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Aquatic and semiaquatic Heteroptera (Nepomorpha and Gerromorpha) fauna of Greek holiday islands (Rhodes, Crete and Corfu) with first records of three species from Europe and Greece

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Abstract

A comprehensive survey on aquatic and semiaquatic bugs (Heteroptera: Nepomorpha and Gerromorpha) of three Greek holiday islands, Rhodes, Crete and Corfu, was conducted from 2007 to 2010 at 237 localities. In this paper, hundreds of detailed records for 30 taxa in nine families are given. The occurrences of *Rhagovelia infernalis africana* Lundblad, 1936 and *Velia mariae* Tamanini, 1971 are confirmed and recorded for the first time from Europe *sensu stricto*. Additionally, some notes on morphology, taxonomy and distribution of the European species of *Rhagovelia* and *Velia* are also given, *Velia mariae* is recorded for the first time not only from several Greek islands, but from continental Greece and Bulgaria as well. *Gerris asper* (Fieber, 1860), a common European species, was also found for the first time in Greece. Furthermore, new occurrence data are given for endemic taxa; *Sigara nigrolineata mendax* Heiss & Jansson, 1986 and *Velia rhadamantha rhadamantha* Hoberlandt, 1941 (whose distribution is restricted to Crete and small adjacent islands) are very common throughout Crete, whereas *Ilyocoris cimicoides jonicus* (Lindberg, 1922) apparently is rare in Corfu.

Key words: distribution, faunistics, endemic species, Mediterranean basin, Balkan Peninsula, *Velia rhadamantha rhadamantha, Velia mariae, Rhagovelia nigricans nigricans, Gerris asper*

Introduction

Although the Mediterranean Basin is considered as a biodiversity hotspot (Myers *et al*. 2000), our knowledge on the Heteroptera fauna of Greece, as a part of the eastern Mediterranean and southern Balkan area, is limited in part because of the lack of taxonomic specialists and the relatively late beginning of taxonomic studies (Josifov & Simov 2006).

Among Heteroptera, members of the infraorders Gerromorpha and Nepomorpha are considered to be true aquatic species (Polhemus & Polhemus 2008). In these infraorders, 55 (plus one doubtful) species belonging to 12 families are known to occur in Greece on the basis of the Catalogue of Palaearctic Heteroptera and the Fauna Europaea Database (Andersen 1995, Polhemus *et al*. 1995, Aukema 2013, Aukema *et al.* 2013). However, in these works only a few species are mentioned from the Greek islands separately that focus on endemic taxa (e.g. *Sigara nigrolineata mendax* Heiss & Jansson, *Ilyocoris cimicoides jonicus* Lindberg) or species with restricted geographical distribution (e.g. *Velia rhadamantha* Hoberlandt). Accordingly, the aquatic Heteroptera fauna of the Greek islands is poorly known and documented.

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Our study focuses on three large Greek islands: Rhodes, Crete, and Corfu. To our knowledge, only sporadic data on aquatic Heteroptera were published for these islands, as the results of faunistic and taxonomic works. The majority of these papers deal with heteropterans from Crete (e.g., Hoberlandt 1941; Zimmermann 1982; Heiss 1983, 1984, 1985; Heiss & Jansson 1986a; Jansson 1986; Heiss & Hopp 1987; Heiss *et al.* 1991, 1993), whereas the number of studies on the aquatic Heteroptera fauna of Rhodes and Corfu is limited and mention only a few species (e.g., Lindberg 1922, Teodoro 1929, Linnavuori 1953, Zimmermann 1982, Jansson 1986, Karaouzas & Gritzalis 2006).

The Aquatic Macroinvertebrates Research Group of the University of Pécs organized collecting trips to these popular holiday islands between 2007 and 2010 with the aim to study the aquatic macroinvertebrate fauna of all permanent, intermittent and ephemeral waterbodies. In this paper, we give detailed results and hundreds of new records concerning aquatic Heteroptera (i.e., Gerromorpha and Nepomorpha) with notes on morphology, taxonomy and distribution of the European species of the genus *Rhagovelia* and some species of the genus *Velia*.

Materials and methods

Museum and Collection Abbreviations

CFC	F. Cianferoni, Florence, Italy
DHUP	Department of Hydrobiology, University of Pécs, Hungary
GBCR	G.M. Berchi, Cluj-Napoca, Romania
HNHM	Hungarian Natural History Museum, Budapest, Hungary
NMNHS	National Museum of Natural History, Sofia, Bulgaria

Our research group visited a total of 237 sampling sites (Fig. 1, complete list of the collecting localities in tabular format can be found in Csabai *et al.* 2017), including a wide variety of aquatic and wetland habitats such as rivers, streams, channels, springs, lakes, ponds, marshes, and natural and artificial pools, from tiny waterbodies (barrels or rock pools with some or only half a liter capacity) to large reservoirs, and from small temporary spring-outlets to large rivers in Rhodes, Crete and Corfu (57, 115 and 65 sites, respectively). All sites were inhabited by aquatic macroinvertebrates and yielded data, but at 78 sites (13 in Rhodes, 46 in Crete and 19 in Corfu) aquatic Heteroptera were not found; thus, new records are from 159 sites (44 in Rhodes, 69 in Crete and 46 in Corfu).

The collections were carried out during late winter (Rhodes: 12–26 February 2007, Crete: 12 February–03 March 2008) and in spring (Corfu: 21 April–04 May 2010). In these periods, beyond the small number of permanent waterbodies, many small intermittent streams and rivers and ephemeral temporary pools existed as well.

Aquatic macroinvertebrates (including aquatic Heteroptera) were captured by sweeping with long handled pond nets (mesh size 0.5 mm, rounded: diameter 32 cm, rectangular: side length 25 cm) just above the substrate, on the water surface, and among submerged or emergent vegetation. In running waters, aquatic insects were mostly captured by using the "kick and sweep" technique. Specimens were also collected by manual picking from the surface of submerged stones, woodstocks, floating debris and garbage, etc.

Most taxa were identified by N. Soós and P. Boda based on published taxonomic works (e.g., Brooks 1951; Jansson 1986; Savage 1989; Andersen 1993) and materials from DHUP and HNHM. Species-level identifications of the genus *Micronecta* were not possible because only immature specimens were collected. However, these nymphs were the only representatives of the genus; thus, *Micronecta* sp. was included in the cumulated numbers of taxa. *Velia* specimens were identified by G.M. Berchi, P. Boda and F. Cianferoni with the help of P. Kment (National Museum, Prague, Czech Republic). Identification of macropterous females and nymphs of *Velia* cannot be performed with certainty; therefore, if they were not accompanied by males or apterous females at a site, their records were listed as *Velia* sp., and not included in the cumulated numbers of taxa. The single specimen of *Rhagovelia* was identified by P. Boda and Z. Csabai with the help of N. Nieser and P.-p. Chen. Most of the collected specimens are deposited in DHUP (partly mounted dry, but mostly in ethanol). Some specimens of *Velia* are kept in the private collection of GBCR. In addition to the material collected by our research group, records of selected species from NMNHS and the private collections of CFC and GBCR were also included.

In the list of species, the collecting sites were sorted by prefectures (only Crete, abbreviated as "P.") and

municipalities (abbreviated as "M."), their coordinates (datum: WGS84), date of collection and the number of captured specimens are given, respectively. In some cases, where the identification of the females is problematic, the sexes of collected insects are indicated with gender symbols. For species of *Velia,* wing development status is given as follows: apt. = apterous, mpt. = macropterous. The bold numbers in the beginning of names of each locality refer to those in Fig. 1 as well as to the complete list of collecting sites published in Csabai *et al.* (2017). In case of the recently collected material, the collectors are indicated as follows: L1: Zoltán Csabai, András Kálmán, Zoltán Kálmán, Nándor Soós; L2: Zoltán Csabai, András Kálmán, Zsuzsanna Pap, Nándor Soós; L3: Zoltán Csabai, Arnold Móra, Zsuzsanna Pap, Nándor Soós; L4: Zoltán Csabai, András Kálmán, Zoltán Kálmán, Zsuzsanna Pap. In the cases of listing additional material from different collections, the full names of collectors are given. Nomenclature follows the Palaearctic Catalogue (Andersen 1995, Polhemus *et al*. 1995, Aukema *et al.* 2013).

Results

Altogether, 1111 specimens belonging to 30 taxa of nine families were collected from the three islands (Table 1). Almost the half of the specimens (511) belonged to Veliidae, while only three, five, nine and 13 specimens of Naucoridae, Micronectidae, Pleidae and Hebridae were caught, respectively. The most species belonged to Corixidae (7), Gerridae (7) and Veliidae (7) followed by Notonectidae (4). Only one representative of Hydrometridae (in all the three islands), Micronectidae (only in Rhodes), Naucoridae and Hebridae (both only in Corfu), and Pleidae (in Crete and Corfu) were collected; the latter has only a single species in Europe. The most specimens were collected in Crete (495), followed by Rhodes (323) and Corfu (293). The numbers of species were higher in Corfu and Crete (17 each), and fewer in Rhodes (11) (see Table 1 for more details).

TABLE 1. Number of individuals (Ind.) and the number of species collected in the three Greek islands separately and summarized.

	Rhodes		Crete		Corfu		Total	
	Ind.	Species	Ind.	Species	Ind.	Species	Ind.	Species
Corixidae	22	3	125	5	6	2	153	7
Micronectidae	5	1	-	-	-	-	5	1
Notonectidae	45	1	51	3	73	4	169	4
Pleidae	-	-	21	1	9	1	30	1
Naucoridae	-	-	-	-	3	1	3	1
Hebridae	-	-	-	-	13	1	13	1
Veliidae	212	4	231	3	68	3	511	7
Gerridae	11	2	54	4	50	4	115	7
Hydrometridae	28	1	13	1	71	1	112	1
Total	323	11	495	17	293	17	1111	30

List of species

NEPOMORPHA

Corixidae

Corixa affinis Leach, 1817
Material examined. RHODES: M. of Lindos: **041** Lardos, River Lardos, 36°05'07"N 28°01'01"E, 17.ii.2007, 1, L1.—CRETE: P. of Heraklion: M. of Asteroussia: **098** Protoria, River Anapodiaris, 35°02'30"N 25°09'16"E, 15.ii.2008, 12, L3.—CORFU: M. of Achilion: **173** Komianata, ditch, 39°31'42"N 19°54'01"E, 29.iv.2010, 5, L4.

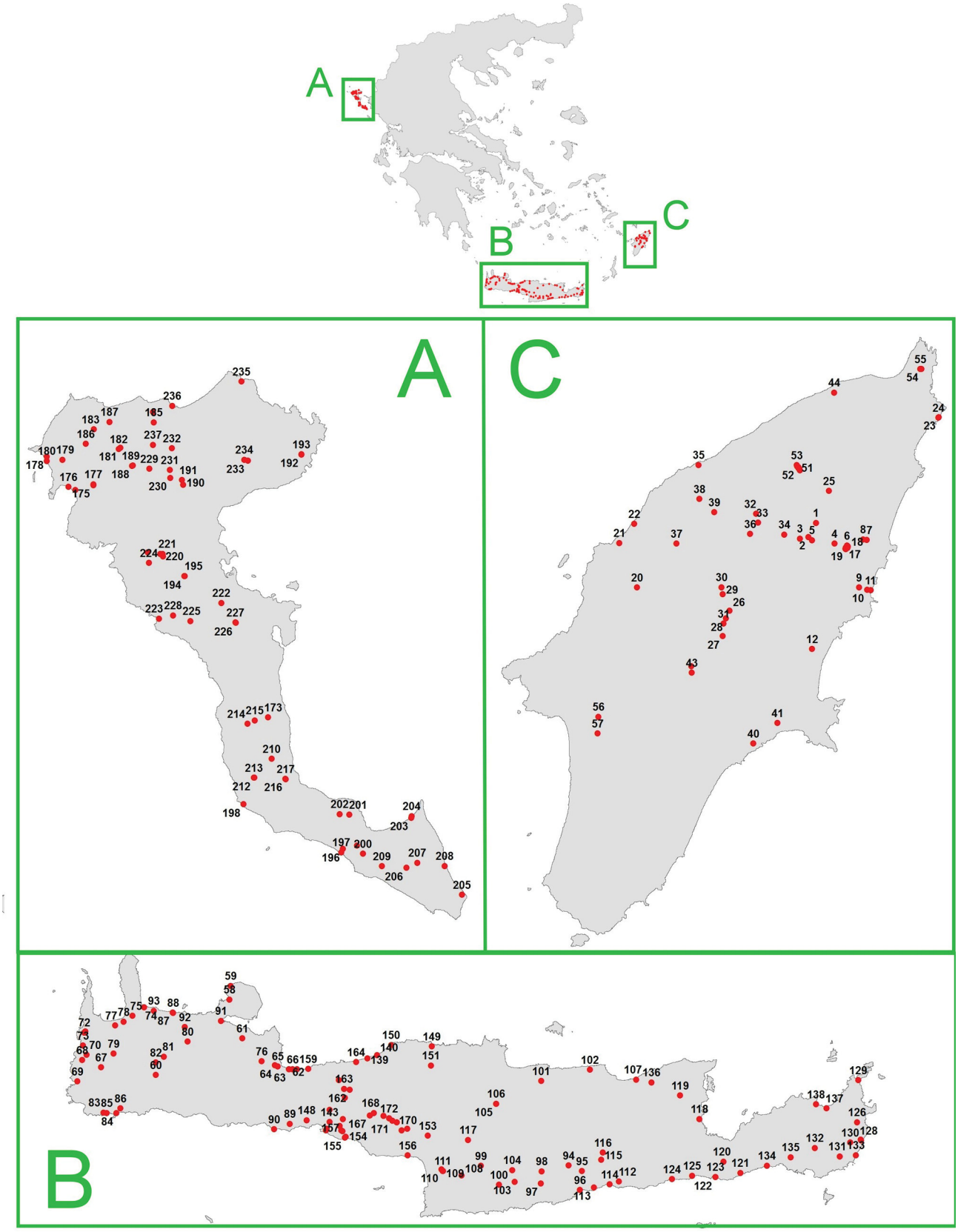


FIGURE 1. Sampling sites in Greek Islands. A: Corfu, B: Crete, C: Rhodes. Numbers refer to the site codes given at each locality data and tabulated with details in Csabai *et al.* (2017). In case of overlapping sites, some of the numbers are hidden.

Corixa panzeri Fieber, 1848
Material examined. CRETE: P. of Chania: M. of Georgioupoli: **063** Asprouliani, pond, 35°21'06"N 24°17'25"E, 25.ii.2008, 4, L3; M. of Platanias: **087** Platanias, puddle, 35°31'11"N 23°53'27"E, 21.ii.2008, 7, L3; M. of Therissos: **092** Agia, Lake Agia, 35°28'39"N 23°55'55"E, 01.iii.2008, 13, L3; P. of Heraklion: M. of Viannos: **113** Dermatos, River Anapodiaris, 34°59'28"N 25°20'00"E, 22.ii.2008, 3, L3; P. of Rethymno: M. of Lampis: **156** Agia Galini, River Platys, 35°05'53"N 24°41'38"E, 24.ii.2008, 4, L3; M. of Rethymno: **161** Fotinos, pool, 35°15'57"N 24°28'54"E, 02.iii.2008, 2, L3.

Corixa punctata (Illiger, 1807)
Material examined. CRETE: P. of Heraklion: M. of Asteroussia: **098** Protoria, River Anapodiaris, 35°02'30"N 25°09'16"E, 15.ii.2008, 1, L3; P. of Rethymno: M. of Rethymno: **161** Fotinos, pool, 35°15'57"N 24°28'54"E, 02.iii.2008, 1, L3.

Hesperocorixa sahlbergi (Fieber, 1848)
Material examined. CORFU: M. of Meliteieon: **216** Mesongi, River Mesongi, 39°28'35"N 19°55'15"E, 29.iv.2010, 1, L4.

Sigara (Pseudovermicorixa) nigrolineata nigrolineata (Fieber, 1848)
Material examined. RHODES: M. of Petaloudes: **048** Petaloudes (Valley of butterflies), stream 4, 36°20'07"N 28°03'47"E, 21.ii.2007, 13, L1; **049** Petaloudes (Valley of butterflies), stream 5, 36°20'11"N 28°03'45"E, 21.ii.2007, 6, L1; **052** Petaloudes (Valley of butterflies), stream 8, 36°20'17"N 28°03'38"E, 21.ii.2007, 1, L1; M. of South Rhodos: **057** Apolakkia, River Apolakkias, 36°05'09"N 27°47'48"E, 16.ii.2007, 1, L1.

Sigara (Pseudovermicorixa) nigrolineata mendax Heiss & Jansson, 1986
Material examined. CRETE: P. of Chania: M. of Platanias: **087** Platanias, puddle, 35°31'11"N 23°53'27"E, 21.ii.2008, 3, L3; P. of Heraklion: M. of Arkalohori: **096** Tsoutsouros, stream, 34°59'05"N 25°17'07"E, 22.ii.2008, 2, L3; M. of Gortina: **099** Agia Deka, stream, 35°03'43"N 24°56'46"E, 15.ii.2008, 1, L3; M. of Viannos: **113** Dermatos, River Anapodiaris, 34°59'28"N 25°20'00"E, 22.ii.2008, 3, L3; P. of Rethymno: M. of Finikas: **145** Damnoni, stream, mouth, 35°10'29"N 24°24'49"E, 19.ii.2008, 4, L3; **146** Gianniou, River Megas Potamos, 35°10'26"N 24°27'58"E, 19.ii.2008, 1, L3; M. of Lampis: **154** Agia Fotini, stream, 35°09'21"N 24°28'54"E, 19.ii.2008, 1, L3; **155** Agia Fotini, stream, mouth, 35°09'13"N 24°28'41"E, 19.ii.2008, 6, L3; M. of Lappas: **158** Dramia, River Mouselas, 35°21'03"N 24°19'04"E, 25.ii.2008, 1, L3; M. of Nikiforos Fokas: **159** Petre, River Petres, 35°21'04"N 24°21'28"E, 25.ii.2008, 1, L3; M. of Rethymno: **160** Armeni, pool, Late Minoan Cemetery, 35°19'03"N 24°27'45"E, 27.ii.2008, 5, L3; **161** Fotinos, pool, 35°15'57"N 24°28'54"E, 02.iii.2008, 5, L3.

Sigara (Vermicorixa) lateralis (Leach, 1817)
Material examined. CRETE: P. of Chania: M. of Platanias: **087** Platanias, puddle, 35°31'11"N 23°53'27"E, 21.ii.2008, 1, L3; P. of Heraklion: M. of Arkalohori: **095** Demati, River Erganas, 35°02'19"N 25°17'37"E, 22.ii.2008, 1, L3; M. of Asteroussia: **098** Protoria, River Anapodiaris, 35°02'30"N 25°09'16"E, 15.ii.2008, 23, L3; M. of Viannos: **113** Dermatos, River Anapodiaris, 34°59'28"N 25°20'00"E, 22.ii.2008, 18, L3; P. of Rethymno: M. of Lampis: **156** Agia Galini, River Platys, 35°05'53"N 24°41'38"E, 24.ii.2008, 2, L3.

Micronectidae

Micronecta sp. (nymphs)
Material examined. RHODES: M. of South Rhodos: **056** Apolakkia, dam-lake, 36°06'08"N 27°47'55"E, 16.ii.2007, 5, L1.

Naucoridae

Ilyocoris cimicoides jonicus (Lindberg, 1922)

Material examined. CORFU: M. of Paleokastriton: **219** Poulades, pond, 39°39’49”N 19°46’49”E, 27.iv.2010, 2, L4; **220** Poulades, pond with open water, 39°39’56”N 19°46’46”E, 27.iv.2010, 1, L4.

Notonectidae

Anisops sardeus sardeus Herrich-Schäffer, 1849
Material examined. CORFU: M. of Agios Georgios: **180** Arillas, stream, mouth, 39°44’32”N 19°38’57”E, 23.iv.2010, 6, L4.

Notonecta (Notonecta) glauca glauca Linnaeus, 1758
Material examined. CRETE: P. of Rethymno: M. of Rethymno: **161** Fotinos, pool, 35°15’57”N 24°28’54”E, 02.iii.2008, 1, L3.—CORFU: M. of Paleokastriton: **220** Poulades, pond with open water, 39°39’56”N 19°46’46”E, 27.iv.2010, 5, L4.

Notonecta (Notonecta) maculata Fabricius, 1794
Material examined. RHODES: M. of Afandou: **002** Arhipoli, River Loutanis 2, 36°16’03”N 28°04’08”E, 19.ii.2007, 1, L1; **003** Arhipoli, River Loutanis 3, 36°15’59”N 28°03’30”E, 22.ii.2007, 2, L2; M. of Arhangelos: **014** Epta Piges (Seven Springs), lake 1, 36°15’15”N 28°06’57”E, 14.ii.2007, 1(nymph), L1; **015** Epta Piges (Seven Springs), lake 2, 36°15’16”N 28°06’56”E, 15.ii.2007, 1, L1; M. of Kamiros: **027** Apollona, River Gadouras 1, 36°10’29”N 27°57’23”E, 17.ii.2007, 11(nymph), L1; **032** Dimylia, River Platis, 36°17’37”N 28°00’23”E, 20.ii.2007, 1, L1; **034** Eleousa, stream, 36°16’17”N 28°02’23”E, 22.ii.2007, 2, L2; **039** Salakos, River Argiros 2, 36°17’52”N 27°57’20”E, 20.ii.2007, 2, L1; M. of Lindos: **043** Laerma, River Lardos 2, 36°08’25”N 27°54’58”E, 17.ii.2007, 6(nymph), L1; M. of Petaloudes: **045** Petaloudes (Valley of butterflies), stream 1, 36°20’03”N 28°03’49”E, 21.ii.2007, 2, L1; **046** Petaloudes (Valley of butterflies), stream 2, 36°20’05”N 28°03’47”E, 21.ii.2007, 7, L1; **047** Petaloudes (Valley of butterflies), stream 3, 36°20’06”N 28°03’47”E, 21.ii.2007, 4, L1; **048** Petaloudes (Valley of butterflies), stream 4, 36°20’07”N 28°03’47”E, 21.ii.2007, 1, L1; **051** Petaloudes (Valley of butterflies), stream 7, 36°20’15”N 28°03’42”E, 21.ii.2007, 2, L1; **053** Petaloudes (Valley of butterflies), stream 9, 36°20’22”N 28°03’36”E, 21.ii.2007, 1, L1; M. of South Rhodos: **057** Apolakkia, River Apolakkias, 36°05’09”N 27°47’48”E, 16.ii.2007, 1, L1.—CRETE: P. of Chania: M. of Georgioupoli: **064** Georgioupoli, River Almiros, 35°21’49”N 24°14’29”E, 21.ii.2008, 2, L3; M. of Kissamos: **073** Sfinari, stream, 35°25’47”N 23°34’33”E, 20.ii.2008, 1, L3; M. of Mousouron: **081** Nea Roumata, stream, 35°23’40”N 23°51’23”E, 01.iii.2008, 1, L3; M. of Pelekanos: **086** Paleochora, stream, 35°14’59”N 23°42’10”E, 01.iii.2008, 1, L3; M. of Sfakia: **089** Argoules, stream, 35°11’45”N 24°17’19”E, 14.ii.2008, 1, L3; M. of Voukolies: **093** Tavronitis, River Tavronitis, 35°31’32”N 23°49’30”E, 21.ii.2008, 2, L3; P. of Rethymno: M. of Arkadi: **139** Sfakaki, stream, 35°22’38”N 24°33’46”E, 28.ii.2008, 3, L3; **140** Stavromenos, stream, 35°23’07”N 24°35’48”E, 28.ii.2008, 1, L3; M. of Kouloukonas: **151** Mourtzana, River Geropotamos, 35°21’06”N 24°47’01”E, 28.ii.2008, 5, L3; M. of Lampis: **155** Agia Fotini, stream, mouth, 35°09’13”N 24°28’41”E, 19.ii.2008, 5, L3; **157** Frati, River Kourtaliotiko, 35°12’19”N 24°28’21”E, 25.ii.2008, 6, L3; M. of Rethymno: **160** Armeni, pool, Late Minoan Cemetery, 35°19’03”N 24°27’45”E, 27.ii.2008, 1, L3; **164** Platanias, River Platanes, 35°22’02”N 24°31’28”E, 28.ii.2008, 1, L3; M. of Sivirtos: **167** Gerakari, stream 1, 35°12’52”N 24°34’00”E, 24.ii.2008, 7, L3; **170** Hordaki, stream, 35°10’12”N 24°40’33”E, 24.ii.2008, 5, L3.—CORFU: M. of Agios Georgios: **174** Agios Georgios, River Potamos 1, 39°43’05”N 19°40’53”E, 26.iv.2010, 5, L4; **181** Kopsohilades, River Fonisa, 39°45’18”N 19°43’48”E, 22.iv.2010, 2, L4; M. of Esperion: **183** Gousades, stream, 39°46’13”N 19°42’01”E, 22.iv.2010, 2, L4; **184** Karousades: stream, 39°47’11”N 19°45’55”E, 23.iv.2010, 6, L4; **185** Kavallouri, stream, 39°46’39”N 19°45’58”E, 23.iv.2010, 3, L4; **186** Kounavades, stream, 39°45’28”N 19°41’31”E, 22.iv.2010, 6, L4; **188** Valanio, stream 1, 39°44’25”N 19°44’39”E, 22.iv.2010, 5, L4; **189** Valanio, stream 2, 39°44’24”N 19°44’37”E, 22.iv.2010, 1, L4; M. of Korission: **199** Perivoli, stream 1, 39°25’15”N 20°00’04”E, 01.v.2010, 1, L4; **202** Roumanades: pool, dry streambed, 39°26’50”N 19°58’53”E, 30.iv.2010, 1, L4; M. of Lefkimeon: **206** Kritika, stream, 39°24’10”N 20°03’21”E, 01.v.2010, 1, L4; **209** Vitalades, stream, 39°24’13”N 20°01’44”E, 01.v.2010, 1, L4; M. of Meliteieon: **215** Kato Pavliana, stream 2, 39°31’32”N 19°53’08”E, 29.iv.2010, 2, L4; M. of Paleokastriton: **218** Liapades, stream, 39°39’59”N 19°45’48”E, 26.iv.2010, 2, L4; M. of Parelion: **226** Kombitsi, stream 1, 39°36’30”N

19°51’44”E, 29.iv.2010, 3, L4; **227** Kombitsi, stream 2, 39°36’31”N 19°51’43”E, 29.iv.2010, 1, L4; M. of Thinalion: **230** Klimatia, stream 1, 39°43’50”N 19°47’09”E, 25.iv.2010, 18, L4; **231** Klimatia, stream 2, 39°44’14”N 19°47’07”E, 25.iv.2010, 1, L4.

Notonecta (Notonecta) viridis Delcourt, 1909
Material examined. CRETE: P. of Chania: M. of Akrotiri: **058** Kalathas, ditch, 35°33’11”N 24°05’17”E, 16.ii.2008, 2, L3; M. of Platanias: **087** Platanias, puddle, 35°31’11”N 23°53’27”E, 21.ii.2008, 1, L3; P. of Rethymno: M. of Rethymno: **161** Fotinos, pool, 35°15’57”N 24°28’54”E, 02.iii.2008, 5, L3.—CORFU: M. of Korission: **202** Roumanades: pool, dry streambed, 39°26’50”N 19°58’53”E, 30.iv.2010, 1, L4.

Pleidae

Plea minutissima minutissima Leach, 1817
Material examined. CRETE: P. of Chania: M. of Akrotiri: **058** Kalathas, ditch, 35°33’11”N 24°05’17”E, 16.ii.2008, 5, L3; M. of Georgioupoli: **062** Asprouliani, channel, 35°21’06”N 24°17’26”E, 21.ii.2008, 2, L3; M. of Kolimbari: **074** Minothiana, stream, 35°32’10”N 23°47’30”E, 21.ii.2008, 2, L3; M. of Therissos: **092** Agia, Lake Agia, 35°28’39”N 23°55’55”E, 01.iii.2008, 6, L3; M. of Nikiforos Fokas: **159** Petre, River Petres, 35°21’04”N 24°21’28”E, 25.ii.2008, 6, L3.—CORFU: M. of Achilion: **173** Komianata, ditch, 39°31’42”N 19°54’01”E, 29.iv.2010, 1, L4; M. of Kerkireon: **194** Tembloni, Lake Bertonou, 39°38’49”N 19°48’17”E, 26.iv.2010, 3, L4; M. of Parelion: **224** Kanakades, stream, 39°39’27”N 19°45’53”E, 26.iv.2010, 1, L4; **228** Vatos, River Ropa, 39°36’48”N 19°47’34”E, 28.iv.2010, 4, L4.

GERROMORPHA

Gerridae

Aquarius najas (DeGeer, 1773)
Material examined. CRETE: P. of Chania: M. of Kissamos: **070** Ano Sfinari, stream, 35°24’13”N 23°35’17”E, 20.ii.2008, 1, L3; M. of Mousouron: **080** Fournes, River Xekolimenos, 35°26’09”N 23°56’24”E, 01.iii.2008, 4, L3; **081** Nea Roumata, stream, 35°23’40”N 23°51’23”E, 01.iii.2008, 7, L3; P. of Rethymno: M. of Lappas: **158** Dramia, River Mouselas, 35°21’03”N 24°19’04”E, 25.ii.2008, 10, L3; M. of Nikiforos Fokas: **159** Petre, River Petres, 35°21’04”N 24°21’28”E, 25.ii.2008, 1, L3.—CORFU: M. of Esperion: **188** Valanio, stream 1, 39°44’25”N 19°44’39”E, 22.iv.2010, 11, L4.

Aquarius paludum paludum (Fabricius, 1794)
Material examined. RHODES: M. of Arhangelos: **013** Epta Piges (Seven Springs), concrete channel, 36°15’21”N 28°06’58”E, 15.ii.2007, 8, L1; M. of Kamiros: **030** Apollona, River Gadouras 4, 36°13’23”N 27°57’31”E, 22.ii.2007, 1, L2.

Gerris (Gerris) argentatus Schummel, 1832
Material examined. CRETE: P. of Rethymno: M. of Lappas: **158** Dramia, River Mouselas, 35°21’03”N 24°19’04”E, 25.ii.2008, 2, L3.

Gerris (Gerris) lacustris (Linnaeus, 1758)
Material examined. CORFU: M. of Agios Georgios: **179** Arillas, stream, 39°44’37”N 19°39’59”E, 22.iv.2010, 1, L4; **181** Kopsohilades, River Fonisa, 39°45’18”N 19°43’48”E, 22.iv.2010, 1, L4; M. of Esperion: **184** Karousades: stream, 39°47’11”N 19°45’55”E, 23.iv.2010, 2, L4; **185** Kavallouri, stream, 39°46’39”N 19°45’58”E, 23.iv.2010, 1, L4; **186** Kounavades, stream, 39°45’28”N 19°41’31”E, 22.iv.2010, 3, L4; **188** Valanio, stream 1, 39°44’25”N 19°44’39”E, 22.iv.2010, 1, L4; M. of Korission: **199** Perivoli, stream 1, 39°25’15”N 20°00’04”E, 01.v.2010, 2, L4; **202** Roumanades: pool, dry streambed, 39°26’50”N 19°58’53”E, 30.iv.2010, 1, L4; M. of Lefkimeon: **206** Kritika,

stream, 39°24’10”N 20°03’21”E, 01.v.2010, 2, L4; **207** Lefkimmi, stream, 39°24’26”N 20°04’04”E, 01.v.2010, 2, L4; **209** Vitalades, stream, 39°24’13”N 20°01’44”E, 01.v.2010, 7, L4; M. of Meliteieon: **210** Episkopiana, River Mesongi, 39°29’35”N 19°54’18”E, 29.iv.2010, 5, L4; M. of Parelion: **226** Kombitsi, stream 1, 39°36’30”N 19°51’44”E, 29.iv.2010, 2, L4; M. of Thinalion: **229** Kipriniades, stream, 39°44’16”N 19°45’46”E, 25.iv.2010, 4, L4; **230** Klimatia, stream 1, 39°43’50”N 19°47’09”E, 25.iv.2010, 2, L4.

Gerris (Gerris) maculatus Tamanini, 1946
Material examined. CORFU: M. of Korission: **202** Roumanades: pool, dry streambed, 39°26’50”N 19°58’53”E, 30.iv.2010, 1, L4.

Gerris (Gerris) thoracicus Schummel, 1832
Material examined. RHODES: M. of Kamiros: **032** Dimylia, River Platis, 36°17’37”N 28°00’23”E, 20.ii.2007, 1, L1; M. of South Rhodos: **057** Apolakkia, River Apolakkias, 36°05’09”N 27°47’48”E, 16.ii.2007, 1, L1.—CRETE: P. of Chania: M. of Georgioupoli: **063** Asprouliani, pond, 35°21’06”N 24°17’25”E, 25.ii.2008, 1, L3; M. of Kolimbari: **074** Minothiana, stream, 35°32’10”N 23°47’30”E, 21.ii.2008, 4, L3; M. of Platanias: **087** Platanias, puddle, 35°31’11”N 23°53’27”E, 21.ii.2008, 1, L3; P. of Heraklion: M. of Hersonissos: **102** Analipsi, stream, 35°19’33”N 25°20’03”E, 02.iii.2008, 2, L3; P. of Lassithi: M. of Ierapetra: **123** Ierapetra, stream, 35°00’31”N 25°45’17”E, 26.ii.2008, 1, L3; P. of Rethymno: M. of Arkadi: **140** Stavromenos, stream, 35°23’07”N 24°35’48”E, 28.ii.2008, 1, L3; M. of Lampis: **155** Agia Fotini, stream, mouth, 35°09’13”N 24°28’41”E, 19.ii.2008, 1, L3; M. of Nikiforos Fokas: **159** Petre, River Petres, 35°21’04”N 24°21’28”E, 25.ii.2008, 5, L3; M. of Rethymno: **161** Fotinos, pool, 35°15’57”N 24°28’54”E, 02.iii.2008, 9, L3.

Gerris (Gerriselloides) asper (Fieber, 1860)
Material examined. CRETE: P. of Chania: M. of Kolimbari: **074** Minothiana, stream, 35°32’10”N 23°47’30”E, 21.ii.2008, 3, L3; P. of Rethymno: M. of Lappas: **158** Dramia, River Mouselas, 35°21’03”N 24°19’04”E, 25.ii.2008, 1, L3.—CORFU: M. of Kerkireon: **195** Tembloni, pond-outlet, 39°38’50”N 19°48’15”E, 26.iv.2010, 2, L4.

Additional material examined. GREECE: MAINLAND: Epirus [region, P. of Preveza, M. of] Preveza, N of Kalamitsi, spring on the beach, 38°58’N 20°43’E, 5.vi.2015, 2♂♂ (mpt.), leg. F. Terzani, S. Rocchi & A. Bandinelli, det. F. Cianferoni (CFC).

Comment. First records for Greece.

Hebridae

Hebrus (Hebrus) pusillus pusillus (Fallén, 1807)
Material examined. CORFU: M. of Kerkireon: **194** Tembloni, Lake Bertonou, 39°38’49”N 19°48’17”E, 26.iv.2010, 8, L4; M. of Paleokastriton: **219** Poulades, pond, 39°39’49”N 19°46’49”E, 27.iv.2010, 3, L4; M. of Parelion: **228** Vatos, River Ropa, 39°36’48”N 19°47’34”E, 28.iv.2010, 1, L4; M. of Thinalion: **237** Xanthates, spring, 39°45’30”N 19°45’57”E, 25.iv.2010, 1, L4.

Hydrometridae

Hydrometra stagnorum (Linnaeus, 1758)
Material examined. RHODES: M. of Afandou: **002** Arhipoli, River Loutanis 2, 36°16’03”N 28°04’08”E, 19.ii.2007, 4, L1; **003** Arhipoli, River Loutanis 3, 36°15’59”N 28°03’30”E, 22.ii.2007, 2, L2; **006** Kolympia, River Loutanis 1, 36°15’24”N 28°06’55”E, 19.ii.2007, 3, L1; M. of Arhangelos: **010** Arhangelos, stream 2, 36°12’42”N 28°08’11”E, 24.ii.2007, 2, L1; **011** Arhangelos, stream 3, 36°12’39”N 28°08’27”E, 24.ii.2007, 1, L1; **019** Epta Piges (Seven Springs), stream 3, 36°15’17”N 28°06’50”E, 15.ii.2007, 2, L1; M. of Kalithea: **025** Psinthos, dry dam lake, stream, 36°18’43”N 28°05’50”E, 25.ii.2007, 1, L1; M. of Kamiros: **039** Salakos, River Argiros 2, 36°17’52”N 27°57’20”E, 20.ii.2007, 6, L1; M. of Petaloudes: **053** Petaloudes (Valley of butterflies), stream 9, 36°20’22”N 28°03’36”E, 21.ii.2007, 2, L1; M. of Rhodos: **055** Rhodos town, Rodini park, stream, 36°25’36”N

28°13’08”E, 23.ii.2007, 5, L1.—CRETE: P. of Chania: M. of Anatoliko Selino: **060** Agia Irini, stream, 35°20’34”N 23°49’39”E, 01.iii.2008, 4, L3; M. of Kolimbari: **074** Minothiana, stream, 35°32’10”N 23°47’30”E, 21.ii.2008, 4, L3; M. of Mousouron: **081** Nea Roumata, stream, 35°23’40”N 23°51’23”E, 01.iii.2008, 2, L3; P. of Rethymno: M. of Lappas: **158** Dramia, River Mouselas, 35°21’03”N 24°19’04”E, 25.ii.2008, 3, L3.—CORFU: M. of Agios Georgios: **174** Agios Georgios, River Potamos 1, 39°43’05”N 19°40’53”E, 26.iv.2010, 3, 1(nymph), L4; **179** Arillas, stream, 39°44’37”N 19°39’59”E, 22.iv.2010, 9, L4; **180** Arillas, stream, mouth, 39°44’32”N 19°38’57”E, 23.iv.2010, 3, L4; **181** Kopsohilades, River Fonisa, 39°45’18”N 19°43’48”E, 22.iv.2010, 2, L4; M. of Esperion: **184** Karousades: stream, 39°47’11”N 19°45’55”E, 23.iv.2010, 1, L4; **185** Kavallouri, stream, 39°46’39”N 19°45’58”E, 23.iv.2010, 2, L4; **187** Livadi, River Fonisa, 39°46’37”N 19°43’02”E, 22.iv.2010, 2, L4; **188** Valanio, stream 1, 39°44’25”N 19°44’39”E, 22.iv.2010, 4, L4; **189** Valanio, stream 2, 39°44’24”N 19°44’37”E, 22.iv.2010, 2, L4; M. of Korission: **197** Marathias, stream, mouth, 39°24’53”N 19°59’02”E, 01.v.2010, 1, L4; **200** Perivoli, stream 2, 39°24’50”N 20°00’29”E, 01.v.2010, 1, L4; **201** Petriti, stream, 39°26’49”N 19°59’31”E, 30.iv.2010, 4, L4; M. of Lefkimeon: **205** Kavos, stream, 39°22’51”N 20°07’03”E, 03.v.2010, 2, L4; **207** Lefkimmi, stream, 39°24’26”N 20°04’04”E, 01.v.2010, 4, L4; **209** Vitalades, stream, 39°24’13”N 20°01’44”E, 01.v.2010, 3, L4; M. of Meliteieon: **213** Gardiki, ditch, 39°28’36”N 19°53’11”E, 30.iv.2010, 1, L4; **214** Kato Pavliana, stream 1, 39°31’21”N 19°52’40”E, 29.iv.2010, 1, L4; **216** Mesongi, River Mesongi, 39°28’35”N 19°55’15”E, 29.iv.2010, 1, L4; **217** Mesongi, stream, 39°28’34”N 19°55’16”E, 29.iv.2010, 1, L4; M. of Paleokastriton: **218** Liapades, stream, 39°39’59”N 19°45’48”E, 26.iv.2010, 1, L4; **219** Poulades, pond, 39°39’49”N 19°46’49”E, 27.iv.2010, 1, L4; M. of Parelion: **223** Ermones, River Ropa, mouth, 39°36’37”N 19°46’39”E, 28.iv.2010, 1, L4; **224** Kanakades, stream, 39°39’27”N 19°45’53”E, 26.iv.2010, 7, L4; **226** Kombitsi, stream 1, 39°36’30”N 19°51’44”E, 29.iv.2010, 7, L4; **227** Kombitsi, stream 2, 39°36’31”N 19°51’43”E, 29.iv.2010, 2, L4; **228** Vatos, River Ropa, 39°36’48”N 19°47’34”E, 28.iv.2010, 1(nymph), L4; M. of Thinalion: **231** Klimatia, stream 2, 39°44’14”N 19°47’07”E, 25.iv.2010, 2, L4; **237** Xanthates, spring, 39°45’30”N 19°45’57”E, 25.iv.2010, 1, L4.

Additional material examined. RHODES: [M. of Petaloudes:] Petaloúdes (Valley of Butterflies), 12.iv.2014, 1♂, leg. D. Spigoli & G. Stasolla, det. F. Cianferoni (CFC).

Veliidae

Microvelia (Microvelia) reticulata (Burmeister, 1835)
Material examined. CORFU: M. of Meliteieon: **213** Gardiki, ditch, 39°28’36”N 19°53’11”E, 30.iv.2010, 1, L4; M. of Paleokastriton: **220** Poulades, pond with open water, 39°39’56”N 19°46’46”E, 27.iv.2010, 1, L4.

Microvelia (Picaultia) pygmaea (Dufour, 1833)
Material examined. RHODES: M. of Afandou: **002** Arhipoli, River Loutanis 2, 36°16’03”N 28°04’08”E, 19.ii.2007, 1, L1; **008** Kolympia, River Loutanis 3, 36°15’42”N 28°08’08”E, 19.ii.2007, 1, L1.—CRETE: M. of Lappas: **158** Dramia, River Mouselas, 35°21’03”N 24°19’04”E, 25.ii.2008, 1, L3.

Rhagovelia (Rhagovelia) infernalis africana Lundblad, 1936
Material examined. RHODES: M. of Afandou: **001** Arhipoli, River Loutanis 1, 36°16’52”N 28°04’45”E, 19.ii.2007, 1♂, L1.

Comment. First confirmed record for the European fauna. First confirmed record for Greece.

Velia (Plesiovelia) affinis filippii Tamanini, 1947
Material examined. RHODES: M. of Afandou: **005** Arhipoli, stream, 36°15’51”N 28°04’23”E, 19.ii.2007, 5 (2♂♂ (mpt.), 3♀♀ (mpt.)), L1; M. of Kamiros: **034** Eleousa, stream, 36°16’17”N 28°02’23”E, 22.ii.2007, 1♀ (mpt.), L2; **035** Kalavarda, River Argiros, 36°20’44”N 27°56’24”E, 20.ii.2007, 3 (2♂♂ (mpt.), 1♀ (mpt.)), L1; **038** Salakos: River Argiros 1, 36°18’43”N 27°56’19”E, 20.ii.2007, 3 (1♂ (mpt.), 2♀♀ (mpt.)), L1; **039** Salakos, River Argiros 2, 36°17’52”N 27°57’20”E, 20.ii.2007, 4 (2♂♂ (mpt.), 2♀♀ (mpt.)), L1; M. of Lindos: **041** Lardos, River Lardos, 36°05’07”N 28°01’01”E, 17.ii.2007, 1♂ (mpt.), L1.—CRETE: P. of Chania: M. of Mousouron: **081** Nea Roumata, stream, 35°23’40”N 23°51’23”E, 01.iii.2008, 1♂ (apt.), L3.—CORFU: M. of Korission: **202**

Roumanades: pool, dry streambed, 39°26’50”N 19°58’53”E, 30.iv.2010, 2 (1♂ (apt.), 1♀ (apt.)), L4; M. of Lefkimeon: **207** Lefkimmi, stream, 39°24’26”N 20°04’04”E, 01.v.2010, 1♀ (apt.), L4.

Velia (Plesiovelia) mariae Tamanini, 1971

Material examined. RHODES: M. of Arhangelos: **010** Arhangelos, stream 2, 36°12’42”N 28°08’11”E, 24.ii.2007, 1♂ (apt.), L1; **014** Epta Piges (Seven Springs), lake 1, 36°15’15”N 28°06’57”E, 14.ii.2007, 3♀♀ (apt.), L1; **015** Epta Piges (Seven Springs), lake 2, 36°15’16”N 28°06’56”E, 15.ii.2007, 3 (1♂ (apt.), 2♀♀ (apt.)), L1; M. of Kamiros: **034** Eleousa, stream, 36°16’17”N 28°02’23”E, 22.ii.2007, 2 (1♂ (mpt.), 1♀ (mpt.)), L2; M. of Petaloudes: **045** Petaloudes (Valley of butterflies), stream 1, 36°20’03”N 28°03’49”E, 21.ii.2007, 9♀♀ (8 apt., 1 mpt.), L1; **046** Petaloudes (Valley of butterflies), stream 2, 36°20’05”N 28°03’47”E, 21.ii.2007, 2♀♀ (apt.), L1; **047** Petaloudes (Valley of butterflies), stream 3, 36°20’06”N 28°03’47”E, 21.ii.2007, 4 (1♂ (apt.), 3♀♀ (apt.)), L1; **048** Petaloudes (Valley of butterflies), stream 4, 36°20’07”N 28°03’47”E, 21.ii.2007, 3♀♀ (apt.), L1; **049** Petaloudes (Valley of butterflies), stream 5, 36°20’11”N 28°03’45”E, 21.ii.2007, 1♂ (apt.), L1; **051** Petaloudes (Valley of butterflies), stream 7, 36°20’15”N 28°03’42”E, 21.ii.2007, 7♀♀ (apt.), L1; **053** Petaloudes (Valley of butterflies), stream 9, 36°20’22”N 28°03’36”E, 21.ii.2007, 1♀ (apt.), L1; M. of Rhodos: **054** Rhodos town, Rodini park, artificial fountain pool, 36°25’37”N 28°13’13”E, 23.ii.2007, 3 (1♂ (apt.), 2♀♀ (apt.)), L1; **055** Rhodos town, Rodini park, stream, 36°25’36”N 28°13’08”E, 23.ii.2007, 1♀ (apt.), L1.

Additional material examined. EUROPE: BULGARIA: Burgas: Balgari [stream], 42°06’42”N 27°45’58”, 193 m a.s.l., 03.vi.2014, 2 (1♂ (apt.), 1♀ (apt.)), leg. & det. G.M. Berchi (GBCR); Petrič, 23.vi.1957, 3♂♂ (apt.), leg. M. Josifov, det. G.M. Berchi (NMNHS) [identified as *V. rhadamantha* by Tamanini (1959), here revised]; Strandzha Mts. (=Standja), 06.vii.1955, 3 (2♂♂ (apt.), 1♀ (apt.)), leg. M. Josifov, det. G.M. Berchi (NMNHS); Veliko Tarnovo: Leskovets [stream], 43°41’55”N 24°02’07”E, 47 m a.s.l., 18.ix.2014, 3 (2♂♂ (apt.), 1♀ (apt.)), leg. & det. G.M. Berchi (GBCR); Plevna: Lozitsa [stream], 43°36’17”N 25°00’03”E, 116 m a.s.l., 18.ix.2014, 13 (9♂♂ (apt.), 4♀♀ (apt.)), leg. & det. G.M. Berchi (GBCR).—GREECE: MAINLAND: [P. of Argolis, M. of Epidavros:] Epidavros, 10.viii.1958, 2♂♂ (apt.), leg. H. Eckerlein, det. G.M. Berchi (NMNHS);—LEFKADA: [M. of Ellomenos:] Nydri stream, near Rachi, 23 m a.s.l., 38°43’N 20°42’E, 4.vi.2015, 5 (3♂♂ (2 mpt., 1 apt.), 2♀♀ (mpt.)), leg. F. Terzani, S. Rocchi & A. Bandinelli, det. F. Cianferoni (CFC); *idem*, 2 (1♂ (mpt.), 1♀ (mpt.)), leg. S. Rocchi, det. F. Cianferoni (CFC).—RHODES: [M. of Petaloudes:] Petaloúdes (Valley of Butterflies), 12.iv.2014, 3 (2♂♂ (apt.), 1♀ (apt.)), leg. D. Spigoli & G. Stasolla, det. F. Cianferoni (CFC).—SAMOS: [M. of Karlovasi:] Potami [stream with waterfalls], 37°47’00”N 26°40’17”E, 20-50 m a.s.l., 07.vii.2006, 13 (8♂♂ (apt.), 5♀♀ (apt.)), leg. O. Seberg, det. G.M. Berchi (GBCR); [M. of Vathy:] Samos [stream], 37°45’52”N 26°58’48”E, 200 m a.s.l., 04.vii.2006, 8 (5♂♂ (apt.), 3♀♀ (apt.)), leg. O. Seberg, det. G.M. Berchi (GBCR).—SAMOTHRACE: [M. of Samothrace:] Amos river, near Panagia Kremniotisa, 190 m a.s.l., 31.v.2005, 3 (2♂♂ (1 mpt., 1 apt.), 1♀ (apt.)), leg. N. Simov, det. G.M. Berchi (NMNHS).—ASIA: TURKEY (Asian Part): Balikesir: Sındırgı [stream], 39°13’05”N 28°07’20”E, 270 m a.s.l., 27.vii.2014, 5 (2♂♂ (apt.), 3♀♀ (apt.)), leg. I. Ribera & A.Cieslak, det. G.M. Berchi (GBCR).

Comment. First records for the European fauna. First records for Bulgaria and Greece.

Velia (Plesiovelia) pelagonensis Hoberlandt, 1941

Material examined. CORFU: M. of Agios Georgios: **176** Agios Georgios, stream 1, 39°43’14”N 19°40’27”E, 26.iv.2010, 4♀♀ (apt.), L4; **177** Agios Georgios, stream 2, 39°43’24”N 19°42’05”E, 26.iv.2010, 1♀ (apt.), L4; **179** Arillas, stream, 39°44’37”N 19°39’59”E, 22.iv.2010, 3♀♀ (apt.), L4; M. of Esperion: **183** Gousades, stream, 39°46’13”N 19°42’01”E, 22.iv.2010, 5 (1♂ (apt.), 4♀♀ (apt.)), L4; **184** Karousades: stream, 39°47’11”N 19°45’55”E, 23.iv.2010, 1♀ (apt.), L4; M. of Meliteieon: **214** Kato Pavliana, stream 1, 39°31’21”N 19°52’40”E, 29.iv.2010, 4 (3♂♂ (apt.), 1♀ (apt.)), L4; M. of Parelion: **222** Afra, stream, 39°37’30”N 19°50’45”E, 27.iv.2010, 2 (1♂ (apt.), 1♀ (apt.)), L4; **226** Kombitsi, stream 1, 39°36’30”N 19°51’44”E, 29.iv.2010, 5 (3♂♂ (apt.), 2♀♀ (apt.)), L4; **227** Kombitsi, stream 2, 39°36’31”N 19°51’43”E, 29.iv.2010, 4 (2♂♂ (apt.), 2♀♀ (apt.)), L4; M. of Thinalion: **230** Klimatia, stream 1, 39°43’50”N 19°47’09”E, 25.iv.2010, 2♂♂ (apt.), L4; **231** Klimatia, stream 2, 39°44’14”N 19°47’07”E, 25.iv.2010, 8 (2♂♂ (apt.), 6♀♀ (apt.)), L4.

Velia (Plesiovelia) rhadamantha rhadamantha Hoberlandt, 1941

Material examined. CRETE: P. of Chania: M. of Anatoliko Selino: **060** Agia Irini, stream, 35°20’34”N

23°49’39”E, 01.iii.2008, 6 (4♂♂ (3 apt., 1 mpt.), 2♀♀ (apt.)), L3; M. of Georgioupoli: **066** Kavros, stream, 35°21’03”N 24°18’08”E, 21.ii.2008, 8 (7♂♂ (apt.), 1♀ (apt.)), L3; M. of Inachorion: **068** Kambos, stream, 35°23’19”N 23°34’24”E, 20.ii.2008, 2 (1♂ (apt.), 1♀ (apt.)), L3; M. of Kissamos: **070** Ano Sfinari, stream, 35°24’13”N 23°35’17”E, 20.ii.2008, 6 (1♂ (apt.), 5♀♀ (4 apt., 1 mpt.)), L3; M. of Mithimna: **078** Koleni, stream, 35°29’44”N 23°43’08”E, 21.ii.2008, 7 (5♂♂ (3 apt., 2 mpt.), 2♀♀ (1 apt., 1 mpt.)), L3; M. of Mousouron: **080** Fournes, River Xekolimenos, 35°26’09”N 23°56’24”E, 01.iii.2008, 2 (1♂ (apt.), 1♀ (apt.)), L3; **081** Nea Roumata, stream, 35°23’40”N 23°51’23”E, 01.iii.2008, 19 (4♂♂ (2 apt., 2 mpt.), 15♀♀ (14 apt., 1 mpt.)), L3; **082** Prases, stream, 35°22’43”N 23°49’44”E, 01.iii.2008, 2♀♀ (apt.), L3; M. of Voukolies: **093** Tavronitis, River Tavronitis, 35°31’32”N 23°49’30”E, 21.ii.2008, 1♀ (apt.), L3; P. of Heraklion: M. of Arkalohori: **096** Tsoutsouros, stream, 34°59’05”N 25°17’07”E, 22.ii.2008, 5 (3♂♂ (mpt.), 2♀♀ (mpt.)), L3; M. of Kofina: **104** Stoli, stream, 35°02’52”N 25°03’13”E, 15.ii.2008, 1♀ (apt.), L3; P. of Lassithi: M. of Makrys Gialos: **135** Pilalimata, stream, 35°03’22”N 26°01’02”E, 26.ii.2008, 4♀♀ (apt.), L3; M. of Neapoli: **136** Selinari, stream, 35°17’01”N 25°32’44”E, 23.ii.2008, 4 (2♂♂ (apt.), 2♀♀ (apt.)), L3; P. of Rethymno: M. of Arkadi: **139** Sfakaki, stream, 35°22’38”N 24°33’46”E, 28.ii.2008, 7 (2♂♂ (apt.), 5♀♀ (4 apt., 1 mpt.)), L3; **140** Stavromenos, stream, 35°23’07”N 24°35’48”E, 28.ii.2008, 2 (1♂ (apt.), 1♀ (apt.)), L3; M. of Finikas: **141** Angouseliana, stream, 35°13’58”N 24°25’42”E, 25.ii.2008, 1♂ (mpt.), L3; M. of Lappas: **158** Dramia, River Mouselas, 35°21’03”N 24°19’04”E, 25.ii.2008, 15 (7♂♂ (6 apt., 1 mpt.), 8♀♀ (7 apt., 1 mpt.)), L3; M. of Nikiforos Fokas: **159** Petre, River Petres, 35°21’04”N 24°21’28”E, 25.ii.2008, 1♂ (mpt.), L3; M. of Rethymno: **160** Armeni, pool, Late Minoan Cemetery, 35°19’03”N 24°27’45”E, 27.ii.2008, 3 (1♂ (marcopterous), 2♀♀ (mpt.)), L3; **164** Platanias, River Platanes, 35°22’02”N 24°31’28”E, 28.ii.2008, 1♀ (apt.), L3; M. of Sivirtos: **167** Gerakari, stream 1, 35°12’52”N 24°34’00”E, 24.ii.2008, 5 (1♂ (apt.), 4♀♀ (3 apt., 1 mpt.)), L3; **169** Gerakari, stream 3, 35°12’45”N 24°36’50”E, 24.ii.2008, 5 (1♂ (apt.), 4♀♀ (3 apt., 1 mpt.)), L3.

***Velia (Plesiovelia)* sp.**

Material examined. **Adult** ♀♀ (mpt.): RHODES: M. of Attavyros: **021** Kamiros Skala, River Linero, 36°16’23”N 27°50’13”E, 20.ii.2007, 1♀ (mpt.), L1; M. of Kamiros: **028** Apollona, River Gadouras 2, 36°11’31”N 27°57’43”E, 22.ii.2007, 1♀ (mpt.), L1.—CRETE: P. of Chania: M. of Kissamos: **073** Sfinari, stream, 35°25’47”N 23°34’33”E, 20.ii.2008, 1♀ (mpt.), L3; M. of Mithimna: **077** Kaloudiana, stream, 35°29’08”N 23°41’20”E, 20.ii.2008, 1♀ (mpt.), L3; M. of Pelekanos: **086** Paleochora, stream, 35°14’59”N 23°42’10”E, 01.iii.2008, 1♀ (mpt.), L3; M. of Sfakia: **089** Argoules, stream, 35°11’45”N 24°17’19”E, 14.ii.2008, 3♀♀ (mpt.), L3; P. of Heraklion: M. of Viannos: **115** Martha, stream, 35°04’06”N 25°21’43”E, 22.ii.2008, 1♀ (mpt.), L3; P. of Rethymno: M. of Finikas: **148** Karo Rodakino, stream, 35°12’19”N 24°20’49”E, 14.ii.2008, 1♀ (mpt.), L3; M. of Rethymno: **161** Fotinos, pool, 35°15’57”N 24°28’54”E, 02.iii.2008, 2♀♀ (mpt.), L3; M. of Sivirtos: **166** Drigies, stream, 35°11’32”N 24°39’32”E, 24.ii.2008, 1♀ (mpt.), L3; **170** Hordaki, stream, 35°10’12”N 24°40’33”E, 24.ii.2008, 2♀♀ (mpt.), L3.—**Nymphs**: RHODES: M. of Afandou: **001** Arhipoli, River Loutanis 1, 36°16’52”N 28°04’45”E, 19.ii.2007, 1, L1; **002** Arhipoli, River Loutanis 2, 36°16’03”N 28°04’08”E, 19.ii.2007, 12, L1; **003** Arhipoli, River Loutanis 3, 36°15’59”N 28°03’30”E, 22.ii.2007, 4, L2; **004** Arhipoli, River Loutanis 4, 36°15’34”N 28°06’01”E, 19.ii.2007, 3, L1; **005** Arhipoli, stream, 36°15’51”N 28°04’23”E, 19.ii.2007, 10, L1; **006** Kolympia, River Loutanis 1, 36°15’24”N 28°06’55”E, 19.ii.2007, 1, L1; **007** Kolympia, River Loutanis 2, 36°15’39”N 28°08’24”E, 19.ii.2007, 3, L1; **008** Kolympia, River Loutanis 3, 36°15’42”N 28°08’08”E, 19.ii.2007, 4, L1; M. of Arhangelos: **010** Arhangelos, stream 2, 36°12’42”N 28°08’11”E, 24.ii.2007, 6, L1; **011** Arhangelos, stream 3, 36°12’39”N 28°08’27”E, 24.ii.2007, 4, L1; **014** Epta Piges (Seven Springs), lake 1, 36°15’15”N 28°06’57”E, 14.ii.2007, 12, L1; **015** Epta Piges (Seven Springs), lake 2, 36°15’16”N 28°06’56”E, 15.ii.2007, 8, L1; **016** Epta Piges (Seven Springs), spring, 36°15’11”N 28°06’49”E, 14.ii.2007, 4, L1; **017** Epta Piges (Seven Springs), stream 1, 36°15’13”N 28°06’48”E, 14.ii.2007, 5, L1; **019** Epta Piges (Seven Springs), stream 3, 36°15’17”N 28°06’50”E, 15.ii.2007, 1, L1; M. of Attavyros: **021** Kamiros Skala, River Linero, 36°16’23”N 27°50’13”E, 20.ii.2007, 9, L1; M. of Kamiros: **026** Apollona, dry stream bed, pool, 36°11’58”N 27°58’00”E, 22.ii.2007, 1, L2; **027** Apollona, River Gadouras 1, 36°10’29”N 27°57’23”E, 17.ii.2007, 2, L1; **028** Apollona, River Gadouras 2, 36°11’31”N 27°57’43”E, 22.ii.2007, 4, L1; **029** Apollona, River Gadouras 3, 36°12’58”N 27°57’35”E, 22.ii.2007, 3, L2; **030** Apollona, River Gadouras 4, 36°13’23”N 27°57’31”E, 22.ii.2007, 2, L2; **032** Dimylia, River Platis, 36°17’37”N 28°00’23”E, 20.ii.2007, 1, L1; **033** Dimylia, stream, 36°17’05”N 28°00’30”E, 25.ii.2007, 3, L1; **034** Eleousa, stream, 36°16’17”N 28°02’23”E, 22.ii.2007, 5, L2; **035** Kalavarda, River Argiros, 36°20’44”N 27°56’24”E,

20.ii.2007, 6, L1; **038** Salakos: River Argiros 1, 36°18’43”N 27°56’19”E, 20.ii.2007, 7, L1; **039** Salakos, River Argiros 2, 36°17’52”N 27°57’20”E, 20.ii.2007, 9, L1; M. of Lindos: **042** Laerma, River Lardos 1, 36°08’48”N 27°54’58”E, 17.ii.2007, 1, L1; **043** Laerma, River Lardos 2, 36°08’25”N 27°54’58”E, 17.ii.2007, 2, L1; M. of Petaloudes: **045** Petaloudes (Valley of butterflies), stream 1, 36°20’03”N 28°03’49”E, 21.ii.2007, 1, L1; **046** Petaloudes (Valley of butterflies), stream 2, 36°20’05”N 28°03’47”E, 21.ii.2007, 1, L1; **047** Petaloudes (Valley of butterflies), stream 3, 36°20’06”N 28°03’47”E, 21.ii.2007, 2, L1; **048** Petaloudes (Valley of butterflies), stream 4, 36°20’07”N 28°03’47”E, 21.ii.2007, 1, L1; **051** Petaloudes (Valley of butterflies), stream 7, 36°20’15”N 28°03’42”E, 21.ii.2007, 1, L1; **053** Petaloudes (Valley of butterflies), stream 9, 36°20’22”N 28°03’36”E, 21.ii.2007, 2, L1; M. of Rhodos: **055** Rhodos town, Rodini park, stream, 36°25’36”N 28°13’08”E, 23.ii.2007, 7, L1; M. of South Rhodos: **057** Apolakkia, River Apolakkias, 36°05’09”N 27°47’48”E, 16.ii.2007, 3, L1.—CRETE: P. of Chania: M. of Anatoliko Selino: **060** Agia Irini, stream, 35°20’34”N 23°49’39”E, 01.iii.2008, 1, L3; M. of Georgioupoli: **064** Georgioupoli, River Almiros, 35°21’49”N 24°14’29”E, 21.ii.2008, 3, L3; M. of Kissamos: **070** Ano Sfinari, stream, 35°24’13”N 23°35’17”E, 20.ii.2008, 1, L3; **072** Kavoussi, stream, 35°28’02”N 23°34’55”E, 20.ii.2008, 1, L3; M. of Kolimbari: **075** Nohia, stream, 35°30’44”N 23°45’00”E, 21.ii.2008, 1, L3; M. of Mithimna: **077** Kaloudiana, stream, 35°29’08”N 23°41’20”E, 20.ii.2008, 4, L3; **078** Koleni, stream, 35°29’44”N 23°43’08”E, 21.ii.2008, 1, L3; **079** Koutsomatados, stream, 35°24’21”N 23°40’56”E, 20.ii.2008, 4, L3; M. of Mousouron: **080** Fournes, River Xekolimenos, 35°26’09”N 23°56’24”E, 01.iii.2008, 1, L3; **081** Nea Roumata, stream, 35°23’40”N 23°51’23”E, 01.iii.2008, 1, L3; M. of Pelekanos: **083** Koundoura, River Pelakaniotikos, 35°14’19”N 23°38’36”E, 01.iii.2008, 1, L3; **084** Paleochora, River Kakodikianos, 35°14’12”N 23°41’20”E, 01.iii.2008, 1, L3; **086** Paleochora, stream, 35°14’59”N 23°42’10”E, 01.iii.2008, 2, L3; M. of Sfakia: **089** Argoules, stream, 35°11’45”N 24°17’19”E, 14.ii.2008, 7, L3; **090** Frangokastello, stream, 35°10’53”N 24°14’02”E, 14.ii.2008, 4, L3; M. of Voukolies: **093** Tavronitis, River Tavronitis, 35°31’32”N 23°49’30”E, 21.ii.2008, 2, L3; P. of Heraklion: M. of Arkalohori: **095** Demati, River Erganas, 35°02’19”N 25°17’37”E, 22.ii.2008, 1, L3; **096** Tsoutsouros, stream, 34°59’05”N 25°17’07”E, 22.ii.2008, 3, L3; M. of Asteroussia: **097** Pirgos, stream, 35°00’26”N 25°09’04”E, 15.ii.2008, 1, L3; **098** Protoria, River Anapodiaris, 35°02’30”N 25°09’16”E, 15.ii.2008, 4, L3; M. of Gortina: **099** Agia Deka, stream, 35°03’43”N 24°56’46”E, 15.ii.2008, 1, L3; M. of Kofina: **103** Dionisi, stream, 35°00’51”N 25°03’38”E, 15.ii.2008, 1, L3; **104** Stoli, stream, 35°02’52”N 25°03’13”E, 15.ii.2008, 1, L3; M. of Kroussonas: **105** Kitharida, small stream, 35°14’15”N 25°00’18”E, 27.ii.2008, 1, L3; M. of Viannos: **112** Arvi, stream, 35°00’18”N 25°25’16”E, 22.ii.2008, 1, L3; **115** Martha, stream, 35°04’06”N 25°21’43”E, 22.ii.2008, 1, L3; M. of Zaros: **117** Zaros, stream, 35°08’13”N 24°54’13”E, 24.ii.2008, 1, L3; P. of Lassithi: M. of Ierapetra: **121** Ferma, stream, 35°01’02”N 25°50’30”E, 26.ii.2008, 1, L3; M. of Makrys Gialos: **134** Koutsouras, stream, 35°02’05”N 25°56’01”E, 26.ii.2008, 3, L3; **135** Pilalimata, stream, 35°03’22”N 26°01’02”E, 26.ii.2008, 2, L3; M. of Neapoli: **136** Selinari, stream, 35°17’01”N 25°32’44”E, 23.ii.2008, 3, L3; M. of Sitia: **137** Agia Fotia, stream, 35°11’26”N 26°08’53”E, 26.ii.2008, 2, L3; P. of Rethymno: M. of Arkadi: **140** Stavromenos, stream, 35°23’07”N 24°35’48”E, 28.ii.2008, 1, L3; M. of Finikas: **141** Angouseliana, stream, 35°13’58”N 24°25’42”E, 25.ii.2008, 2, L3; **142** Asomatos, concrete water channel, 35°11’13”N 24°27’40”E, 19.ii.2008, 5, L3; **145** Damnoni, stream, mouth, 35°10’29”N 24°24’49”E, 19.ii.2008, 1, L3; **146** Gianniou, River Megas Potamos, 35°10’26”N 24°27’58”E, 19.ii.2008, 3, L3; **148** Karo Rodakino, stream, 35°12’19”N 24°20’49”E, 14.ii.2008, 1, L3; M. of Kouloukonas: **151** Mourtzana, River Geropotamos, 35°21’06”N 24°47’01”E, 28.ii.2008, 2, L3; M. of Kourites: **152** Agios Ioannis, River Platys, 35°10’23”N 24°41’42”E, 24.ii.2008, 5, L3; M. of Lampis: **154** Agia Fotini, stream, 35°09’21”N 24°28’54”E, 19.ii.2008, 4, L3; **155** Agia Fotini, stream, mouth, 35°09’13”N 24°28’41”E, 19.ii.2008, 7, L3; **156** Agia Galini, River Platys, 35°05’53”N 24°41’38”E, 24.ii.2008, 1, L3; **157** Frati, River Kourtaliotiko, 35°12’19”N 24°28’21”E, 25.ii.2008, 1, L3; M. of Rethymno: **160** Armeni, pool, Late Minoan Cemetery, 35°19’03”N 24°27’45”E, 27.ii.2008, 1, L3; **161** Fotinos, pool, 35°15’57”N 24°28’54”E, 02.iii.2008, 1, L3; **162** Gouleđiana, stream, 35°17’20”N 24°29’57”E, 13.ii.2008, 2, L3; **163** Kare, stream, 35°17’30”N 24°28’48”E, 13.ii.2008, 2, L3; **164** Platanias, River Platanes, 35°22’02”N 24°31’28”E, 28.ii.2008, 4, L3; M. of Sivirtos: **166** Drigies, stream, 35°11’32”N 24°39’32”E, 24.ii.2008, 1, L3; **167** Gerakari, stream 1, 35°12’52”N 24°34’00”E, 24.ii.2008, 1, L3; **169** Gerakari, stream 3, 35°12’45”N 24°36’50”E, 24.ii.2008, 1, L3.–CORFU: M. of Agios Georgios: **179** Arillas, stream, 39°44’37”N 19°39’59”E, 22.iv.2010, 1, L4; M. of Esperion: **183** Gousades, stream, 39°46’13”N 19°42’01”E, 22.iv.2010, 2, L4; **184** Karousades: stream, 39°47’11”N 19°45’55”E, 23.iv.2010, 7, L4; **185** Kavallouri, stream, 39°46’39”N 19°45’58”E, 23.iv.2010, 1, L4; **186** Kounavades, stream, 39°45’28”N 19°41’31”E, 22.iv.2010, 1, L4; M. of Feakon (Faiakon): **190** Zigos: stream,

39°43’30”N 19°48’02”E, 25.iv.2010, 1, L4; M. of Paleokastriton: **218** Liapades, stream, 39°39’59”N 19°45’48”E, 26.iv.2010, 2, L4; M. of Parelion: **222** Afra, stream, 39°37’30”N 19°50’45”E, 27.iv.2010, 4, L4; **225** Kokkini, stream, 39°36’32”N 19°48’44”E, 28.iv.2010, 1, L4; **226** Kombitsi, stream 1, 39°36’30”N 19°51’44”E, 29.iv.2010, 2, L4; M. of Thinalion: **231** Klimatia, stream 2, 39°44’14”N 19°47’07”E, 25.iv.2010, 2, L4.

Comments. Probably all of the listed macropterous females and nymphs collected from Crete belongs to *V. rhadamantha rhadamantha*, from Corfu to *V. pelagonensis*, and from Rhodes to *V. mariae*. Although *V. affinis filippii* also occurs in all three islands, it is much less common compared to the other three species.

Discussion

Most of the collected species are widely distributed in Europe and have been known from Greece as well (Andersen 1995; Polhemus *et al*. 1995; Aukema 2013; Aukema *et al.* 2013). The most frequently captured species in the islands were *Notonecta maculata* and *Hydrometra stagnorum,* which are common in Greece and throughout most of Europe. Surprisingly, the latter two species were not collected in Corfu, which is the closest island to the Greek mainland. Notwithstanding, on the basis of their geographical distribution and ecological requirements, we can assume that these species also occur in Corfu.

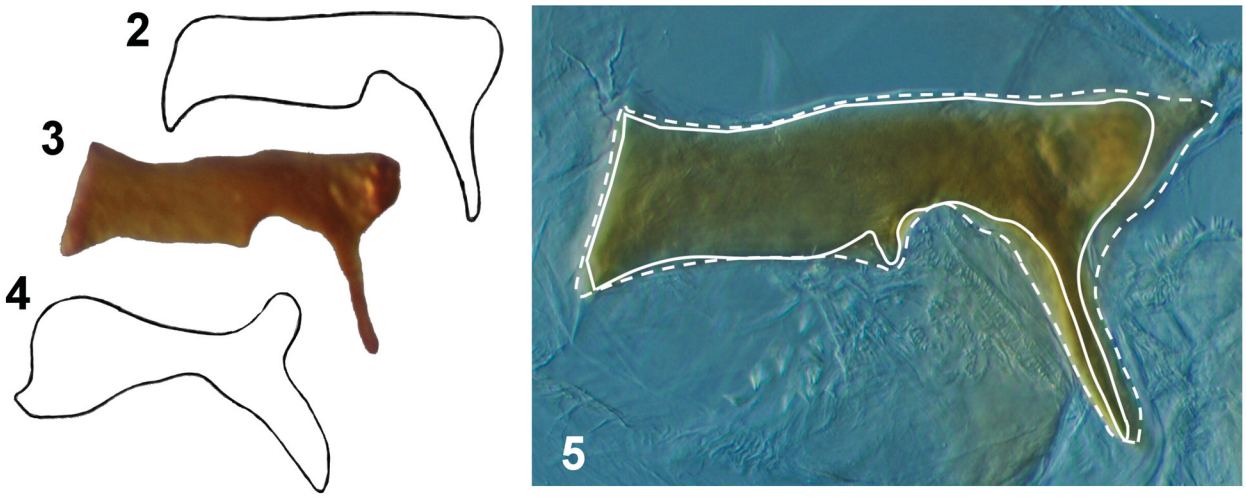
The first confirmed records from Greece are given in this paper for three taxa, *Gerris asper, Rhagovelia infernalis africana* and *Velia mariae*. The occurrence of the latter two taxa is confirmed for the first time from Europe *sensu stricto* (=excluding Cyprus, which belongs to Asia biogeographically).

Small water striders of the genus *Rhagovelia* are nearly ubiquitous and common in tropical streams throughout the world including parts of the Old World (Africa and Madagascar, Asia and the Indo-Pacific region) and Australia (e.g., Polhemus & Polhemus 1988, Polhemus 1990, Lansbury 1993, Polhemus & Andersen 2015) as well as the Neotropics where the greatest diversity and immense number of described *Rhagovelia* species can be found (e.g., Padilla-Gil & Moreira 2013, Floriano & Moreira 2015, Moreira 2015, Moreira *et al*. 2015, Padilla-Gil 2015). Some Old World species occur outside of the tropical zone and reach northern Africa and Europe, and they are apparently rare in the temperate zone.

Rhagovelia nigricans (Burmeister) was long regarded as the only western Palaearctic species of *Rhagovelia* (Europe, North Africa and Asia Minor). Among the two known Palaearctic subspecies, *R. nigricans maderensis* Poisson occurs only in Madeira (biogeographically North Africa). The nominotypical *R. nigricans nigricans* is widely distributed in the tropical zone; furthermore, it has been reported from North Africa (Egypt, Morocco, Tunisia) and Asia Minor (Saudi Arabia, Jordan, Lebanon, Syria, Yemen) including Asian Turkey and Cyprus (Andersen 1995, Fent *et al*. 2011, Dursun 2012). In Europe, it is known only from Spain (Baena *et al*. 1994). Most of the old and several new records were considered automatically as *R. nigricans nigricans*, despite the facts that Baena *et al.* (1994) described an endemic species from Tunisia (*R. tozeur* Baena, Nieser & Gallardo) and Nieser (1995) recorded *R. infernalis africana* from Israel based on old museum specimens. *Rhagovelia tozeur* can be distinguished from the others using external features; however, *R. nigricans* and *R. infernalis* are hardly distinguishable from each other, and it is possible only by investigating the male genital sclerites (see more details below). Thus, many former records of *R. nigricans nigricans* are dubious and their revision is necessary. Fent *et al.* (2011) with the help of N. Nieser revealed that some old voucher specimens from Cyprus and Israel belong to *R. infernalis africana*, and Dursun (2012) verified the record of *R. nigricans nigricans* from Anatolia, Turkey, also based on an old museum specimen. To determine the distribution of these two species, more data are needed, although it seems that they might be parapatric and both taxa could have been expected to occur in Greece as well. Fent *et al.* (2011) also mentioned specimens of *Rhagovelia* from Rhodes that appeared to be *R. infernalis africana*, although reliable identification to species-level was not possible because only three females were collected.

During the first identification of our male specimen of *Rhagovelia* from Rhodes, we also overlooked Lundblad’s (1936) and Nieser’s (1995) papers about *R. infernalis africana* and it was misidentified as *R. nigricans nigricans*. Later, Aukema *et al.* (2013) in the Supplement Band of the Palaearctic Catalogue mentioned this subspecies from Rhodes based on our unpublished erroneous record (with note “Csabai!”). When we realised that two very similar species can occur in the region, with the help of N. Nieser and P.-p. Chen, we redetermined the specimen from Rhodes to be clearly *R. infernalis africana*. Because these two species are very similar externally, identification of females can not be performed without doubt, and the shape of the lateral sclerite of the endosoma

(Figs. 2–5) is the only reliable characteristic in separation of the males (Lundblad 1936, Nieser 1995, N. Nieser pers. comm.). Lundblad (1936) illustrated the schematic contour of lateral sclerites of both species (see Figs. 2 & 4). Although schematization is a standard and common practice to visualise important species-specific details, sometimes it can be misleading, as partly shown in our case due to the real solid shape of the lateral sclerite. As an analogy, the lateral sclerite can be imagined as a hill-shape formation, which has a wider foothill region at the medial base (Fig. 5, broken line), and a tapered summit ridge on the lateral top (Fig. 5, continuous line). Although Lundblad (1936) illustrated the lateral sclerite on 'the halfway up the slope', as a combination of the two extremities, there is no doubt that our male specimen belongs to *R. infernalis africana* based on the general rectangular shape and on straight and angled edges of the sclerite.



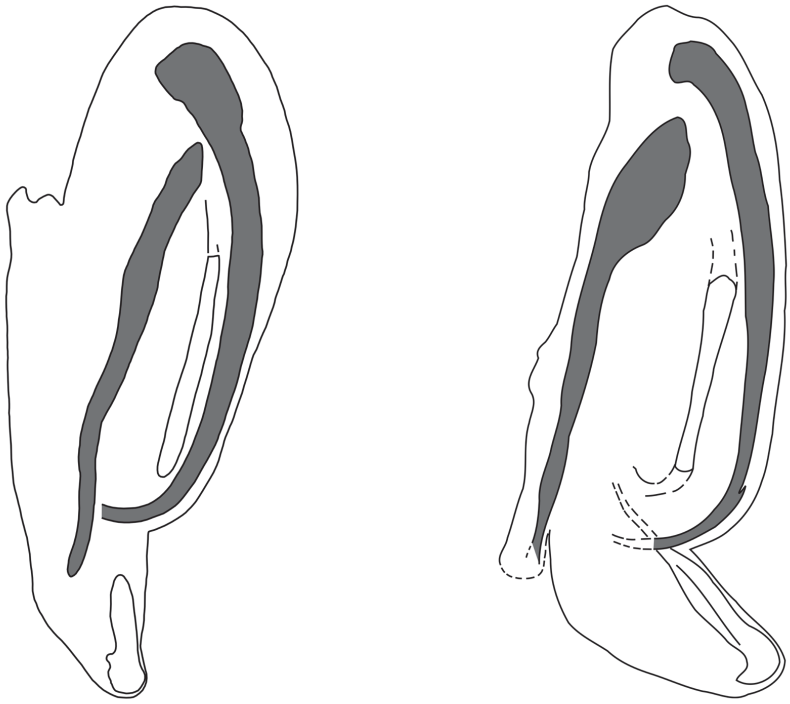
FIGURES 2–5. Shape of the lateral endosomal sclerites. 2, 3, 5: *Rhagovelia infernalis africana*. 4: *Rhagovelia nigricans nigricans*. 5: dotted line indicates outline at medial surface, continuous line indicates outline at lateral surface. 2, 4: based on Lundblad (1936), modified. 3, 5 original.

Our revised record confirms the suspicion of Fent *et al.* (2011) and the occurrence of this species in Rhodes and therefore in Greece and also in Europe *sensu stricto.* The distributional records for these species in the Palaearctic Catalogue (Andersen 1995; Aukema *et al.* 2003) should be emended as follow (all further Palaearctic records still need a revision):

R. nigricans nigricans: EUROPE: Spain (Baena *et al*. 1994). ASIA: Asian Turkey (Dursun 2012), Jordan (Katbeh *et al*. 2000), Lebanon (Nieser & Moubayed 1986), Cyprus, Syria, Yemen (Andersen 1995). NORTH AFRICA: Egypt, Morocco (Andersen 1995).

R. infernalis africana: EUROPE: Greece (Rhodes) (this paper). ASIA: Cyprus (Fent *et al.* 2011), Israel (Nieser 1995).

The taxonomy of the genus *Velia* Latreille was confused until Tamanini's (1947) revision. Various species were misidentified based on simple external features or highly variable characters (cf. Tamanini 1947, Berchi & Kment 2015). Thus, *Velia rhadamantha rhadamantha* was described by Hoberlandt (1941) based on material collected from Crete, and redescribed by Tamanini (1947) based on material from the type locality and from Gavdos Island, which is close to Crete. Later, Tamanini (1959) recorded the species from Strandzha Mountains, in southeastern Bulgaria. Tamanini (1970, 1971) described *Velia mariae* (*nomen novum* for *V. helenae*) from Düzce, Turkey; this species is closely related to *V. rhadamantha* and has the following distinguishing characteristics: darker color and eyes more convex; male with the distal apophyses of the last connexival segment shorter and with the superior edge curved, the 9th tergum and genital capsule are larger, lateral and ventral sclerites of the endophallus have different shapes (Figs. 6 & 7); the female has the pronotum less globular, the 7th tergum distal edge is more convex, and the 9th tergum nearly round (Tamanini 1970). High variability exists in most of the characters listed above; thus, the structure of the male genitalia and the shape of the endosomal sclerites are the most reliable diagnostic characters (Figs. 6 & 7). Differences between *V. rhadamantha rhadamantha* and *V. mariae* are also confirmed by molecular data, therefore validating these as two species (Berchi *et al*., unpublished data).



FIGURES 6–7. Shape of endosoma with lateral (left) and ventral (right) sclerites in dark grey. 6: *Velia rhadamantha rhadamantha*, modified after Tamanini (1947). 7: *Velia mariae*, modified after Tamanini (1970).

Until recently, *V. mariae* was known only from the type locality through Tamanini's (1970) record. Later, Samin *et al.* (2011) reported *V. mariae* from Iran, but this record needs verification (Aukema *et al.* 2013). Our investigations have revealed that *V. mariae* is in fact distributed across the Balkan Peninsula, through northern and southeastern Bulgaria, Greece (mainland and islands), and Asian Turkey. Furthermore, by revisiting the material of the NMNHS the individuals from Petrič and Strandzha Mountains (Bulgaria) identified by Tamanini as *V. rhadamantha rhadamantha* are in fact specimens of *V. mariae*. However, this is not surprising since the Strandzha Mountains are close (ca. 300 km) to Düzce (Turkey), the type locality of *V. mariae*. Moreover, Petrič' specimens were identified by Tamanini in 1959 (as indicated by labels "*Velia rhadamantha* Hob. / Tamanini det. 1959"), thus before the description of *V. mariae* (Tamanini 1970). Zimmermann (1982) gave further records of *V. rhadamantha* from Crete, but either from Arta, Evia and Thessaloniki. Fent *et al.* (2011) reported *V. rhadamantha rhadamantha* from the European part of Turkey, from Sarpdere, which is very close to the Bulgarian-Turkish border and to the Strandzha Mountains (within 15 km). Therefore, although the specimens in Zimmermann (1982) and Fent *et al.* (2011) were not examined by us, they should be *V. mariae* (except those from Crete); however, all this material requires review. Although recently *V. rhadamantha rhadamantha* was considered a Ponto-Mediterranean element (Josifov 1999), actually it seems to be endemic to Crete and some small adjacent islands (e.g., Gavdos). In contrast, *V. mariae* occurs widely in the Balkan Peninsula, including some major Greek islands such as Lefkada, Samos, Samothrace or Rhodes (see records above); however, this should be investigated through more detailed and broader sampling across this area (Fig. 8).

In contrast to the taxa discussed above, *Gerris asper* is a common semiaquatic heteropteran in the continental part of Europe (but absent in Scandinavia and rare in Italy) and it also occurs in Asian Turkey and in the Near East (Andersen 1995; Fent *et al.* 2011; Cianferoni *et al.* 2013; Cianferoni & Terzani 2013); thus, its presence in Greece was expected. Since the species was found in both Crete and Corfu and has become known from the mainland (Fig. 8), we presume that *G. asper* was simply overlooked from Greece and probably is widely distributed throughout the islands and mainland.

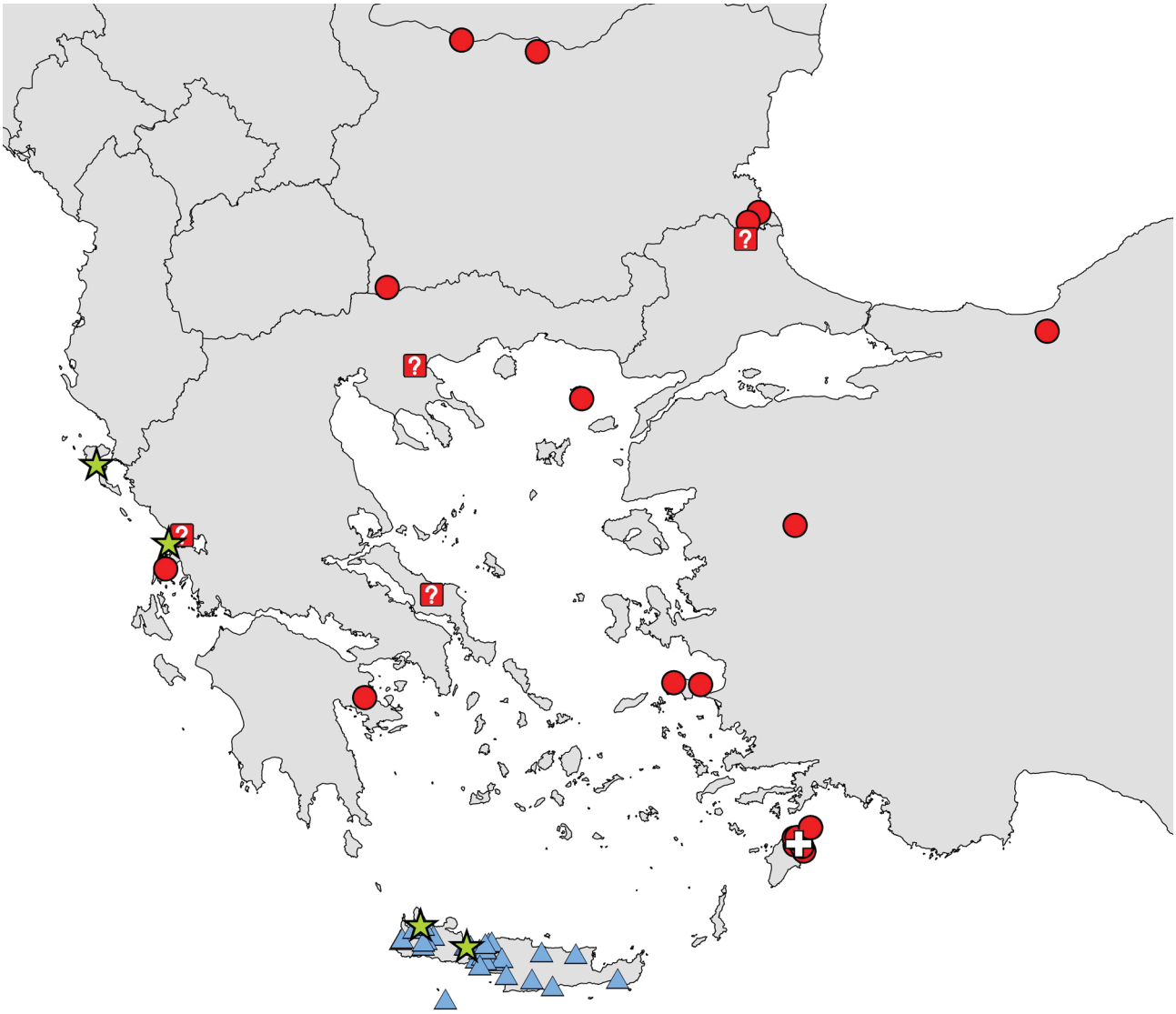


FIGURE 8. Distribution of selected species in the eastern Mediterranean. Red dots: Recently known distribution of *V. mariae*, Red squares with question mark inside: dubious records published as *V. rhadamantha rhadamantha* by Zimmermann (1982) and Fent *et al.* (2011) that probably refer to *V. mariae*. Blue triangles: Recently known and confirmed distribution records of *V. rhadamantha rhadamantha*, White cross: First locality of *R. infernalis africana* in Europe, Green stars: First localities of *G. asper* in Greece.

From faunistic and biogeographic points of view, the most valuable members of the Greek Heteroptera fauna are the endemic taxa (Josifov & Simov 2006). However, among the aquatic taxa only two endemic subspecies were known from the investigated islands. *Sigara nigrolineata mendax* is limited to occur in some parts of the Greek archipelago, i.e. Crete and some adjacent islands (Heiss & Jansson 1986a, b; Jansson 1986), and is common throughout Crete. *Ilyocoris cimicoides jonicus* was described from Corfu (Lindberg 1922) and was also found in the mainland, in Epirus, close to Corfu (ca. 90 km to the east), in Lake Ioannina (Zimmermann 1982), although we had no further knowledge or published records of this subspecies. *Ilyocoris cimicoides jonicus* is geographically separated from the nominotypical subspecies, most probably by high ranges of the Pindus Mountains (Zimmermann 1982). It is apparently rare in Corfu, and in 2010 it was only found in two small ponds very close to each other and within about 5 km to the locus typicus ("Valle die Ropa" = Ropa Valley, see also Lindberg 1922). It is possible that the type specimens also originated from these ponds and the published name of the type locality indicates only the wider vicinity. Based on the results of this project, *V. rhadamantha rhadamantha* is the third endemic taxon (in the environs of Crete).

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