

## A mass migration of *Libellula* species in North Holland in 1681 documented in artwork by Rochus van Veen

Henri J. Dumont

Department of Biology, Ghent University, Belgium

**Abstract.** A watercolour painting executed by the Dutch painter Rochus van Veen in 1681 and held in the Getty Museum, Alabama, depicting, in exquisite detail, two males of *Libellula quadrimaculata* and one male of *L. depressa*, is presented and discussed. The specimens were obtained in May 1681 during the first documented mass migration of dragonflies in the Netherlands. Other records of early dragonfly migrations are noted.

Further key words. *Libellula quadrimaculata*, *Libellula depressa*, dragonflies, Odonata

## Odonata records from the coastal region of the Islamic Republic of Mauritania

Stefan Fischer<sup>1</sup>, Bernd Nicolai<sup>2</sup> & Herbert Grimm<sup>3</sup>

<sup>1</sup>Unter den Eichen 1a, 14641 Paulinenaue, Germany; fischer@dda-web.de

<sup>2</sup>Herbingsstr. 20, 38820 Halberstadt, Germany; nicolaibea@gmx.de

<sup>3</sup>Nordstr. 17, 06567 Bad Frankenhausen, Germany; herbert\_grimm@t-online.de

**Abstract.** During an 11-day birdwatching trip in coastal Mauritania (West Africa) we recorded 18 species of Odonata, including two identified only to genus. Five of these are new to Mauritania: *Ceriagrion glabrum* / *suave*, *Pseudagrion* sp., *Rhyothemis semihyalina*, *Tholymis tillarga* and *Trithemis hecate*. We report the first Mauritanian records of *Acisoma inflatum*, *Orthetrum trinacria* and *Urothemis edwardsii* for almost 50 years. At Plage de Ghara we found dead or dying dragonflies of 10 different species on a beach. In pellets of the Blue-cheeked Bee-eater found near a small pond south of Tamxat, Odonata made up 33.6% of food items. Further key words. Dragonflies, exuviae, West Africa

## A comparison of odonate communities in primary and secondary cloud forest at Santa Elena Cloud Forest Reserve, Monteverde, Costa Rica

Wade B. Worthen<sup>1</sup> & Meyer Guevara-Mora<sup>2</sup>

<sup>1</sup> Biology Department, Furman University, Greenville, SC, USA, 29613

<sup>2</sup> Laboratorio de Entomología-LEUNA, Escuela de Ciencias Biológicas, Universidad Nacional, Heredia, Costa Rica.

**Abstract.** We compared the adult odonate communities in primary and secondary cloud forest sites at the Santa Elena Preserve in Monteverde, Costa Rica, during seven weekly visits from April to June 2023. There were no significant differences between primary and secondary forest sites in mean odonate abundance/site, mean abundance of each species/site, ACE incidence-based estimated species richness, or Chao estimated Shannon Diversity. Pairwise community similarity values were calculated among all sites and sites within forest types were no more similar than sites from different forests. Similarity was not correlated with horizontal or elevational distances between sites in partial correlations. Community composition did not vary between secondary and primary forest sites in NMDS and PERMANOVA analyses. The adult odonate communities in primary and secondary forests were nearly indistinguishable, suggesting a recovery of odonate communities in this abutting 30-year-old secondary forest.

Further key words. Odonata, community ecology, community recovery, forest restoration, nestedness

## New records and localities of Odonata from Zacatecas, Mexico

Diana E. Carrillo-Lara<sup>1</sup> & Rodolfo Novelo-Gutiérrez<sup>2</sup>

<sup>1</sup>Departamento de Vida Silvestre y Áreas Naturales Protegidas, Secretaría del Agua y Medio Ambiente, Gobierno del Estado de Zacatecas, Edificio F, Circuito Cerro del Gato Piso 1, Ciudad Administrativa, 98160, Zacatecas, Zacatecas, México; dpepper.1120@gmail.com

<sup>2</sup>Red de Biodiversidad y Sistemática, Instituto de Ecología A.C., Carretera Antigua a Coatepec 351, Col. El Haya, 91073 Xalapa, Veracruz, México; corresponding author: rodolfo.novelo@inecol.mx

**Abstract.** A list of 25 species found in three new localities, including five new records for Zacatecas State, Mexico, is provided. *Enallagma novaehispaniae*, *Protoneura cara*, *Celithemis eponina*, *Paltothermis lineatipes*, and *Tauriphila australis* are recorded for the first time, increasing to 51 the number of species for this state.

Further key words. Dragonfly, damselfly, Anisoptera, Zygoptera, Mexican state

## High elevation wintertime records of *Orthetrum ransonnetii* (Odonata: Libellulidae) from north-western Saudi Arabia

Binish Roobas

Dubai Natural History Group, Dubai, United Arab Emirates; binishroobas@hotmail.com

**Abstract.** A breeding population of *Orthetrum ransonnetii* (Desert Skimmer, Desert Basker, Ransonnet's Skimmer, etc.) is here reported from 1500–1800 m in the granite mountains of north-western Saudi Arabia in early February 2024. This eremic species has a vast range in the arid regions from the Canary Islands across North Africa and Arabia to south-west Asia, but its occurrence is patchy, with long series of records from the Dead Sea Rift Valley and the Sinai Peninsula, the Hajar Mountains of the United Arab Emirates and northern Oman, and the north-west and central Sahara in Morocco and Algeria, but limited records from the remainder of its range and only a single previous record from Saudi Arabia. The wintertime high-elevation records discussed here fill a large observational gap within the species' distribution range and provide additional evidence for the recently recognised ecological plasticity of the species.

Further key words. Jebel Lawz, eremic habitat, species distribution, wadi

## New record of *Pyrrhosoma cf. nymphula* (Odonata: Coenagrionidae) in north-eastern Algeria

Chelli Abdelmadjid<sup>1</sup>, Meriem Tababouchet<sup>2</sup> & Abdelazize Franck Bougaham<sup>3\*</sup>

<sup>1</sup>Laboratoire de Zoologie Appliquée et d'Écophysiologie Animale. Faculté des Sciences de la Nature et de la Vie, Université de Bejaia, 06000 Bejaia, Algeria

<sup>2,3</sup>Laboratoire de Recherche en Écologie et Environnement. Faculté des Sciences de la Nature et de la Vie, Université de Bejaia, 06000 Bejaia, Algeria

\* Corresponding author: abdelazize.bougaham@univ-bejaia.dz

**Abstract.** During a survey of odonates along the river Wadi Boulahdaïd in the north-east of Algeria, a new population of the large red damselfly, *Pyrrhosoma cf. nymphula*, was recorded. This stream had not been explored in previous odonatological studies in Algeria. The population displayed a range of reproductive behaviours, from copulation and oviposition to territoriality, which suggests local establishment. This finding adds a new locality within the previously known North African range of this taxon, which runs from northern and western Morocco to Tunisia through the Rif Mountains, the High and Middle Atlas and the Tell Atlas orographic system. It contributes to an improved understanding of the North African odonate fauna.

Further key words. Spatial data, *Pyrrhosoma nymphula*, Wadi Boulahdaïd, North Africa