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

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

I.Ya. Grichanov
И.Я. Гричанов

All-Russian Institute of Plant Protection, Podbelskiy roadway 3, St. Petersburg–Pushkin, 196608 Russia. E-mail: grichanov@mail.ru
Всероссийский институт защиты растений, шоссе Подбельского 3, Санкт-Петербург–Пушкин, 196608, Россия.

KEY WORDS: Diptera, Dolichopodidae, Dolichopodinae, *Hercostomus*, taxonomy, new species, Tropical Africa.

КЛЮЧЕВЫЕ СЛОВА: Diptera, Dolichopodidae, Dolichopodinae, *Hercostomus*, таксономия, новый вид, Тропическая Африка.

ABSTRACT: A new material for the genus *Hercostomus* Loew, 1857 has been recently found and identified. *Hercostomus nikitai* Grichanov, **sp.n.** from Tanzania is described and illustrated. The new species differs from other representatives of the genus in morphology of male fore tarsus and genitalia mainly. Correction of the last key to Afrotropical species of *Hercostomus* is also provided.

РЕЗЮМЕ: Обнаружен и определён новый материал для рода *Hercostomus* Loew, 1857. Описан *Hercostomus nikitai* Grichanov, **sp.n.** из Танзании. Новый вид отличается от известных, главным образом, по морфологии передней лапки и гениталий самцов. Приведено дополнение к последнему определителю афротропических видов рода.

Afrotropical species of the genus *Hercostomus* Loew, 1857 have been recently revised by Grichanov [2020], who has provided a key for 23 known species. Tanzanian fauna of the genus contains nine known species, being the most species-rich on the continent. A new trip of Dr. N.E. Vikhrev (the Zoological Museum of Moscow State University, Moscow, Russia, ZMUM) to this country has revealed a specimen from Tanganyika Lake shore belonging to an undescribed species.

In this paper, *H. nikitai* Grichanov, **sp.n.** from Tanzania is described. Now ten *Hercostomus* species are found in the country. As a result of research from 1999 to 2022, the author of this paper has described 21 Afrotropical species of the genus. The number of Afrotropical species has increased to 24 valid names (excluding three doubtful species).

Holotype is 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 preparations have 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.

Hercostomus nikitai Grichanov, **sp.n.**
Figs 1–10.

MATERIAL. Holotype ♂, Tanzania: [Mbeya Region], Matema, Nyasa Lake, at rivulet, 9.496°S, 34.0449°E, 560 m, 14–18.XII.2021, N. Vikhrev leg.; terminalia dissected, stored in glycerin in microvial pinned with the specimen (ZMUM).

DESCRIPTION. **Male** (Fig. 1). *Head*. Frons greenish-black, white pollinose; face densely white pollinose; one long, strong, vertical pair of setae; 1 short postvertical, pair of long ocellar setae; upper postocular setae black; lower ones white; eye with short hairs; face glabrous; face gradually narrowed towards palpi, 8 × as high as wide in middle, under antennae 4/5 as wide as width of postpedicel, at clypeus 1/3 as wide as width of postpedicel; clypeus not reaching lower margin of eyes; antenna (Fig. 3) about as long as height of head, entirely black; pedicel short and wide, convex anterior-

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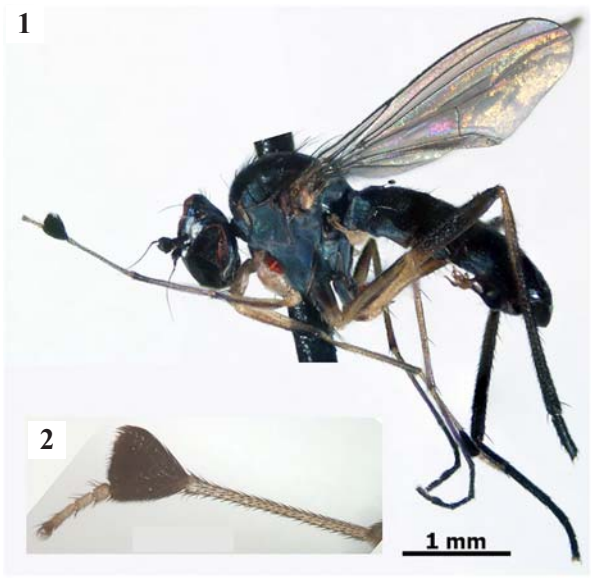

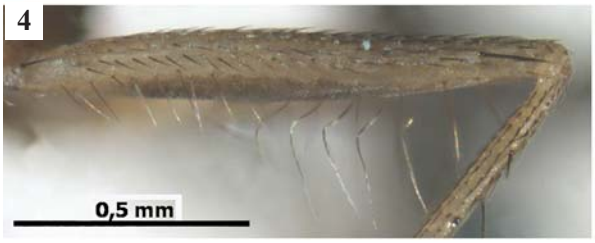

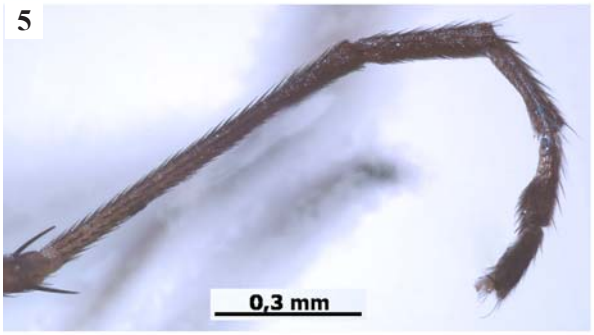

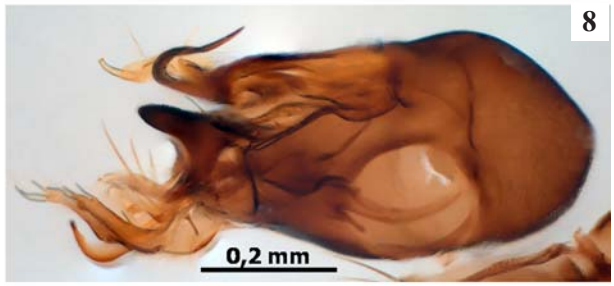

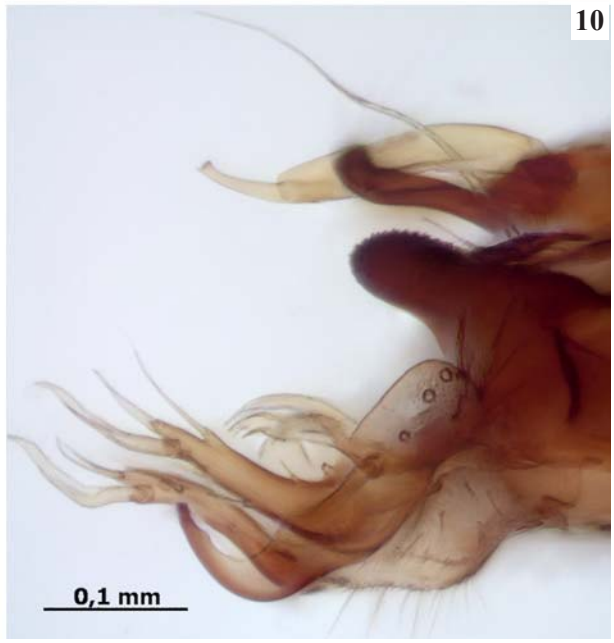

Figs 1–10. *Hercostomus nikitai*, **sp.n.**, male holotype: 1 — habitus; 2 — fore tarsus; 3 — antenna; 4 — mid femur; 5 —mid tarsus; 6 — hind femur; 7 — wing; 8 — hypopygium, lateral view; 9 — hypopygium, ventral view; 10 — distal appendages of hypopygium, lateral view.

Рис. 1–10. *Hercostomus nikitai*, **sp.n.**, голотип, самец: 1 — внешний вид; 2 — передняя лапка; 3 — усик; 4 — среднее бедро; 5 — средняя лапка; 6 — заднее бедро; 7 — крыло; 8 — гипопигий, сбоку; 9 — гипопигий, снизу; 10 — дистальные придатки гипопигия, сбоку.

ly on inner side, with short distal setulae; postpedicel rounded-triangular, angular distally, as long as high, covered with short pubescence; arista mid-dorsal, black, with short hairs. Length ratio of scape to pedicel to postpedicel to stylus (1st–2nd segments), 14/9/15/8/65. Palpus and proboscis moderately small, black, with short black setae; palpus with 1 black bristle.

Thorax. Bluish-black, greyish pollinose. Six strong dorsocentral setae; 2 rows of acrostichals, nearly half as long as dorsocentrals; 2 strong notopleural, 1 strong humeral, 1 posthumeral setae present. Propleura with 1 strong black seta above fore coxa and few short hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs. Mostly yellow, with black setae; mid and hind coxae black; segment 2 of fore tarsus black; fore tarsomeres 3–5 whitish yellow; mid femur blackish ventrally in middle third; mid tarsus black from middle of basitarsus; hind femur black on distal half; hind tibia black except basal third; hind tarsus black; fore coxa with black hairs anteriorly and several setae in apical half; mid coxa with 1 strong lateral seta in addition to anterior hairs; hind coxa with 1 strong lateral seta; fore femur and tibia without distinct setae; segment 2 of fore tarsus flattened laterally, strongly widened, triangular, as long as wide, with dorsal row of dense setae (Fig. 2); mid femur with 1 anterior and 1 posteroventral subapical bristles, 2 ventral rows of erect setae on basal half, not longer than femur height, about 6 anteroventral straight and 5 posteroventral curved setae on distal half, 2 times longer than femur height (Fig. 4); mid tibia with 2–3 anterodorsal, 2 posterodorsal and 3–4 apical setae; mid tarsus thickened from tip of basitarsus; segment 4 thick on distal half (Fig. 5); hind femur thickened on distal half, with one subapical anterodorsal seta, with posteroventral row of long setae on distal half, 2 times longer than femur height (Fig. 6); hind tibia with 2–3 anterodorsal, 2–3 posterodorsal, 2–3 fine ventral, 3–4 apical setae. Femur, tibia and tarsomere (from first to fifth) length ratio (in mm): fore leg: 0.95/0.94/0.67/0.26/0.07/0.06/0.13, mid leg: 1.19/1.33/0.77/0.28/0.21/0.20/0.16, hind leg: 1.67/2.17/0.38/0.51/0.28/0.18/0.19.

Wings (Fig. 7). Simple, greyish, veins black; costa simple; R1 reaching to first third of wing length; R2+3, R4+5 weakly divergent; ratio of part of costa between R2+3, R4+5 to between R4+5, M1+2: 2.5/1. R4+5, M1+2 distinctly convergent in distal part; M1+2 with weak bend in middle of distal part, joining costa just before wing apex; crossvein dm-m straight, oblique to longitudinal wing axis, forming right angle with M1+2, M4 longitudinal veins; ratio of dm-m to distal part of M4, 27/45; posterior wing margin almost evenly convex; anal vein distinct, almost reaching wing margin; anal lobe developed; anal angle obtuse; lower calypter yellow, with black setae; halter yellow.

Abdomen. Bluish-black, weakly pollinose, with black hairs and marginal setae; segment 7 short, 3/4 length of epandrium; segment 8 large, covering half lateral side of epandrium, with numerous dark setae; genitalia (Figs 8–10) with epandrium black, elongate-ovate, twice longer than high; foramen positioned at middle of left lateral side; hypandrium mid-ventral, with short base, 2 long wide lobes, 1 longest lobe thin, sclerotized, strongly curved, with pointed apex; phallus thin, concealed; distoventral epandrial lobe fused to epandrium, projected, with 2 short and 1 very long ventral epandrial setae; surstylus yellow, short, bilobate; each lobe pointed at apex, thin distally, with 1 long basal seta and 1 short apical seta; distal lobe of postgonite nearly as long as cercus, broad, curved ventrally, narrow at apex (Fig. 10); ventral lobe of postgonite broad, fingerlike, strongly sclerotized, densely covered with spinules (Fig. 10); cercus yellow; large basolateral lobe bearing about 5 strong, several short black setae, long narrow apex bearing 4 long pedunculate yellow setae (Fig. 10).

Measurements (in mm). Body length 4, antenna length 1, wing length 3, wing width 1.

Female. Unknown.

ETYMOLOGY. The species is named for the collector of the holotype, Dr. Nikita Vikhrev (ZMUM, Moscow).

DISTRIBUTION. Tanzania.

DIAGNOSIS. *Hercostomus nikitai* **sp.n.** belongs to the *H. nectarophagus* species subgroup [Grichanov, 2020] of the *H. longiventris* lineage [Brooks, 2005], being the closest to *H. fedotovae* Grichanov, 2020, differing from the latter in larger size, morphology of male fore tarsus and hypopygial appendages (see key below).

4. Fore tarsomere 3 simple 4a
— Fore tarsomere 3 compressed and widened 5
4a. Fore tarsomeres 4–5 flattened and widened; fore tarsomere 2 simple; fore tarsomere 4 white and fore tarsomere 5 deep black [Grichanov, 2020: Fig. 2Ñ]; body 2.4 mm. Tanzania: Morogoro Region ..... *H. fedotovae* Grichanov, 2020
— Fore tarsomeres 4–5 simple, whitish yellow; fore tarsomere 2 flattened and strongly widened (Fig. 2); body 4 mm. Tanzania: Mbeya Region ..... *H. nikitai* **sp.n.**

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References

Brooks S.E. 2005. Systematics and phylogeny of the Dolichopodinae (Diptera: Dolichopodidae) // Zootaxa. Vol.857. P.1–158. https://doi.org/10.11646/zootaxa.857.1.1.

Cumming J.M., Wood D.M. 2017. 3. Adult morphology and terminology // A.H. Kirk-Spriggs, B.J. Sinclair (eds.). Manual of Afrotropical Diptera. Vol.1. Introductory chapters and keys to Diptera families. Suricata 4. Pretoria: SANBI Graphics and Editing. P.89–134.

Grichanov I.Ya. 2020. New species of *Hercostomus* Loew, 1857 from Afrotropics (Diptera: Dolichopodidae) and key to Afrotropical fauna // European J. Taxonomy. Vol.722. P.1–21. https://doi.org/10.5852/ejt.2020.722.1131.

Grichanov I.Ya., Brooks S.E. 2017. 56. Dolichopodidae (longlegged dance flies) // A.H. Kirk-Spriggs, B.J. Sinclair (eds.). Manual of Afrotropical Diptera. Vol.2. Nematocerous Diptera and lower Brachycera. Suricata 5. Pretoria: SANBI Graphics and Editing. P.1265–1320.