

Two new species of the genus *Acerocnema* Becker, 1894 (Diptera: Scathophagidae) from Far East of Russia

Два новых вида рода *Acerocnema* Becker, 1894 (Diptera: Scathophagidae) с Дальнего Востока России

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КЛЮЧЕВЫЕ СЛОВА: Diptera, Scathophagidae, *Acerocnema*, новый вид, определительная таблица, Россия.

ABSTRACT. *Acerocnema gorodkovi* sp.n. and *Acerocnema nitens* sp.n., from the family Scathophagidae (Diptera), are described from Khabarovsk Krai and Primorskiy Krai, Russia. Key for determination of species from Russia is given.

РЕЗЮМЕ. Описаны два новых для науки вида, *Acerocnema gorodkovi* sp.n. и *Acerocnema nitens* sp.n., из семейства Scathophagidae (Diptera), с территории Хабаровского и Приморского краев, Россия. Дан ключ для определения видов рода *Acerocnema* фауны России.

Introduction

Acerocnema Becker, 1894 is one of the small genera within the family Scathophagidae, which until the present time has comprised 11–12 species distributed in the Holarctic Region [Gorodkov, 1986; Vockeroth 1987; Iwasa, 2014]. 7 species are registered in Russia [Stackelberg, 1952; Ozerov, 2006, 2013, 2014, 2015].

The genus *Acerocnema* is characterised by the combination of next characters: arista bare or short pubescent; palpus slender or distinctly spatulate, without strong apical/subapical seta; proepisternum covered with hairs at middle or in anterior part; fore femur ventrally without short black spines; anepisternum covered with setulae usually along dorsal margin and in posterior part only, without setulae posterior to anterior spiracle; katepisternum with one strong seta in posterodorsal

corner; anepimeron bare; postmetacoxal bridge absent; scutellum with two pairs of setae, basal and apical; male sternite 5 usually long and bilobate posteriorly, directed downwardly and perpendicularly to other sternites (Fig. 6).

The specimens examined for this study are deposited in the Zoological Museum, Moscow State University, Russia (ZMUM) and Zoological Institute of Russian Academy of Sciences, St. Petersburg, Russia (ZISP). Terminology follows McAlpine [1981] and Cumming et al. [2009], except that “postpedicel” is used for antennal flagellomere 1 (third antennal segment) [Stuckenberg, 1999].

Descriptions of a new species

Acerocnema gorodkovi, sp.n.

Figs. 1, 3–5.

MATERIAL. Holotype ♂, RUSSIA: Khabarovsk Krai, Malyshevo (48.7317°N 135.6131°E) near Petropavlovka, 13.V.1973, Gorodkov (ZISP).

DESCRIPTION. Male. Length of body 3.6 mm. Length of wing 3.4 mm.

Head in profile higher than wide. Frontal vitta matt, black, but yellow in apical quarter; fronto-orbital plate black, subshining. Face, parafacial and gena yellow. Ocellar triangle black, shining. Postcranium black in upper part and yellowish in lower third, delicately greyish dusted. Height of gena about 4 times less than vertical diameter of eye. Setae: 3 orbitals, 4 frontals,



Figs. 1–5. *Acerocnema gorodkovi*, sp.n., holotype ♂ (1, 3–5) and *Acerocnema breviseta* (Zetterstedt, 1846), ♂ (2): 1, 2 — head; 3 — sternites 4 (lower) and 5 (upper); 4 — epandrium, cerci and surstyli, lateral view; 5 — same, dorsal view.

Рис. 1–5. *Acerocnema gorodkovi*, sp.n., голотип (1, 3–5) и *Acerocnema breviseta* (Zetterstedt, 1846) (2): 1, 2 — голова; 3 — стерниты 4 (внизу) и 5 (вверху); 4 — эпандрий, церки и сурстили, сбоку; 5 — то же, сверху.

1 ocellar, 1 postocellar (small, parallel), 1 inner vertical, 1 outer vertical; 2 strong vibrissae on well developed vibrissal angle (Fig. 1) present. Scapus, pedicel and postpedicel black. Postpedicel wide, approximately 1.5 times as long as wide. Arista black, widened throughout its length, very short pubescent. Palpus clavate, yellow.

Thorax black, delicately whitish dusted; scutum with four shining stripes: two short at middle, and two distally from dorsocentral lines. Acrostichals as hairs, in two–four rows, prescutellar pair not differentiated from other hairs on scutum, dorsocentrals 2+3, intra-alars 0+1, supra-alars 1+2, postpronotals 2, notopleurals 2, postalars 2. Proepisternum with hairs in central part, with long seta near lower margin. Proepimeron with long seta. Anepisternum covered with hairs in posterior half and with 2–3 long setae along posterior margin. Katepisternum with hairs in ventral corner and 1 strong seta in posterodorsal corner. Anepimeron bare. Scutellum black, shining, with a pair of basal scutellar and a pair of apical scutellar setae. All thoracic setae and hairs yellow.

Legs yellow. Mid tibia with 1 anterodorsal seta. Hind tibia with 2 anterodorsal setae, also with 1 preapical anterodorsal and 1 preapical posterodorsal setae. All setae and hairs of legs yellow.

Wing clear, with yellow veins. R_1 bare apically on dorsal surface. Calypters and their margins yellowish. Halter yellowish.

Abdomen black, covered with yellow hairs. Male sternites 4 and 5 as in Fig. 3. Epandrium and surstyli as in Figs 4, 5.

COMPARISON. The new species is similar to *Acerocnema breviseta* (Zetterstedt, 1846), but has scutum with four shining stripes, also vibrissal angle well developed (Fig. 1). *A. breviseta* has scutum mostly shining, vibrissal angle not developed (Fig. 2).

ETYMOLOGY. The species is named in the honour of the Russian dipterist Dr. Kirill Borisovich Gorodkov, who made substantial contribution to the study of Scathophagidae.

DISTRIBUTION. Russia: Khabarovsk Krai.

Acerocnema nitens, sp.n.

Figs. 6–9.

MATERIAL. Holotype ♂, RUSSIA: Primorskyi Krai, Sikhotealin Reserve, Cordon Yasnyi (45.2359°N 136.5114°E), 18.V.2015, M. Sergeev (ZMUM).

DESCRIPTION. Male (Fig. 6). Length of body 4.4 mm. Length of wing 3.8 mm.

Head in profile slightly higher than wide. Frontal vitta yellow, matt; fronto-orbital plate black, shining. Face and parafacial black. Gena and postgena yellow. Ocellar triangle black, shining. Postcranium black in upper part and yellowish in lower third, delicately greyish dusted. Height of gena about 2 times less than vertical diameter of eye. Setae: 3 orbital, 4–5 frontal, 1 ocellar, 1 postocellar (small, parallel), 1 inner vertical, 1 outer vertical; 2–3 pairs of strong vibrissae. Scapus, pedicel and postpedicel black. Postpedicel rounded apically, approximately 2 times as long as wide. Arista black, widened throughout its length, very short pubescent. Palpus slender, yellow.

Thorax black, shining, only meron, katatergite, anatergite and mediotergite delicately whitish dusted, meron with shining spot at middle. Acrostichals short, in irregular rows, not differentiated from other hairs on scutum, dorsocentrals 1+2, intra-alars absent, supra-alars 1+1, postpronotals 2, notopleurals 2, postalars 2. Proepisternum with hairs in central part, with 2 long setae near lower margin. Proepimeron with 1 long seta. Anepisternum covered with hairs in posterior half and with 2 long setae along posterior margin. Katepisternum with hairs in ventral corner and 1 strong seta in posterodorsal corner. Anepimeron bare. Scutellum black, shining, with a pair of basal scutellar and a pair of apical scutellar setae. All thoracic setae and hairs yellow.

Legs yellow, only mid and hind coxae black. Mid tibia with 2 anterodorsal setae. Hind femur with 3–4 anterodorsal setae in apical third. Hind tibia with 2 anterodorsal and 1–2 posterodorsal setae, also with 1 preapical dorsal and 1 apical anteroventral setae.

Wing clear, with yellow veins. R_1 setose on dorsal surface (Fig. 6). Calypters, margins of calypters yellowish. Halter yellowish.

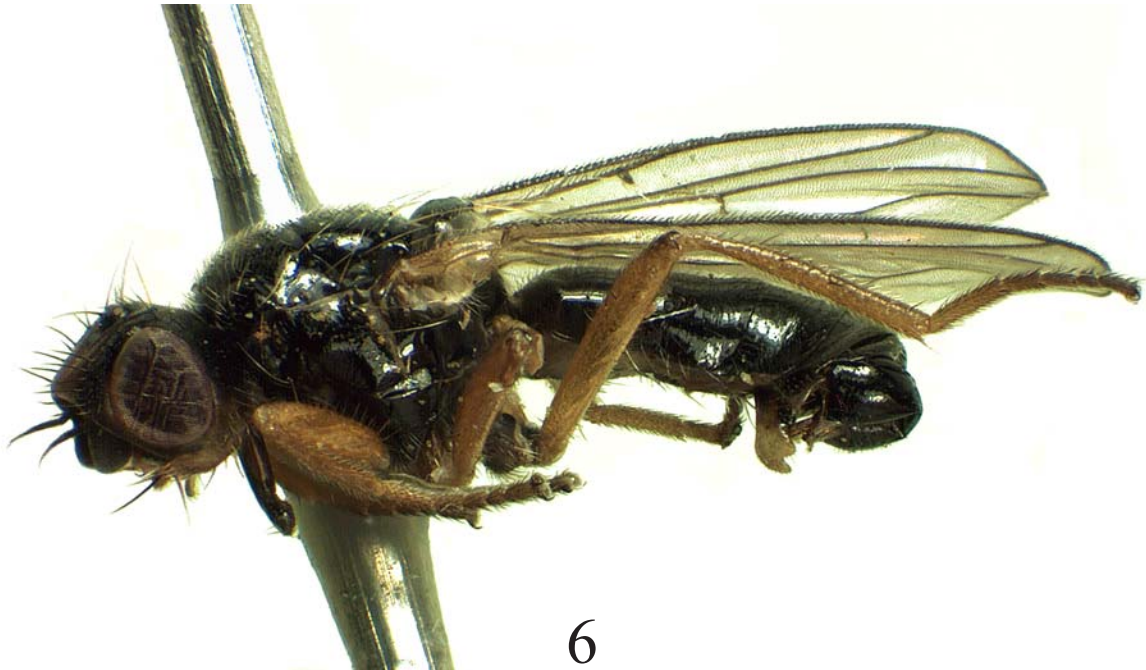
Abdomen black, shining, covered with yellow hairs. Male sternites 4 and 5 as in Fig. 7. Epandrium and surstyli as in Figs 8, 9.

COMPARISON. The new species is similar to *Acerocnema lobanovi* Ozerov, 2006 by the structure of wing. Both species have R_1 setose on dorsal surface. *A. nitens*, sp.n. is readily distinguished from *A. lobanovi* by fronto-orbital plate black, scutum and scutellum black shining, also by structure of male sternite 5 and genitalia. *A. lobanovi* has fronto-orbital plate yellow, scutum grey dusted, with two small shining spots behind transverse suture, scutellum is grey dusted.

DISTRIBUTION. Russia: Primorskyi Krai.

KEY TO SPECIES OF *ACEROCNEMA* OF RUSSIA

1. Vein R_1 setulose in apical part of dorsal surface (Fig. 6) ... 2
- Vein R_1 bare 3
2. Fronto-orbital plate black. Scutum and scutellum black shining *A. nitens* sp.n.
- Fronto-orbital plate yellow. Scutum grey dusted, with two small shining spots behind transverse suture; scutellum grey dusted *A. lobanovi* Ozerov
3. Postpedicel yellow, if darkened (female of *A. arctica* Ozerov) then fronto-orbital plate yellow completely or in anterior half 4
- Postpedicel black, fronto-orbital plate black completely 6
4. Postcranium completely yellow. Thoracic pleura yellow *A. richterae* Ozerov
- Postcranium black in upper half and yellow in lower half. Thoracic pleura black 5
5. Scutellum grey dusted dorsally *A. arctica* Ozerov
- Scutellum shining dorsally *A. barkalovi* Ozerov
6. Scutum densely grey dusted 7



6



7



8



9

Figs. 6–9. *Acerocnema nitens*, sp.n., holotype ♂: 6 — imago before the abdomen is removed, lateral view; 7 — sternites 4 (lower) and 5 (upper); 8 — epandrium, cerci and surstyli, lateral view; 9 — same, dorsal view.

Рис. 6–9. *Acerocnema nitens*, sp.n., голотип ♂: 6 — имаго до отчленения брюшка, сбоку; 7 — стерниты 4 (внизу) и 5 (вверху); 8 — эпандрий, церки и сурстили, сбоку; 9 — то же, сверху.

- Scutum mostly shining or with four shining stripes ... 8
7. Palpus black. Scutellum shining dorsally
 *A. macrocera* (Meigen)
- Palpus yellow, sometimes with dark brown apex. Scutellum grey dusted dorsally
 *A. paradoxopyga* Stackelberg
8. Scutum with four shining stripes, vibrissal angle well developed (Fig. 1) *A. gorodkovi* sp.n.
- Scutum mostly shining, vibrissal angle not developed (Fig. 2) *A. breviseta* (Zetterstedt)

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