Zootaxa 3981 (2): 151–176
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3981.2.1
http://zoobank.org/urn:lsid:zoobank.org:pub:5E714DAC-15F2-46DA-AE2E-F74B2513D558

Checklist, distribution, and a new record of Nepomorphan water bugs (Hemiptera: Heteroptera) in northern Tunisia

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Abstract

We report on the results of a survey of the Nepomorpha of northern Tunisia, and list twenty-three species belonging to twelve genera and seven families: Nepidae, Ochteridae, Corixidae, Micronectidae, Naucoridae, Notonectidae, and Pleidae. These records are based on intensive field surveys during the year 2013 and examination of the entomological collections of the National Museum Natural History of Paris. *Ranatra linearis* (Linnaeus, 1758) is recorded for the first time from Tunisia**.** The occurrence of *Sigara (Halicorixa) stagnalis stagnalis* (Leach, 1817) in Tunisia is confirmed. A preliminary checklist of the Nepomorpha of Northern Tunisia and updated distribution maps for all species treated are provided for further studies.

Key words: Heteroptera, Nepomorpha, water bugs, checklist, survey, distribution, Tunisia

Introduction

Many plant and animal species that live in lentic water bodies are endangered by destruction of their natural habitat. This is particularly the case in areas where rivers are dried seasonally, as in Maghreb. Typically, studies of water quality and its impact on aquatic fauna have concerned aquatic beetles (Armin *et al.* 2010). Communities of aquatic Heteroptera have been less studied than aquatic beetles, but may provide additional and different information. In particular, a number of publications indicate that some species of Corixidae seem to have clearly defined habitat demands. For example, the distribution of corixids has been found to correlate with the percentage of organic material in the sediment (Macan 1938; 1954), electrical conductivity and shape of the water body (Savage 1982), water hardness (Tully *et al.*1991) and vegetation (Tully *et al.*1991; Macan 1954).

The nepomorphan water bugs (Hemiptera, Heteroptera, Nepomorpha) represent 42% of all aquatic Heteroptera in the Palearctic Region (Henry 2009). They inhabit both stagnant and running waters, in areas rich in marginal vegetation or hydrophytes (Poisson 1957). All species are predators (Schuh & Slater 1995), although many Corixidae are omnivorous (Jansson & Scudder 1972). The size of nepomorphan bugs ranges from the smallest Heteroptera (Micronectidae and Helotrephidae, 1.3 mm) to some of the largest (Belostomatidae, *Lethocerus* Mayr, 110 mm). There are currently 13 families worldwide: Nepidae Latreille (water scorpions, water stick insects), Belostomatidae Leach (giant water bugs), Gelastocoridae Kirkaldy (toad bugs), Ochteridae Kirkaldy (velvet shore bugs), Corixidae Leach (waterboatmen), Micronectidae (pygmy waterboatmen), Naucoridae Leach (creeping water bugs, saucer bugs), Aphelocheiridae Fieber, Notonectidae Latreille (backswimmers), Potamocoridae Hungerford, Diaprepocoridae Lundblad, Pleidae Fieber (pygmy backswimmers) and Helotrephidae Esaki & China. In total, Palearctic water bugs include 50 genera and 334 species (Aukema *et al.* 2013), of which seven families, 12 genera and 28 species occur in Tunisia (Carapezza 1997).

Accepted by M. Malipatil: 9 Jun. 2015; published: 3 Jul. 2015