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A new species of *Hercostomus* Loew, 1857 (Diptera: Dolichopodidae) from Nepal

Новый вид рода *Hercostomus* Loew, 1857 (Diptera: Dolichopodidae) из Непала

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Key words: Dolichopodinae, *Hercostomus*, Indomalayan realm, new species.
Ключевые слова: Dolichopodinae, *Hercostomus*, Индомалайская область, новый вид, определитель.

Abstract. New material for the genus *Hercostomus* Loew, 1857 has been recently found and identified. *Hercostomus andreyi* Grichanov **sp.n.** from Bagmati Province of Nepal is described and illustrated; it differs from closely related species in fore tarsomeres 3–5 distinctly dilated, in shape of male cercus, hypandrial, and epandrial lobes, leaf-like setae on surstylus. 26 *Hercostomus* Loew species are now known from Nepal. An identification key to species of *Hercostomus* Loew known from Nepal is supplemented.

Резюме. Собран и определён новый материал по роду *Hercostomus* Loew, 1857. Описан и иллюстрирован *Hercostomus andreyi* Grichanov **sp.n.** из Непала, отличающийся от близких видов расширенными 3-м, 4-м и 5-м члениками передних лапок, формой церки, лопастей гипандрия и эпандрия, наличием листовидных щетинок на сурстилях. Число видов рода в стране достигло 26. Дополнен определитель известных из Непала видов.

Introduction

The dolichopodine genus *Hercostomus* Loew, 1857 numbers about 475 known species worldwide [Grichanov, 2023]. The Nepalese fauna of this genus was reviewed by Yang et al. [2002]. The authors found in this country 25 species including 16 new for science species. Seven of discovered species were described originally from tropical China, while the rest 18 species are up to date conditional endemics of Nepal collected at a height between 1770 and 4700 m a.s.l. (usually between 2000 and 3000 m a.s.l.). The genus is poorly studied in India comprising eight species described from this country and one doubtfully recorded, mainly European, *H. chetifer* (Walker, 1849) [Becker, 1922; Grichanov, 2023].

Treating collections of the Zoological Museum of Moscow State University, Moscow, Russia (ZMUM), I have found a male of a new *Hercostomus* Loew species from Nepal. The following regional keys are available for Nepalese *Hercostomus* Loew species identification: Yang et al. [2002] for Nepal, Yang et al. [2011] for Palaearctic and Oriental China, Grichanov [2023] for India.

Materials and methods

The holotype is mounted on a pin and will be housed at the ZMUM collection. The specimen has been studied and photographed with a ZEISS Discovery V-12 stereo microscope and an AxioCam MRc5 camera. Genitalia preparation has been photographed with a ZEISS Axiostar stereo microscope and an AxioCam ICc3 camera. Morphological terminology and abbreviations follow Cumming, Wood [2017] and Grichanov, Brooks [2017]. The relative lengths of the antennomeres and podomeres should be regarded as representative ratios and not measurements. Body length is measured from the base of the antenna to the tip of abdominal segment 6. Wing length is measured from the base to the wing apex. The figures showing the hypopygium and its appendages in lateral view are oriented as they appear in the intact specimen, with the morphologically ventral surface of the genitalia facing upwards, dorsal surface downwards, anterior end facing left and posterior end facing right.

Nomenclatural acts introduced in the present work are registered in ZooBank (www.zoobank.org) under urn:lsid:zoobank.org:pub:E090EA60-8916-46F9-90EE-99343DEDDE57.

Results

Dolichopodinae Latreille, 1809
Dolichopodini Latreille, 1809
Hercostomus Loew, 1857

Type species: *Sybistroma longiventris* Loew, 1857 by original designation.

For the diagnosis of the genus, synonymy and discussion see Brooks [2005].

Hercostomus andreyi Grichanov, **sp.n.**
Figs 1–7.

Urn:lsid:zoobank.org:act:FF175C95-2F0B-4E62-AD93-4F3A3CD94C41.

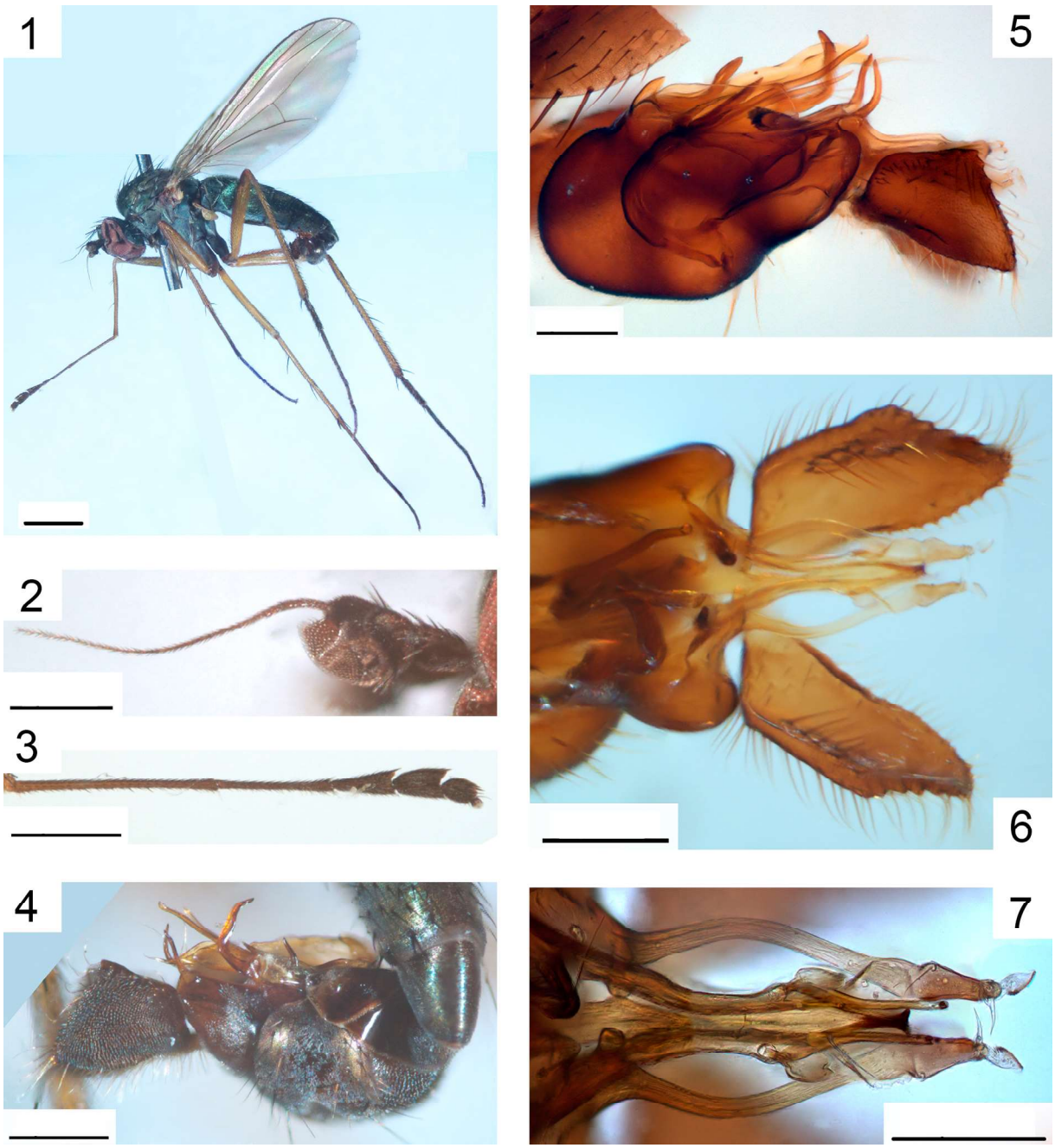
Material. **Nepal,** ***Bagmati Province:*** Holotype, ♂, Dhunche env., 28.097° N, 85.3209° E, h~2040 m a.s.l., 24.V.2016, A. Ozerov leg. [ZMUM]. The holotype has its male terminalia dissected and stored in glycerin in a microvial pinned with the source specimen.

Description. *Male* (Fig. 1). Head. Frons blue-black, weakly pollinose; face silvery white pollinose, narrow, about 2 times higher than wide below antennae; face below antennae 1.3 times as wide as height of postpedicel, 2 times as wide as face at clypeus; clypeus narrow, white pollinose; one long, strong, vertical pair of setae; 1 shorter postvertical and pair of long ocellar setae; postocular setae black; eye with short hairs; clypeus not reaching lower margin of eyes; antenna (Fig. 2) about as long as height of head, black; pedicel short and

wide, convex anteriorly on both lateral sides, with short distal setulae; postpedicel subtriangular, angular distally, as long as high, covered with short pubescence; arista-like stylus black, arising at middle of dorsal edge, with short hairs. Length (mm) of scape, pedicel, postpedicel, arista-like stylus (aristomeres 1 and 2), 0.13/0.11/0.17/0.12/0.58. Palpus and proboscis small, black, with short black setae; palpus with 1 black bristle.

Thorax. Greenish black, weakly grey pollinose; 6 strong dorsocentral setae; acrostichals biserial; 2 strong notopleural, 1 strong humeral, 1 posthumeral setae present; propleura with 1 strong black bristle above fore coxa, with few short white hairs; scutellum with 2 strong bristles and 2 short lateral setae.

Legs. Mostly yellow, with black setae; mid and hind coxae black; fore and mid tarsi black from tip of basitarsus; hind femur with black spot dorsally at apex; hind tibia at apex and hind tarsus black; fore coxa with several brown hairs anteriorly and black bristles distally; mid coxa with 1 strong lateral seta



Figs 1–7. Details of *Hercostomus andreyi* Grichanov sp.n. holotype, male, morphology. 1 — habitus, lateral view; 2 — antenna; 3 — fore tarsus, lateral view; 4 — dry hypopygium, left lateral view; 5 — hypopygium after maceration, right lateral view; 6 — distal appendages of hypopygium, ventral view; 7 — postgonite and surstyli, ventral view. Scale bars: 1 — 1 mm; 2, 5, 6 — 0.2 mm; 3 — 0.5 mm; 4 — 0.3 mm; 7 — 0.15 mm.

Рис. 1–7. Детали строения голотипа, самца *Hercostomus andreyi* Grichanov sp.n. 1 — внешний вид, сбоку; 2 — усик; 3 — передняя лапка, вид сбоку; 4 — гипопигий, вид слева сбоку; 5 — гипопигий после размачивания, вид справа сбоку; 6 — дистальные придатки гипопигия, вид снизу; 7 — постгонит и сурстили, вид снизу. Масштаб: 1 — 1 мм; 2, 5, 6 — 0,2 мм; 3 — 0,5 мм; 4 — 0,3 мм; 7 — 0,15 мм.

in addition to dark anterior hairs; hind coxa with 1 strong black lateral bristle at middle; fore femur without distinct setae; fore tibia with 2 posterodorsal and 1 anterodorsal setae; fore tarsomeres 1 and 2 simple, with short semi-erect hairs venrally; fore tarsomeres 3–5 flattened laterally and widened, with simple setulae (Fig. 3); mid femur with 1 anterior and 1 very short posteroventral subapical bristles; mid tibia with 2 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical bristles; mid tarsus simple; hind femur thin, with one subapical anterodorsal bristle; hind tibia simple, with 2 anterodorsal, 3 posterodorsal and 1 apical bristles. Femur, tibia and tarsomere (from first to fifth) length (mm): fore leg: 1.17/1.26/0.93/0.52/0.28/0.23/0.17, mid leg: 1.48/1.76/1.09/0.65/0.37/0.23/0.18, hind leg: 1.79/2.37/0.58/0.96/0.46/0.26/0.16.

Wing (Fig. 1). Simple, greyish, veins brown; costa simple; R_1 reaching to first third of wing length; R_{2+3} and R_{4+5} divergent; ratio of part of costa between R_{2+3}, R_{4+5} to part between R_{4+5}, M_{1+2}: 0.51/0.15. R_{4+5}, M_{1+2} distinctly convergent in distal part; M_{1+2} weakly convex anteriorly, with indistinct bend in middle of distal part, joining costa at wing apex; crossvein dm-m almost straight, oblique to longitudinal wing axis, forming almost right angles with M_{1+2}, M_4 longitudinal veins; ratio of dm-m to distal part of M_4, 0.41/0.57; posterior wing margin almost evenly convex; anal vein distinct, almost reaching wing margin; anal lobe weakly developed; anal angle obtuse; lower calypter yellow, with long black setae; halter yellow.

Abdomen. Greenish black, weakly pollinose, with black hairs and marginal bristles; segment 7 short, half as long as epandrium; segment 8 large, black, covering half lateral side of epandrium, with black setae; hypopygium (Figs 4–7) black with yellow and brown appendages and black cercus; epandrium elongate-ovate, 1.7 times longer than high, with asymmetrical ventral margins; foramen positioned at middle of left lateral side; distoventral epandrial lobe fused to epandrium, long and thin, with short apical spine, 2 long ventral setae at base, 1 preapical dorsalseta; surstylus hypandrium basoventral, with short base and 2 pairs of long thin asymmetrical lobes, phallus thin, concealed; bilobate, with long and thin lobes; each lobe with 1 leaf-like and few long simple setae; postgonite long and broad, nearly straight; cercus simple, trapezoid, with short white hairs and setae; setae curved along distal margin of cercus.

Measurements (mm). Body length 4.5, wing length 4.3, wing width 1.4, antenna length 1.

Female. Unknown.

Differential diagnosis. With metallic dark body, large trapezoid cercus, expanded distoventral epandrial lobe, *Hercostomus andreyi* Grichanov sp.n. belongs to the Chinese *H. absimilis* Yang & Grootaert, 1999 species group [Qilemoge et al., 2020] and keys to the Tibetan *H. motuoensis* Zhang, Yang et Grootaert, 2008 [Yang et al., 2011], differing from the latter in fore tarsomeres 3–5 distinctly flattened, in shape of male cercus, hypandrial and epandrial lobes, leaf-like setae on surstylus. *H. motuoensis* Zhang, Yang et Grootaert was described with fore tarsomeres 4 and 5 distinctly flattened, fore tarsomere 3 simple, simple setation of surstylus [Zhang et al., 2008].

Distribution. The new species is only known from the type locality in Nepal (Bagmati Province).

Etymology. The specific epithet is dedicated to the holotype collector, the Russian dipterologist Dr. Andrey Leonidovich Ozerov (ZMUM).

Conclusion

As a result of this study, *Hercostomus andreyi* Grichanov, sp.n. from Bagmati Province of Nepal is described. Now 26 *Hercostomus* Loew species are known in the country. In comparison, about 300 species have been recorded from China [Qian et al., 2020]. It means that new species records are anticipated in Nepal.

An identification key to species of *Hercostomus* Loew known from Nepal [Yang et al., 2002] can be supplemented as follows:

15a. Distoventral epandrial lobe long and thin, with short apical spine, 2 long ventral setae at base, 1 preapical dorsal seta; fore tarsomeres 3, 4 and 5 dilated .... *andreyi* Grichanov, sp.n.

— Distoventral epandrial lobe short, without long setae; fore tarsomeres usually simple 15

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