

New species of the genus *Habropogon* Loew, 1847 (Diptera: Asilidae) from Kazakhstan

VITAL V. SAKHVON^{1,*} & MAXIM YU. PROSHCHALYKIN^{2,3}

¹Belarusian State University, Faculty of Biology, Nezavisimosti, 4, Minsk, 220030, Belarus

 sakhvon@gmail.com;  <https://orcid.org/0000-0002-6673-8118>

²Federal Scientific Centre of the East Asian Terrestrial Biodiversity, Far Eastern Branch of Russian Academy of Sciences, Vladivostok-22 690022, Russia

 proshchalikin@biosoil.ru;  <https://orcid.org/0000-0001-7870-8226>

³Nakhchivan State University, University Campus, AZ 7012 Nakhchivan, Azerbaijan

*Corresponding author

Abstract

Based on the examination of the robberflies collected during an expedition to Kazakhstan in 2024, a new species *Habropogon storozhenkoi* Sakhvon, **sp. nov.**, is described and illustrated. An identification key for the males of the genus *Habropogon* from Kazakhstan is provided.

Key words: robber flies, Brachyrhopalinae, key to species, Palaearctic region

Introduction

The genus *Habropogon* Loew, 1847 includes 50 species, most of which are found in arid and semi-arid regions of the Palaearctic (43 species) and Afrotropical (seven species) regions (Hradský & Geller-Grimm 2005; Bosák & Hradský 2011; Geller-Grimm *et al.* 2016). The genus was placed in the subfamily Stenopogoninae by Papavero (1973) and later cited here by Lehr (1988) and Geller-Grimm (2004). However, Dikow (2020) recently transferred *Habropogon* in the subfamily Brachyrhopalinae with the “unplaced” tribe.

Seven species of *Habropogon* have been recorded in Kazakhstan to date: *H. appendiculatus* Schiner, 1867, *H. deserticola* Lehr, 1960, *H. latifrons* Loew, 1871, *H. longiventris* Loew, 1847, *H. malkovskii* Lehr, 1964, *H. mesasiaticus* Lehr, 1960, and *H. montanus* Lehr, 1960 (Lehr 1960, 1988; Sakhvon & Lelej 2017). This new species of *Habropogon* was described based on the material collected during the expedition to Altyn-Emel National Park (Jetisu Region, Kazakhstan) in 2024. Thus, eight species of *Habropogon* are now known from Kazakhstan.

Material and methods

The information presented in this paper is based on the specimens deposited in the Department of Zoology of Belarusian State University, Minsk, Belarus (BSU). The morphological terminology mainly follows Cumming & Wood (2009) and Geller-Grimm *et al.* (2016). The male genitalia of the new species were separated from the abdomen, then treated with 10% potassium hydroxide at 100°C for approximately 15 minutes, then dissected, and after that mounted in glycerin for observation and illustration. Photographs were made using a Canon R6 mark ii camera and stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness with Adobe® Photoshop® 2020 (version 21.0) software.

6. Distance between mystax and antennal sockets equal to or less than combined length of scape and pedicel. Fore- and mid-femur reddish brown without black stripe or with only stripe dorsally *H. deserticola* Lehr, 1960
- Upper margin of mystax nearly reaching antennal sockets. Fore- and mid-femur reddish brown with black stripes anterodorsally and dorsally *H. latifrons* Loew, 1871
7. Distance between mystax and antennal sockets equal to length of scape. Dorsocentral macrosetae well developed, 2–3 dorsocentral macrosetae cross transverse suture. Fore- and mid-femur reddish brown without black stripes. Cerci long and straight *H. malkovskii* Lehr, 1964
- Distance between mystax and antennal sockets equal to or less than combined length of scape and pedicel. Dorsocentral macrosetae absent. Fore- and mid-femur reddish brown with black stripes. Cerci long and curved at the apex *H. storozhenkoi* Sakhvon, sp. nov.

Acknowledgements

We would like to thank A.S. Lelej for help with studying of collection of asilids in the Federal Scientific Center of the East Asia Terrestrial Biodiversity (Vladivostok, Russia) and A. Shapovalov (Grodno, Belarus) for help in photographing insects.

The research (for MYuP) was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. 124012400285-7).

References

- Astakhov, D.M. (2015) Robber flies (Diptera: Asilidae) of Low[er] Volga Area. *Proceedings of the Russian Entomological Society*, 86 (1), 1–410. [in Russian]
https://doi.org/10.47640/1605-7678_2015_86_1_4
- Bosák, J. & Hradský, M. (2011) Order Diptera, family Asilidae. In: van Harten, A. (Ed.), *Arthropod fauna of the United Arab Emirates*. 4. Dar Al Ummah Printing, Publishing, Distribution & Advertising, Abu Dhabi, pp. 696–758.
- Coquillett, D.W. (1910) The type-species of the North American genera of Diptera. *Proceedings of the United States National Museum*, 37, 499–647.
<https://doi.org/10.5479/si.00963801.37-1719.499>
- Cumming, J.M. & Wood, D.M. (2009) Adult morphology and terminology. In: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. & Zumbado, M.A. (Eds.), *Manual of Central American Diptera*. Vol. 1. National Research Council Research Press, Ottawa, Ontario, pp. 9–50.
- Dikow, T. (2020) Asiloid flies: deciphering their diversity and evolutionary history. Asilidae generic classification sensu Dikow 2009. Update 2 November 2020. Available from: <https://asiloidflies.si.edu/asilidae-generic-classification-dikow2009> (accessed 1 November 2023)
- Engel, E.O. (1930) 24. Asilidae. In: Lindner, E. (Ed.), *Die Fliegen der palaearktischen Region*. E. Schweizerbart, Stuttgart, pp. 321–491.
- Geller-Grimm, F., Dikow, T. & Lavigne, R.J. (2016) Robber flies (Asilidae). Available from: <http://www.geller-grimm.de/asilidae.htm> (accessed 31 July 2025)
- Hradský, M. & Geller-Grimm, F. (2005) The *appendiculatus* species-group of *Habropogon* Loew, 1847 (Diptera: Asilidae) in the Palaearctic region, including the description of new species. *Zootaxa*, 1004 (1), 1–14.
<https://doi.org/10.11646/zootaxa.1004.1.1>
- Lehr, P.A. (1960) Robber flies of the genus *Habropogon* (Asilidae, Diptera) of the Kazakhstan and of Middle Asia. *Akademiia Nauk KSSR, Trudy Instituta Zoologii*, 11, 180–192. [in Russian]
- Lehr, P.A. (1964) Robber flies (Diptera, Asilidae) of Mangyshlak Peninsula. *Trudy Nauchno-Issledovatel'skogo Instituta Zashchity Rasteniy*, 8, 298–309. [in Russian]
- Lehr, P.A. (1988) Family Asilidae. In: Soos, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*. Volume 5: *Athericidae–Asilidae*. Akadémiai Kiadó, Budapest, pp. 197–326.
- Lehr, P.A. (1999) Fam. Asilidae – Robber flies. In: Sidorenko, V.S. (Ed.), *Key to the insects of Russia Far East*. Vol. VI. *Diptera and Siphonaptera*. Pt. 1. Dalnauka, Vladivostok, pp. 591–640. [in Russian]
- Loew, H. (1847) Über die europäischen Raubfliegen (Diptera, Asilica). *Linnaea Entomologica*, 2, 384–568.
- Loew, H. (1871) Turkestanskije dvukrylye [Turkestanish Diptera]. *Izvestiya Imperatorskogo obshchestva lyubiteley estestvoznaniya, antropologii i etnografii*, 9 (1), 51–59. [in Russian]
- Meigen, J.W. (1820) *Systematische Beschreibung der bekannten Europäischen zweiflügeligen Insekten*. Zweiter Theil. F.W. Forstmann, Aachen, xxxvi + 363 pp., pls. 12–21.
- Papavero, N. (1973) Studies of Asilidae (Diptera) systematics and evolution. I. A preliminary classification in subfamilies. *Arquivos de Zoologia*, 23 (3), 217–274.
<https://doi.org/10.11606/issn.2176-7793.v23i3p217-274>

- Richter, V.A. (1969) Fam. Asilidae – Robber flies. In: Stakelberg, A.A. & Narchuk, E.P. (Eds.), *Key to the insects of European part of the USSR in five volumes. Vol. V. Diptera, Siphonaptera. Part. 1.* Nauka, Leningrad, pp. 504–531. [in Russian]
- Sakhvon, V.V. & Lelej, A.S. (2017) Review of the genus *Habropogon* Loew, 1847 (Diptera: Asilidae) from Russia, with description of new species from Siberia. *Zootaxa*, 4311 (3), 417–425.
<https://doi.org/10.11646/zootaxa.4311.3.7>
- Schiner, J.R. (1867) Neue oder weniger bekannte Asiliden des K. zoologischen Hofcabinetes in Wien. Ein Beitrag zur Kenntnis der Asiliden. *Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien*, 17, 355–412.