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## Aquatic beetle fauna of Greek holiday islands (Rhodes, Crete and Corfu)

(Coleoptera, Hydradephaga, Hydrophiloidea, Hydraenidae)

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Detailed new records of 101 aquatic beetle taxa from 179 sites of Rhodes, Crete and Corfu Islands were given. Further species which were only known from these islands based on publication data and database records were also listed. Regarding the eight discussed families, 11, 16 and 18 species were recorded for the first time, and the number of water beetle taxa known from of Rhodes, Crete and Corfu raised to 48, 79 and 112, respectively.

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### Introduction

One of the most serious environmental problems is the loss of biodiversity due to human impacts, which is more harmful in freshwater ecosystems than in terrestrial ones (see citations in Sánchez-Fernández et al. 2008). The diversity of freshwaters can be more threatened in the Mediterranean Basin, which is considered as one of Earth's hotspot areas for biodiversity (Myers et al. 2000) and where landscapes have been strongly influenced by human activities for thousands of years. In the Palaearctic, the Mediterranean region is regarded as biodiversity hotspot for water beetles, at least for certain families (Jäch & Balke 2008). However, the distribution of many species is poorly known, and a remarkable number of species are likely still undescribed. It is

particularly true for the Greek islands, an area of great biogeographic interest, where a number of endemic taxa exists (e. g. Angus 1988, Audisio et al. 1996, Jäch 1985, 1990, 1993a) and some of them have just recently been recognized (e. g. Fery & Štátný 2007, Toledo 2009).

The Aquatic Macroinvertebrates Research Group of University of Pécs organized collecting trips to Rhodes (2007), Crete (2008) and Corfu (2010) with the aim to study the aquatic macroinvertebrate fauna of these popular holiday islands. Comprehensive up-to-date regional information on water beetle species has not been published for these islands so far. In this paper we give detailed results and hundreds of new records concerning certain groups of water beetles (i. e. Hydradephaga, Hydrophiloidea, and Hydraenidae).

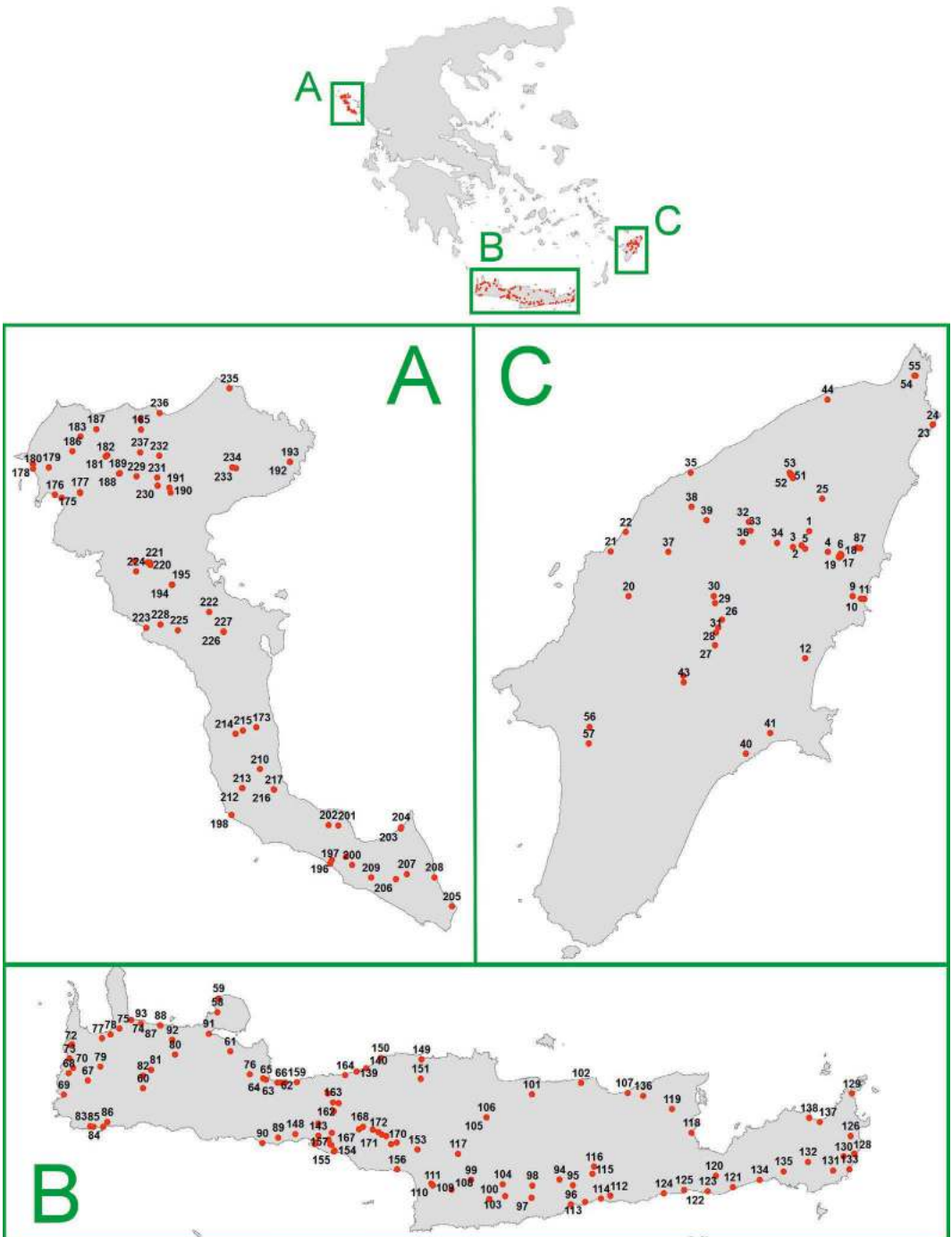


Fig. 1. Sampling sites in Greek Islands. A. Corfu; B. Crete; C. Rhodes. Numbers refer to the site codes in Table 1. In case of overlapping sites some of the numbers are hidden.

## Materials and methods

Our group visited a total of 237 sampling sites (Table 1, Fig. 1), including a wide variety of aquatic and wetland habitats, e.g. rivers, streams, channels, springs, lakes, ponds, marshes, natural and artificial pools, from tiny sized waterbodies (barrels or rock pools with some or only half a liter capacity) up to big reservoirs, from small temporary spring-outlets to large rivers in Rhodes, Crete and Corfu (57, 115 and 65 sites respectively). All sites yielded aquatic macroinvertebrates, but at 58 sites (12 in Rhodes, 38 in Crete, 8 in Corfu) water beetles were not found, thus new records of beetles are from altogether 179 sites (45 in Rhodes, 77 in Crete, 57 in Corfu). Sites without water beetle specimens are also listed in Table 1, because the lack of beetles is also informative.

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

Aquatic macroinvertebrates (including aquatic beetles) 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 water surface, and among the submerged or emergent vegetation. In running waters aquatic insects were mostly captured by using “kick and sweep” technique. Apart from applying netting technique specimens were also captured by manual singling from surface of submerged stones, wood branches, floating debris and garbage, etc.

Identification of the species was based on multiple taxonomical works, material of different collections and specialists’ experience. However, in some cases the

species-level identification was not possible. In the case of *Ilybius chalconatus* group the specimens could not be identified at species-level due to only females were collected. In the case of *Hydroporus jonicus* and *Hydroporus distinguendus*, only the males are separable from each other. Accordingly, female records of these two species were listed separately as a combined category (species pair) that later was not counted to the cumulated numbers of species. The accurate species-level identification was not always possible in the case of the taxonomically problematic family Hydraenidae. The specimens of *Paracymus* differed from those collected in other regions (see Angus 2013), but clearing the species-level identity of them needs further investigations.

In the list of species the code of collecting sites according to Table 1 and the number of captured specimens are given, with the exception of Hydraenidae collected in Crete, where numbers of individuals are not indicated. List of species was given in alphabetic order within the families. In the list, an asterisks (\*) at the names of the islands indicates species that were recorded from the given island for the first time. The nomenclature follows Nilsson & Hájek (2016) and Löbl & Löbl (2015). In the case of *Nebrioporus amicorum* from Crete and *Laccobius* spp. collected in Rhodes some of the records have already been published for taxonomical purposes (Gentili & Csabai 2009, Toledo 2009), but for the sake of completeness, they are repeated here as well. Moreover, based on our material, Angus (2013) listed several species which are known to occur in Corfu but the full records are given in this paper for the first time.

Approximately one third of the collected specimens are housed in the collection of the Department of Hydrobiology University of Pécs (partly mounted dry but mostly in ethanol), further specimens are deposited in the private collections of Elio Gentili (Rasa-Varese, Italy – *Laccobius* spp.), Robert Angus (London, UK – *Helopho-*

**Table 1.** List of localities visited during the collection trips, sorted by prefectures (in Crete) and municipalities, with their WGS84 coordinates. The collecting methods and collectors are also indicated. Localities where water beetles were not found are in italics. **Abbreviations in the head:** Lat.(N) = latitude (North); Lon.(E) = longitude (East); leg. = collectors; **abbreviations in column “Method”:** KS = kick and sweep water netting; WN = water netting above the substrate and among the vegetation; MS = manual sampling; **abbreviations in column “leg.”:** 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.

Code	Collecting sites	Date	Lon.(N)	Lat.(E)	Method	leg
<b>RHODES</b>						
<b>Municipality of Afandou</b>						
001	Arhipoli: River Loutanis 1	19.02.2007	36°16'52"	28°04'45"	KS, MS	L1
002	Arhipoli: River Loutanis 2	19.02.2007	36°16'03"	28°04'08"	KS, MS	L1
003	Arhipoli: River Loutanis 3	22.02.2007	36°15'59"	28°03'30"	KS, MS	L2
004	Arhipoli: River Loutanis 4	19.02.2007	36°15'34"	28°06'01"	KS, MS	L1
005	Arhipoli: stream	19.02.2007	36°15'51"	28°04'23"	KS, MS	L1
006	Kolympia: River Loutanis 1	19.02.2007	36°15'24"	28°06'55"	KS, MS	L1
007	Kolympia: River Loutanis 2	19.02.2007	36°15'39"	28°08'24"	KS, MS	L1
008	Kolympia: River Loutanis 3	19.02.2007	36°15'42"	28°08'08"	KS, MS	L1

Code	Collecting sites	Date	Lon.(N)	Lat.(E)	Method	leg
<b>RHODES (continued)</b>						
<b>Municipality of Arhangelos</b>						
009	<i>Arhangelos: stream 1</i>	24.02.2007	36°12'52"	28°07'37"	KS, MS	L1
010	Arhangelos: stream 2	24.02.2007	36°12'42"	28°08'11"	KS, MS	L1
011	Arhangelos: stream 3	24.02.2007	36°12'39"	28°08'27"	KS, MS	L1
012	Charaki: River Gadouras	24.02.2007	36°09'23"	28°03'53"	KS, MS	L1
013	Epta Piges (Seven Springs): concrete channel	15.02.2007	36°15'21"	28°06'58"	WN, MS	L1
014	Epta Piges (Seven Springs): lake 1	14.02.2007	36°15'15"	28°06'57"	WN, MS	L1
015	Epta Piges (Seven Springs): lake 2	15.02.2007	36°15'16"	28°06'56"	WN, MS	L1
016	Epta Piges (Seven Springs): spring	14.02.2007	36°15'11"	28°06'49"	WN, MS	L1
017	Epta Piges (Seven Springs): stream 1	14.02.2007	36°15'13"	28°06'48"	KS, MS	L1
018	Epta Piges (Seven Springs): stream 2	14.02.2007	36°15'20"	28°06'58"	KS, MS	L1
019	<i>Epta Piges (Seven Springs): stream 3</i>	15.02.2007	36°15'17"	28°06'50"	KS, MS	L1
<b>Municipality of Attavyros</b>						
020	<i>Emponas: Grill House Taverna, barrels</i>	16.02.2007	36°13'41"	27°51'19"	MS	L1
021	Kamiro Skala: River Linero	20.02.2007	36°16'23"	27°50'13"	KS, MS	L1
022	<i>Mandriko: River Mandriko</i>	20.02.2007	36°17'28"	27°51'24"	KS, MS	L1
<b>Municipality of Kalithea</b>						
023	Kalithea spa: bath pool	14.02.2007	36°22'41"	28°14'16"	WN, MS	L1
024	<i>Kalithea spa: stone basin</i>	14.02.2007	36°22'39"	28°14'14"	WN, MS	L1
025	<i>Psinthos: dry dam lake, stream</i>	25.02.2007	36°18'43"	28°05'50"	KS, MS	L1
<b>Municipality of Kamiros</b>						
026	Apollona: dry stream bed, pool	22.02.2007	36°11'58"	27°58'00"	WN, MS	L2
027	Apollona: River Gadouras 1	17.02.2007	36°10'29"	27°57'23"	KS, MS	L1
028	Apollona: River Gadouras 2	22.02.2007	36°11'31"	27°57'43"	KS, MS	L1
029	Apollona: River Gadouras 3	22.02.2007	36°12'58"	27°57'35"	KS, MS	L2
030	Apollona: River Gadouras 4	22.02.2007	36°13'23"	27°57'31"	KS, MS	L2
031	Apollona: stream	17.02.2007	36°11'13"	27°57'31"	KS, MS	L1
032	Dimylia: River Platis	20.02.2007	36°17'37"	28°00'23"	KS, MS	L1
033	Dimylia: stream	25.02.2007	36°17'05"	28°00'30"	KS, MS	L1
034	Eleousa: stream	22.02.2007	36°16'17"	28°02'23"	KS, MS	L2
035	Kalavarda: River Argiros	20.02.2007	36°20'44"	27°56'24"	KS, MS	L1
036	Profitis Ilias: St. Nicholaos Foundoukli, fountain	16.02.2007	36°16'27"	27°59'51"	WN, MS	L1
037	Profitis Ilias: stream	16.02.2007	36°16'09"	27°54'25"	KS, MS	L1
038	Salakos: River Argiros 1	20.02.2007	36°18'43"	27°56'19"	KS, MS	L1
039	Salakos: River Argiros 2	20.02.2007	36°17'52"	27°57'20"	KS, MS	L1
<b>Municipality of Lindos</b>						
040	<i>Lardos: River Kontari</i>	17.02.2007	36°03'59"	27°59'08"	KS, MS	L1
041	Lardos: River Lardos	17.02.2007	36°05'07"	28°01'01"	KS, MS	L1
042	Laerma: River Lardos 1	17.02.2007	36°08'48"	27°54'58"	KS, MS	L1
043	Laerma: River Lardos 2	17.02.2007	36°08'25"	27°54'58"	KS, MS	L1
<b>Municipality of Petaloudes</b>						
044	Kremasti: River Kremastinos	21.02.2007	36°24'32"	28°06'41"	KS, MS	L1
045	<i>Petaloudes (Valley of butterflies): stream 1</i>	21.02.2007	36°20'03"	28°03'49"	KS, MS	L1
046	Petaloudes (Valley of butterflies): stream 2	21.02.2007	36°20'05"	28°03'47"	KS, MS	L1
047	Petaloudes (Valley of butterflies): stream 3	21.02.2007	36°20'06"	28°03'47"	KS, MS	L1
048	Petaloudes (Valley of butterflies): stream 4	21.02.2007	36°20'07"	28°03'47"	KS, MS	L1
049	Petaloudes (Valley of butterflies): stream 5	21.02.2007	36°20'11"	28°03'45"	KS, MS	L1
050	Petaloudes (Valley of butterflies): stream 6	21.02.2007	36°20'12"	28°03'43"	KS, MS	L1
051	Petaloudes (Valley of butterflies): stream 7	21.02.2007	36°20'15"	28°03'42"	KS, MS	L1
052	<i>Petaloudes (Valley of butterflies), stream 8</i>	21.02.2007	36°20'17"	28°03'38"	KS, MS	L1
053	Petaloudes (Valley of butterflies): stream 9	21.02.2007	36°20'22"	28°03'36"	KS, MS	L1

<b>Municipality of Rhodes</b>						
054	Rhodos town: Rodini park, artificial fountain pool	23.02.2007	36°25'37"	28°13'13"	WN, MS	L1
055	Rhodos town: Rodini park, stream	23.02.2007	36°25'36"	28°13'08"	KS, MS	L1
<b>Municipality of South Rhodes</b>						
056	<i>Apolakkia: dam-lake</i>	16.02.2007	36°06'08"	27°47'55"	WN, MS	L1
057	Apolakkia: River Apolakkias	16.02.2007	36°05'09"	27°47'48"	KS, MS	L1
<b>CRETE</b>						
<b>Prefecture of Chania</b>						
<b>Municipality of Akrotiri</b>						
058	Kalathas: ditch	16.02.2008	35°33'11"	24°05'17"	WN, MS	L3
059	Stavros: ditch	15.02.2008	35°35'31"	24°05'40"	WN, MS	L3
<b>Municipality of Anatoliko Selino</b>						
060	Agia Irini: stream	01.03.2008	35°20'34"	23°49'39"	KS, MS	L3
<b>Municipality of Armeni</b>						
061	Stilos: stream	21.02.2008	35°26'31"	24°07'49"	KS, MS	L3
<b>Municipality of Georgioupoli</b>						
062	Asprouliani: channel	21.02.2008	35°21'06"	24°17'26"	KS, MS	L3
063	Asprouliani: pond	25.02.2008	35°21'06"	24°17'25"	WN, MS	L3
064	Georgioupoli: River Almiros	21.02.2008	35°21'49"	24°14'29"	KS, MS	L3
065	<i>Georgioupoli: spring-fed pond</i>	21.02.2008	35°21'38"	24°15'06"	WN, MS	L3
066	Kavros: stream	21.02.2008	35°21'03"	24°18'08"	KS, MS	L3
<b>Municipality of Inachorion</b>						
067	Elos: stream	20.02.2008	35°22'02"	23°38'16"	KS, MS	L3
068	Kambos: stream	20.02.2008	35°23'19"	23°34'24"	KS, MS	L3
069	<i>Plokamiana: River Linia</i>	20.02.2008	35°19'42"	23°33'16"	KS, MS	L3
<b>Municipality of Kissamos</b>						
070	Ano Sfinari: stream	20.02.2008	35°24'13"	23°35'17"	KS, MS	L3
071	<i>Kavoussi: spring</i>	20.02.2008	35°28'14"	23°35'07"	MS	L3
072	<i>Kavoussi: stream</i>	20.02.2008	35°28'02"	23°34'55"	KS, MS	L3
073	Sfinari: stream	20.02.2008	35°25'47"	23°34'33"	KS, MS	L3
<b>Municipality of Kolimbari</b>						
074	Minothiana: stream	21.02.2008	35°32'10"	23°47'30"	KS, MS	L3
075	<i>Nohia: stream</i>	21.02.2008	35°30'44"	23°45'00"	KS, MS	L3
<b>Municipality of Krionerida</b>						
076	Vryses: stream	21.02.2008	35°22'32"	24°11'43"	KS, MS	L3
<b>Municipality of Mithimna</b>						
077	Kaloudiana: stream	20.02.2008	35°29'08"	23°41'20"	KS, MS	L3
078	Koleni: stream	21.02.2008	35°29'44"	23°43'08"	KS, MS	L3
079	Koutsomatados: stream	20.02.2008	35°24'21"	23°40'56"	KS, MS	L3
<b>Municipality of Mousouron</b>						
080	Fournes: River Xekolimenos	01.03.2008	35°26'09"	23°56'24"	KS, MS	L3
081	Nea Roumata: stream	01.03.2008	35°23'40"	23°51'23"	KS, MS	L3
082	<i>Prases: stream</i>	01.03.2008	35°22'43"	23°49'44"	KS, MS	L3
<b>Municipality of Pelekanos</b>						
083	Koundoura: River Pelakaniotikos	01.03.2008	35°14'19"	23°38'36"	KS, MS	L3
084	Paleochora: River Kakodikianos	01.03.2008	35°14'12"	23°41'20"	KS, MS	L3
085	Paleochora: lithotelma (beach)	01.03.2008	35°14'13"	23°39'16"	MS	L3
086	Paleochora: stream	01.03.2008	35°14'59"	23°42'10"	KS, MS	L3
<b>Municipality of Platania</b>						
087	Platania: puddle	21.02.2008	35°31'11"	23°53'27"	WN, MS	L3
088	Platania: River Xekolimenos	21.02.2008	35°31'07"	23°53'29"	KS, MS	L3

Code	Collecting sites	Date	Lon.(N)	Lat.(E)	Method	leg
<b>CRETE (continued)</b>						
<b>Prefecture of Chania (continued)</b>						
<b>Municipality of Sfakia</b>						
089	Argoules: stream	14.02.2008	35°11'45"	24°17'19"	KS, MS	L3
090	Frangokastello: stream	14.02.2008	35°10'53"	24°14'02"	KS, MS	L3
<b>Municipality of Souda</b>						
091	<i>Souda: stream</i>	16.02.2008	35°29'35"	24°03'27"	KS, MS	L3
<b>Municipality of Therissos</b>						
092	Agia: Lake Agia	01.03.2008	35°28'39"	23°55'55"	WN, MS	L3
<b>Municipality of Voukolies</b>						
093	Tavronitis: River Tavronitis	21.02.2008	35°31'32"	23°49'30"	KS, MS	L3
<b>Prefecture of Heraklion</b>						
<b>Municipality of Arkalohori</b>						
094	Ano Kastelliana: River Anapodiaris	22.02.2008	35°03'21"	25°14'56"	KS, MS	L3
095	Demati: River Erganas	22.02.2008	35°02'19"	25°17'37"	KS, MS	L3
096	Tsoutsouros: stream	22.02.2008	34°59'05"	25°17'07"	KS, MS	L3
<b>Municipality of Asteroussia</b>						
097	Pirgos: stream	15.02.2008	35°00'26"	25°09'04"	KS, MS	L3
098	Protoria: River Anapodiaris	15.02.2008	35°02'30"	25°09'16"	KS, MS	L3
<b>Municipality of Gortina</b>						
099	Agia Deka: stream	15.02.2008	35°03'43"	24°56'46"	KS, MS	L3
100	<i>Vagionia: stream</i>	15.02.2008	35°00'25"	25°00'23"	KS, MS	L3
<b>Municipality of Heraklion</b>						
101	<i>Knossos: lithotelma, Minoan Palace</i>	28.02.2008	35°17'54"	25°09'49"	MS	L3
<b>Municipality of Hersonissos</b>						
102	<i>Analipsi: stream</i>	02.03.2008	35°19'33"	25°20'03"	KS, MS	L3
<b>Municipality of Kofina</b>						
103	Dionisi: stream	15.02.2008	35°00'51"	25°03'38"	KS, MS	L3
104	Stoli: stream	15.02.2008	35°02'52"	25°03'13"	KS, MS	L3
<b>Municipality of Kroussonas</b>						
105	Kitharida: small stream	27.02.2008	35°14'15"	25°00'18"	KS, MS	L3
106	Kitharida: stream	27.02.2008	35°14'16"	25°00'18"	KS, MS	L3
<b>Municipality of Malia</b>						
107	<i>Malia: stone basin, Minoan Palace</i>	02.03.2008	35°17'36"	25°29'33"	MS	L3
<b>Municipality of Moires</b>						
108	Moires: River Geropotamos	15.02.2008	35°02'14"	24°52'42"	KS, MS	L3
<b>Municipality of Tympaki</b>						
109	<i>Festos: earthenware vessel, Minoan Palace</i>	15.02.2008	35°03'04"	24°48'49"	MS	L3
110	<i>Festos: River Geropotamos</i>	15.02.2008	35°03'18"	24°48'31"	KS, MS	L3
111	<i>Festos: lithotelma</i>	15.02.2008	35°03'04"	24°48'52"	MS	L3
<b>Municipality of Viannos</b>						
112	Arvi: stream	22.02.2008	35°00'18"	25°25'16"	KS, MS	L3
113	Dermatos: River Anapodiaris	22.02.2008	34°59'28"	25°20'00"	KS, MS	L3
114	<i>Keratokambos: stream</i>	22.02.2008	34°59'52"	25°23'16"	KS, MS	L3
115	Martha: stream	22.02.2008	35°04'06"	25°21'43"	KS, MS	L3
116	Thomadiano: River Erganas	22.02.2008	35°05'21"	25°22'08"	KS, MS	L3
<b>Municipality of Zaros</b>						
117	Zaros: stream	24.02.2008	35°08'13"	24°54'13"	KS, MS	L3

<b>Prefecture of Lassithi</b>						
<b>Municipality of Agios Nikolaos</b>						
118	Ammoudara: spring-fed pond	23.02.2008	35°10'29"	25°42'21"	WN, MS	L3
119	Limnes: stream	23.02.2008	35°14'37"	25°38'35"	KS, MS	L3
<b>Municipality of Ierapetra</b>						
120	<i>Episkopi: stream</i>	23.02.2008	35°03'03"	25°47'01"	KS, MS	L3
121	<i>Ferma: stream</i>	26.02.2008	35°01'02"	25°50'30"	KS, MS	L3
122	<i>Ierapetra: lithotelma (beach)</i>	26.02.2008	35°00'28"	25°45'16"	MS	L3
123	Ierapetra: stream	26.02.2008	35°00'31"	25°45'17"	KS, MS	L3
124	<i>Mirtos: stream</i>	23.02.2008	35°00'25"	25°36'14"	KS, MS	L3
125	<i>Stomio: stream</i>	23.02.2008	35°00'52"	25°40'29"	KS, MS	L3
<b>Municipality of Itanos</b>						
126	<i>Hohlakies: stream</i>	26.02.2008	35°08'51"	26°15'02"	KS, MS	L3
127	Kato Zakros: artificial pool, Minoan Palace	26.02.2008	35°05'52"	26°15'41"	MS	L3
128	<i>Kato Zakros: pool, in river bed</i>	26.02.2008	35°05'43"	26°15'45"	WN, MS	L3
129	Vai: puddle	26.02.2008	35°16'01"	26°15'41"	WN, MS	L3
130	<i>Zakros: stream</i>	26.02.2008	35°05'26"	26°13'27"	KS, MS	L3
<b>Municipality of Lefki</b>						
131	<i>Hametoulo: stream</i>	26.02.2008	35°03'10"	26°11'11"	KS, MS	L3
132	<i>Handras: stream</i>	26.02.2008	35°04'47"	26°06'06"	KS, MS	L3
133	<i>Xerokambos: stream</i>	26.02.2008	35°03'15"	26°14'32"	KS, MS	L3
<b>Municipality of Makrys Gialos</b>						
134	Koutsouras: stream	26.02.2008	35°02'05"	25°56'01"	KS, MS	L3
135	Pilalimata: stream	26.02.2008	35°03'22"	26°01'02"	KS, MS	L3
<b>Municipality of Neapoli</b>						
136	Selinari: stream	23.02.2008	35°17'01"	25°32'44"	KS, MS	L3
<b>Municipality of Sitia</b>						
137	Agia Fotia: stream	26.02.2008	35°11'26"	26°08'53"	KS, MS	L3
138	<i>Sitia: river</i>	26.02.2008	35°12'11"	26°06'41"	KS, MS	L3
<b>Prefecture of Rethymno</b>						
<b>Municipality of Arkadi</b>						
139	Sfakaki: stream	28.02.2008	35°22'38"	24°33'46"	KS, MS	L3
140	Stavromenos: stream	28.02.2008	35°23'07"	24°35'48"	KS, MS	L3
<b>Municipality of Finikas</b>						
141	Angouseliana: stream	25.02.2008	35°13'58"	24°25'42"	KS, MS	L3
142	Asomatos: concrete water channel	19.02.2008	35°11'13"	24°27'40"	WN, MS	L3
143	Asomatos: stream	13.02.2008	35°11'54"	24°25'35"	KS, MS	L3
144	Damnoni: small stream	19.02.2008	35°10'47"	24°24'58"	KS, MS	L3
145	Damnoni: stream, mouth	19.02.2008	35°10'29"	24°24'49"	KS, MS	L3
146	Gianniou: River Megas Potamos	19.02.2008	35°10'26"	24°27'58"	KS, MS	L3
147	Gianniou: stream	19.02.2008	35°10'18"	24°28'13"	KS, MS	L3
148	Karo Rodakino: stream	14.02.2008	35°12'19"	24°20'49"	KS, MS	L3
<b>Municipality of Geropotamos</b>						
149	Bali: lithotelma (beach)	29.02.2008	35°24'21"	24°47'16"	MS	L3
150	Lavris: River Geropotamos	28.02.2008	35°24'47"	24°38'49"	KS, MS	L3
<b>Municipality of Kouloukonas</b>						
151	Mourtzana: River Geropotamos	28.02.2008	35°21'06"	24°47'01"	KS, MS	L3
<b>Municipality of Kourites</b>						
152	Agios Ioannis: River Platys	24.02.2008	35°10'23"	24°41'42"	KS, MS	L3
153	<i>Platanos: fountain</i>	24.02.2008	35°09'08"	24°45'57"	MS	L3

Code	Collecting sites	Date	Lon.(N)	Lat.(E)	Method	leg
<b>CRETE (continued)</b>						
<b>Prefecture of Rethymno (continued)</b>						
<b>Municipality of Lampis</b>						
154	Agia Fotini: stream	19.02.2008	35°09'21"	24°28'54"	KS, MS	L3
155	Agia Fotini: stream, mouth	19.02.2008	35°09'13"	24°28'41"	KS, MS	L3
156	Agia Galini: River Platys	24.02.2008	35°05'53"	24°41'38"	KS, MS	L3
157	Frati: River Kourtaliotiko	25.02.2008	35°12'19"	24°28'21"	KS, MS	L3
<b>Municipality of Lappas</b>						
158	Dramia: River Mouselas	25.02.2008	35°21'03"	24°19'04"	KS, MS	L3
<b>Municipality of Nikiforos Fokas</b>						
159	Petre: River Petres	25.02.2008	35°21'04"	24°21'28"	KS, MS	L3
<b>Municipality of Rethymno</b>						
160	Armeni: pool, Late Minoan Cemetery	27.02.2008	35°19'03"	24°27'45"	WN, MS	L3
161	Fotinos: pool	02.03.2008	35°15'57"	24°28'54"	WN, MS	L3
162	Goulediana: stream	13.02.2008	35°17'20"	24°29'57"	KS, MS	L3
163	Kare: stream	13.02.2008	35°17'30"	24°28'48"	KS, MS	L3
164	Platanias: River Platanes	28.02.2008	35°22'02"	24°31'28"	KS, MS	L3
<b>Municipality of Sivirtos</b>						
165	Drigies: puddle	24.02.2008	35°11'32"	24°39'31"	WN, MS	L3
166	Drigies: stream	24.02.2008	35°11'32"	24°39'32"	KS, MS	L3
167	Gerakari: stream 1	24.02.2008	35°12'52"	24°34'00"	KS, MS	L3
168	<i>Gerakari: stream 2</i>	24.02.2008	35°13'15"	24°34'50"	KS, MS	L3
169	Gerakari: stream 3	24.02.2008	35°12'45"	24°36'50"	KS, MS	L3
170	Hordaki: stream	24.02.2008	35°10'12"	24°40'33"	KS, MS	L3
171	<i>Vryses: spring</i>	24.02.2008	35°11'52"	24°38'39"	MS	L3
172	<i>Vryses: stream</i>	24.02.2008	35°12'15"	24°38'00"	KS, MS	L3
<b>CORFU</b>						
<b>Municipality of Achilion</b>						
173	Komianata: ditch	29.04.2010	39°31'42"	19°54'01"	MS-WN	L4
<b>Municipality of Agios Georgios</b>						
174	Agios Georgios: River Potamos 1	26.04.2010	39°43'05"	19°40'53"	KS-WN-M	L4
175	Agios Georgios: River Potamos 2	26.04.2010	39°43'22"	19°42'05"	KS-WN-MS	L4
176	Agios Georgios: stream 1	26.04.2010	39°43'14"	19°40'27"	KS-WN-MS	L4
177	Agios Georgios: stream 2	26.04.2010	39°43'24"	19°42'05"	KS-WN-MS	L4
178	Arillas: channel	03.05.2010	39°44'46"	19°38'57"	MS-WN	L4
179	Arillas: stream	22.04.2010	39°44'37"	19°39'59"	KS-WN-MS	L4
180	Arillas: stream, mouth	23.04.2010	39°44'32"	19°38'57"	KS-WN-MS	L4
181	Kopsihilades: River Fonisa	22.04.2010	39°45'18"	19°43'48"	KS-WN-MS	L4
182	Kopsihilades: stream	22.04.2010	39°45'14"	19°43'42"	KS-WN-MS	L4
<b>Municipality of Esperion</b>						
183	Gousades: stream	22.04.2010	39°46'13"	19°42'01"	KS-WN-MS	L4
184	Karousades: stream	23.04.2010	39°47'11"	19°45'55"	KS-WN-MS	L4
185	Kavallouri: stream	23.04.2010	39°46'39"	19°45'58"	KS-WN-MS	L4
186	Kounavades: stream	22.04.2010	39°45'28"	19°41'31"	KS-WN-MS	L4
187	Livadi: River Fonisa	22.04.2010	39°46'37"	19°43'02"	KS-WN-MS	L4
188	Valanio: stream 1	22.04.2010	39°44'25"	19°44'39"	KS-WN-MS	L4
189	Valanio: stream 2	22.04.2010	39°44'24"	19°44'37"	KS-WN-MS	L4
<b>Municipality of Feakon (Faiakon)</b>						
190	Zigos: stream	25.04.2010	39°43'30"	19°48'02"	KS-WN-MS	L4
191	Zigos: well	25.04.2010	39°43'44"	19°47'56"	MS-WN	L4



<b>Municipality of Kassiopeon</b>						
192	<i>Sarakinatika: lithotelma</i>	23.04.2010	39°45'11"	19°55'49"	MS-WN	L4
193	<i>Sarakinatika: spring</i>	23.04.2010	39°45'12"	19°55'49"	MS-WN	L4
<b>Municipality of Kerkireon</b>						
194	<i>Tembloni: Lake Bertonou</i>	26.04.2010	39°38'49"	19°48'17"	MS-WN	L4
195	<i>Tembloni: pond-outlet</i>	26.04.2010	39°38'50"	19°48'15"	KS-WN-MS	L4
<b>Municipality of Korission</b>						
196	<i>Marathias: stream</i>	01.05.2010	39°25'04"	19°59'09"	KS-WN-MS	L4
197	<i>Marathias: stream, mouth</i>	01.05.2010	39°24'53"	19°59'02"	KS-WN-MS	L4
198	<i>Mesavorisi: Lake Korision</i>	30.04.2010	39°27'14"	19°52'32"	MS-WN	L4
199	<i>Perivoli: stream 1</i>	01.05.2010	39°25'15"	20°00'04"	KS-WN-MS	L4
200	<i>Perivoli: stream 2</i>	01.05.2010	39°24'50"	20°00'29"	KS-WN-MS	L4
201	<i>Petriti: stream</i>	30.04.2010	39°26'49"	19°59'31"	KS-WN-MS	L4
202	<i>Roumanades: pool, dry streambed</i>	30.04.2010	39°26'50"	19°58'53"	MS-WN	L4
<b>Municipality of Lefkimeon</b>						
203	<i>Alikes: channel 1</i>	03.05.2010	39°26'44"	20°03'37"	MS-WN	L4
204	<i>Alikes: channel 2</i>	03.05.2010	39°26'49"	20°03'38"	MS-WN	L4
205	<i>Kavos: stream</i>	03.05.2010	39°22'51"	20°07'03"	KS-WN-MS	L4
206	<i>Kritika: stream</i>	01.05.2010	39°24'10"	20°03'21"	KS-WN-MS	L4
207	<i>Lefkimmi: stream</i>	01.05.2010	39°24'26"	20°04'04"	KS-WN-MS	L4
208	<i>Melikia: stream</i>	03.05.2010	39°24'18"	20°05'53"	KS-WN-MS	L4
209	<i>Vitalades: stream</i>	01.05.2010	39°24'13"	20°01'44"	KS-WN-MS	L4
<b>Municipality of Meliteion</b>						
210	<i>Episkopiana: River Mesongi</i>	29.04.2010	39°29'35"	19°54'18"	KS-WN-MS	L4
211	<i>Gardiki: brooklet</i>	30.04.2010	39°28'36"	19°53'12"	MS-WN	L4
212	<i>Gardiki: channel</i>	30.04.2010	39°28'36"	19°53'10"	MS-WN	L4
213	<i>Gardiki: ditch</i>	30.04.2010	39°28'36"	19°53'11"	MS-WN	L4
214	<i>Kato Pavliana: stream 1</i>	29.04.2010	39°31'21"	19°52'40"	KS-WN-MS	L4
215	<i>Kato Pavliana: stream 2</i>	29.04.2010	39°31'32"	19°53'08"	KS-WN-MS	L4
216	<i>Mesongi: River Mesongi</i>	29.04.2010	39°28'35"	19°55'15"	KS-WN-MS	L4
217	<i>Mesongi: stream</i>	29.04.2010	39°28'34"	19°55'16"	KS-WN-MS	L4
<b>Municipality of Paleokastriton</b>						
218	<i>Liapades: stream</i>	26.04.2010	39°39'59"	19°45'48"	KS-WN-MS	L4
219	<i>Poulades: pond</i>	27.04.2010	39°39'49"	19°46'49"	MS-WN	L4
220	<i>Poulades: pond with open water</i>	27.04.2010	39°39'56"	19°46'46"	MS-WN	L4
221	<i>Poulades: wheel track</i>	27.04.2010	39°39'56"	19°46'37"	MS-WN	L4
<b>Municipality of Parelion</b>						
222	<i>Afra: stream</i>	27.04.2010	39°37'30"	19°50'45"	KS-WN-MS	L4
223	<i>Ermones: River Ropa, mouth</i>	28.04.2010	39°36'37"	19°46'39"	KS-WN-MS	L4
224	<i>Kanakades: stream</i>	26.04.2010	39°39'27"	19°45'53"	KS-WN-MS	L4
225	<i>Kokkini: stream</i>	28.04.2010	39°36'32"	19°48'44"	KS-WN-MS	L4
226	<i>Kombitsi: stream 1</i>	29.04.2010	39°36'30"	19°51'44"	KS-WN-MS	L4
227	<i>Kombitsi: stream 2</i>	29.04.2010	39°36'31"	19°51'43"	KS-WN-MS	L4
228	<i>Vatos: River Ropa</i>	28.04.2010	39°36'48"	19°47'34"	KS-WN-MS	L4
<b>Municipality of Thinalion</b>						
229	<i>Kipriniades: stream</i>	25.04.2010	39°44'16"	19°45'46"	KS-WN-MS	L4
230	<i>Klimatia: stream 1</i>	25.04.2010	39°43'50"	19°47'09"	KS-WN-MS	L4
231	<i>Klimatia: stream 2</i>	25.04.2010	39°44'14"	19°47'07"	KS-WN-MS	L4
232	<i>Nimfes: well</i>	25.04.2010	39°45'21"	19°47'13"	WN-MS	L4
233	<i>Pantokrator: Monastery of Ipsilos</i>	25.04.2010	39°44'49"	19°52'16"	MS	L4
234	<i>Pantokrator: stone basin</i>	25.04.2010	39°44'51"	19°52'02"	WN-MS	L4
235	<i>Pelekito: Lake Antinioti</i>	23.04.2010	39°48'51"	19°51'43"	WN-MS	L4
236	<i>Roda: stream</i>	23.04.2010	39°47'31"	19°47'10"	KS-WN-MS	L4
237	<i>Xanthates: spring</i>	25.04.2010	39°45'30"	19°45'57"	MS-WN	L4

*rus* spp. from all three island and hydrophilids from Corfu), Ignacio Ribera (Barcelona, Spain – Hydraenidae from Rhodes and Corfu), Andor Lókkös (Fonyód, Hungary – Hydraenidae from Corfu) and Hans Fery (Berlin, Germany, property of the Naturhistorisches Museum, Wien – most of the dytiscids).

## Results

Approximately 4235 specimens belonging to 101 taxa of eight families were collected from the three islands. The most specimens (2261) and species (41)

belonged to Dytiscidae, followed by Hydrophilidae (821 specimens, 22 species). Only one representative each of Noteridae and Hydrochidae were collected, both of them from Corfu (in details see Table 2).

The highest number of specimens were collected in Corfu, followed by Crete and Rhodes, and the number of species followed this tendency too (Table 2). To our best knowledge 11, 16 and 18 species were newly recorded for the fauna of Rhodes, Crete and Corfu, respectively. In comparison with the literature, we found 67 % of the species recorded from Rhodes. This proportion is similar in the case

**Table 2.** Number of individuals and species of water beetle families in the three islands based on our collections and literature data (ind. = number of collected individuals; coll. = number of collected species; new = new species for the fauna; lit. = number of species known only from the literature and/or collections; total = total number of species recorded from the given island).

	Rhodes				Crete				Corfu			
	ind.	coll. (new)	lit.	total	ind.	coll. (new)	lit.	total	ind.	coll. (new)	lit.	total
Haliplidae	0	0	0	0	49	3(0)	0	3	1	1(0)	3	4
Dytiscidae	305	10(2)	4	14	595	18(3)	21	39	1370	29(8)	12	41
Noteridae	0	0	0	0	0	0	0	0	54	1(0)	0	1
Gyrinidae	67	3(3)	0	3	83	3(3)	2	4	203	2(0)	1	2
Hygrobiidae	0	0	0	0	0	0	0	0	0	0	1	1
Hydrochidae	0	0	0	0	0	0	0	0	14	1(0)	0	1
Helophoridae	6	2(2)	0	2	19	4(4)	1	5	306	7(1)	4	11
Hydrophilidae	330	7(3)	0	7	209	10(5)	1	11	282	18(4)	7	25
Hydraenidae	242	5(2)	12	17	~16	4(1)	12	16	93	10(5)	15	25
total	950	32(12)	16	48	~971	42(16)	37	79	2323	69(18)	43	112

**Table 3.** List of species which were not collected during our trips in the given islands, but known to occur based on published data and/or database records. PDC = Palaearctic Dytiscidae Catalogue (Nilsson & Hájek 2016); FaEu = Fauna Europaea Database (de Jong et al. 2014); NMPC = Národní muzeum, Praha, Czech Republic (Jiří Hájek); HFPC = Hans Fery's personal collection, property of the Naturhistorisches Museum, Wien.

Species	Rhodes	Crete	Corfu
<i>Agabus dilatatus</i> (Brullé, 1832)	FaEu, Gridelli 1929		
<i>Agabus didymus</i> (Olivier, 1795)		FaEu	
<i>Agabus nebulosus</i> (Forster, 1771)		FaEu, NMPC	
<i>Berosus byzantinus</i> Ganglbauer, 1904			Schödl 1993, Angus 2013
<i>Bidessus calabricus</i> Guignot, 1957		FaEu	
<i>Bidessus delicatulus</i> (Schaum, 1844)			Fery 1992, Angus 2013, HFPC
<i>Boreonectes macedonicus</i> (Guéorguiev, 1959)		Dutton & Angus 2007, PDC, HFPC	
<i>Coelostoma hispanicum</i> (Kuster, 1848)			Hebauer & Klausnitzer 1998
<i>Coelostoma orbiculare</i> (Fabricius, 1775)			Angus 2013
<i>Cybister lateralimarginalis</i> (De Geer, 1774)	FaEu, Gridelli 1929	FaEu	Angus 2013, HFPC
<i>Cybister tripunctatus africanus</i> Laporte, 1835			Angus 2013

Species	Rhodes	Crete	Corfu
<i>Deronectes moestus inconspectus</i> (Leprieur, 1876)		Wewalka 1977b	
<i>Dytiscus circumflexus</i> Fabricius, 1801		FaEu	
<i>Dytiscus pisanus</i> Laporte, 1835		FaEu	
<i>Dytiscus mutinensis</i> Branden, 1885			Angus 2013, HFPC
<i>Enochrus testaceus</i> (Fabricius, 1801)			Angus 2013
<i>Eretes sticticus</i> (Linnaeus, 1767) <sup>1</sup>		FaEu	
<i>Graptodytes fractus</i> (Sharp, 1882)		FaEu	
<i>Gyrinus distinctus</i> Aubé, 1836		Svensson 1977	
<i>Gyrinus dejeani</i> Brullé, 1832		NMPC	NMPC
<i>Haliplus dalmatinus</i> Müller, 1900			van Vondel 1997
<i>Helophorus kervillei</i> d'Orchymont, 1932			Angus 1992, 1998, 2013
<i>Helophorus liguricus</i> Angus, 1970			Angus 1992, 2013
<i>Helophorus minutus</i> Fabricius, 1775			Angus 1992, 2013
<i>Helophorus pallidipennis</i> Mulsant & Wachanru, 1852		Angus 1998	
<i>Helophorus singularis</i> Miller, 1881			Angus 1992, 2013
<i>Hydraena speciosa</i> d'Orchymont, 1944	Janssens 1965, FaEu		
<i>Hydraena subinflata</i> d'Orchymont, 1944	FaEu		
<i>Hydraena subintegra</i> Ganglbauer, 1901			Janssens 1965, Audisio et al. 1996
<i>Hydraena vedrasi</i> d'Orchymont, 1931			Audisio et al. 1996
<i>Hydrobius convexus</i> Brullé, 1835 <sup>2</sup>			Hebauer & Klausnitzer 1998
<i>Hydroglyphus geminus</i> (Fabricius, 1792)			Angus 2013, HFPC
<i>Hydroglyphus signatellus</i> (Klug, 1834)			Angus 2013
<i>Hydrophilus piceus</i> (Linnaeus, 1758)			Angus 2013
<i>Hydroporus bodemeyeri</i> Ganglbauer, 1900 <sup>3</sup>	Wewalka 1971, Hájek & Fikáček 2010, FaEu, PDC	FaEu	
<i>Hydroporus brucki</i> Wehncke, 1875		Fery & Petrov 2005, FaEu	Fery & Petrov 2005
<i>Hydroporus discretus</i> Fairmaire & Brisout, 1859		FaEu	
<i>Hydroporus dobrogeanus</i> Ienistea, 1962 <sup>4</sup>		FaEu, Pederzani 1989, NMPC, HFPC	
<i>Hydroporus obsoletus</i> Aube, 1838		FaEu, NMPC, HFPC	
<i>Hydroporus pubescens</i> (Gyllenhal, 1808)	FaEu		
<i>Hydrovatus cuspidatus</i> (Kunze, 1818)		FaEu	
<i>Hygrobia hermanni</i> (Fabricius, 1775)			Dettner 1997
<i>Hygrotus confluens</i> (Fabricius, 1787)		FaEu, HFPC	
<i>Hygrotus inaequalis</i> (Fabricius, 1777)			Angus 2013
<i>Hygrotus parallellogrammus</i> (Ahrens, 1812)		FaEu	
<i>Hyphydrus anatolicus</i> Guignot, 1957			Wewalka 1984, Angus 2013
<i>Hyphydrus aubei</i> Ganglbauer, 1891			Angus 2013
<i>Laccobius cretaeus</i> Gentili, 1975		Gentili 1975, Gentili & Chiesa 1975,	
<i>Laccophilus minutus</i> (Linnaeus, 1758)			Schaefflein 1983, Angus 2013, HFPC
<i>Limnebius gridellii</i> Pretner, 1929		Jäch 1993a, FaEu	
<i>Limnebius murcus</i> d'Orchymont, 1945		Jäch 1993a, FaEu	
<i>Limnebius murentius</i> d'Orchymont, 1945	Jäch 1993a, FaEu		
<i>Limnebius paganettii</i> Ganglbauer, 1904			Jäch 1993a
<i>Limnebius papposus</i> Mulsant, 1844	FaEu		Jäch 1993a

Species	Rhodes	Crete	Corfu
<i>Limnebius perparvulus</i> Rey, 1884	Jäch 1993a, FaEu		
<i>Limnebius stagnalis</i> Guillebeau, 1890			Jäch 1993a, Angus 2013
<i>Meladema coriacea</i> Laporte, 1835		Wewalka 1977b, FaEu	
<i>Nebrioporus canaliculatus</i> (Lacordaire, 1835)		FaEu	
<i>Nebrioporus ceresyi</i> (Aube, 1838)		Toledo 2009, FaEu, HFPC	
<i>Ochthebius adriaticus</i> Reitter, 1886		Jäch 1989b, FaEu	Jäch 1989b
<i>Ochthebius anaxagoras</i> Jäch, 1999		Jäch 1999, FaEu	Jäch 1989b <sup>5</sup> , Jäch 1999
<i>Ochthebius annae</i> Ferro, 1979		Jäch 1990, FaEu	
<i>Ochthebius corcyraeus</i> Jäch, 1990			Jäch 1990
<i>Ochthebius dalmatinus</i> Ganglbauer, 1904		Jäch 1999, FaEu	
<i>Ochthebius dilatatus</i> Stephens, 1829	FaEu		Jäch 1990, Angus 2013
<i>Ochthebius hellenicus</i> (Ienistea, 1988)	FaEu	Jäch 1991, FaEu	
<i>Ochthebius lanuginosus</i> Reiche & Saulcy, 1856		Jäch 1989a, FaEu	
<i>Ochthebius lividipennis</i> Peyron, 1858			Jäch 1992b
<i>Ochthebius meridionalis</i> Rey, 1885	FaEu		Jäch 1992b
<i>Ochthebius olicinium</i> Jäch, 1990			Jäch 1990
<i>Ochthebius peregrinus</i> d'Orchymont, 1941			Jäch 1990
<i>Ochthebius pusillus</i> Stephens, 1835			Jäch 1992b
<i>Ochthebius ragusae</i> Kuwert, 1887		Jäch 1989a, FaEu	
<i>Ochthebius steinbuehleri</i> (Reitter, 1886)	FaEu, Gridelli 1929	Jäch 1993b, FaEu	
<i>Ochthebius subinteger</i> Mulsant & Rey, 1861		FaEu	
<i>Ochthebius subpictus</i> Wollaston, 1857	FaEu	Jäch 1992b, FaEu	Jäch 1992b
<i>Ochthebius thermalis</i> Janssens, 1965	FaEu	Jäch 1991, FaEu	
<i>Ochthebius viridis</i> Peyron, 1858	FaEu		Jäch & Delgado 2008 <sup>6</sup>
<i>Paracymus aeneus</i> (Germar, 1824)			Angus 2013
<i>Peltodytes caesus</i> (Duftschmid, 1805)			Angus 2013
<i>Peltodytes rotundatus</i> (Aubé, 1836)			HFPC
<i>Porhydrus obliquesignatus</i> (Bielz, 1852)			Angus 2013, HFPC

- 1 This record may refer to old data of *Eretes griseus* (Fabricius, 1781). Before the revision or the *Eretes* genus (Miller 2002) *E. griseus* was considered as a synonym of *E. sticticus*. There are new records of *E. sticticus* from the Greek mainland (Hájek et al. 2015) and might be represented on Crete, but the occurrence of *E. griseus* cannot be excluded; although it is regarded as regionally extinct from many parts of Europe, it has recent records from various parts of Greece.
- 2 *Hydrobius convexus* was mentioned from Corfu by Hebauer & Klausnitzer (1998), but nowhere else, and it is missing from other catalogues and databases. Its distribution was mainly concentrated to the western Mediterranean (France, Italy, Portugal and Spain) and North Africa (Algeria and Tunisia), but also known from Asian Turkey (İncekara & Bouzid 2007, Löbl & Löbl 2015, Mart et al. 2010), so the occurrence in Corfu cannot surely be excluded.
- 3 *Hydroporus bodemeyeri* is divided to three subspecies (Hájek & Fikáček 2010): *H. b. cariaensis* Hájek & Fikáček, 2010 occurs in Rhodes and along the south-western coast of Asian Turkey, *H. b. guignoti* Gschwendtner, 1935 is known from the Greek mainland and southern part of the Balkan Peninsula, while the distribution of the nominotypical subspecies is confined to North-eastern Aegean Islands and to the western half of Asian Turkey. FaEu Database also lists this species from Crete, but there is no information about the origin of this record and on which subspecies can be there.
- 4 Pederzani (1989) published occurrence of *H. jurjurensis* from Crete, this record refers to *H. dobrogeanus*. For more info see the text.
- 5 This paper mentioned *O. poweri* Rye, 1869 from Corfu, but this species does not occur in that region, and records refer to *O. anaxagoras* (Manfred Jäch personal communication).
- 6 *Ochthebius viridis fallaciosus* Ganglbauer, 1901 was published from Corfu. We also recorded the species from that island, but without subspecific identification, our record may also refer to this subspecies.

of Corfu (62 %), but somewhat lower in the case of Crete (55 %).

### List of species with collecting localities and numbers of individuals

#### Hydradephaga

##### Dytiscidae

(identified by Hans Fery)

*Agabus (Gaurodytes) biguttatus* (Olivier, 1795) – RHODES: 003, 1; 026, 1; 033, 3; 039, 11. – CRETE: 059, 1; 064, 3; 066, 1; 067, 1; 070, 1; 073, 2; 076, 1; 077, 20; 078, 3; 079, 8; 081, 2; 083, 2; 086, 1; 089, 1; 093, 7; 095, 3; 096, 2; 097, 1; 098, 3; 099, 20; 103, 2; 104, 3; 105, 1; 106, 4; 108, 1; 112, 1; 113, 1; 115, 6; 116, 3; 117, 2; 134, 1; 136, 2; 137, 1; 139, 6; 140, 4; 141, 4; 142, 1; 146, 1; 151, 13; 152, 4; 154, 2; 156, 1; 157, 1; 164, 3; 166, 1; 167, 2; 169, 4; 170, 1. – CORFU\*: 175, 16; 177, 2; 179, 2; 189, 1; 201, 1; 209, 2; 210, 6; 214, 1; 237, 1.

*Agabus (Gaurodytes) bipustulatus* (Linnaeus, 1767) – RHODES: 057, 2. – CRETE: 061, 1; 063, 1; 074, 1; 077, 4; 099, 3; 105, 1; 119, 2; 155, 3; 159, 3; 160, 1; 161, 1. – CORFU: 179, 1; 182, 4; 183, 1; 184, 1; 186, 8; 189, 1; 190, 2; 202, 17; 205, 2; 207, 1; 208, 1; 210, 2; 212, 2; 213, 9; 224, 1; 225, 2; 226, 1; 230, 2; 231, 1.

*Agabus (Gaurodytes) conspersus* (Marsham, 1802) – CRETE: 108, 1; 123, 1. – CORFU\*: 185, 1; 208, 2.

*Agabus (Gaurodytes) didymus* (Olivier, 1795) – CORFU\*: 174, 6; 176, 4; 180, 4; 184, 4; 185, 6; 186, 3; 187, 1; 196, 2; 201, 6; 205, 8; 207, 4; 209, 1; 210, 2; 217, 3; 224, 1; 226, 1; 227, 2; 229, 1.

*Agabus (Gaurodytes) dilatatus* (Brullé, 1832) – CRETE: 064, 1; 073, 3; 076, 2; 077, 3; 079, 1; 081, 2; 084, 2; 089, 2; 136, 2; 137, 2; 141, 5; 151, 1; 154, 1; 155, 1; 157, 1; 170, 2. – CORFU: 174, 3; 175, 8; 176, 3; 177, 3; 178, 2; 179, 9; 180, 1; 182, 2; 183, 4; 184, 8; 185, 8; 186, 12; 190, 7; 193, 1; 200, 1; 201, 4; 202, 3; 205, 3; 207, 3; 209, 2; 210, 3; 213, 1; 214, 16; 215, 3; 216, 1; 217, 1; 218, 6; 222, 2; 225, 1; 226, 4; 227, 6; 229, 9; 230, 10; 231, 8; 237, 2.

*Agabus (Gaurodytes) nebulosus* (Forster, 1771) – CORFU: 207, 1.

*Bidessus calabricus* Guignot, 1957 – RHODES: 005, 2; 026, 1.

*Bidessus cretensis* Fery, 1992 – CRETE: 151, 5.

*Bidessus muelleri* Zimmermann, 1927 – CORFU: 173, 18; 176, 1; 194, 2; 219, 22; 220, 24; 224, 1.

*Colymbetes fuscus* (Linnaeus, 1758) – CRETE\*: 063, 1.

*Deronectes moestus inconspiculus* (Leprieur, 1876) – CORFU: 174, 7; 175, 2; 176, 1; 177, 1; 180, 1; 184, 4; 189, 2; 210, 2; 217, 1; 226, 1; 230, 16; 231, 6.

*Deronectes sahlbergi* Zimmermann, 1932 – RHODES: 002, 1; 003, 8; 005, 23; 029, 1; 033, 23; 034, 35; 035, 1; 038, 1; 039, 1; 042, 3; 043, 4; 057, 1.

*Graphoderus cinereus* (Linnaeus, 1758) – CORFU\*: 219, 1.

*Graptodytes flavipes* (Olivier, 1795) – CRETE: 161, 2. – CORFU: 184, 1; 207, 10; 209, 6; 218, 3.

*Graptodytes fractus* (Sharp, 1882) – CORFU: 174, 4; 179, 6; 180, 3; 186, 6; 190, 6; 191, 10; 202, 6; 207, 1; 218, 16; 223, 1; 224, 1; 228, 1; 230, 3.

*Graptodytes veterator veterator* (Zimmermann, 1918) – CORFU: 184, 1; 187, 1; 194, 3; 195, 1; 202, 1; 212, 1; 213, 3; 218, 11; 219, 18; 223, 3; 224, 13; 225, 1; 226, 1; 227, 2; 228, 30.

*Hydaticus (Hydaticus) transversalis transversalis* (Pontopidan, 1763) – CORFU\*: 219, 2.

*Hydaticus (Prodaticus) leander* (Rossi, 1790) – CRETE\*: 063, 2. – CORFU\*: 228, 1.

*Hydroglyphus geminus* (Fabricius, 1792) – RHODES\*: 026, 1. – CRETE: 063, 12; 113, 1; 158, 2.

*Hydroporus distinguendus* Desbrochers des Loges, 1871 (males) – CORFU: 194, 1; 218, 4; 219, 3; 223, 1; 224, 3; 226, 1.

*Hydroporus hebaueri* Hendrich, 1990 – CORFU: 175, 1; 218, 9; 221, 2; 222, 3; 224, 11; 226, 1; 227, 7; 228, 6.

*Hydroporus jonicus jonicus* L. Miller, 1862 (males) – CORFU: 213, 3; 218, 2; 219, 6; 212, 2; 223, 1; 224, 1; 225, 2; 226, 1; 227, 1; 228, 18.

*Hydroporus jonicus / distinguendus* (females) – CORFU: 186, 1; 187, 1; 195, 1; 201, 1; 202, 2; 212, 1; 213, 2; 217, 1; 218, 2; 219, 7; 223, 1; 224, 8; 225, 1; 228, 21.

*Hydroporus memnonius* Nicolai, 1822 – CORFU: 178, 6; 179, 1; 182, 2; 184, 1; 185, 1; 186, 3; 190, 1; 194, 1; 201, 1; 202, 13; 205, 3; 209, 1; 213, 3; 217, 1; 218, 6; 219, 4; 224, 1; 225, 4; 226, 1; 227, 1; 228, 9.

*Hydroporus obsoletus* Aubé, 1838 – CORFU\*: 201, 1; 231, 6.

*Hydroporus pubescens* (Gyllenhal, 1808) – CRETE: 063, 1; 129, 1; 161, 5. – CORFU: 190, 2; 201, 1; 208, 2; 218, 1; 219, 1; 224, 1.

*Hydroporus tessellatus* (Drapiez, 1819) – RHODES: 003, 2; 015, 2; 026, 30; 032, 6; 034, 1; 035, 1; 039, 5; 041, 4; 057, 1. – CRETE: 064, 1; 087, 1; 093, 1; 105, 1; 155, 2; 159, 9; 160, 4; 161, 2. – CORFU: 174, 3; 175, 2; 177, 1; 179, 8; 182, 2; 183, 4; 184, 3; 185, 3; 186, 26; 190, 31; 201, 6; 202, 7; 205, 4; 207, 23; 208, 12; 209, 3; 210, 2; 213, 16; 215, 3; 216, 1; 218, 6; 219, 3; 222, 3; 223, 2; 224, 6; 227, 2; 229, 1; 230, 2; 231, 2.

*Hyphydrus aubei* Ganglbauer, 1891 – CRETE: 058, 1; 088, 1; 092, 3; 113, 7; 118, 3.

*Ilybius chalconatus* group (females) – CRETE: 161, 2.

*Ilybius pseudoneglectus* (Franciscolo, 1972) – CORFU: 184, 1; 187, 1; 194, 4; 208, 2; 212, 1; 218, 14; 219, 7; 224, 9; 225, 4; 226, 2; 228, 13; 237, 1.

*Laccophilus hyalinus* (De Geer, 1774) – RHODES: 002, 20; 003, 9; 006, 2; 008, 1; 010, 5; 011, 5; 012, 1; 014, 3; 015, 4; 028, 8; 029, 4; 031, 2; 038, 1; 039, 2; 044, 1; 053, 8. – CRETE: 062, 3; 066, 3; 074, 6; 081, 1; 088, 2; 093, 4; 094, 1; 098, 7; 113, 2; 139, 2; 140, 4; 147, 4; 152, 5; 155, 6; 157, 2; 158, 7; 159, 4; 164, 5. – CORFU: 174, 9; 181, 6; 184, 4; 185, 3; 187, 12; 188, 2; 196, 1; 199, 1; 201, 2; 205, 7; 207, 7; 209, 1; 210, 10; 217, 1; 223, 2; 228, 8.

*Laccophilus minutus* (Linnaeus, 1758) – CRETE: 063, 1; 092, 5; 161, 2.

*Laccophilus poecilus* Klug, 1834 – RHODES\*: 026, 1. – CORFU: 219, 3; 228, 1.

*Liopterus haemorrhoidalis* (Fabricius, 1787) – CRETE\*: 063, 10. – CORFU: 219, 7; 220, 1; 224, 1; 228, 3.

*Melanodytes pustulatus* (Rossi, 1792) – CORFU: 195, 1; 202, 1; 228, 2.

*Nebrioporus amicornum* Toledo, 2009 – CRETE: 060, 2; 070, 1; 080, 14; 081, 17; 084, 4; 093, 3; 096, 5; 139, 2; 140, 1; 151, 2; 152, 1; 154, 1; 158, 1; 170, 1.

*Nebrioporus stearinus suavis* (Sharp, 1882) – RHODES: 005, 3; 008, 7; 015, 4; 026, 2; 039, 1; 042, 1; 043, 1; 046, 2; 047, 1; 048, 2; 049, 1; 051, 16.

*Porhydrus genei* (Aubé, 1838) – CORFU: 219, 2; 220, 3.

*Rhantus (Rhantus) suturalis* (W.S. Macleay, 1825) – CORFU\*: 213, 1.

*Scarodytes halensis* (Fabricius, 1787) – RHODES: 026, 1; 027, 1; 029, 1; 032, 6; 033, 2.

*Scarodytes malickyi* Wewalka, 1977 – CRETE: 061, 1; 066, 1; 074, 6; 077, 9; 081, 1; 084, 3; 088, 19; 090, 1; 093, 14; 094, 1; 095, 1; 096, 5; 098, 2; 099, 2; 105, 1; 139, 6; 140, 19; 146, 1; 151, 6; 152, 2; 154, 6; 155, 7; 156, 22; 157, 7; 158, 1; 159, 8; 164, 10; 167, 6; 170, 5.

*Scarodytes savinensis cercyae* Fery & Štastný, 2007 – CORFU: 174, 16; 175, 3; 176, 8; 180, 6; 184, 4; 188, 7; 189, 7; 190, 17; 196, 6; 199, 8; 200, 2; 201, 3; 205, 2; 207, 9; 209, 24; 210, 16; 213, 6; 214, 2; 215, 2; 216, 1; 217, 12; 218, 1; 226, 10; 227, 1; 229, 1; 230, 16; 231, 2.

## Gyrinidae

(identified by Hans Fery)

*Aulonogyrus striatus* (Fabricius, 1792) – CRETE\*: 164, 1.

*Gyrinus caspius* Ménétrés, 1832 – CRETE\*: 164, 1.

*Gyrinus dejeani* Brullé, 1832 – CORFU: 173, 1; 180, 2.

*Gyrinus distinctus* Aubé, 1836 – RHODES\*: 012, 4.

*Gyrinus substriatus* Stephens, 1829 – RHODES\*: 003, 1; 013, 1; 021, 2; 041, 7.

*Gyrinus urinator* Illiger, 1807 – RHODES: 002, 1; 008, 5; 026, 1; 035, 5; 039, 10; 049, 1; 051, 13; 053, 5; 054, 4; 055, 6; 057, 1. – CRETE\*: 064, 2; 066, 12; 078, 1; 088, 5; 093, 1; 139, 3; 140, 5; 145, 10; 146, 1; 147, 1; 150, 1; 157, 6; 158, 7; 159, 9; 161, 6; 164, 9; 167, 2. – CORFU: 174, 30; 175, 4; 176, 2; 180, 7; 182, 1; 183, 6; 184, 1; 185, 2; 186, 13; 189, 3; 196, 17; 199, 1; 201, 16; 202, 10; 207, 16; 208, 16; 209, 11; 210, 14; 212, 4; 213, 7; 215, 3; 216, 10; 225, 2; 227, 3; 230, 1.

## Halipilidae

(identified by Hans Fery and Zoltán Csabai)

*Haliplus lineatocollis* (Marsham, 1802) – CRETE: 064, 1; 066, 2; 074, 4; 092, 1; 095, 1; 140, 2; 151, 21; 155, 4; 156, 1; 159, 1 – CORFU: 202, 1.

*Haliplus variegatus* Sturm, 1834 – CRETE: 095, 1; 161, 8.

*Pelodytes rotundatus* (Aubé, 1836) – CRETE: 092, 2.

## Noteridae

(identified by Hans Fery)

*Noterus clavicornis* (De Geer, 1774) – CORFU: 173, 9; 187, 1; 194, 12; 219, 6; 228, 26.

## Hydrophiloidea

### Helophoridae

(identified by Robert Angus)

*Helophorus (Helophorus) milleri* Kuwert, 1886 – CRETE\*: 104, 1; 159, 1; 161, 2. – CORFU: 183, 2; 187, 1; 194, 12; 202, 3; 213, 3; 224, 5; 225, 3.

*Helophorus (Rhopalohelophorus) asperatus* Rey, 1885 – CORFU: 181, 1; 182, 2; 186, 6; 187, 3; 190, 1; 224, 4.

*Helophorus (Rhopalohelophorus) brevipalpis* Bedel, 1881 – RHODES\*: 032, 1. – CRETE\*: 078, 1; 161, 1. – CORFU: 174, 11; 175, 1; 176, 2; 179, 4; 180, 1; 182, 1; 183, 1; 184, 1; 185, 11; 186, 22; 187, 7; 190, 5; 194, 1; 197, 2; 200, 1; 201, 4; 203, 1; 207, 4; 208, 2; 210, 2; 211, 3; 213, 29; 217, 12; 218, 7; 221, 11; 222, 1; 223, 10; 224, 1; 225, 15; 226, 1; 228, 1; 230, 1; 236, 2; 237, 2.

*Helophorus (Rhopalohelophorus) illustris* Sharp, 1916 – CORFU: 197, 24; 202, 13; 203, 9; 208, 2.

*Helophorus (Rhopalohelophorus) minutus* Fabricius, 1775 – CRETE\*: 074, 1.

*Helophorus (Rhopalohelophorus) obscurus* Mulsant 1844 – CRETE\*: 159, 4; 161, 8. – CORFU\*: 190, 2; 202, 2; 212, 1; 213, 2; 217, 1.

*Helophorus (Rhopalohelophorus) pallidipennis* Mulsant & Wachanru, 1852 – RHODES\*: 032, 5.

*Helophorus (Rhopalohelophorus) wrootae* Angus, 1988 – CORFU: 187, 1; 219, 4; 222, 1; 225, 3; 226, 1; 227, 1; 228, 10.

*Helophorus (Trichohelophorus) alternans* Gené, 1836 – CORFU: 182, 1; 224, 1; 228, 1.

## Hydrochidae

(identified by Robert Angus)

*Hydrochus flavipennis* Küster, 1852 – CORFU: 224, 1; 226, 1; 228, 12.

## Hydrophilidae

(identified by Zoltán Csabai (Rhodes, Crete), Robert Angus (Corfu) (all genera excl. *Laccobius*), and Elio Gentili (*Laccobius*))

*Anacaena limbata* (Fabricius, 1792) – CRETE\*: 063, 9; 074, 1; 151, 1; 158, 1; 159, 6; 161, 3. – CORFU\*: 190, 6; 191, 1; 194, 2; 196, 1; 201, 1; 202, 1; 209, 3; 212, 3; 213, 6; 218, 1; 219, 25; 224, 14; 228, 22; 230, 1.

*Anacaena rufipes* (Guillebeau, 1896) – CRETE\*: 070, 1; 158, 1. – CORFU: 175, 2; 176, 1; 178, 1; 196, 2; 205, 1; 210, 1; 214, 1; 218, 1; 229, 3.

*Berosus (Berosus) affinis* Brullé, 1835 – CRETE: 074, 8; 092, 15; 095, 2; 113, 1. – CORFU: 203, 2; 208, 1.

*Berosus (Berosus) hispanicus* Küster, 1847 – RHODES: 039, 1. – CRETE: 063, 18; 074, 2; 087, 4. – CORFU: 203, 1; 208, 2; 209, 3; 226, 1.

*Berosus (Berosus) signaticollis* Charpentier, 1825 – CORFU: 173, 5; 194, 13; 219, 1; 220, 3.

*Berosus (Enoplurus) bispina* Reiche & Saulcy, 1856 – CORFU\*: 203, 4.

*Cymbiodyta marginella* (Fabricius, 1792) – CORFU: 194, 3; 219, 12.

*Enochrus (Lumetus) ater* (Kuwert, 1888) – RHODES\*: 002, 3; 003, 1; 044, 1. – CORFU: 194, 4; 197, 1; 202, 1; 208, 2; 219, 2.

*Enochrus (Lumetus) bicolor* (Fabricius, 1792) – CRETE\*: 058, 3; 063, 4. – CORFU\*: 203, 3.

*Enochrus (Methyrus) nigrinus* (Sharp, 1872) – CORFU: 194, 13; 219, 30.

*Helochares lividus* (Forster, 1855) – CRETE: 063, 1; 092, 3; 156, 1; 158, 6; 159, 1; 161, 5. – CORFU: 224, 2.

*Helochares obscurus* (O.F. Müller, 1776) – CORFU: 194, 8; 219, 2.

*Hydrobius fuscipes* (Linnaeus, 1758) – CRETE\*: 063, 14; 115, 1. – CORFU: 194, 1; 219, 2.

*Hydrochara caraboides* (Linnaeus, 1758) – RHODES\*: 026, 1; 057, 1. – CORFU: 174, 1; 186, 2; 194, 2; 202, 4; 209, 1; 212, 2; 213, 1; 217, 2; 225, 1.

*Laccobius (Dimorpholaccobius) aegaeus* Gentili, 1974 – RHODES: 005, 1; 015, 6; 023, 1; 032, 1; 050, 1.

*Laccobius (Dimorpholaccobius) bipunctatus* (Fabricius, 1775) – CORFU\*: 201, 1.

*Laccobius (Dimorpholaccobius) obscuratus* Rottenberg, 1874 – CRETE\*: 089, 1; 151, 1; 154, 1; 155, 1. (all specimens with the characteristics of *L. o. orchymontii* Gentili, 1976).

*Laccobius (Dimorpholaccobius) scutellaris* Motschulsky, 1855 – RHODES: 001, 32; 003, 18; 004, 13; 005, 13; 006, 18; 007, 7; 008, 23; 014, 1; 015, 6; 018, 2; 026, 21; 027, 7; 028, 2; 030, 1; 031, 18; 032, 12; 033, 3; 034, 8; 038, 4; 039, 30; 041, 5; 042, 7; 043, 10; 057, 3. – CRETE: 066, 1; 074, 1; 088, 1; 092, 1; 105, 1; 140, 1; 151, 6; 154, 1; 156, 5; 158, 3; 159, 64; 161, 3; 164, 3. – CORFU\*: 223, 19.

*Laccobius (Microlaccobius) cretaeus* Gentili, 1975 – RHODES\*: 026, 29; 027, 8; 028, 1; 031, 17; 043, 1.

*Laccobius (Microlaccobius) gracilis* Motschulsky, 1855 – RHODES: 003, 1; 008, 1. – CRETE: 161, 1; 164, 1.

*Limnoxenus niger* (Gmelin, 1790) – CORFU: 194, 4; 219, 8; 224, 1.

*Paracymus* sp. near *scutellaris* (Rosenhauer, 1856) – CORFU: 194, 2; 219, 7; 224, 1.

## Staphylinioidea

### Hydraenidae

(identified by Ignacio Ribera (Rhodes, Crete), Andor Lókkös and Manfred Jäch (Corfu))

*Hydraena (Hydraena) canackioglu* Janssens, 1965 – CORFU: 185, 2; 229, 1.

*Hydraena (Hydraena) croatica* Kuwert, 1888 – CORFU\*: 210, 3; 213, 2; 229, 1.

*Hydraena (Hydraena) morio* Kiesenwetter, 1849 – CORFU\*: 190, 3; 211, 1; 230, 1; 236, 2.

*Hydraena (Hydraena) nigrita* Germar, 1824 – CORFU\*: 193, 3.

*Hydraena (Hydraena) paganettii* Ganglbauer, 1901 – CORFU\*: 224, 1.

*Hydraena (Hydraena) phallica* d'Orchymont, 1930 – CORFU\*: 211, 1.

*Hydraena (Hydraena) rhodia* Jäch, 1985 – RHODES: 001, 22; 002, 24; 003, 11; 004, 11; 005, 1; 006, 4; 008, 3; 013, 2; 014, 2; 015, 31; 016, 1; 017, 1; 026, 31; 027, 5; 030, 3; 031, 6; 032, 7; 033, 1; 034, 13; 039, 18; 042, 1; 046, 5; 049, 2; 050, 1; 051, 1; 055, 3.

*Hydraena (Hydraena) subinura* d'Orchymont 1944 – CRETE: 068; 077; 083; 089; 097; 103; 135; 137; 143; 145; 148; 151; 158; 159.

*Hydraena (Hydraena) subjuncta* d'Orchymont, 1930 – CORFU: 174, 1; 175, 1; 179, 2; 184, 1; 185, 2; 196, 1; 201, 1; 205, 1; 210, 2; 211, 1; 217, 3; 218, 2; 224, 1; 230, 1; 231, 1; 237, 1.

*Limnebius cf. crassipes* Kuwert 1890 – CRETE\*: 089.

*Ochthebius (Asiobates) cf. dilatatus* Stephens, 1829 (female) – CRETE: 074.

*Ochthebius (Asiobates) striatus* (Laporte de Castelnaud, 1840) – RHODES: 031, 1. – CORFU: 174, 3; 175, 1; 179, 1; 181, 1; 182, 1; 184, 1; 185, 15; 186, 1; 190, 1; 197, 1; 199, 2; 200, 2; 201, 1; 202, 1; 207, 1; 210, 1; 211, 2; 213, 1; 217, 1; 223, 1; 225, 2; 229, 1; 230, 1; 231, 1; 236, 1; 237, 1.

*Ochthebius (Calobius) steinbuehleri* (Reitter, 1886) – CRETE: 085.

*Ochthebius (Ochthebius) difficilis* Mulsant, 1844 – RHODES\*: 026, 7; 031, 1.

*Ochthebius (Ochthebius) foveolatus* group (female) – RHODES\*: 032, 1.

*Ochthebius (Ochthebius) lanuginosus* Reiche & Saulcy, 1856 – CORFU: 197, 1; 201, 1; 207, 1.

*Ochthebius (Ochthebius) ragusae* Kuwert, 1887 – RHODES: 005, 1; 007, 2; 026, 6; 032, 7; 038, 1; 043, 5.

*Ochthebius (Ochthebius) viridis* Peyron, 1858 – CORFU: 190, 1.

## Discussion

In this paper we listed new records for the following aquatic beetle (see Jäch & Balke 2008) families: Gyrimidae, Haliplidae, Noteridae, Dytiscidae, Helophoridae, Hydrochidae, Hydrophilidae and Hydraenidae. From a faunistic point of view an important result was the finding of a former subspecies, *Laccobius obscuratus orchymonti* in Crete, which was only known so far from Cyprus, Israel, Lebanon, Syria and Asian Turkey (Löbl & Löbl 2015), so these records are the first ones in Greece and even in Europe sensu stricto. After the acceptance of this manuscript, Gentili & Shaverdo (2016) synonymized *L. o. orchymonti* with the nominotypical subspecies and raised a further subspecies *L. o. aegaeus* to species level. As a consequence, we made minor corrections during the proofing process of this paper and used the up-to-date classification and recently valid names in the list of species.

The most valuable members of the fauna of the region are the endemic species and subspecies, which are of great importance in conservation of biodiversity. In this point of view the most remarkable result is the occurrence of *Laccobius cretaeus* (formerly *L. gracilis cretaeus*) in Rhodes, which was regarded

to be endemic to Crete. Surprisingly, no specimens of this species were collected in Crete during our tours. Moreover, *L. cretaeus* was raised to species level based on our material (see Gentili & Csabai 2009). Our collecting tours significantly contributed to the recent knowledge on taxonomy of *Nebrioporus* (Dytiscidae) too, since the description of *Nebrioporus amicomum*, an endemic species to Crete, was partly made based on our specimens (Toledo 2009). According to our results, the endemic *Scarodytes savinensis cercyrae* (Corfu), *Nebrioporus amicomum* (Crete), *Hydraena subinura* (Crete) and *Hydraena rhodia* (Rhodes) are widely distributed species in the relevant islands, while *Bidessus cretensis* (Crete) apparently is a rare species, as it was collected at only one site. Further two endemic hydraenid species in Crete, *Limnebius gridellii* Pretner, 1929 and *Ochthebius annae* (Ferro, 1979), were not found during our expedition.

Further species with restricted distributional area also deserve a short mention. Most of them are only known to occur in some European countries, mainly from the Mediterranean region and from the Balkans: *Bidessus calabricus* (Cyprus, Bulgaria, Croatia, Greece, Italy, Macedonia and Slovenia); *Bidessus muelleri* (Greece, Italy and Montenegro); *Deronectes moestus inconspectus* (Albania, Bulgaria, Croatia, France, Greece, Italy, Macedonia, Montenegro, Portugal, Spain, Switzerland); *Deronectes sahlbergi* (Greece and Turkey); *Graptodytes fractus* (Bulgaria, France, Greece, Italy, Portugal and Spain); *Graptodytes veterator veterator* (Bulgaria, Croatia, Greece, Italy, Macedonia, Montenegro); *Hydroporus distinguendus* (France, Italy, Greece); *Hydroporus jonicus jonicus* (Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Greece, Italy, Macedonia, Montenegro, Slovenia); *Nebrioporus stearinus suavis* (Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Greece, Macedonia, Montenegro and Serbia); *Porhydrus genei* (Bosnia-Herzegovina, Croatia, France, Greece, Italy); *Scarodytes malickyi* (Greece); *Ilybius pseudoneglectus* (Albania, Bulgaria, Croatia, Greece, Hungary, Italy, Montenegro, Romania); *Melanodytes pustulatus* (Albania, Bulgaria, Croatia, France, Greece, Italy, Turkey); *Helophorus illustris* (France, Greece, Italy, Macedonia, Spain, Ukraine); *Helophorus pallidipennis* (Cyprus, Greece and Italy: Sicily); *Helophorus milleri* (France: Corsica, Greece, Italy); *Helophorus wroatae* (Greece); *Anacaena rufipes* (Bosnia-Herzegovina, Greece, Italy and Turkey); *Laccobius aegaeus* (Greece, Turkey and Ukraine); *Berosus bispina* (Greece, Italy, Spain, Russia and Ukraine); *Hydraena canackioglui canackioglui* (Greece and Turkey); *Hydraena croatica* (Albania, Croatia, Greece, Macedonia, Montenegro, Serbia); *Hydraena subjuncta* (Albania, Croatia, Greece, Macedonia, Montenegro, Serbia); *Limnebius crassipes* (Greece), *Ochthebius brevicollis steinbuehleri* (Albania,



Croatia, Greece, Italy, Montenegro, Serbia, Slovenia); *Ochthebius lanuginosus* (Albania, Cyprus, Greece, Italy); *Ochthebius ragusae* (Albania, Cyprus, France, Greece, Italy, Macedonia) (Angus 2013, de Jong et al. 2014, Löbl & Löbl 2015, Nilsson & Hájek 2016).

First water beetle records (15 species) from Rhodes can be found in a zoological monograph chapter (Gridelli 1929) about the results of the "Italian mission for the study of the fauna of the Dodecanese". From the Dodecanese Islands, the Fauna Europaea Database (de Jong et al. 2014) listed 32 taxa belonging to only three water beetle families (Dytiscidae, Elmidae, Hydraenidae). We can assume that all of these taxa occur in Rhodes, the largest member of this group of islands, too. The majority of these records are based on taxonomical revisions dealing with certain genera or species-groups (e.g. Audisio & De Biase 1990, Fery 1992, Fery & Brancucci 1997, Hájek & Fikáček 2010, Jäch 1985, 1990, 1993a, Toledo 2009, Wewalka 1971, 1977a, 1989). Additionally, some hydrophilid species, which have not been included in the FaEu database, were found in Rhodes (Gentili 1974, Gentili & Chiesa 1975, Gentili & Csabai 2009, Schödl 1993). Gridelli (1929) mentioned *Coelostoma hispanicum* (Kuster, 1848) and *Ochthebius difficilis* Mulsant, 1844 from Rhodes and their occurrence cannot be excluded, but no other published or database records are available for these species. *Ochthebius semisericeus* Sainte-Claire Deville, 1914 and *Anacaena globulus* Paykull, 1798 were also listed by Gridelli (1929), but without doubt these data are based on misidentification. Accordingly, these four species are not included to the list of aquatic beetles known from Rhodes. Based on literature data and our new results, a total of 48 species and subspecies (without Elmidae) are known to occur in Rhodes (see Table 2 and 3).

Since the early 1900s sporadic data on water beetle fauna of Crete were published mainly in taxonomical works (e.g. Apfelbeck 1904, Aradottir & Angus 2004, Audisio & De Biase 1990, Fery 1992, Gentili 1975, Gentili & Chiesa 1975, Jäch 1989a, 1989b, 1990, 1991, 1992b, 1993a, 1993b, 1999, Schödl 1993, van Vondel 1997, Wewalka 1977a, 1977b). The majority of these results until 2004 were summarized in the Fauna Europaea Database (de Jong et al. 2014), in which 58 taxa were listed for Crete. However, some species with older records were not included, i.e. *Gyrinus distinctus*, *Helophorus pallidipennis*, *Berosus affinis*, *B. hispanicus*, *Helochares lividus*, *Laccobius scutellaris* (Angus 1998, Gentili & Chiesa 1975, Hebauer & Klausnitzer 1998, Schödl 1993, Svensson 1977). After 2004 further taxa were recorded from the biggest Greek island as results of taxonomical revisions

(Angus & Tatton 2011, Dutton & Angus 2007, Toledo 2009), and some new faunistic data were published too (Karaouzas & Incekara 2011). Pederzani (1989) published a record of *H. jurjurensis* Régimbart, 1895 from Crete which is a result of misidentification, and this record most probably refers to *H. dobrogeanus*, although molecular analysis would need to be sure about its identity (Hans Fery, personal communication). Zimmermann (1930) published the occurrence of *Bidessus exornatus* (Reiche & Saulcy, 1855) from Crete (and also from Corfu), which are also based on misidentification and these records refer to *B. calabricus* (Hans Fery, personal communication). The Fauna Europaea Database listed *Nebrioporus stearinus* and *N. suavis* (de Jong et al. 2014) for Crete, but with no doubt these names refer to *N. amicorum* (Toledo 2009). Based on the literature data completed with our new results, the occurrence of 79 water beetle taxa has been recorded in Crete up to date (see Table 2 and 3).

Angus (2013) has recently published a provisional checklist of water beetles for Corfu, without detailed records. This checklist contains 82 species on the basis of Robert Angus's, and Hans Fery's collections, and records of our collecting trip, but data from the literature were not included. Additional sporadic occurrence data from Corfu can be found in catalogues (Angus 1992, Dettner 1997, Hebauer & Klausnitzer 1998, Nilsson & Hájek 2016, van Vondel 1997) and specific faunistic and taxonomical works (e.g. Angus 1988, 1998, Audisio et al. 1996, Fery 1992, 1999, Fery & Brancucci 1997, Fery & Petrov 2005, Fery & Št'astný 2007, Jäch 1989a, 1989b, 1989c, 1990, 1992a, 1992b, 1993a, 1997, 1999, Jäch & Delgado 2008, Schaefflein 1983, Schödl 1993, Sutton 2012, Wewalka 1977a, 1984, Zimmermann 1930). These publications contain further 20 species not included in the checklist by Angus (2013). Janssens (1965) published *Hydranea pulchella* Germar, 1824 from Corfu which species definitely does not occur there (and also not known from Greece), this record most probably refers to *H. bicolorata* Jäch, 1997 (Manfred Jäch personal communication), but verification of the voucher specimen(s) is still needed, since no other published record of *H. bicolorata* from Corfu was found. Jäch (1990) mentioned an old record of *Ochthebius laevisculptus* Reitter, 1901 from Corfu, which was marked by him as questionable: most probably it must be a result of mislabelling, because the species has Central Asian distribution (Afghanistan, Tajikistan, Uzbekistan) and is not a member of the European fauna. Based on former records and our new findings, the number of water beetle taxa of Corfu raised to 112 (see Table 2 and 3).

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