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The first record of *Nesciothemis farinosa* (Odonata: Libellulidae) from Iraq

První nález vážky *Nesciothemis farinosa* (Odonata: Libellulidae) z Iráku

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Abstract. The species *Nesciothemis farinosa* (Förster, 1898) is recorded for the first time from Iraq. It was collected from Baghdad Province.

INTRODUCTION

The genus *Nesciothemis* Longfield, 1955 includes only the following five species (Schorr & Paulson 2019): *N. farinosa* (Förster, 1898), *N. fitzgeraldi* Pinhey, 1956, *N. minor* Gambles, 1966, *N. nigeriensis* Gambles, 1966 and *N. pujoli* Pinhey, 1971. *N. farinosa* was described as *Orthetrum farinosum* by Förster (1898) from material (3 ♂♂) collected by Karl Hartmann in Transvaal, South Africa (Förster 1897, Garrison et al. 2003). Longfield (1955) described the new genus *Nesciothemis* and designated *Orthetrum farinosum* Förster, 1898 as the type species of the genus. A lectotype (1 ♂) was designated by Kormondy & Gloyd in Pinhey (1962). Type material (lectotype) of *N. farinosa* is deposited in the type collection of the University of Michigan Museum of Zoology (UMMZ), Ann Arbor, Michigan (Garrison et al. 2003). The type locality of the species is Komatipoort (Förster 1898, Garrison et al. 2003) in Mpumalanga Province, which lies in the eastern Republic of South Africa (RSA). Before 1994, Mpumalanga Province was part of the now-defunct Transvaal Province. Larvae of *N. farinosa* were described by Suhling et al. (2003).

The dragonfly fauna of Iraq has only been studied sporadically, and was studied in detail for the first time by Morton (1919, 1920a,b, 1921) and later by Sage (1960a,b) and Asahina (1973, 1974); only a few other papers have dealt with the Iraqi odonatofauna (e. g. Fraser 1917, Ris 1928, St. Quentin 1964, Schneider 1984, Carl 1989, Dumont 1991). Lists of dragonflies from Iraq have been published over time by Sage (1960b), Asahina (1973), Kalkman (2006) and Boudot et al. (2009). New species of dragonflies for the fauna of Iraq were published by Porter (2016). According to Kalkman (2006), Boudot et al. (2009) and later published papers (e.g. Ali & Khidhir 2015, Augul et al. 2016, Porter 2016, Al-Hashmi 2017, Al-Hashmi et al. 2018), *N. farinosa* is not part of the Iraqi dragonfly fauna. The checklist of Odonata for Iraq, including *Trithemis arteriosa* (Burmester, 1839) (Ris 1928) and *N. farinosa* (this paper) comprises 46 species (P. Jeziorski unpubl.).

MATERIAL AND METHODS

The specimen is dry mounted in the collections of the Department of Entomology, National Museum in Prague. It is a male in very good condition. The specimen was identified by the author using Dumont (1991) and Dijkstra & Clausnitzer (2014). The author‘s additional remarks are given in square brackets.

The specimen of *N. farinosa* was collected by V. Kálalová during her stay in Iraq. Vlasta Kálalová-di Lotti (* October 26, 1896, Bernartice, Austria-Hungary – † February 15, 1971, Písek, Czechoslovakia) was a Czech physician specializing in tropical diseases and entomology. From 1925 to 1932, she worked in Baghdad, where she also treated members of the royal family. She contributed to research into tropical diseases, and also extended the collection of the National Museum in Prague with rare specimens of exotic insects (Borská 2016).

RESULTS AND DISCUSSION

Nesciothemis farinosa (Förster, 1898)
Material examined. Iraq, Baghdad, 6.x.1929, 1 ♂ [teneral], [leg.] Dr. [Vlasta] Kálalová, det. Petr Jeziorski, 2017, coll. National Museum, Prague, Czech Republic. **New species for Iraq.**

Nesciothemis farinosa is recorded from Africa and Western Asia. Known in Africa from Angola, Botswana, The Democratic Republic of the Congo, Egypt (African part), Ethiopia, Kenya, Malawi, Mozambique, Namibia, Rwanda, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe (Boudot et al. 2016), and from Oman (Waterston & Pittaway 1989), Saudi Arabia (Lambret & Boudot 2009) and Yemen (Waterston 1985) in the Arabian peninsula. The present article formally extends its distribution range to include Iraq. It is not yet reported from Iran (Heidari & Dumont 2002, Schneider et al. 2018) or Turkey (Kalkman et al. 2003, Kalkman 2006).

According to Boudot et al. (2016), *N. farinosa* is distributed on the Arabian peninsula in western Saudi Arabia, western Yemen and southern Oman. *N. farinosa* has not been recorded from the Socotra Archipelago (Yemen) (Riservato et al. 2010). This find of *N. farinosa* in Baghdad (Iraq) is the most northeastern record. Future research will show whether this is just a historical record, or if the species still occurs in Iraq and has been overlooked.

Nesciothemis farinosa is not a migrant (Boudot et al. 2016). The male in the collection was caught as teneral specimen, which is evidence of its autochthonous origin in Baghdad and therefore in Iraq. This species is generally common at rivers and permanent streams with high reed margins. It has also been recorded at pools and ponds (Boudot et al. 2016).

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REFERENCES

AL-HASHMI A. H. 2017: External morphological study of the Sympetrum fonscolombei (Selys, 1840) (Odonata: Anisoptera: Libellulidae) in Baghdad. *Al-Mustansiriyah Journal of Science* **28**: 11–15.

AL-HASHMI A. H., AL-SAFFAR H. H. & AUGUL R. S. 2018: Key to the species of the Orthetrum Newman, 1833 (Odonata, Libellulidae) with a new record species in Iraq. *Bulletin of the Iraq Natural History Museum* **15**: 15–29.

ALI W. K. & KHIDHIR A. S. 2015: Morphological study of the Sympetrum arenicolor Jödicke, 1994 (Odonata: Libellulidae) collected in Kurdistan région-Iraq. *Entomology, Ornitology & Herpetology* **4**: 168.

ASAHINA S. 1973: The odonata of Iraq. *Japanese Journal of Zoology* **17**: 17–36.

ASAHINA S. 1974: An additional note to the Odonata of Iraq. *Kontyû, Tokyo* **42**: 107–109.

AUGUL R. S., AL-HASHMI A. H. & AL-SAFFAR H. H. 2016: New record of the epaulet skimmer: Orthetrum chrysostigma (Burmeister) (Odonata: Libellulidae) from Iraq. *Journal of Biodiversity and Environmental Sciences* **8**: 233–238.

BORSKÁ I. 2016: *Doktorka z domu Trubačů.* [*Doctor from Trubač's house*]. Motto, Praha, 270 pp. (in Czech).

BOUDOT J.-P., CLAUSNITZER V., SUHLING F., DIJKSTRA K.-D. B., SAMRAOUI B. & SCHNEIDER W. 2016: Nesciothemis farinosa. *The IUCN Red List of Threatened Species* 2016: e.T59921A83853056. http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T59921A83853056.en. (accessed 16 January 2019).

BOUDOT J.-P., KALKMAN V. J., AZPILICUETA AMORÍN M., BOGDANOVIĆ T., CORDERO RIVERA A., DEGABRIELE G., DOMMANGET J. L., FERREIRA S., GARRIGÓS B., JOVIĆ M., KOTARAC M., LOPAU W., MARINOV M., MIHOKOVIĆ N., RISERVATO E., SAMRAOUI B. & SCHNEIDER W. 2009. Atlas of the Odonata of the Mediterranean and North Africa. *Libellula Supplement* **9**: 1–256.

CARL M. 1989: Aquatische Insekten aus dem Irak: Ihre Verbreitung und Lebensräume (Ephemeroptera, Odonata, Heteroptera, Coleoptera, Diptera). *Nachrichtenblatt der Bayerischen Entomologen* **38**: 12–20.

DIJKSTRA K.-D. B. & CLAUSNITZER V. 2014: The Dragonflies and Damselflies of Eastern Africa: Handbook for all Odonata from Sudan to Zimbabwe. *Studies in Afrotropical Zoology* **298**: 1–264.

DUMONT H. J. 1991: *Odonata of the Levant. Fauna Palaestina. Insecta V.* Israel Academy of Sciences and Humanities, Jerusalem, 297 pp.

FÖRSTER F. 1897: Odonaten des Transvaalstaates. *Entomologische Nachrichten* **23**: 215–220.

FÖRSTER F. 1898: Odonaten des Transvaalstaates. II. *Entomologische Nachrichten* **24**: 166–172.

FRASER F. C. 1917: The female of the dragonfly, Brachythemis fuscopalliata (Ris). *The Journal of the Bombay Natural History Society* **25**: 282–283.

GARRISON R. W., VON ELLENRIEDER N. & O'BRIEN M. F. 2003: An annotated list of the name-bearing types of species-group names in Odonata preserved in the University of Michigan Museum of Zoology. *Occasional Papers of the Museum of Zoology, University of Michigan* **736**: 1–73.

HEIDARI H. & DUMONT H. J. 2002: An annotated check-list of the Odonata of Iran. *Zoology in the Middle East* **26**: 133–150.

KALKMAN V. J. 2006: Key to the dragonflies of Turkey including species known from Greece, Bulgaria, Lebanon, Syria, the Trans-Caucasus and Iran. *Brachytron* **10**: 3–82.

KALKMAN V. J., WASSCHER M. & VAN PELT G. J. 2003: An annotated checklist of the Odonata of Turkey. *Odonatologica* **32**: 215–236.

LAMBRET P. & BOUDOT J.-P. 2009: Nesciothemis farinosa (Förster, 1898) et Orthetrum ransonnetii (Brauer, 1868) nouveaux pour l'Arabie Saoudite et autres observations d'Odonates sur les reliefs côtiers de la Mer Rouge. *Martinia* **25**: 153–155.

LONGFIELD C. 1955: The Odonata of North Angola. Part I. *Publicações culturais Companhia de Diamantes de Angola* **27**: 11–64.

MORTON K. J. 1919: Odonata from Mesopotamia. *The Entomologist's Monthly Magazine* **55**: 143–151; 183–196.

MORTON K. J. 1920a: Odonata collected in North-Western Persia and Mesopotamia by Captain P. A. Buxton, R.A.M.C. *The Entomologist's Monthly Magazine* **56**: 82–87.

MORTON K. J. 1920b: Odonata collected in Mesopotamia by the late Major R. Brewitt-Taylor, R.A.M.C. *The Annals and Magazine of Natural History; zoology, botany, and geology* **5** (Series 9): 293–303.

MORTON K. J. 1921: Neuroptera, Mecoptera, and Odonata from Mesopotamia and Persia. *The Entomologist's Monthly Magazine* **57**: 213–225.

PINHEY E. 1962: A descriptive catalogue of the odonata of the African continent (up to December 1959). Part I., II. *Publiçacões culturais Companhia de Diamantes de Angola* **59**: 1–320.

PORTER R. F. 2016: Odonata from Iraq, with three new records. *Notulae Odonatologicae* **8**: 247–318.

RIS F. 1928: Zur Erforschung der Persischen Golfes. Beitrag Nr. 8. Libellen (Odonata). *Wiener Entomologische Zeitung* **44**: 155–164.

RISERVATO E., GRIECO C., PELLA F., SINDACO R., PUPIN F., SULEIMAN A. S. & FASOLA M. 2010: A contribution to the knowledge of the odonatofauna of the Socotra Archipelago (Yemen): (Insecta: Odonata). *Zoology in the Middle East* **50**: 101–106.

SAGE B. L. 1960a: Notes on the Odonata of Iraq. *The Entomologist* **93**: 118–125.

SAGE B. L. 1960b: Notes on the Odonata of Iraq. *Iraq Natural History Museum Publication* **18**: 1–11.

SCHNEIDER T., IKEMEYER D., MÜLLER O. & DUMONT H. J. 2018: Checklist of the dragonflies (Odonata) of Iran with new records and notes on distribution and taxonomy. *Zootaxa* **4394**: 1–40.

SCHNEIDER W. 1984: Beschreibung von Gomphus kinzelbachi n. sp. aus dem Iraq (Odonata: Anisoptera: Gomphidae). *Entomologische Zeitschrift* **94**: 1–16.

SCHORR M. & PAULSON D. 2019: World Odonata List, https://www.pugetsound.edu/ academics/academic--resources/slater-museum/biodiversity-resources/dragonflies/world-odonata-list2/ (accessed 16 January 2019).

ST. QUENTIN D. 1964: Odonaten aus Anatolien und dem Irak. *Entomologische Mitteilungen des Zoologischen Staatsinstituts und Zoologischen Museums Hamburg* **3**: 5–7.
SUHLING F., SCHÜTTE C. & MÜLLER O. 2003: Nesciothemis farinosa: description of the final stadium larva (Odonata: Libellulidae). *International Journal of Odonatology* **7**: 73–78.
WATERSTON A. R. 1985: Insects of southern Arabia. Odonata from the Yemen and Saudi Arabia. *Fauna of Saudi Arabia* **6**: 451–472.
WATERSTON A. R. & PITTAWAY A. R. 1989: The Odonata or Dragonflies of Oman and neighbouring territories. *Journal of Oman Studies* **10**: 131–168.

SOUHRN

Rod *Nesciothemis* Longfield, 1955 zahrnuje pouze pět druhů (Schorr & Paulson 2019). Jde o následující druhy: *N. farinosa* (Förster, 1898), *N. fitzgeraldi* Pinhey, 1956, *N. minor* Gambles, 1966, *N. nigeriensis* Gambles, 1966 a *N. pujoli* Pinhey, 1971.

Fauna vážek Iráku byla studována jen sporadicky. Seznamy vážek Iráku postupně publikovali Sage (1960b), Asahina (1973), Kalkman (2006) a Boudot et al. (2009). Nové druhy vážek pro Irák publikoval Porter (2016). Seznam druhů vážek Iráku, včetně *Trithemis arteriosa* (Burmester, 1839) (Ris 1928) a *N. farinosa* (tento příspěvek) obsahuje 46 druhů (P. Jeziorski nepubl.).

Dokladový materiál vážky *N. farinosa* byl uloven V. Kálalovou během jejího pobytu v Iráku. Vlasta Kálalová-di Lotti (* 26. října 1896, Bernartice, Rakousko-Uhersko – † 15. února 1971, Písek, Československo) byla česká lékařka se zaměřením na tropické nemoci a entomologii. Od roku 1925 do roku 1932 pracovala v Bagdádu, kde také ošetřovala členy královské rodiny. Přispěla k výzkumu tropických nemocí a také rozšířila sbírku Národního muzea v Praze o vzácné exempláře exotického hmyzu (Borská 2016).

Vážka *N. farinosa* nepatří k migrujícím druhům (Boudot et al. 2016). Samec vážky *N. farinosa* byl chycen jako nedospělý, což svědčí o jeho autochtonním původu v Bagdádu, a tudíž i v Iráku.

Vážka *N. farinosa* je rozšířena v Africe a v západní Asii. Je známa z Angoly, Botswany, Demokratické republiky Kongo, Egyptu, Etiopie, Jihoafrické republiky, Keni, Malawi, Mosambiku, Namibie, Rwandy, Somálska, Súdánu, Svazijska, Tanzanie, Ugandy, Zambie a Zimbabwe z afrického kontinentu (Boudot et al. 2016) a z Ománu (Waterston & Pittaway 1989), Saudské Arábie (Lambret & Boudot 2009) a Jemenu (Waterston 1985) z Arabského poloostrova a v této práci ji prvně uvádím z Iráku.