cAss); 1♂: "N41°40'34 E41°52'49, GG Adjara Chakvistavi E, 360 m 20.5.2019, Brachat & Meybohm (27)" (cAss); 1♂: "N41°39'12 E41°45'36 (9), Georgien Adjara, Batumi 7 km NE, 500-600 m, Brachat & Meybohm 24.6.2017" (cAss); 1♂: "N41°41'21 E41°43'50, Georgien Adjara (59), Chakvistavi, 170 m, 22.5.2018, Brachat & Meybohm" (cAss); 1♀: "41°30'38 E41°52'37, Georgien Adjara (60), Chikuneti E 580 m, 23.5.2018, Brachat & Meybohm" (cAss).

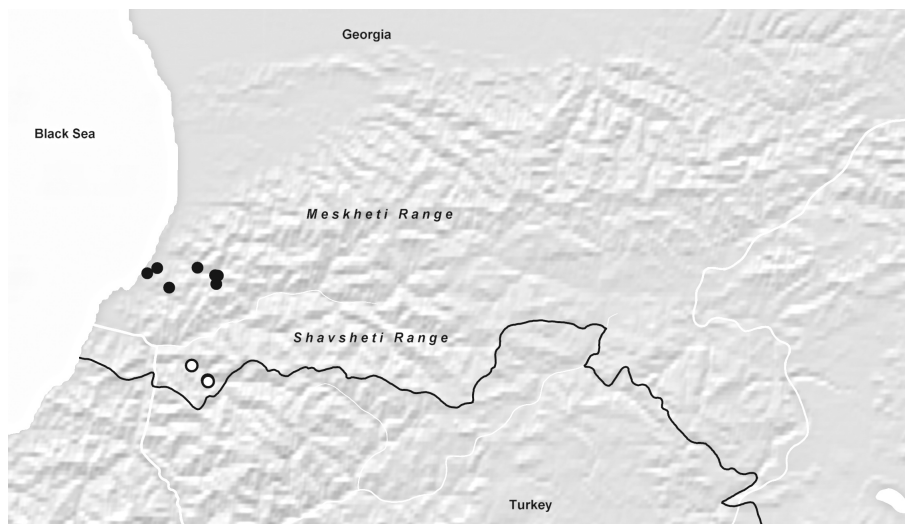
**Etymology:** The specific epithet (Latin, adjective) alludes to the distinctly converging apico-lateral lamellae of the median lobe of the aedeagus, one of the characters distinguishing this species from the highly similar *I. parallelum*.

**Description:** Very small species of slender habitus, body length 2.5-3.3 mm; length of forebody 1.2-1.4 mm. Habitus as in Fig. 3. Eye rudiments (Fig. 4) minute, approximately as large as antennomere I in cross-section, composed of 0-5 ommatidia, often with additional degenerated rudiments of ommatidia. Pronotum approximately 1.15 times as broad as long and 1.6 times as broad as head. Other external characters similar to those of *I. myops*.

♂: shape and chaetotaxy of sternite VII unmodified (Fig. 40); sternite VIII (Fig. 41) with sparse unmodified pubescence, posterior margin weakly concave; median lobe of aedeagus (Figs 32-34, 42) 0.42-0.45 mm long (0.50-0.54 mm including parameres); ventral process apically broadly convex in ventral view and obtuse in lateral view; apico-lateral lamellae distinctly converging apicad; internal sac with a pair of short and broad apical and a pair of small and curved median sclerites, and with small and dark basal membranous structures.

**Comparative notes:** *Ischnosoma convergens* is distinguished from the similar *I. myops* only by smaller size (*I. myops*: length of forebody 1.4-1.7 mm), a more slender habitus (*I. myops*: pronotum approximately 1.2 times as broad as long and 1.7 times as broad as head), smaller eye rudiments (*I. myops*: eyes significantly larger than antennomere I in cross-section), a posteriorly weakly concave male sternite VIII (*I. myops*: posterior margin truncate), and a smaller aedeagus (*I. myops*: aedeagus approximately 0.5 mm long, 0.6 mm including parameres) with a ventral process and internal structures of different shapes. The new species is readily distinguished from all other Caucasian representatives of the genus, except the following species, by much smaller size and smaller eye rudiments alone. For illustrations of *I. myops* see Figs 7-8, 38-39, 46.

**Distribution and natural history:** Based on currently available data, *I. convergens* is endemic to Mtirala National Park and its vicinity in the extreme west of the Meskheta Range, Adjara region, Southwest Georgia (Map 3). The male paratype collected in 2017 was reported as *I. myops* in ASSING & SCHÜLKE (2017). The specimens were mostly sifted from litter in moist deciduous forests, often with rhododendron undergrowth; few specimens were collected by soil-washing. The altitudes range from 150 to approximately 600 m. In some localities, the species was collected together with *I. myops* and/or *I. molle*. Some of the type specimens collected in May are more or less distinctly teneral.



**Map 3:** Distributions of *Ischnosoma convergens* (black circles) and *I. parallelum* (white circles).

***Ischnosoma parallelum* nov.sp. (Figs 5-6, 35-37, 43-45, Map 3)**

**Type material:** **Holotype** ♂: "GEORGIA [36a] - Adjara, SE Batumi, Machakhela Nat. Park, 41°30'34"N, 41°49'04"E, 170 m, 17.VII.2019, V. Assing / Holotypus ♂ *Ischnosoma parallelum* sp. n. det. V. Assing 2019" (cAss). **Paratypes:** 2♂♂: same data as holotype (cAss); 1♀: "GEORGIA [33] - Adjara, SE Batumi, Machakhela Nat. Park, 41°28'55"N, 41°51'29"E, 680 m, 16.VII.2019, V. Assing" (cAss); 1♂: same data, but "[33a]" (cAss); 1♀: "GEORGIA [37] - Adjara, SE Batumi, Machakhela Nat. Park, 41°28'47"N, 41°51'31"E, 700 m, 17.VII.2019, V. Assing" (cAss).

**E t y m o l o g y :** The specific epithet (Latin, adjective) alludes to the more or less sub-parallel apico-lateral lamellae of the median lobe of the aedeagus.

**D e s c r i p t i o n :** Habitus as in Fig. 5. Eye rudiments (Fig. 6) minute, approximately as large as antennomere I in cross-section or slightly larger, composed of 0-5 ommatidia, often with additional degenerated rudiments of ommatidia. In size, proportion, coloration, and other external characters practically identical to *I. convergens*.

♂: shape and chaetotaxy of sternite VII unmodified (Fig. 43); sternite VIII (Fig. 44) with sparse pubescence, posterior margin weakly concave; median lobe of aedeagus (Figs 35-37, 45) on average slightly larger than that of *I. convergens*; apico-lateral lamellae sub-parallel, weakly converging apicad at most; pair of apical sclerites longer and more slender, median pair of sclerites larger, and basal membranous structure larger than in *I. convergens*.

**C o m p a r a t i v e n o t e s :** *Ischnosoma parallelum* is distinguished from the otherwise practically identical *I. convergens* only by the morphology of the aedeagus: the orientation of the apico-lateral lamellae, the longer and more slender apical internal structures, the larger median internal structures, and the larger basal internal structure. Based on the available males, these differences are constant.

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** The type specimens were collected in three localities in the Machakhela National Park in the extreme west of the

Shavsheti range, Adjara region, Southwest Georgia. The highly restricted distribution of *I. parallelum* is separated from that of *I. convergens* by the Acharistskali river valley (Map 3).

The specimens were sifted from leaf litter or washed from soil obtained in a deciduous forest margin with rhododendron undergrowth and in stream valleys with deciduous forests (alnut, hazelnut, alder, chestnut) at altitudes of 170-600 m, in two localities together with *I. myops*.

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I am indebted to Volker Brachat (Geretsried) and Heinrich Meybohm (Großhansdorf) for the gift of Staphylinidae collecting during their field trips to Georgia in 2018 and 2019. Benedikt Feldmann (Münster) proof-read the manuscript.

### Zusammenfassung

Vier Arten der Gattung *Ischnosoma* STEPHENS, 1829, alle aus der *I. spelaum*-Gruppe, werden beschrieben und abgebildet: *Ischnosoma acre* nov.sp. (Südwest-Georgien: Imereti), nah verwandt mit *I. solodovnikovi* SCHÜLKE, 2001 und *I. molle* ASSING & SCHÜLKE, 2017, *I. convergens* nov.sp. (Südwest-Georgien: Adjara: Meskheta-Gebirge) und *I. parallelum* nov.sp. (Südwest-Georgien: Adjara: Shavsheti-Gebirge), beide nah verwandt mit *I. myops* (EPPELSHEIM, 1880) sowie *I. cuspidatum* nov.sp. (Nordost-Georgien: Kakheti). Zum Vergleich werden neue Abbildungen von *I. solodovnikovi*, *I. molle* und *I. myops* erstellt. Weitere Nachweise von vier Arten werden gemeldet; darunter der erste Nachweis mit gesicherter Fundortangabe von *I. thoracicum* (EPPELSHEIM, 1880), einer Art mit höchstwahrscheinlich inkorrekt Typuslokalität. Die derzeit bekannten Verbreitungsgebiete der neu beschriebenen Arten sowie von *I. solodovnikovi*, *I. molle*, *I. myops* und *I. thoracicum* werden anhand von Karten illustriert.

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