



<http://dx.doi.org/10.11646/zootaxa.3827.4.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:6AE606D7-62DE-49E9-8F6F-52D7B400670F>

The Nabidae (Hemiptera: Heteroptera) of Israel and the Sinai Peninsula

T. NOVOSELSKY¹, A. FREIDBERG¹, N. DORCHIN¹, N. MELTZER¹ & I. KERZHNER²

¹Department of Zoology, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel.

E-mail: tania@post.tau.ac.il, afdipter@post.tau.ac.il, ndorchin@post.tau.ac.il, niko.meltzer@gmail.com

²Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (deceased)

Abstract

A long-term taxonomic and faunistic survey of the family Nabidae from Israel and the Sinai (Egypt) was conducted based primarily on material housed in the National Collection of Insects at Tel Aviv University, Israel (TAUI). A key is provided to all species and information is given for each, species including its distribution, previous records from the study area and life history details if available. Eleven species are recorded; *Nabis (Nabis) pseudoferus orientarius* Remane and *Nabis (Halonabis) sareptanus* Dohrn are new records to the fauna of the study area. *Phorticus velutinus velutinus* Puton is expected to occur in Israel based on its current circummediterranean distribution.

Key words: Heteroptera, Hemiptera, Israel, key, Nabidae, list, new records

Introduction

The family Nabidae (Heteroptera) includes 21 genera and about 400 species. It is divided into four subfamilies, of which Velocipedinae and Medocostinae—each containing one genus and considered a separate family by some authors—do not occur in the Palaearctic Region. The two other subfamilies, Prostematinae and Nabinae, have a worldwide distribution and occur in the study area (Israel and the Sinai Peninsula, Egypt). The Prostematinae comprise two tribes, Prostematini and Phorticini (Kerzhner 1981), and the Nabinae comprise one tribe, Nabini. All Nabidae are predacious. Prostematinae feed on other bugs, especially of the family Lygaeidae, and live on the ground. Nabinae are polyphagous, feeding on adults, larvae and eggs of various insects and other arthropods (Lattin 1989, Polivanova 1960). Most Nabidae species live on grasses or shrubs, but some live on the ground or on trees. Eggs are laid in plant tissues. Some *Nabis* species (subgenera *Nabis* and *Tropiconabis*) are abundant in cultivated areas and are therefore important in the control of various pests (Koschel 1971, Guppy 1986, Braman & Yeagan 1990).

Although a monograph and a catalog of the Palaearctic Nabidae were published by Kerzhner (1996), and a monograph of the species of Western Europe and northwest Africa was published by Péricart (1987), knowledge about the Israeli nabid fauna has been somewhat confused. Bodenheimer (1937) listed eight species of Nabidae from Palestine based on scattered records in the literature, and Linnavuori (1961) in his review of the Israeli Heteroptera has subsequently added *Nabis (Nabis) palifer* Seidenstücker and excluded *Nabis (Nabis) ferus* from that list. Of the eight species listed by Linnavuori, three were included based on a reference to Bodenheimer (1937) alone, and *Alloeorhynchus flavipes* (Fieber) was omitted although it was recorded from Nazareth by Reuter & Poppius (1909) and appeared in Bodenheimer's list (1937). Subsequently, *Himacerus (Anaptus) major* (Costa) was recorded from Israel by Linnavuori (1973) and *Nabis (Halonabis) sareptanus* Dohrn was recorded by Kerzhner (1981) from the Jordanian shore of the Jordan River. *Prostemma aeneicolle* Stein was first reported from Israel by Douglas and Scott (1868), and increased the number of nabid species in Israel to twelve. In the present paper we attempt to clarify these confusing records by treating all the species known from Israel and the Sinai (plus one species that is expected to occur there) and addressing previous literature records.

This study was prompted by a previous survey of the biodiversity of tamarisk (*Tamarix* spp.) insects in Israel (Gerling & Kugler 1973, Gerling et al. 1976). In a more recent, similar but unpublished project, special attention

References

- Bodenheimer, F.S. (1937) Prodrômus Faunae Palaestinae. *Mémoires a l'Institut d'Égypte*, 32, 1–286.
- Braman, S.K. & Yeargan, K.V. (1990) Phenology and abundance of *Nabis americanoferus*, *N. roseipennis*, and *N. rufusculus* (Hemiptera: Nabidae) and their parasitoids in alfalfa and soybean. *Journal of Economic Entomology*, 83 (3), 823–830.
- Carapezza, A. (1997) Heteroptera of Tunisia – II. *Naturalista Siciliano*, 21, suppl. A, 1–312.
- Carayon, J. (1949) Caractères distinctifs, répartitions géographiques et habitats des espèces paléarctiques du genre *Alloeorhynchus* Fieb. (Hem. Nabidae). *Bulletin de la Société entomologique de France*, 54, 136–142.
- Douglas, J.W. & Scott, J. (1868) List of captures of Hemiptera in Palestine and Syria together with the description of several new species (concluded from p. 118). *Entomologist's Monthly Magazine*, 5, 135–139.
- Gerling, D. & Kugler, J. (1973) *Evaluation of enemies of noxious plants in Israel as potential agents for the biological control of weeds*. Final technical report. Project number: A10-ENT-36. USDA, P.L. 480. Tel Aviv University, George S. Wise Center for Life Sciences, Dep. Zool., Tel Aviv, Israel, 241 leaves.
- Gerling, D., Kugler, J. & Lupo, A. (1976) The galls of insects and mites that occur on *Tamarix* in Israel and the Sinai. *Bollettino del Laboratorio di Entomologia Agraria "Filippo Silvestri"*, 23, 53–79.
- Guppy, J.C. (1986) Bionomics of the damsel bug, *Nabis americanoferus* Carayon (Hemiptera: Nabidae), a predator of the alfalfa blotch leafminer (Diptera: Agromyzidae). *Canadian Entomologist*, 118 (8), 745–751.
<http://dx.doi.org/10.4039/ent118745-8>
- Kerzhner, I.M. (1981) *Heteroptera: Nabidae. Fauna SSSR. Nasekomye Khobotniye*, 13 (2). Leningrad, Nauka, 326 pp. [in Russian]
- Kerzhner, I.M. (1996) Family Nabidae A.Costa. Damsel bugs. In: Aukema, B. & Rieger, C. (Eds.), *Catalogue of the Heteroptera of the Palaearctic Region. Vol. 2*. Netherlands Entomological Society, pp. 84–107.
- Kerzhner, I.M. & Yachevskii, T.L. (1964) 19. Order Hemiptera (Heteroptera). In: Bei-Bienko, G.Ya. (Ed.), *Keys to the Insects of the European USSR. Vol. 1*. Apterygota, Palaeoptera, Hemimetabola. Moskva-Leningrad, Nauka, pp. 851–1118.
- Koschel, H. (1971) Zur Kenntnis der Raubwanze *Himacerus apterus* F. (Heteroptera, Nabidae). Teil 1. *Zeitschrift für angewandete Entomologie*, 68, 1–24.
<http://dx.doi.org/10.1111/j.1439-0418.1971.tb03116.x>
- Lattin, D.J. (1989) Bionomics of the Nabidae. *Annual Review of Entomology*, 34, 383–400.
<http://dx.doi.org/10.1146/annurev.ento.34.1.383>
- Linnavuori, R. (1961) Hemiptera of Israel II. *Annales Zoologici Societatis Zoologicae-Botanicæ "Vanamo"*, 22 (7), 37–38.
- Linnavuori, R. (1973) Studies on the hemipterous fauna of Israel and Sinai. *Israel Journal of Entomology*, 8, 35–54.
- Péricart, J. (1987) *Hémiptères Nabidae d'Europe Occidentale et du Maghreb (Faune de France, 71)*. Fédération Française des Sociétés des Sciences Naturelles, Paris, 185 pp.
- Polivanova, E. (1960) Ekologo-morfologitsheskie osobennosti klopov nadsemejstva *Pentatomoidea* v iozhnykh zernovykh rajonakh evropejskoj tshasti SSSR. – [Ecological and morphological features of the bug superfamily *Pentatomoidea* in the southern grain regions of European part of USSR]. *Harmful bug Eurygaster integriceps Put*, Moscow 4, 157–221.
- Reuter, O.M. & Poppius, B. (1909) Monographia Nabidarum orbis terrestris, I. *Acta Societatis Scientiarum Fennicae*, 37 (2), 1–62.
- Theodor, O. (1975) *Fauna Palaestina, Insecta 1, Diptera Pupipara*. The Israel Academy of Sciences and Humanities, Jerusalem, 168 pp. + map.