

## New species of Eulophidae from the Republic of Moldova (Hymenoptera)

V.V. Kostjukov & A.V. Tuzlikova

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Two new species of the genus *Baryscapus* Förster, 1854 (*B. moldovicus* sp. n. and *B. andriescui* sp. n.) and one species of the genus *Aprostocetus* Westwood, 1833 (*A. grahami* sp. n.) are described from the Republic of Moldova. The hosts of all the new species are larvae of Curculionidae. Larvae of this coleopterous family were not recorded earlier as hosts for the genera *Baryscapus* and *Aprostocerus* in the Republic of Moldova.

V.V. Kostjukov, All-Russian Scientific Research Institute of Biological Plant Protection, Krasnodar-39, 350039, Russia.

A.V. Tuzlikova, Institute of Biological Plant Protection, Academy of Sciences of the Republic of Moldova, Chişinău, Moldova.

Two new species of the genus *Baryscapus* Förster, 1854 and one species of the genus *Aprostocetus* Westwood, 1833, which parasitize larvae and pupae of beetles from the family Curculionidae, were found in the collection of the Zoological Institute of the Academy of Sciences, Republic of Moldova, Chişinău (ZIM).

The following abbreviations are used in the text: POL, postocellar line; OOL, ocular-ocellar line;  $F_1$ - $F_3$  ( $F_4$ ), funicle segments of flagellum;  $C_1$ - $C_3$ , claval segments of flagellum; *M*, marginal vein; *SM*, submarginal vein; *ST*, stigmal vein.

### *Aprostocetus grahami* sp. n. (Figs 1, 2)

*Holotype*. ♀, Moldova, Chişinău, Gratişti, 10.VI.1988 (Poiras), ZIM.

*Description. Female*. Head 0.87 times as narrow as thorax, about 1.1 times as long as wide, as wide as high. POL/OOL = 1.5. Eye about 1.4 times as long as wide. Malar space 0.8 times as high as eye length; sulcus slightly curved. Mouth about 1.2 times as wide as malar space. Antenna (Fig. 1) with scapus 0.9 times as long as eye, reaching median ocellus. Pedicellus and flagellum combined 1.2 times as long as width of mesoscutum; pedicellus twice as long as wide and as long as  $F_1$ . Funicular segments subequal in

length;  $F_1$  twice as long as wide. Clava 2.4 times as long as wide, 1.8 times as wide as  $F_3$ , very slightly longer than  $F_2$  and  $F_3$  combined;  $C_1$  as long as wide,  $C_2$  1.15 times as long as wide,  $C_3$  1.2 times as long as wide.

Thorax 1.1 times as long as wide. Pronotum very short. Mid lobe of mesoscutum 1.2 times as wide as long, with very fine median line and three rather short adnotaular setae on each side. Scutellum 1.5 times as wide as long, moderately convex; submedian lines distinctly closer to sub-lateral lines than to each other, curved outwards near fore edge, bounding an area about twice as long as wide; setae equal, about 0.7 times as long as the distance between submedian lines, anterior pair distinctly behind the middle. Dorsellum 2.8 times as wide as long. Propodeum widely and deeply emarginate, 0.8 times as long as dorsellum; median carina distinct; spiracles oval with diameter 0.8 times the length of median carina, nearly touching metanotum; callus with three setae. Legs moderate in length; hind femora 3.7 times as long as wide; midtibial spur 1.1 times as long as basitarsus; 4th tarsal segment as long as basitarsus.

Fore wing (Fig. 2) 2.2 times as long as wide; costal cell 0.8 times as long as *M*; *SM* with 4 dorsal setae; *M* thin, 3.3 times as long as *ST*, its fore edge with 15 setae about 0.6 times as long

**Table 1.** Distinguishing characters for females of *Aprostocetus grahami* sp. n. and *A. domenichinii* Erdős

Character	<i>A. grahami</i>	<i>A. domenichinii</i>
POL/OOL ratio	1.5	1.7
Scapus	0.9 eye length, reaching median ocellus	much shorter than eye, not reaching median ocellus
Claval spine	0.6 times as long as C <sub>3</sub>	about 0.25 times as long as C <sub>3</sub>
Propodeum	median carina strong	median carina thin
Scutellum	submedian lines bounding an area 2.0-2.1 times as long as wide	submedian lines bounding an area 1.3-1.5 times as long as wide
Hind wing	cilia 0.65 times as long as wing width	cilia 0.25-0.33 times as long as wing width
4th tarsal segment	as long as basitarsus	much shorter than basitarsus
Gaster	elongate oval, 2.7 times as long as wide	short oval, 1.1-1.6 times as long as wide
Coloration	body yellow; gaster yellow only at base, brownish yellow with transverse bands; coxae yellow	body black; proximal part of gaster and antennae sulphur yellow; coxae black

as *ST*. Hind wing obtuse, 5.3 times as long as wide; cilia 0.65 times as long as wing width.

Gaster lanceolate, 1.5 times as long as thorax, 1.2 times as long as long as thorax and head combined. Ovipositor sheaths and postcercalae 0.26 times as long as hind tibia; longest seta of each cercus 1.8 times as long as the seta next in length, slightly curved.

Coloration. Head and thorax yellow. Gaster brownish yellow, yellow only at base, with brownish and yellowish transverse bands; ovipositor black. Antennae brownish-yellowish. Legs yellow; 4th tarsal segment of middle and hind legs brownish. Wing veins yellow. Length 1.5 mm.

*Male.* Unknown.

*Host.* Larvae of *Lignyodes* sp. (Curculionidae) on *Fraxinus*.

*Comparison.* The new species is close to *A. domenichinii* Erdős, 1969, differs in the characters listed in Table 1.

*Etymology.* The species is named in honour of Prof. M.V.R. de V. Graham.

### **Baryscapus andriescui** sp. n. (Figs 3, 4)

*Holotype.* ♀, **Moldova**, *Anenii-Noi*, Cimişeni, 1.VII.1986 (Poiras), ZIM.

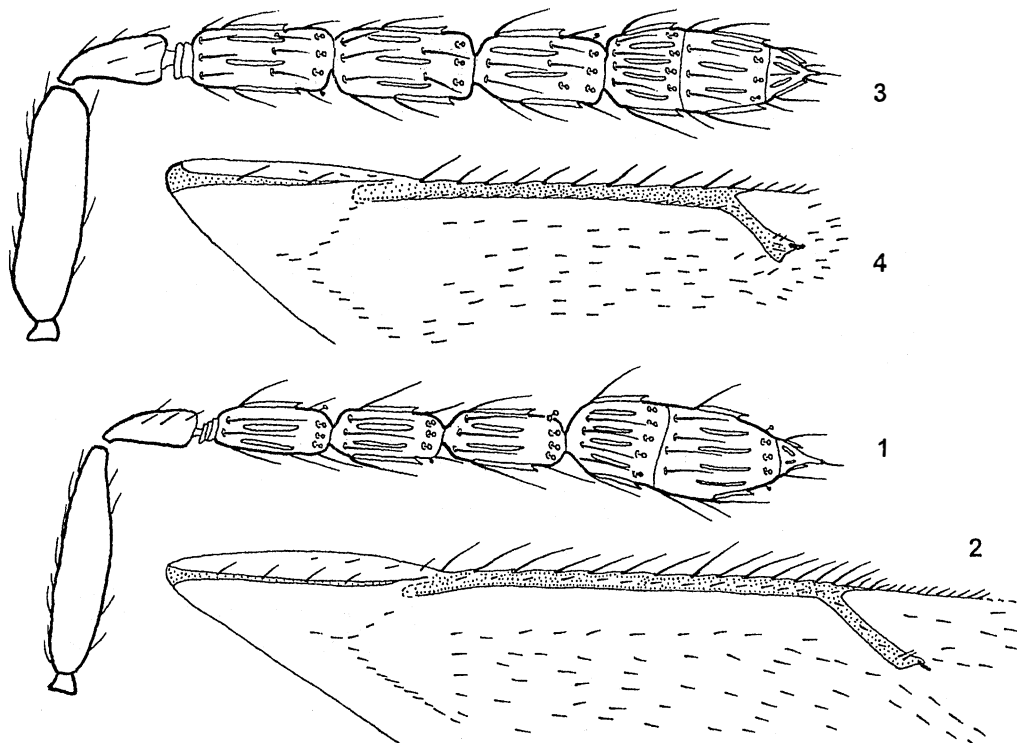
*Paratypes.* 4 ♀, as holotype, same collection.

*Description. Female.* Head as long as wide, 1.2 times as wide as high. Mesoscutum as wide as head. POL/OOL = 2.3-2.5. Malar sulcus 0.6 times as long as eye. Mouth slightly wider than malar

space. Antenna (Fig. 3) with scapus as long as eye, reaching median ocellus. Pedicellus and flagellum combined as long as mesoscutum width; pedicellus 2.3-2.4 times as long as wide and 0.7 times as long as F<sub>1</sub>. Funicular segments subequal in length and 2.0-2.2 times as long as wide. Clava distinctly wider than F<sub>3</sub>, distinctly shorter than F<sub>2</sub> and F<sub>3</sub> combined, 1.5 times longer than F<sub>3</sub> and 2.3 times as long as wide.

Thorax 1.4 times as long as wide. Mid lobe of mesoscutum as long as wide or slightly wider, with fine median line and 6-7 setae on each side (arranged in one row). Scutellum 1.1-1.2 times as wide as long; submedian lines slightly closer to sublateral lines than to each other, bounding an area 2.0-2.1 times as long as wide; posterior pair of setae slightly longer than anterior one, the latter situated in the middle of scutellum. Dorsellum 6 times as wide as long. Propodeum narrowly and moderately deeply emarginate, medially 2.4-2.5 times as long as dorsellum, with strong median carina; spiracles oval, as long as median carina, with raised reticulation; callus with 5-6 setae.

Fore wing (Fig. 4) 2.1-3.1 times as long as wide; costal cell 11-12 times as long as wide; *SM* with 2-4 dorsal setae; *M* about as long as costal cell, 2.9-3.1 times as long as *ST*, its fore edge with 10-12 setae. Hind wing obtuse, 6-7 times as long as wide; cilia 0.10-0.15 times as long as wing width. Legs moderately long and not stout; hind femur 3.5 times as long as wide; midtibial spur 0.7 times as long as basitarsus.



Figs 1-4. 1-2, *Aprostocerus grahami* sp. n., female: 1, antenna; 2, venation of fore wing; 3-4, *Baryscapus andriescui* sp. n., female: 3, antenna; 4, venation of fore wing.

Gaster lanceolate or sublanceolate, acute, 1.2 times as long as thorax. Apices of ovipositor sheaths slightly projecting.

Coloration. Body black-green. Antennae black, except brownish yellow scapes. Tibiae brownish; coxae black-green; femora brown; tarsi yellowish. Wing veins yellowish. Length 2.1-2.4 mm.

*Male.* Unknown.

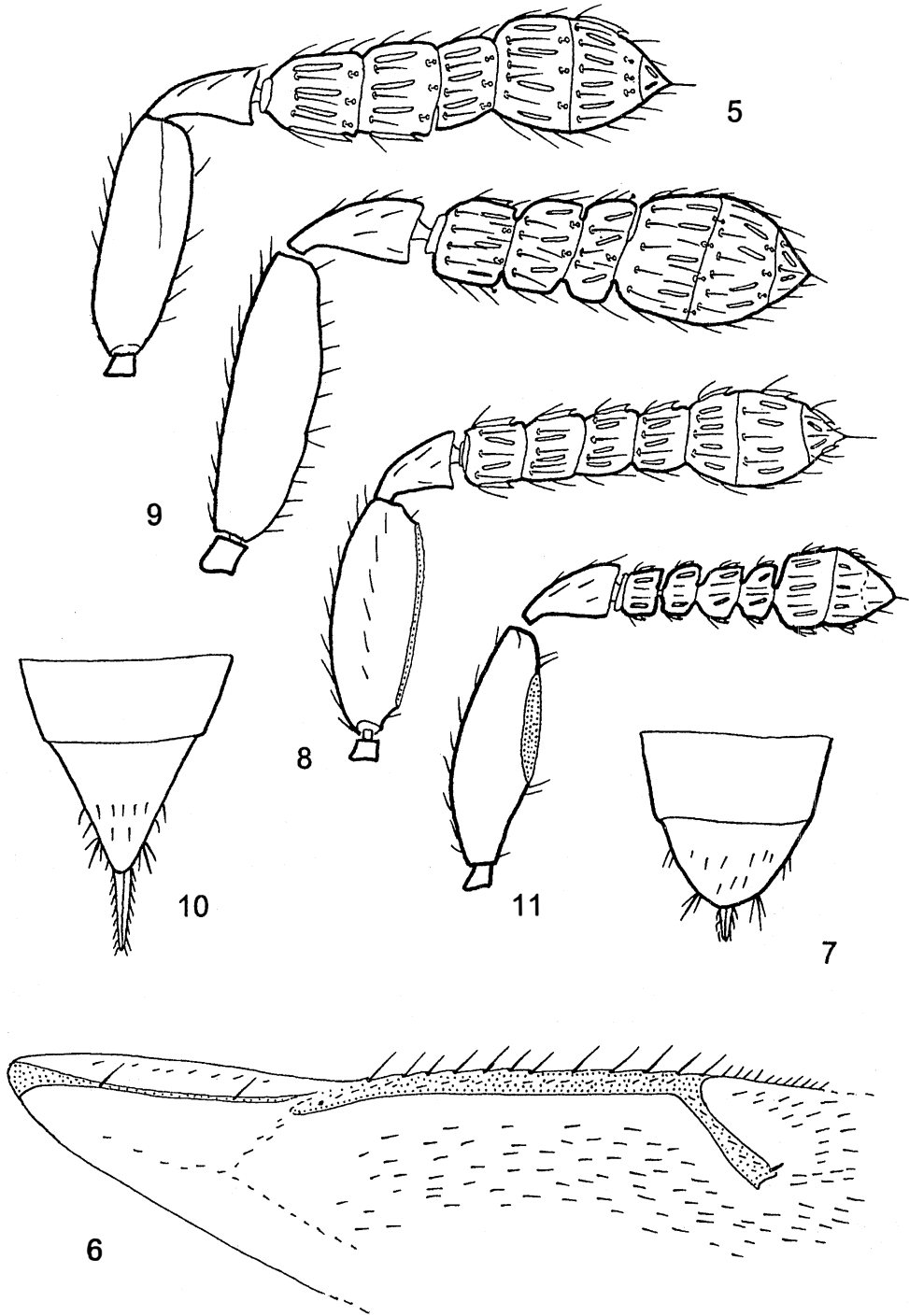
*Host.* Larva of *Stephanites fraxini* (De Geer, 1775) (Curculionidae).

*Comparison.* The new species is close to *B. nigroviolaceus* Nees, 1834, differs in the characters listed in Table 2.

*Etymology.* The species is named after Prof. I. Andriescu.

Table 2. Distinguishing characters for females of *Baryscapus andriescui* sp. n. and *B. nigroviolaceus* Nees

Character	<i>B. andriescui</i>	<i>B. nigroviolaceus</i>
F <sub>1</sub> segment of antenna	2.2 times as long as wide	1.6-1.9 times as long as wide
F <sub>3</sub> segment of antenna	twice as long as wide	1.2-1.5 times as long as wide
Clava of antenna	distinctly shorter than F <sub>2</sub> and F <sub>3</sub> combined	as long as F <sub>2</sub> and F <sub>3</sub> combined or slightly longer
Marginal vein/stigmal vein ratio	2.9-3.1	2.2-2.5
Propodeum	medially 2.4-2.5 times as long as dorsellum	medially somewhat longer than dorsellum
Tarsi	yellowish	cream



**Figs 5-11.** 5-8, *Baryscapus moldovicus* sp. n.; 5-7, female: 5, antenna; 6, venation of fore wing; 7, last tergite and ovipositor, dorsally; 8, male, antenna; 9-11, *B. diaphantus* Walker, 9-10, female: 9, antenna; 10, last tergite, dorsally; 11, male, antenna.

Table 3. Distinguishing characters for *Baryscapus moldovicus* sp. n. and *B. diaphantus* Walker

Character	<i>B. moldovicus</i>	<i>B. diaphantus</i>
♀: POL/OOL ratio	2.6	2.0
♀: F <sub>3</sub> segment of antenna	slightly or distinctly transverse	about 1.5 times as wide as long
♀: Clava of antenna	1.7-1.8 times as long as wide, 1.2-1.3 times as long as F <sub>2</sub> and F <sub>3</sub> combined, but shorter than entire funicle	1.3-1.5 times as long as wide, somewhat longer than F <sub>2</sub> and F <sub>3</sub> combined, nearly as long as entire funicle
♀: Mid lobe of mesoscutum	with setae arranged into 2-3 adnotaular rows	with setae arranged into a band, from narrow to broad (behind the middle)
♀: Propodeum	medially 0.5-0.6 times as long as scutellum	medially 0.3-0.35 times as long as scutellum
♀: Gaster	elongate oval, 1.4-1.6 times as long as thorax	lanceolate, 1.8-2.4 times as long as thorax
♂: Funicular segments	quadrate	transverse
♂: Ventral plaque	0.7-0.9 times as long as scapus	0.5 times as long as scapus
♂: Pedicellus and flagellum combined	as long as mesoscutum width	nearly 0.8 times as long as mesoscutum width

***Baryscapus moldovicus* sp. n.**  
(Figs 5-8)

*Holotype*. ♀, **Moldova**, *Strășani*, Cojușna, 25.VI.1987 (Poiras), ZIM.

*Paratypes*. 9 ♀, 1 ♂, as holotype, same collection.

*Description. Female*. Head 0.93 times as wide as mesoscutum, as wide as high, 2.4-2.7 times as wide as long. POL/OOL = 2.6. Eyes about 1.3 times as long as wide. Malar space 0.7 times as high as eye length. Mouth 1.1 times as wide as length of malar space. Antenna (Fig. 5) with scapus as long as eye, not reaching median ocellus; pedicellus and flagellum combined 0.8 times as long as width of mesoscutum; pedicellus 1.2-1.3 times as long as F<sub>1</sub> and 1.7-1.8 times as long as wide. Funicle proximally clearly stouter than pedicellus; F<sub>1</sub> as long as wide or slightly longer than wide, F<sub>2</sub> as long as wide or very slightly transverse, F<sub>3</sub> more or less transverse. Clava 1.3-1.4 times as wide as F<sub>3</sub>, 1.7-1.8 times as long as wide, 1.2-1.3 times as long as F<sub>1</sub> and F<sub>3</sub> combined. C<sub>1</sub> 1.2 times as wide as long, C<sub>2</sub> 1.2-1.5 times as long as wide, C<sub>3</sub> as long as wide or very slightly transverse.

Thorax 1.3-1.5 times as long as wide, wider than high. Pronotum 0.3-0.4 times as long as mesoscutum. Mesoscutum weakly convex, with median line fine but complete and 2-3 rows of adnotaular setae on each side. Scutellum 1.4-1.5 times as wide as long, rather weakly convex; sub-

median lines closer to sublateral lines than to each other, bounding an area 2.0-2.2 times as long as wide; setae 0.7-0.8 as long as the distance between submedian lines, anterior pair behind the middle of scutellum. Dorsellum 3.5-4.0 times as wide as long. Propodeum medially 1.5-1.6 times as long as dorsellum; median carina strong; spiracles small, circular; callus with 4-5 setae. Hind femora 3.2-3.4 times as long as wide; middle tibia as long as wide, with spur 0.8 as long as basitarsus; fore femora 4.4-4.6 times as long as wide.

Fore wing (Fig. 6) 1.9-2.1 times as long as wide; costal cell subequal to or a little longer than *M*; *SM* with 2-3 dorsal setae; *M* 2.5-2.7 times as long as *ST*, with 11-12 setae along fore edge 0.4 times as long as *ST*; cilia 0.1 times as long as *ST*. Hind wing obtuse, 4.4-4.5 times as long as wide; cilia 0.2 times as long as wing width.

Gaster (Fig. 7) elongate oval, 1.4-1.6 times as long as thorax, 1.2-1.3 times as long as head and thorax combined. Outer part of ovipositor sheaths 0.2-0.3 times as long as hind tibia.

Coloration. Body with a green metallic tint. Scapus black with green metallic tint; flagellum blackish brown with a metallic tint. Tegula green. Coxae and femora (except apices) coloured as body; tibiae brownish, except basal and apical ends; tarsi yellowish, 4th tarsal segment brownish. Wing veins yellowish. Length 1.4-1.6 mm.

*Male*. Differs from female in the following characters: wider scapus of antenna (Fig. 8), ven-

tral plaque 0.7-0.9 times as long as scapus, width of mesoscutum equal to the length of pedicellus and flagellum combined, funicular segments subequal in length, and strongly clavate flagellum. Gaster oblong, about as long as thorax, but narrower. Length 0.9 mm.

*Host.* Larvae of Curculionidae on *Tilia*.

*Comparison.* The new species is close to *B. diaphantus* Walker, 1839 (Figs 9-11), differs in the characters listed in Table 3.

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