# Three new species of *Oxypoda* from Spain, Armenia, and Ukraine, with notes on the fauna of Armenia (Coleoptera: Staphylinidae: Aleocharinae)

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A b s t r a c t : Three species of *Oxypoda* MANNERHEIM, 1830 from Spain, Armenia, and Ukraine are described and illustrated: *Oxypoda* (*Bessopora*) parvioculata nov.sp. (Spain: Andalucía: Sierra Nevada), O. (*Podoxya*) verminata nov.sp. (Armenia), and O. breviata nov.sp. (Ukraine). Additional records of 18 species are reported from Armenia, 13 of them for the first time. The currently known Armenian Oxypoda fauna is composed of at least 22 species, 20 of them named and 6 exclusive. The currently known distributions of six species are mapped.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, Oxypodini, *Oxypoda*, Armenia, Ukraine, Spain, taxonomy, new species, new records, distribution maps.

# Introduction

The speciose genus *Oxypoda* MANNERHEIM, 1830 is currently represented in the Palaearctic region by nearly 500 described species in 13 subgenera (ASSING 2016).

According to SCHÜLKE & SMETANA (2015), only a single *Oxypoda* species, *O. vittata* MÄRKEL, 1842, had been reported from Armenia. Five additional species from Armenia were subsequently described by ASSING (2016).

The present paper is based primarily on the results of two recent field trips to Armenia, as well as some additional material received from other sources. This material included three undescribed species and first records of thirteen species from Armenia.

# 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)

NHMW ......Naturhistorisches Museum Wien (H. Schillhammer)

cAss..... author's private collection

cGon..... private collection Andrej Gontarenko, Odessa

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 a digital camera (Nikon Coolpix 995) and Axiocam ERc 5s, as well as a photographing device constructed by Arved Lompe

(Nienburg) and CombineZ software. The maps were created using MapCreator 2.0 (primap) software.

Body length was measured from the anterior margin of the labrum to the abdominal apex, the length of the forebody from the anterior margin of the labrum to the posterior margin of the elytra, head length along the middle from the anterior margin of the clypeus to the posterior carina 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.

# **Descriptions**

#### Oxypoda (Bessopora) parvioculata nov.sp. (Figs 1-8)

T y p e m a t e r i a l : <u>Holotype 3</u>: " $\delta$  / T 139 / SO - Spanien, Sierra - Nevada, Dr. Steiner / Corral de Veleta, Jung-Moränenschutt der Schattseite, 3060 m, 30.7.1954 / Typus *Oxypoda microphthalma* O. Scheerpeltz / *Oxypoda microphthalma* nov.spec. / Holotypus  $\delta$  *Oxypoda parvioculata* sp.n., det. V. Assing 2013" (NHMW). <u>Paratypes</u>:  $1\delta$  [in poor condition]: " $\delta$  / SO - Spanien, Sierra Nevada, Dr. H. Janetschek / Veleta Nord-Hang, Oberste Grasheideflecken, ca. 3380 m, 22.7. 54 / Cotypus *Oxypoda microphthalma* O. Scheerpeltz / Paratypus *Oxypoda parvioculata* sp.n., det. V. Assing 2013" (NHMW); 2 Q Q: " $\delta$  / SO - Spanien, Sierra Nevada, Dr. H. Janetschek / Veleta Nord-Hang, Oberste Grasheideflecken, ca. 3380 m, 22.7. 54 / Cotypus *Oxypoda microphthalma* O. Scheerpeltz / Paratypus *Oxypoda parvioculata* sp.n., det. V. Assing 2013" (NHMW); 2Q Q: " $\delta$  / SO - Spanien, Sierra Nevada, Dr. H. Janetschek / Veleta Nord-Hang, Oberste Grasheideflecken, 2960, 22.7. 54 / Typus / Cotypus *Oxypoda microphthalma* O. Scheerpeltz / Paratypus *Oxypoda parvioculata* sp.n., det. V. Assing 2013" (NHMW); 2Q Q: " $\delta$  / SO - Spanien, Sierra Nevada, Dr. H. Janetschek / Veleta Nord-Hang, Oberste Grasheideflecken, 2960, 22.7. 54 / Typus / Cotypus *Oxypoda microphthalma* O. Scheerpeltz / Paratypus *Oxypoda parvioculata* sp.n., det. V. Assing 2013" (NHMW, cAss).

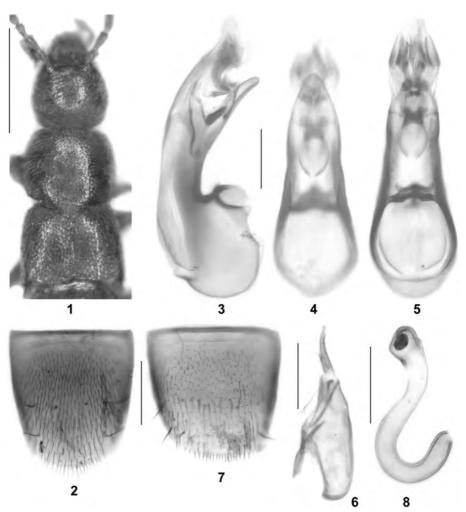
E t y m o l o g y : The specific epithet is an adjective composed of the Latin adjectives (parvus: small) and oculata (with eyes). It refers to the reduced eye size.

D e s c r i p t i o n : Small species; body length 2.9-3.4 mm; length of forebody 1.2-1.3 mm. Coloration: body reddish, with abdominal segment VI and the anterior portion of segment VII noticeably infuscate; legs reddish yellow; antennae reddish.

Head (Fig. 1) of subcircular shape, weakly oblong; punctation fine and moderately dense; interstices with microreticulation. Eyes very small and not projecting from lateral contours of head, composed of approximately 25 ommatidia. Antenna 0.8-0.9 mm long; antennomere III approximately 1.5 times as long as broad, IV as broad as long or weakly transverse, V-X moderately transverse and weakly increasing in width, X less than 1.5 times as broad as long, XI approximately as long as the combined length of IX and X.

Pronotum (Fig. 1) moderately transverse, approximately 1.2 times as broad as long and 1.25 times as broad as head, widest slightly behind middle; posterior angles weakly marked; punctation fine and dense; interstices with microreticulation.

Elytra (Fig. 1) short, approximately 0.75 times as long as pronotum; posterior margin moderately sinuate near postero-lateral angles; punctation fine and dense. Hind wings completely reduced. Metatarsomere I nearly as long as the combined length of II-IV.



Figs 1-8: Oxypoda parvioculata nov.sp.: (1) forebody; (2) male sternite VIII; (3-5) median lobe of aedeagus in lateral and in ventral view; (6) paramere; (7) female sternite VIII; (8) spermatheca. Scale bars: 1: 0.5 mm; 2, 6-7: 0.2 mm; 3-5, 8: 0.1 mm.

Abdomen approximately as broad as elytra; segments III-VII of subequal width; punctation dense and fine; interstices with distinct microsculpture; posterior margin of tergite VII without palisade fringe.

3: sternite VIII (Fig. 2) approximately 1.1 times as long as broad and with convex posterior margin; median lobe of aedeagus (Figs 3-5) 0.35 mm long, ventral process apically not bifid; apical lobe of paramere (Fig. 6) relatively long and slender, more than 0.4 times as long as basal portion.

 $\bigcirc$ : sternite VIII (Fig. 7) approximately as long as broad, posterior margin weakly convex, in the middle weakly concave; spermatheca shaped as in Fig. 8.

C o m p a r a t i v e n o t e s : This species is characterized particularly by the small eyes and the primary sexual characters. It somewhat resembles *O. brachyptera* (STEPHENS, 1832) in habitus and coloration, but differs by an even smaller and more slender body, smaller eyes, finer punctation, shorter and more slender antennae, the absence of a palisade fringe at the posterior margin of the abdominal tergite VII, a posteriorly smoothly convex male sternite VIII, the shape and internal structures of the median lobe of the aedeagus, an apically undivided ventral process of the aedeagus, and by the shape of the spermatheca. For illustrations of *O. brachyptera* see ASSING (2012a).

D is tribution and natural his tory: The species is currently known only from the Veleta in the Sierra Nevada, Andalucía (South Spain), where it may be endemic, as is suggested by the reduced eyes, wings, and palisade fringe at the posterior margin of tergite VII, as well as by the high elevations at which it was found. The specimens were collected from grassy patches and scree at altitudes of 2960-3380 m.

# Oxypoda (Podoxya) verminata nov.sp. (Figs 9-20, Map 2)

T y p e m a t e r i a l : <u>Holotype</u>  $\stackrel{\frown}{\bigcirc}$ : "ARMENIA [10] – Sevani range E Sevan lake, 40°23'51"N, 45°29'53"E, 2025 m, oak forest, 28.VI.2017, V. Assing / Holotypus  $\stackrel{\frown}{\bigcirc}$  *Oxypoda verminata* sp.n. det. V. Assing 2017" (cAss). <u>Paratypes</u>:  $2\stackrel{\frown}{\bigcirc}$ , 1 $\bigcirc$ : same data as holotype (cAss); 3 exs.: same data, but leg. Schülke (MNB);  $3\stackrel{\frown}{\bigcirc}\stackrel{\frown}{\bigcirc}$ ,  $3\stackrel{\bigcirc}{\bigcirc}\stackrel{\bigcirc}{\bigcirc}$ : "ARMENIA [8] – mountain range SE Vardenis, 40°05'14"N, 45°49'22"E, 2330 m, stream valley, 27.VI.2017, V. Assing (cAss); 1 $\bigcirc$ : same data, but leg. Schülke (MNB);  $1\stackrel{\frown}{\bigcirc}$ : "ARMENIA [AR17-09] - Vardenis mountain range SE Vardenis, 40°02'38"N, 45°46'12"E, 2730 m, stream bank below snowfields, debris sifted, 27.VI.2017, Schülke" (MNB).

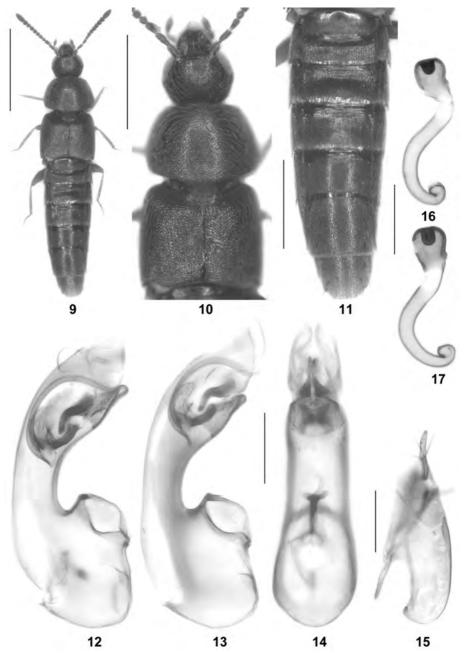
E t y m o l o g y : The specific epithet (Latin, adjective: with worms, worm-shaped) refers to the shapes of the sclerotized internal structures of the aedeagus in lateral view.

D e s c r i p t i o n : Body length 2.3-3.1 mm; length of forebody 1.2-1.4 mm. Habitus as in Fig. 9. Coloration: head, pronotum, abdomen (except for the somewhat paler segments VIII-X), and antennae black; elytra black with the posterior margin more or less distinctly and more or less extensively paler brown; legs dark-yellowish with the metafemora usually slightly darker; maxillary palpi blackish with palpomere IV dark-yellowish.

Head (Fig. 10) transverse; punctation extremely dense and fine; interstices with pronounced microsculpture and matt. Eyes large, longer than postocular region in dorsal view. Antenna moderately incrassate; antennomere IV as long as broad or weakly transverse; antennomeres V-X of gradually increasing width and increasingly transverse, X approximately 1.5 times as broad as long, and XI approximately as long as the combined length of VIII-X. Maxillary palpomere III barely three times as long as broad.

Pronotum (Fig. 10) large and strongly transverse, 1.37-1.45 times as broad as long and approximately 1.55 times as broad as head, broadest near posterior angles; punctation extremely dense and very fine; interstices with pronounced microreticulation and matt.

Elytra (Fig. 10) approximately as long as pronotum or slightly shorter; punctation similar to that of pronotum; interstices with microreticulation and matt. Hind wings fully developed. Metatarsomere I approximately as long as the combined length of meta-tarsomeres II-IV or nearly so.



Figs 9-17: Oxypoda verminata nov.sp.: (9) habitus; (10) forebody; (11) abdomen; (12-14) median lobe of aedeagus in lateral and in ventral view; (15) paramere; (16-17) spermatheca. Scale bars: 9: 1.0 mm; 10-11: 0.5 mm; 15: 0.2 mm; 12-14, 16-17: 0.1 mm.



Fig. 18: Type locality of Oxypoda verminata.



Fig. 19: Locality in the mountain range to the southeast of Vardenis, where six specimens of *Oxypoda verminata* were found.

Abdomen (Fig. 11) narrower than elytra and tapering from base to apex; tergites III-V with very shallow anterior impressions; punctation extremely dense and very fine; microsculpture present, but difficult to see owing to the dense punctation; posterior

margin of tergite VII with palisade fringe; posterior margin of tergite VIII weakly concave in the middle.

 $\delta$ : posterior margin of sternite VIII (Fig. 20) acutely produced in the middle; median lobe of aedeagus (Figs 12-14) 0.35 mm long, with large crista apicalis; ventral process apically convex in ventral view; internal sac with long flagellum and with sclerotized structures of distinctive shapes; paramere (Fig. 15) approximately 0.62 mm long and with slender apical lobe.

 $\phi$ : posterior margin of sternite VIII broadly and weakly convex, with rather long, dark, and moderately stout marginal setae; spermatheca as in Figs 16-17.

C o m p a r a t i v e n o t e s : *Oxypoda verminata* somewhat resembles *O. lentula* ERICHSON, 1837, the type species of *Podoxya* MULSANT & REY, 1875, in coloration, size, antennal morphology, head shape, the shapes of the male and female sternites VIII, and particularly in the dense punctation of the whole body. It differs from this species by the paler coloration of the legs, a more transverse pronotum, even denser punctation of the pronotum, the elytra, and the posterior tergites, more transverse preapical antennomeres, a posteriorly more distinctly tapering abdomen, a much smaller and differently shaped median lobe of the aedeagus (*O. lentula*: median lobe approximately 0.5 mm long), the presence of a long flagellum and differently shaped sclerotized structures in the internal sac of the aedeagus, and by the shape of the spermatheca.

Distribution and natural history: The species is currently known from three localities in the mountains to the east and south of Lake Sevan, North Armenia (Map 2). The specimens were sifted from litter and roots beneath willow at a stream bank (Fig. 19), from litter and roots at an oak forest margin (Fig. 18), and from debris at a stream bank below large snowfields at altitudes of 2025-2730 m.

# Oxypoda breviata nov.sp. (Figs 21-27)

T y p e m a t e r i a l : <u>Holotype</u>  $\vec{C}$ : "Ukraine: Kherson obl., Askania Nova env., 31.III.2016, Bol'shoy Chapels pod, salt soil, leg. Gontarenko" (cAss). <u>Paratype</u>  $\underline{\circ}$ : same data as holotype (cGon).

E t y m o l o g y : The specific epithet is the past participle of the Latin verb breviare (to shorten) and alludes to the short spermatheca.

D e s c r i p t i o n : Body length 3.8-4.0; length of forebody 1.7-1.8 mm. Coloration: body black, except for an extensive reddish spot of triangular shape on each elytron; legs brown to dark-brown with the tarsi slightly paler; antennae dark-brown; maxillary palpi dark-brown with the apical palpomere yellowish.

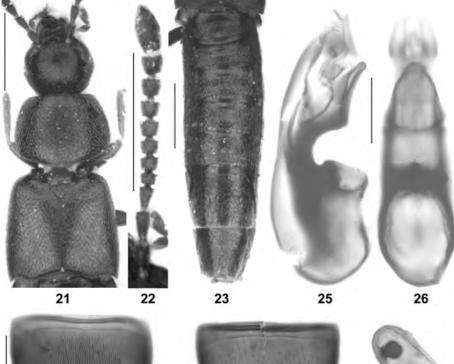
Head (Fig. 21) of suborbicular shape; punctation very fine and moderately dense; interstices with distinct microsculpture and practically matt. Eyes large and weakly convex, approximately as long as distance from posterior margin of eye to posterior constriction of head in dorsal view. Antenna (Fig. 22) approximately 1.0 mm long; antennomeres III of conical shape, approximately as long as II or slightly shorter, IV short and distinctly transverse (approximately 1.5 times as broad as long), V-X of gradually increasing length and decreasingly transverse, X less than 1.5 times as broad as long, and XI elongate, nearly as long as the combined length of VIII-X. Maxillary palpomere III rather short, less than three times as long as broad.

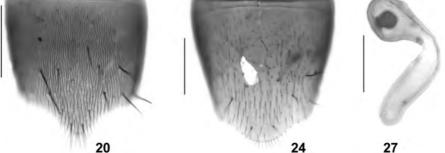
Pronotum (Fig. 21) 1.33-1.39 times as broad as long and 1.33-1.43 times as broad as

head, broadest slightly behind middle; punctation dense and distinct, coarser than that of head; interstices with distinct microsculpture, nearly matt.

Elytra (Fig. 21) 1.03-1.06 times as long as pronotum; punctation similar to that of pronotum; interstices with microsculpture and nearly matt. Hind wings probably fully developed. Legs slender; metatarsomere I approximately as long as the combined length of metatarsomeres II-IV.

Abdomen (Fig. 23) narrower than elytra, slender, and with segments III-VII of subequal width (i.e., lateral outline of segments III-VII nearly parallel); tergites III-V with shallow anterior impressions; punctation very dense on tergites III-VI, sparser on tergites VII-VIII; interstices without evident microsculpture.





Figs 20-27: Oxypoda verminata nov.sp. (20) and O. breviata nov.sp. (21-27): (20, 24) male sternite VIII; (21) forebody; (22) antenna; (23) abdomen; (25-26) median lobe of aedeagus in lateral and in ventral view; (27) spermatheca. Scale bars: 21-23: 0.5 mm; 20, 24: 0.2 mm; 25-27: 0.1 mm.

3: sternite VIII (Fig. 24) noticeably longer than tergite VIII, posterior margin strongly convex in the middle; median lobe of aedeagus (Figs 25-26) 0.48 mm long and of highly distinctive shape; ventral process with strongly arched basal portion and distinctly angled in the middle in lateral view; paramere large and approximately 0.75 mm long, much longer than median lobe, apical lobe of paramere long, curved, and apically acute.

 $\bigcirc$ : posterior margin of sternite VIII truncate in the middle and with stout dark marginal setae; spermatheca (Fig. 27) short and comma-shaped.

C o m p a r a t i v e n o t e s : Among West Palaearctic congeners, *O. breviata* most resembles the widespread *O. bimaculata* BAUDI DI SELVE, 1870 (East Mediterranean and Caucasus regions) in habitus, size, antennal morphology, and coloration. It is distinguished from this species by much more transverse antennomeres IV-V, coarser punctation of the forebody, coarser and much less dense punctation of the abdomen, a longer metatarsomere I, and particularly by the completely different shapes of the aedeagus and of the spermatheca.

Distribution and natural history: The type locality is situated near Askania Nova in Kherson oblast (to the north of the Krym Peninsula). The specimens were collected on saline soil.

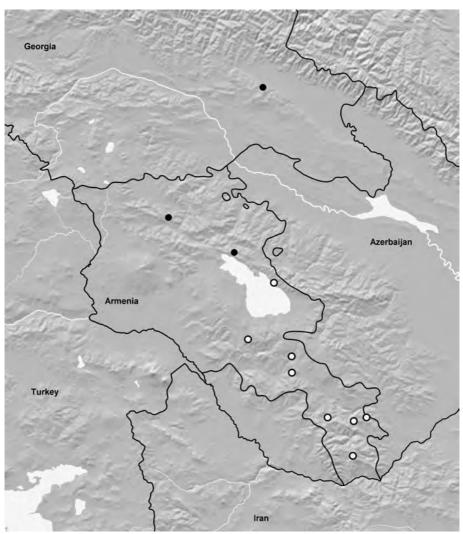
# The Oxypoda fauna of Armenia

Including the material listed below and the records provided by ASSING (2016), the known *Oxypoda* fauna is presently composed of at least 22 species. Six of the 20 named species are currently known only from Armenia. Thirteen species are reported from Armenia for the first time. The material collected during two recent field trips to Armenia also includes 69 specimens of *Baeoglena* THOMSON, 1867. This subgenus is currently in a state of taxonomic confusion and a reliable identification of its species is not possible. For distribution maps of recently described species not illustrated in Maps 1-2 see ASSING (2016).

#### Oxypoda (Oxypoda) vittata MÄRKEL, 1942

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, N Yerevan, NW Hrazdan, 40°34'N, 44°24'E, 2000 m, mixed deciduous forest margin, litter sifted, 28.VI.2016, leg. Assing (cAss); 1♂, S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, slope with small stream and scattered bushes, litter and roots near stream sifted, 29.VI.2016, leg. Assing (cAss); 1♂, ca. 50 km NW Sisian, Jermuk, 39°50'N, 45°40'E, 2110 m, oak forest and forest margin, litter and roots sifted, 30.VI.2016, leg. Assing (cAss); 1 ex., 25 km S Kapan, N Gomarants Pass, 39°02'N, 46°22'E, 2050 m, oak forest with *Acer, Carpinus*, and fern undergrowth, litter and dead wood sifted, 7.VII.2016, leg. Schülke (MNB); 1♀, N Vanadzor, N Pushkin pass, 40°55'N, 44°27'E, 1900 m, mixed forest (oak, pine, etc.), litter sifted, 1.VII.2017, leg. Assing (cAss); 2♀♀, N Vanadzor, S Pushkin pass, 40°54'N, 44°26'E, 1880 m, N-slope with scattered bushes, debris and grass roots sifted, 1.VII.2017, leg. Assing (cAss); 1♂, WSW Dilijan, Kalavan, 40°38'N, 45°06'E, 2100 m, forest at timber line with oak and birch, litter and large fungus on oak sifted, 5.VII.2017, leg. Assing (cAss); 1 ex., Vardenis mountain range SE Vardenis, 40°05'N, 45°49'E, 2330 m, stream valley with *Salix*, litter and roots beneath *Salix* sifted, 27.VI.2017, leg. Schülke (MNB); 1 ex., E Dilijan, road Ttujur-Berd, 40°44'N, 45°18'E, 1930 m, slope with beech and bushes, litter, roots, and mushrooms sifted, 30.VI.2017, leg. Schülke (MNB).

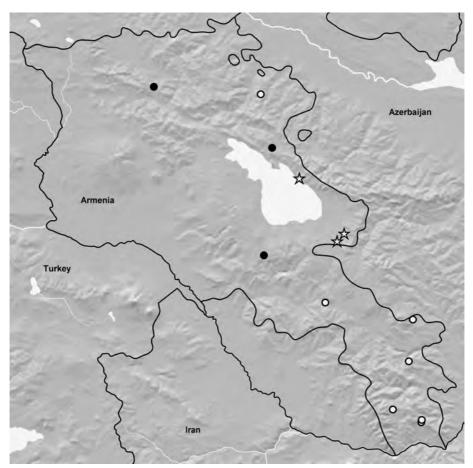
C o m m e n t : According to SCHÜLKE & SMETANA (2015), this widespread species was the sole representative of the genus recorded from Armenia prior to ASSING (2016).



Map 1: Distributions of Oxypoda articollis (black circles) and O. infissoides (white circles).

#### Oxypoda (Oxypoda) longipes MULSANT & REY, 1861

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, 1♀, mountain range W Gavar, 40°21'N, 45°01'E, 2330 m, grassy slope, litter and roots sifted, 26.VI.2017, leg. Assing (cAss); 1♂, mountain range W Gavar, 40°20'N, 44°57'E, 2700 m, debris near snow field and moist litter on slope sifted, 26.VI.2017, leg. Assing (cAss); 2♂♂, 2♀♀, 1 ex., Vardenis mountain range SE Vardenis, 40°05'N, 45°49'E, 2330 m, stream valley with *Salix*, litter and roots beneath *Salix* sifted, 27.VI.2017, leg. Assing & Schülke (cAss, MNB); 1♀, Vardenis mountain range SE Vardenis, 40°03'N, 45°46'E, 2730 m, slope below snowfields, stream bank, debris sifted, 27.VI.2017, leg. Assing (cAss); 1♀, SW Gavar, 40°15'N, 45°02'E, 2570 m, stream valley, moist litter and roots near stream sifted, 4.VII.2017, leg. Assing (cAss).



Map 2: Distributions of *Oxypoda flexa* (black circles), *O. subplicata* (white circles), and *O. verminata* (white stars).

C o m m e n t : The trans-Palaearctic distribution of this nidicolous species ranges from West Europe to East Siberia. The above material represents the first records from Armenia.

# Oxypoda (Oxypoda) ignorata MULSANT & REY, 1861

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♀, 3 exs., 20 km SSE Goris, Shumukh, 39°22'N, 46°25'E, 1720 m, *Quercus* and *Carpinus* forest, litter and dead wood sifted, 5.VII.2016, leg. Assing & Schülke (cAss, MNB); 2 exs., 25 km SW Kapan, 39°04'N, 46°16'E, 2150 m, near stream, litter of *Salix* and debris sifted, 10.VII.2016, leg. M. Schülke (MNB); 1♀, Vardenis mountain range SE Vardenis, 40°03'N, 45°46'E, 2730 m, slope below snowfields, stream bank, debris sifted, 27.VI.2017, leg. Assing (cAss); 2♀♀, NE Sevan Lake, Karmir pass, 40°34'N, 45°18'E, 2150 m, debris, grass, and roots beneath scattered *Sorbus* sifted, 30.VI.20176, leg. Assing (cAss); 1♂, 2♀♀, SW Gavar, 40°15'N, 45°02'E, 2570 m, stream valley, moist litter and roots near stream sifted, 4.VII.2017, leg. Assing (cAss); 1♂, pass N Goris, 39°35'N, 46°20'E, 2110 m, grassy slope with stones, small straw heap sifted, 9.VII.2017, leg. Assing (cAss); 1♀, 2 exs., 30 km NW Sisian, Mt. Karkar, 39°47'N, 45°57'E, 2990 m, straw manure sifted, 11.VII.2017, leg. Assing & Schülke (cAss, MNB); 1 ex., N Vanadzor, S Pushkin pass, 40°54'N, 44°26'E, 1780 m, forest

margin with *Quercus, Fagus, Sorbus*, etc., litter and roots near small stream sifted, 1.VII.2017, leg. Schülke (MNB); 1 ex., SW Gavar, 40°15'1N, 45°10'E, 2170 m, N-slope with scattered bushes, litter and roots roots sifted, 2.VII.2017, leg. Schülke (MNB).

C o m m e n t : The previously known distribution of *O. ignorata* ranged from Central Europe to the Middle East. The above specimens represent the first records from Armenia.

# Oxypoda (Oxypoda) flexa Assing, 2016 (Map 2)

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♂, 1♀, N Vanadzor, S Pushkin pass, 40°54'N, 44°26'E, 1880 m, N-slope with scattered bushes, debris and grass roots sifted, 1.VII.2017, leg. Assing (cAss); 2♂♂, 2♀♀, S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, slope with small stream and scattered bushes, litter and roots near stream sifted, 8.VII.2017, leg. Assing (cAss); 1 ex., NE Sevan Lake, Karmir pass, 40°34'N, 45°18'E, 2150 m, debris, grass, and roots beneath scattered *Sorbus* sifted, 30.VI.20176, leg. Schülke (MNB).

C o m m e n t : This recently described species was previously known only from Sulema pass (ASSING 2016). The currently known distribution is illustrated in Map 2.

#### Oxypoda (Oxypoda) articollis Assing, 2016 (Map 1)

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♀, N Vanadzor, S Pushkin pass, 40°54'N, 44°26'E, 1780 m, forest margin with *Quercus, Fagus, Sorbus*, etc., litter and roots near small stream sifted, 1.VII.2017, leg. Assing (cAss); 2♂♂, WSW Dilijan, Kalavan, 40°38'N, 45°06'E, 2100 m, forest at timber line with oak and birch, litter and large fungus on oak sifted, 5.VII.2017, leg. Assing (cAss).

C o m m e n t : The original description of this recently described and very conspicuous species is based on a unique male holotype from Georgia (ASSING 2016). The above specimens represent the first records from Armenia. The currently known distribution is illustrated in Map 1.

#### Oxypoda (Podoxya) brevicornis (STEPHENS, 1832)

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, N Yerevan, NW Hrazdan, 40°42'N, 44°29'E, 2500 m, grassy W-slope with scattered *Salix*, litter and roots of grass sifted, 26.VI.2016, leg. Assing (cAss); 1 ex., N Yerevan, NW Hrazdan, 40°38'N, 44°28'E, 2110 m, stream valley, mixed deciduous forest, litter and grass roots sifted, 28.VI.2016, leg. Schülke (MNB); 1 ex., N Yerevan, NW Hrazdan, 40°34'N, 44°24'E, 2000 m, mixed deciduous forest margin, litter sifted, 28.VI.2016, leg. Schülke (MNB); 1∂, 1♀, S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, slope with small stream and scattered bushes, litter and roots near stream sifted, 29.VI.2016, leg. Assing (cAss); 1∂, 12, ca. 50 km NW Sisian, Jermuk, 39°50'N, 45°40'E, 2110 m, oak forest, litter and roots sifted, 12.VII.2016, leg. Assing (cAss);  $1^{\circ}_{2}$ , 20 km S Sisian, Dastakert,  $39^{\circ}22'N$ ,  $46^{\circ}01'E$ , 2080 m, grassy slope with scattered bushes, litter and roots beneath bushes sifted, 1.VII.2016, leg. Assing (cAss); 1 ex., 20 km SSE Goris, Shurnukh, 39°22'N, 46°25'E, 1720 m, Quercus and Carpinus forest, litter and dead wood sifted, 5.VII.2016, leg. Schülke (MNB); 1 ex., WSW Kapan, S Meghri Pass, 39°05'N, 46°11'E, 2170 m, oak forest margin, litter (partly moist litter under bushes) sifted, 8.VII.2016, leg. Schülke (MNB); 233, 292, 3 exs., 25 km SW Kapan, 39°04'N, 46°16'E, 2150 m, near stream, litter of *Salix* and debris sifted, 10.VII.2016, leg. Assing & Schülke (cAss, MNB); 1 ex., 25 km SW Kapan, 39°03'N, 46°15'E, 1890 m, stream valley, litter of Salix and other trees sifted, 10.VII.2016, leg. Schülke (MNB); 3 d d, mountain range W Gavar, 40°20'N, 44°57′E, 2700 m, snow field, debris sifted, 26.VI.2017, leg. Assing (cAss); 1∂, 4 exs., mountain range W Gavar, 40°20'N, 44°57'E, 2700 m, debris near snow field and moist litter on slope sifted, 26.VI.2017, leg. Assing & Schülke (MNB); 1∂, 2♀♀, 1 ex., Vardenis mountain range SE Vardenis, 40°05'N, 45°49'E, 2330 m, stream valley with *Salix*, litter and roots beneath *Salix* sifted, 27.VI.2017, leg. Assing & Schülke (MNB);  $5\sqrt[3]{}$ , 2qq, 9 exs., Vardenis mountain range SE Vardenis, 40°03'N, 45°46'E, 2730 m, slope below snowfields, stream bank, debris sifted, 27.VI.2017, leg. Assing & Schülke (cAss, MNB);  $1\sqrt[3]{}$ , 2qq, 1 ex., NE Sevan Lake, Karmir pass,

40°34'N, 45°18'E, 2150 m, debris, grass, and roots beneath scattered Sorbus sifted, 30.VI.20176, leg. Assing & Schülke (cAss, MNB); 1∂, 229, 1 ex., N Vanadzor, S Pushkin pass, 40°54'N, 44°26'E, 1780 m, forest margin with Quercus, Fagus, Sorbus, etc., litter and roots near small stream sifted, 1.VII.2017, leg. Assing & Schülke (cAss, MNB); 1 ex., SW Gavar, 40°15'N, 45°10'E, 2170 m, N-slope with scattered bushes, litter and roots roots sifted, 2.VII.2017, leg. Schülke (MNB); 1 $\circ$ , ENE Dilijan, Hovk, 1290 m, 40°48'N, 45°01'E, stream valley, moist litter near stream sifted, 3.VII.2017, leg. Assing (cAss); 6 $\circ$ , 3 $\circ$ , 5 ex., SW Gavar, 40°15'N, 45°02'E, 2570 m, stream valley, moist litter and roots near stream sifted, 4.VII.2017, leg. Assing & Schülke (cAss, MNB); 1♀, 2 exs., WSW Dilijan, Kalavan, 40°38'N, 45°06'E, 1960 m, forest with Quercus, Betula, and Carpinus, litter sifted, 5.VII.2017, leg. Assing & Schülke (cAss, MNB); 13, pass road E Ijevan, 40°52'N, 45°13'E, 1790 m, forest with old Quercus and Carpinus, litter and roots sifted, 6.VII.2017, leg. Assing (cAss); 19, S Spitak, 40°46"N, 44°16'E, 2000 m, deforested stream valley, bank of small stream, roots and moss sifted, 7.VII.2017, leg. Assing (cAss); 13, 3  $\bigcirc$  S Spitak, 40°46'N, 44°16'E, 2070 m, deforested stream valley with scattered trees and bushes, litter and roots beneath small trees and bushes sifted, 7.VII.2017, leg. Assing (cAss); 1 ex., SE Spitak, 40°48'N, 44°18"E, 1840 m, oak forest margin, litter and roots sifted, 7.VII.2017, leg. Schülke (MNB);  $2^{\circ}_{\circ}, 4_{\varphi}_{\varphi}$ , S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, slope with small stream and scattered bushes, litter and roots near stream sifted, 8.VII.2017, leg. Assing (cAss);  $1^{\circ}_{\downarrow}$ , 40 km NW Sisian, Vorotan Pass, 39°42'N, 45°41'E, 2090 m, grassy slope with scatteres bushes, litter, debris, and moss sifted, 8.VII.2017, leg. Assing (cAss); 17, pass N Goris, 39°35'N, 46°20'E, 2110 m, grassy slope with stones, mouse nest under stone sifted, 9.VII.2017, leg. Assing (cAss); 333, 322, 1 ex., pass N Goris, 39°36'N, 46°19'E, 1990 m, N-slope with small stream valleys with and without water, litter, debris, and moss sifted, 9.VII.2017, leg. Assing & Schülke (cAss, MNB); 2♂♂, 2♀♀, pass N Goris, 39°36'N, 46°19'E, 1990 m, N-slope with small stream valleys with water, litter, debris, and moss sifted, 10.VII.2017, leg. Assing (cAss); 1 ex., SW Goris, ESE Tatev, 39°22'N, 46°16'E 1730 m, margin of mixed deciduous forest (Quercus, Carpinus, Acer, etc.), litter and debris in or near small ditch near road sifted, 13.VII.2017, leg. Schülke (MNB); 233, 19, 5 exs., SW Goris, ESE Tatev, 39°22'N, 46°17'E, 1950 m, mixed deciduous forest (Quercus, Carpinus, Acer, etc.), stream valley, moist litter near small stream sifted, 13.VII.2017, leg. Assing & Schülke (cAss, MNB).

C o m m e n t : *Oxypoda brevicornis* is widespread and common across the Palaearctic region, but was previously unknown from Armenia.

#### Oxypoda (Sphenoma) abdominalis (MANNERHEIM, 1830)

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♂, N Yerevan, W Hrazdan, 40°31'N, 44°31'E, 2020 m, grassy slope with scattered oak, litter and roots sifted, 25.VI.2016, leg. Assing (cAss); 1♀, WSW Kapan, S Meghri Pass, 39°06'N, 46°11'E. 2310 m, oak forest near tree line, oak litter sifted, 6.VII.2016, leg. Assing (cAss); 1♂, 20 km Kapan, W Tsav, 39°03'N, 46°26'E, 1170 m, stream valley, litter and flood debris near stream sifted, 9.VII.2016, leg. Assing (cAss).

C o m m e n t : This widespread and common trans-Palaearctic species was previously unknown from Armenia.

#### Oxypoda (Sphenoma) subplicata Assing, 2016 (Map 2)

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, pass road E Ijevan, 40°52'N, 45°13'E, 1790 m, forest with old *Quercus* and *Carpinus*, litter and roots sifted, 6.VII.2017, leg. Assing (cAss); 1♂, 7♀♀, pass N Goris, 39°36'N, 46°19'E, 1990 m, N-slope with small stream valleys with and without water, litter, debris, and moss sifted, 9.VII.2017, leg. Assing (cAss); 1 ex., 40 km NW Sisian, Vorotan Pass, 39°42'N, 45°41'E, 2090 m, grassy slope with scatteres bushes, litter, debris, and moss sifted, 8.VII.2017, leg. Schülke (MNB); 2 exs., SW Goris, ESE Tatev, 39°22'N, 46°17'E, 1950 m, mixed deciduous forest (*Quercus, Carpinus, Acer*, etc.),stream valley, moist litter near small stream sifted, 13.VII.2017, leg. Schülke (MNB).

C o m m e n t : *Oxypoda subplicata* was previously known from three localities to the south and the southwest of Kapan, South Armenia (ASSING 2016). The currently known distribution is illustrated in Map 2.

#### Oxypoda (Sphenoma) vicina KRAATZ, 1858

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 13♂♂, 20♀♀, 8 exs., S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, slope with small stream and scattered bushes, litter and roots near stream sifted, 29.VI.2016, leg. Assing & Schülke (cAss, MNB); 299, S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, rocky slope with grass, moss, and fern, roots and moss sifted, 29.VI.2016, leg. Assing (cAss); 1 ex., N Yerevan, W Hrazdan, 40°31'N, 44°31'E, 2020 m, grassy slope with scattered oak, litter and roots sifted, 25.VI.2016, leg. Schülke (MNB); 200, 200, 5 exs., 35 km NW Sisian, 39°41'N, 45°47'E, 2070 m, stream valley, litter beneath bushes near stream sifted, 3.VII.2016, leg. Assing & Schülke (cAss, MNB); 1 ex., 35 km NW Sisian, 39°41'N, 45°47'E, 2080 m, swampy meadow, debris sifted, 3.VII.2016, leg. Schülke (MNB); 4♂♂, 6♀♀, 1 ex., 25 km SW Kapan, 39°04'N, 46°16'E, 2150 m, near stream, litter of Salix and debris sifted, 10.VII.2016, leg. Assing & Schülke (cAss, MNB); 1∂, 300, 3 exs., Vardenis mountain range SE Vardenis, 40°05'N, 45°49'E, 2330 m, stream valley with *Salix*, litter and roots beneath *Salix* sifted, 27.VI.2017, leg. Assing & Schülke (cAss, MNB); 2133, 179, 8 exs., Sevani mountain range E Sevan lake, Tsapatagh env., 40°24'N, 45°30'E, 2025 m, oak forest margin, litter and roots sifted, 28.VI.2017, leg. Assing & Schülke (cAss, MNB); 2♀♀, NE Sevan Lake, Karmir pass, 40°34'N, 45°18'E, 2150 m, debris, grass, and roots beneath scattered Sorbus sifted, 30.VI.20176, leg. Assing (cAss); 1∂, 5♀♀, S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, slope with small stream and scattered bushes, litter and roots near stream sifted, 8.VII.2017, leg. Assing (cAss); 13, pass N Goris, 39°35'N, 46°20'E, 2110 m, grassy slope with stones, mouse nest under stone sifted, 9.VII.2017, leg. Assing (cAss); 12, 40 km NW Sisian, Vorotan Pass, 39°41'N, 45°45'E, 2140 m, stream valley with Salix, litter and roots sifted, 10.VII.2017, leg. Assing (cAss).

C o m m e n t : *Oxypoda vicina*, a rather common species distributed in the West Palaearctic region from West Europe to Middle Asia, had not been reported from Armenia.

#### Oxypoda (Bessopora) ferruginea ERICHSON, 1839

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♀, N Yerevan, NW Hrazdan, 40°34'N, 44°24'E, 2000 m, pasture, nests of *Formica exsecta* (det. Seifert) and *Lasius flavus* sifted, 28.VI.2016, leg. Assing (cAss); 3♂♂, 2♀♀, 3 exs., 25 km SW Kapan, 39°04'N, 46°16'E, 2150 m, near stream, litter of *Salix* and debris sifted, 10.VII.2016, leg. Assing & Schülke (cAss, MNB); 1♂, 1 ex., Vardenis mountain range SE Vardenis, 40°03'N, 45°46'E, 2730 m, slope below snowfields, stream bank, debris sifted, 27.VI.2017, leg. Assing & Schülke (cAss, MNB); 1♂, 2♀♀, WSW Dilijan, Kalavan, 40°39'N, 45°06'E, 1700 m, calcareous S-slope with stream valley and oak forest, litter and roots sifted, 29.VI.2017, leg. Assing (cAss); 1♂, 1 ex., NE Sevan Lake, Karmir pass, 40°34'N, 45°18'E, 2150 m, debris, grass, and roots beneath scattered *Sorbus* sifted, 30.VI.20176, leg. Assing & Schülke (CAss, MNB); 1♂, 1♀, 40 km NW Sisian, Vorotan Pass, 39°42'N, 45°41'E, 2090 m, grassy slope with scatteres bushes, litter, adebris, and moss sifted, 8.VII.2017, leg. Schülke (MNB).

C o m m e n t : This species is widespread, but rather rare, in the West Palaearctic region. It was previously unknown from Armenia.

#### Oxypoda (Bessopora) flavicornis KRAATZ, 1856

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, ca. 50 km NW Sisian, Jermuk, 39°50'N, 45°40'E, 2110 m, oak forest, litter and roots sifted, 3.VII.2016, leg. Assing (cAss).

C o m m e n t : The above male represents the first record of this widespread and common species from Armenia.

#### Oxypoda (Bessopora) haemorrhoa (MANNERHEIM, 1830)

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, 35 km NW Sisian, 39°41'N, 45°47'E, 2080 m, swampy meadow, debris sifted, 3.VII.2016, leg. Assing (cAss); 4♂♂, 4♀♀, N Vanadzor, S Pushkin pass, 40°54'N, 44°26'E, 1780 m, forest margin with *Quercus, Fagus, Sorbus*, etc., litter and roots near small stream sifted, 1.VII.2017, leg. Assing (cAss); 3♂♂, 3♀♀, SW Goris, ESE Tatev, 39°22'N, 46°17'E, 1950 m, margin of mixed deciduous forest (*Quercus, Carpinus, Acer*, etc.), nest of *Formica exsecta* (det. Seifert) sifted, 13.VII.2017, leg. Assing (cAss).

C o m m e n t : The specimens collected from ant nests are distinguished from the remaining material by a more slender habitus. The aedeagus, however, is identical. The above material represents the first records of this widespread and common species from Armenia.

#### Oxypoda (Bessopora) soror THOMSON, 1855

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♂, N Yerevan, NW Hrazdan, 40°38'N, 44°30'E, 2010 m, mixed deciduous forest, litter and grass roots sifted, 27.VI.2016, leg. Assing (cAss); 18♂♂, 10♀♀, 12 exs., mountain range W Gavar, 40°21'N, 45°01'E, 2250 m, grassy slope, tall herbs and roses, roots and debris sifted, 26.VI.2017, leg. Assing & Schülke (cAss, MNB); 1♂, SE Spitak, 40°48'N, 44°18'E, 1840 m, oak forest margin, litter and roots sifted, 7.VII.2017, leg. Assing (cAss).

C o m m e n t : *Oxypoda soror* is widespread in Europe, but rare. The species was previously unknown from Armenia.

#### Oxypoda (Mycetodrepa) alternans (GRAVENHORST, 1802)

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♀, 20 km SSE Goris, Shurnukh, 39°22'N, 46°25'E, 1720 m, *Quercus* and *Carpinus* forest, litter and dead wood sifted, 5.VII.2016, leg. Assing (cAss); 2 exs., E Dilijan, road Ttujur - Berd, 40°41'N, 45°20'E, 1900 m, moist mixed deciduous forest with *Fagus orientalis, Sorbus*, etc., litter and roots sifted, 30.VI.2017, leg. Schülke (MNB); 7♂♂, 11♀♀, E Dilijan, road Ttujur - Berd 40°44'N, 45°18'E, 1930 m, slope with beech and bushes, litter, roots, and mushrooms sifted, 30.VI.2017, leg. Assing (cAss); 1♂, 3♀♀, WSW Dilijan, Kalavan, 40°38'N, 45°06'E, 2100 m, forest at timber line with oak and birch, litter and large fungus on oak sifted, 5.VII.2017, leg. Assing (cAss).

C o m m e n t : This common and widespread fungicolous species is reported from Armenia for the first time.

#### Oxypoda (Mycetodrepa) formosa KRAATZ, 1856

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♂, E Dilijan, road Ttujur - Berd 40°44'N, 45°18'E, 1930 m, slope with beech and bushes, litter, roots, and mushrooms sifted, 30.VI.2017, leg. Assing (cAss).

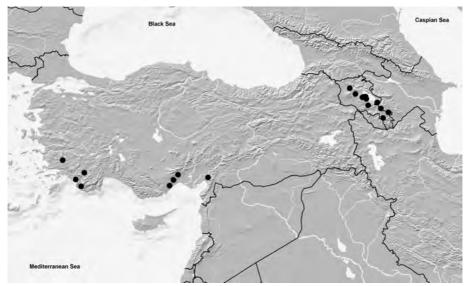
C o m m e n t : The previously known distribution of *O. formosa* ranges from West Europe and Northwest Africa eastwards to Azerbaijan. The above male represents the first record from Armenia.

#### Oxypoda (Thliboptera) recta ASSING, 2006

M a t e r i a 1 e x a m i n e d : <u>Armenia</u>: 1♂, S Martuni, Sulema Pass, 39°58'N, 45°14'E, 2340 m, road margin with bushes, litter and gravel sifted, 29.VI.2016, leg. Assing (cAss); 1♂, 30 km NW Sisian, 39°46'33"N, 45°56'05"E, 2960 m, grassy slope with rocks, roots and debris sifted, 2.VII.2016, leg. Assing (cAss); 2 exs., N Yerevan, W Hrazdan, 40°30'28"N, 44°34'12"E, 1870 m, meadow, roots of grass and herbs sifted, 25.VI.2016, leg. Schülke (MNB); 1 ex., 20 km S Sisian, Dastakert, 39°21'50"N, 46°01'27"E, 2080 m, grassy slope with scattered bushes, *Formica*-nest sifted, 1.VII.2016, leg. Schülke (MNB); 1♀, Gavar, 40°21'01"N, 45°07'45"E, 1950 m, old poplar trees near river, litter and roots of herbs sifted, 25.VI.2017, leg. Assing (cAss); 1♂, mountain range

W Gavar, 40°19'59"N, 44°56'53"E, 2700 m, debris near snow field and moist litter on slope sifted, 26.VI.2017, leg. Assing (cAss);  $2 \bigcirc \bigcirc$ , mountain range W Gavar, 40°20'40"N, 45°00'52"E, 2250 m, grassy slope, tall herbs and roses, roots and debris sifted, 26.VI.2017, leg. Assing (cAss);  $1 \bigcirc$ , Vardenis mountain range SE Vardenis, 40°02'38"N, 45°46'12"E, 2730 m, slope below snowfields, grass and herb roots in shade of large rocks sifted, 27.VI.2017, leg. Assing (cAss);  $1 \bigcirc \bigcirc$ , SW Gavar, 40°15'18"N, 45°09'40"E, 2170 m, N-slope with scattered bushes, litter and roots roots sifted, 2.VII.2017, leg. Assing (cAss);  $2 \bigcirc \bigcirc$ , S Spitak, 40°45'45"N, 44°16'23"E, 2000 m, deforested stream valley, bank of small stream, roots and moss sifted, 7.VII.2017, leg. Assing (cAss);  $1 \bigcirc \bigcirc$ , pass N Goris, 39°34'53"N, 46°19'39"E, 2110 m, grassy slope with stones, small straw heap sifted, 9.VII.2017, leg. Assing (cAss).

C o m m e n t : *Oxypoda recta* was previously known only from Turkey (ASSING 2012). The currently known distribution is remarkably discontinuous (Map 3). For previous records from Turkey see ASSING (2006, 2007).



Map 3: Distribution of Oxypoda recta.

# Oxypoda (Thliboptera) infissoides Assing, 2016 (Map 1)

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 10♂♂, 9♀♀, 10 exs., Sevani mountain range E Sevan lake, Tsapatagh env., 40°24'N, 45°30'E, 2025 m, oak forest margin, litter and roots sifted, 28.VI.2017, leg. Assing (cAss); 1♂, SW Goris, ESE Tatev, 39°20'N, 46°17'E, 1950 m, margin of mixed deciduous forest (*Quercus, Carpinus, Acer*, etc.), litter and roots sifted, 13.VII.2017, leg. Assing (cAss).

C o m m e n t : The original description of this recently described species is based on material from several localities in South Armenia (ASSING 2016). The currently known distribution is illustrated in Map 1.

# Oxypoda (Podoxya) nov.sp.

M a t e r i a l e x a m i n e d : <u>Armenia</u>: 1♀, 30 km NW Sisian, 39°47'N, 45°56'E, 2960 m, grassy slope with rocks, roots and debris sifted, 2.VII.2016, leg. Assing (cAss); 2♀♀, 30 km NW Sisian, Mt. Karkar, 39°47'N, 45°56'E, 3000 m, wetland, moist debris near water sifted, 11.VII.2017, leg. Assing (cAss).

C o m m e n t : The above specimens most likely represent an undescribed species closely allied to *O. lentula* and *O. verminata*. It remains undescribed for want of males.

#### Acknowledgements

My thanks are extended to the colleagues indicated in the material section for the loan of material, to Mark Kalashian and Gayane Karagyan (both Yerevan) for the assistance in organizing two field trips to Armenia (including collecting permits), and to Tigran Ghrejyan (Yerevan) for excellent guidance during a field trip to Armenia in 2017. Benedikt Feldmann proof-read the manuscript.

#### Zusammenfassung

Drei Arten der Gattung Oxypoda MANNERHEIM, 1830 aus Spanien, Armenien und der Ukraine werden beschrieben und abgebildet: Oxypoda (Bessopora) parvioculata nov.sp. (Spanien: Andalusien: Sierra Nevada), O. (Podoxya) verminata nov.sp. (Armenien) und O. breviata nov.sp. (Ukraine). Weitere Nachweise von 18 Arten, darunter 13 Erstnachweise, werden aus Armenien gemeldet. Die derzeit bekannte armenische Oxypoda-Fauna umfasst mindestens 22 Arten, davon eine wahrscheinlich unbeschrieben und mindestens eine nicht identifiziert. Sechs der Arten sind bisher nur aus Armenien nachgewiesen. Die derzeit bekannten Verbreitungsgebiete von sechs Arten werden anhand von Karten illustriert.

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Band/Volume: 0050\_1

Autor(en)/Author(s): Assing Volker

Artikel/Article: <u>Three new species of Oxypoda from Spain, Armenia, and Ukraine,</u> with notes on the fauna of Armenia (Coleoptera: Staphylinidae: Aleocharinae) 111-127