

### TRABAJOS ORIGINALES

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Escarabajos (coleópteros) de Perú: un reconocimiento de las familias. Attelabidae Billberg, 1820

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**Keywords:** Curculionoidea; leaf-rolling weevils; Attelabinae; new species; South American biodiversity; checklist.

**Palabras clave:** Curculionoidea; Attelabinae; Biodiversidad sudamericana; especie nueva; Listado de especies.

#### Abstract

A new species, *Omolabus (Sternolaboides) sokolovi* Legalov n. sp. from Satipo, Central Peru, is described. New data for *Hybolabus ater* (Olivier, 1789), *Omolabus (Perulabus) peruanus* Legalov, 2004, *O. (Pseudomolabus) westerduijni* Legalov, 2008 and *O. (Sternolaboides) ecuadorensis* Legalov, 2007 are recorded. A verified species checklist of Peruvian Attelabidae based on literature and specimen examinations is presented. Distributions of 18 species from eight genera of two tribes found in the fauna of Attelabidae from Peru are given.

#### Resumen

Se describe una nueva especie, *Omolabus (Sternolaboides) sokolovi* Legalov n. sp. de Satipo, centro de Perú. Se registran nuevos datos para *Hybolabus ater* (Olivier, 1789), *Omolabus (Perulabus) peruanus* Legalov, 2004, *O. (Pseudomolabus) westerduijni* Legalov, 2008 y *O. (Sternolaboides) ecuadorensis* Legalov, 2007. Basada en la literatura y exámenes de muestras, se elabora una lista de las 18 especies peruanas de Attelabidae, pertenecientes a ocho géneros de dos tribus, también se presentan sus distribuciones en Perú.

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## Introduction

Curculionid beetles have been poorly studied in Peru. There are many separate descriptions of species (Erichson 1847; Kirsch 1874; Voss 1954; Howden 2001; Hespeneheide 2018; etc.). General information about the species of Peru is provided by Wood and Bright (1992), Wibmer and O'Brien (1986), Rheinheimer (2004), and Sforzi and Bartolozzi (2004). Recently, checklists of some groups (Brentidae, Scolytinae, Platypodinae) were compiled as part of the 'Beetles of Peru' (see Chaboo 2015; Kirkendall 2017; Mantilleri et al. 2017; Smith et al 2017).

The leaf-rolling weevils, or family Attelabidae, are geographically widespread (Legalov 2007, 2008a, 2008b, 2010) and currently comprise more than 170 genera and about 1300 species in the world. Attelabidae includes two subfamilies, Attelabinae and Apoderinae and it is represented in the New World by the subfamily Attelabinae with three tribes. Data on Attelabidae from Peru are published by Kirsch (1874), Voss (1925, 1929, 1937), Legalov (2004, 2007, 2008a) and Hamilton (2005).

As their common name suggests, leaf-rolling weevils actually cut leaves of host trees and roll the leaves into tubes (called "nidus") where they live and eat. The adult cuts the mid-rib of the leaf, lets it go limp, then bits along the lower surface to make notches where it folds the leaf with its legs (Kôno 1930; Legalov 2007). The largest number of species of Attelabidae examined develops on cosmopolitan and tropical plant families. In all the zones, the richest fauna of Attelabidae was found on representatives of such widespread families as Rosaceae and Fagaceae, and also on cosmopolitan Betulaceae. Fagaceae, Myrtaceae, and Lauraceae are very important food sources for tropical species (Legalov 2005). Biology of Attelabidae is summarized in Legalov (2007).

The genus *Omolabus* includes 76 species distributed in Central and South America but absent in the West Indies (Voss 1925; Hamilton 2005; Legalov 2007, 2008b). Species of the genus have been reproductively associated with plants from families Anacardiaceae, Myrtaceae, Tiliaceae and Euphorbiaceae (Voss, 1953; Hamilton 2005). Larvae develop in curled fragments of leaves (Wheeler et al. 2013).

In this article, I describe a new species and present the first checklist of the Attelabidae of Peru. This is another installment in Caroline Chaboo's Beetles of Peru' project.

## Material and methods

The studied specimens are kept at the Museo de Historia Natural, San Marcos University (Peru: Lima) - MUSM, Institute of Systematic and Ecology of Animals (Russia: Novosibirsk) - ISEA, collection of A.V. Korshunov (Russia: Kemerovo) - KKC, collection of E.V. Obidin (Kazakhstan: Temirtau) - EOC, Zoological Museum of Moscow State University (Russia: Moscow) - ZMM, Lund University (Sweden: Lund); Museo Civico di Storia Naturale "Giacomo Doria" (Italy: Genova), Museum für Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden (Germany: Dresden), Natural History Museum (UK: Lon-

don); Petr Kresl Collection (Czech Republic: Janovice nad Uhlovou), Zoological Institute of Russian Academy of Sciences (Russia: St. Petersburg). Description, body measuring, and photographs were performed using the Zeiss Stemi 2000-C dissecting stereomicroscope.

## Results

Nineteen species from eight genera of two tribes are documented for the fauna of Attelabidae from Peru. Below, I describe a new species based on 9 specimens. Locality records for all 18 species now documented in Peru are available in the original citations. Future field collections and study of specimens from more museums may uncover more diversity.

### Description of new species

#### *Omolabus (Sternolaboides) sokolovi* Legalov, new species

(Figs. 1 – 5)

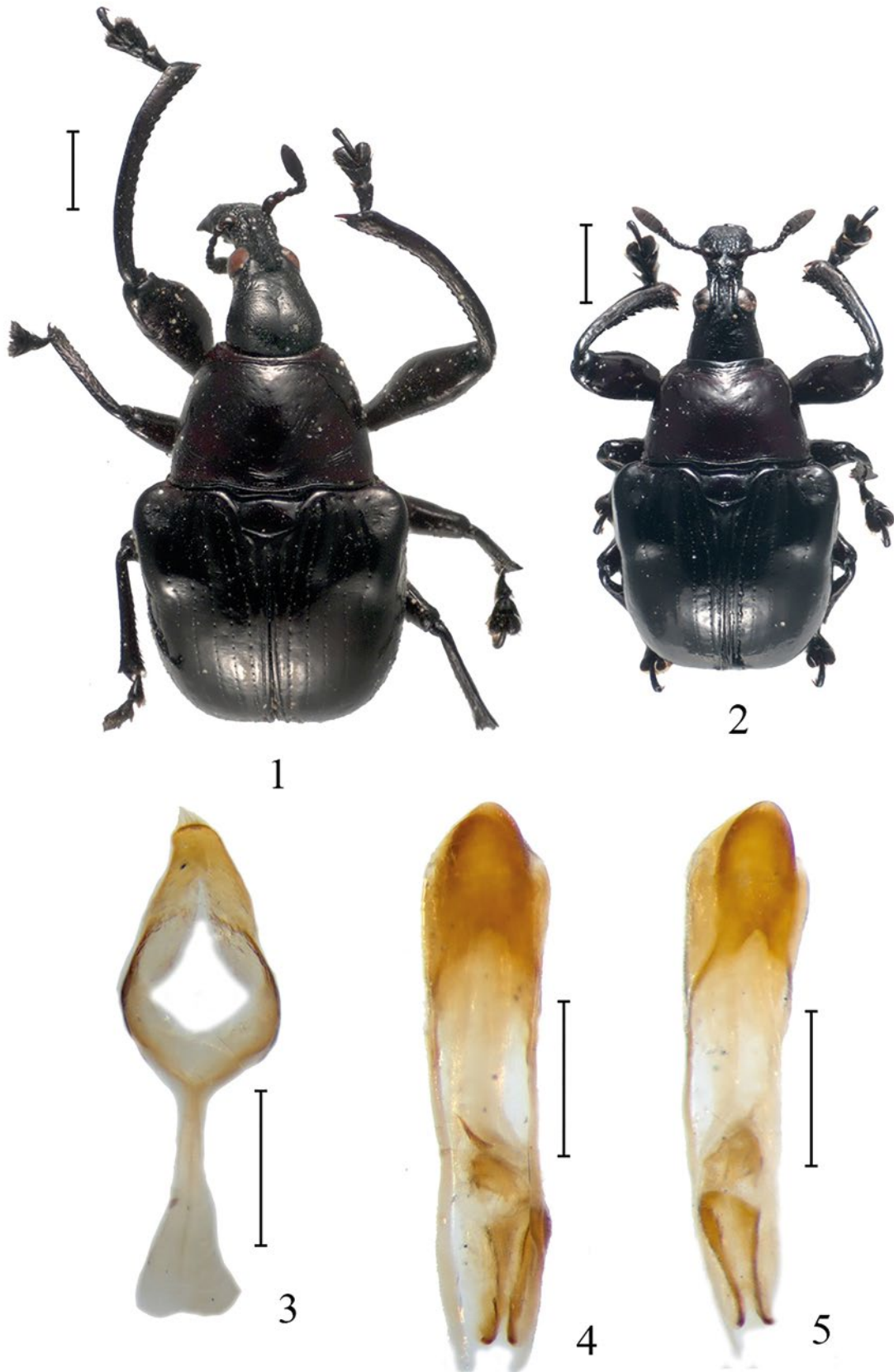
**Diagnosis.** The new species is very similar to *Omolabus (Sternolaboides) bogotensis* Legalov, 2007 from Colombia but differs in the elytra weakly narrowed to apex and wider pronotum. It is distinguished from *O. (S.) ecuadorensis* in the distinct dorsal posthumeral hump-like protuberance on the elytra, weaker convex pronotum and form (narrow and long) of the basal sclerite of the endophallus.

**Description.** Body black, lustrous, naked. Pronotum usually brownish or brown.

**Male:** Head conical, elongate, distinctly widened at base. Rostrum quite long, arcuate, widened to apex, densely punctate, with two longitudinal striae from antennal insertion to base, with apico-lateral denticulate on each side. Antennae inserted near middle dorso-laterally. Eyes large, oval, weakly convex. Forehead narrow, weakly concave, sparsely punctate. Temples elongate, weakly transversely wrinkled. Vertex flattened, finely transversely wrinkled. Antennae long, reaching temples. Antennomere 1 oval. Antennomere 2 oval, slightly shorter and narrower than antennomere 1. Antennomeres 2-8 conical. Antennomere 3 shorter and narrower than antennomere 2. Antennomere 4 shorter and equal in wide to antennomere 3. Antennomere 5 shorter and slightly wider than antennomere 4. Antennomere 6 slightly shorter than Antennomere 5. Antennomere 7 slightly wider than antennomere 6. Antennomere 8 distinctly wider than Antennomere 7. Club compact, 0.6 times as long as antennomeres 1 – 8 combined. Antennomeres 9 and 10 subequal. Antennomere 11 distinctly wider than antennomere 10.

Pronotum almost conical, widest at base. Sides almost straight. Disk convex, sparsely punctate, near slightly transversely wrinkled. Scutellum almost rectangular, wide.

Elytra slightly longer than wide, with dorsal posthumeral hump-like protuberance. Greatest width in humeri. Humeri strongly convex. Intervals flat, almost smooth. Striae distinct, without deep points.



**Figures 1 – 5. *Omolabus (Sternolaboides) sokolovi* Legalov, new species.** 1) habitus, dorsally, holotype. 2) habitus, dorsally, paratype, female. 3) tegmen, dorsally, holotype. 4) aedeagus, dorsally, holotype. 5) aedeagus, ventrally, holotype.

Precoxal portion of prosternum long, transversely wrinkled, concave in middle. Procoxal cavities contiguous. Postcoxal portion short. Metaventrite slightly longer than metacoxa. Metanepisternum wide, finely punctate. Metepimera wide-triangular, punctate.

Abdomen convex, punctate. Ventrites subequal in length. Pygidium convex, densely punctate.

Legs long. Forelegs elongated. Profemora enlarged. Protibiae long, weakly curved, with long mucro. Meso- and metatibiae shorter, weakly biconcave, weakly expanded to apex. Tarsi long. Tarsomere 1 long-conical, longer than tarsomere 2. Tarsomere 2 wide-conical, flattened. Tarsomere 3 bilobed. Tarsomere 5 elongate. Claws long, fused at base.

Length of body (without rostrum): 5.2 – 6.0 mm. Length of rostrum: 1.1 – 1.4 mm.

Female: Rostrum shorter. Prementum without tooth. Antennae inserted closer to rostrum base. Temples shorter. Precoxal part of prosternum shorter. Tibiae with mucro and premucro. Protibiae shorter and wider.

Length of body (without rostrum): 4.7 – 5.4 mm. Length of rostrum: 0.8 – 1.1 mm.

**Type material.** Holotype, male (MUSM), PERU, Junin Dep., Satipo Prov., near Rio Venado vill., 11°11'787"S, 74°46'168"W, 1122 m, 23.XI-6.XI.2014, A. Sokolov. Paratype: female (ISEA), female (MUSM), idem; male (EOC), idem, 21.X.2013; 4 males (ISEA), female (EOC), 22.IX-18.X.2017, idem; female (ISEA), female (KKC), idem, 15-28.I.2016, A. Korshunov; female (ZMM), Satipo env., Calabaza vill., 2500 m, V.2004, A. Sokolov.

**Etymology.** The species named in honour of Dr. Alexander V. Sokolov (Russia), who collected this species.

**Remarks.** The new species belongs to the genus *Omolabus* based on the femora without teeth of males and weakly convex eyes. It is placed in the subgenus *Sternolaboides* Legalov, 2007 because the humeri without tooth, apex of the elytra without blades, pronotum without protuberance or tooth near apex, rostrum shorter than pronotum, and the basal sclerite of the endophallus almost symmetric.

#### Key to Species of Subgenus *Sternolaboides*

1. Elytra with distinct dorsal posthumeral hump-like protuberance. **2**
- Elytra without dorsal posthumeral hump-like protuberance. **3**
2. Elytra weakly narrowed to apex. Pronotum wider, width in middle 1.5 times as long as length. Peru. ***Omolabus sokolovi*** Legalov, new species
- Elytra more narrowed to apex. Pronotum narrower, width in middle 1.4 times as long as length. Colombia. ***Omolabus bogotensis*** Legalov, 2007
3. Elytra narrowed to apex. Brazil. ***Omolabus curticornoides*** Legalov, 2007
- Elytra almost rectangular. **4**
4. Pronotum more densely punctate, with two impressions. Brazil. ***Omolabus niger*** Legalov, 2007
- Pronotum smooth or sparsely punctate. **5**
5. Eyes slightly convex. Protibia wider. Bolivia. ***Omolabus bolovicus*** Legalov, 2007
- Eyes stronger convex. Protibia narrower. **6**
6. Pronotum slightly narrowed to apex. Armament of endophallus (Fig. 8). Ecuador, Peru. ***Omolabus ecuadorensis*** Legalov, 2007
- Pronotum strongly narrowed to apex. **7**
7. Pronotum stronger narrowed to apex. Armament of endophallus (Fig. 6). Columbia, Peru. ***Omolabus curticornis*** Voss, 1929
- Pronotum weaker narrowed to apex. Armament of endophallus (Fig. 7). Brazil. ***Omolabus bowringi*** Voss, 1938



**Figures 6 – 8.** *Omolabus (Sternolaboides)* ssp., armament of the endophallus. 6). *O. curticornis*, 7). *O. bowringi*, lectotype, 8). *O. ecuadorensis*.

New Material

*Hybolabus ater* (Olivier, 1789)

Material. female (KKC), PERU, Junin Dep., Satipo Prov., near Rio Venado vill., 11°11'787"S, 74°46'168"W, 1122 m, 15-28.I.2016, A. Korshunov; male (ISEA), PERU, Loreto, Padre Cocha, 20.I.2007, R. Westeruijn.

*Omolabus (Perulabus) peruanus* Legalov, 2004

Material. Male (ZMM), PERU, Iquitos env., Botanical garden, 5-8.VI.2004, A. Sokolov.

*Omolabus (Pseudomolabus) westerduijni* Legalov, 2008

Material. Female (ZMM), PERU, Iquitos env., Botanical garden, 5-8.VI.2004, A. Sokolov.

*Omolabus (Sternolaboides) ecuadorensis* Legalov, 2007

Material. Female (ZMM), PERU, Iquitos env., Botanical garden, 5-8.VI.2004, A. Sokolov.

Check list

TRIBE EUSCELINI VOSS, 1925  
SUBTRIBE CLINOLABINA LEGALOV, 2003  
GENUS CLINOLABUS JEKEL, 1860

1. *Clinolabus flavomarginatus* Voss, 1925  
(Fig. 9, Madre de Dios, square)

=*Clinolabus boliviensis* Janczyk, 1960

SUBTRIBE EUSCELINA VOSS, 1925  
GENUS VOSSIEUSCELUS LEGALOV, 2007

2. *Vossieuscelus huanucus* (Legalov, 2004)  
(Fig. 9, Huánuco, circle)

3. *Vossieuscelus lineatus* (Voss, 1925)  
(Fig. 9, Pasco, Huánuco, rhombus)  
= *Euscelus lineatus* f. *geniculata* Voss, 1937

4. *Vossieuscelus loretoensis* Legalov, 2008  
(Fig. 11, Loreto, circle)

GENUS ALLEUSCELUS VOSS, 1937

5. *Alleuscelus (Alleuscelus) violaceipennis* Voss, 1937  
GENUS EUSCELUS SCHOENHERR, 1833

6. *Euscelus (Meteusceliodes) peruanus* Voss, 1925  
(Fig. 9, Madre de Dios, square)

GENUS PHELEUSCELUS JEKEL, 1860

7. *Pheleuscelus (Pheleusceloides) subimpressus* (Voss, 1925)  
(Fig. 9, Loreto, hexahedron)  
= *Euscelus subimpressus* f. *testaceicornis* Voss, 1937

GENUS EMPHYLEUSCELUS VOSS, 1925

8. *Emphyleuscelus (Emphyleuscelus) iquitensis* (Legalov, 2004)  
(Fig. 9, Loreto, triangle)

TRIBE HYBOLABINI VOSS, 1925  
SUBTRIBE HYBOLABINA VOSS, 1925  
GENUS HYBOLABUS JEKEL, 1860

9. *Hybolabus ater* (Olivier, 1789)  
(Fig. 10, Loreto, circle)

= *Attelabus atratus* Fabricius, 1801  
= *Attelabus cupripennis* Perty, 1832  
= *Attelabus variabilis* Gyllenhal, 1833  
= *Attelabus sallei* Jekel, 1860  
= *Hybolabus ater* ssp. *peruanus* Voss, 1925  
= *Hybolabus ater* f. *ruficollis* Voss, 1938



Figure. 9. Distribution of Attelebinae. *Vossieuscelus huanucus*, circle. *Clinolabus flavomarginatus*, square. *Euscelus peruanus*, *Omolabus lituratus* and *O. rubellus*, square. *Vossieuscelus lineatus*, rhombus. *Pheleuscelus subimpressus*, hexahedron. *Emphyleuscelus iquitensis* and *Omolabus peruanus*, triangle.

SUBTRIBE OMOLABINA LEGALOV, 2003  
GENUS NEOXESTOLABUS VOSS, 1943

**10. *Neoxestolabus (Hamiltonilabus) megalomus*** (Hamilton, 2005)  
(Fig. 11, Loreto, circle)

GENUS OMOLABUS JEKEL, 1860

**11. *Omolabus (Perulabus) peruanus*** Legalov, 2004  
(Fig. 9, Loreto, triangle)

**12. *Omolabus (Pseudomolabus) tricolor*** (Kirsch, 1874)  
(Fig. 11, Pasco, Huánuco, square)

**13. *Omolabus (Pseudomolabus) westerduijni*** Legalov, 2008  
(Fig. 12, Loreto, circle)

**14. *Omolabus (Paralabus) lituratus*** Voss, 1938  
(Fig. 9, Madre de Dios, square)

**15. *Omolabus (Xestolabus) rubellus*** (Voss, 1925)  
(Fig. 9, Madre de Dios, square)

**16. *Omolabus (Sternolaboides) sokolovi*** Legalov, new species  
(Fig. 12, Junín, hexahedron)

**17. *Omolabus (Sternolaboides) curticornis*** Voss, 1929  
(Fig. 10, Madre de Dios, rhombus)

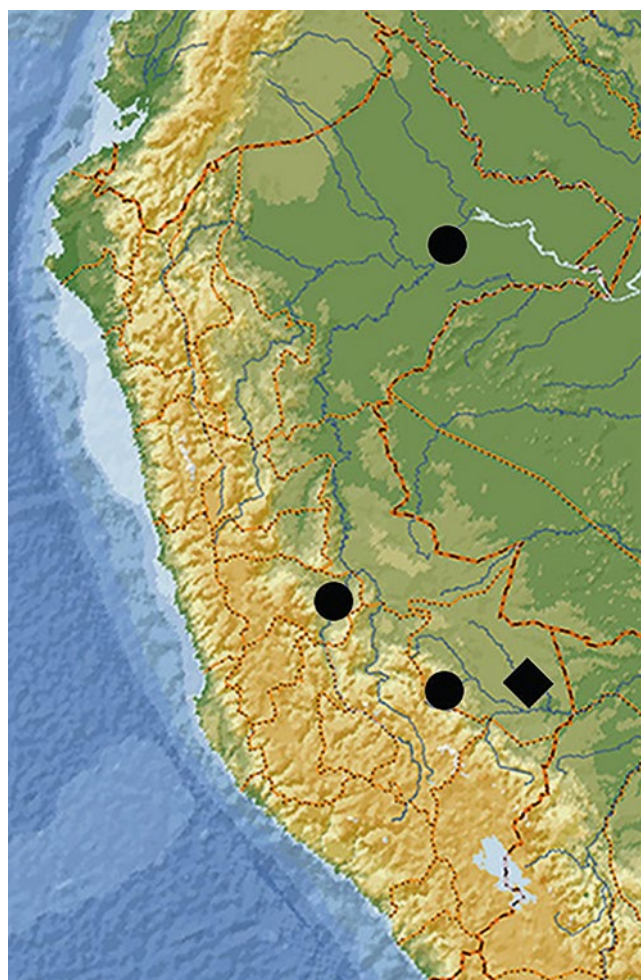
**18. *Omolabus (Sternolaboides) ecuadorensis*** Legalov, 2007  
(Fig. 12, Loreto, circle)

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**Figure 10.** Distribution of Hybolabini. *Hybolabus ater*, circle. *Omolabus curticornis*, rhombus.



**Figure 11.** Distribution of *Omolabus*. *Vossiuscelus loretoensis* and *Neoxestolabus megalomus*, circle. *Omolabus tricolor*, square.

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**Figure 12.** Distribution of Attelabinae. *Omolabus ecuadorensis* and *O. westerduijni*, circle. *O. sokolovi* new species, hexahedron.

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