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Checklist of the Mediterranean brachyuran crabs

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The ongoing studies by Mediterranean carcinologists have enhanced our knowledge of the brachyuran fauna of the area. Meticulous sampling procedures, improved systematic understanding and the continuing influx from the Red Sea have combined to augment the number of known brachyuran crabs in the Mediterranean Sea. The current inventory comprises 141 species ranged in 77 genera and 27 families.

INTRODUCTION

HOLTHUIS (1972) pronounced the necessity for a checklist of the Mediterranean decapods in the first Mediterranean Decapoda colloquium in Rovinj and was supported by FOREST (1972). However, the resulting list of HOLTHUIS appeared in 1987, not including all but a reduced number of species, mostly of economical importance. Recently, analyses of the decapod fauna of the Mediterranean Sea were advanced by FREDJ (1974), ĐURIŠ (1987 a, b) and KOUKOURAS *et al.* (1992), and for the Adriatic Sea ŠTEVČIĆ (1983). NÖEL (1992) published an extensive review of the decapods of the French coasts including the Mediterranean crabs. In the past three decades, much information have accumulated on the decapod fauna in different areas of the Mediterranean Sea. Most investigations refer to the Western Mediterranean (FOREST, 1965; ZARIQUIEY ALVAREZ, 1968; MANNING and FROGLIA 1982, GARCÍA RASO 1985, 1990, 1992; GARCÍA RASO *et al.*, 1987). To the Eastern Mediterranean much attention was also devoted (HOLTHUIS and GOTTLIEB, 1958; HOLTHUIS, 1961, RAMADAN and DOWIDAR, 1972; KOCATAŞ, 1981; LEWINSOHN and HOLTHUIS, 1986; TÜRKAY *et al.*, 1987; D'UDEKEM D'ACOZ, 1992 a; KOUKOURAS *et al.*, 1992 and KOUKOURAS *et al.*, 1993), the same can be said for the Adriatic decapods (ŠTEVČIĆ, 1990; VASO and GJIKNURI, 1993), while somewhat less attention was paid to the Central Mediterranean subregion (FOREST and GUINOT, 1956; FOREST, 1967; PASTORE, 1972; PARENZAN, 1983; SCHEMBRI and LANFRANCO, 1984 and PIPITONE and TUMBIOLO, 1993). Only a few studies were made on the brachyuran fauna of the Black Sea (BĂCESCU, 1967; KOBYAKOVA and DOLGOPOL'SKAYA, 1969; KOCATAŞ, 1981). Freshwater crabs of the Mediterranean area were intensively studied by PRETZMANN (1987). It is noteworthy that chronological and horological problems of the Mediterranean brachyuran crabs of the area attired attention of several scientists such as: FOREST (1972); ALMAÇA (1985, 1988, 1989); ĐURIŠ (1987 a, b), TÜRKAY (1989) and EMMERSON (1993).

In view of the advances made by the regional studies mentioned above, we felt the need to update the checklist and review it in the light of the most current data available. The

principal intention of this work is to present a complete checklist of the brachyuran crabs within the framework of the modern system as well as species distribution.

MATERIAL AND METHODS

An updated checklist was compiled from regional literature sources (Table 1) and species geographic distribution patterns were designated. As a basic reference for species distribution the monographs of ZARIQUIEY ALVAREZ (1968) and MANNING and HOLTHUIS (1981) were used. The species names applied in accordance with the International Code of Zoological Nomenclature. The geographic area considered is the Atlantic-Mediterranean province, divided into two regions; i.e. Mediterranean and Pontic (Black Sea) ones. The Mediterranean was divided into three subregions: Western, Eastern and Central, in which the Adriatic Sea is included (Fig. 1). The brachyuran taxa are arranged in a natural hierarchical system.

RESULTS

In the Mediterranean and adjacent seas 27 families (with 25 subfamilies), 77 genera with 141 species of brachyuran crabs have been recorded (including freshwater crabs in the surrounding areas).

The species noted are not distributed uniformly throughout the area. Their distribution is shown in Table 2.

Table 2. Distribution of species, endems and immigrants according to the subregions

Subregions	Species number	Endems	Immigrants
Eastern Medit.	117	9	15
Black Sea	20	2	1
Central Medit.	107	8	2
Adriatic Sea	91	10	3
Western Medit.	109	10	1

According to the current state of knowledge, the brachyuran fauna in the Eastern Mediterranean is somewhat richer in species than in the western part, and the number of species gradually increases from the western to the eastern subregions. The number of species reported from the Adriatic Sea is reduced in relation to the central subregion, whereas in the

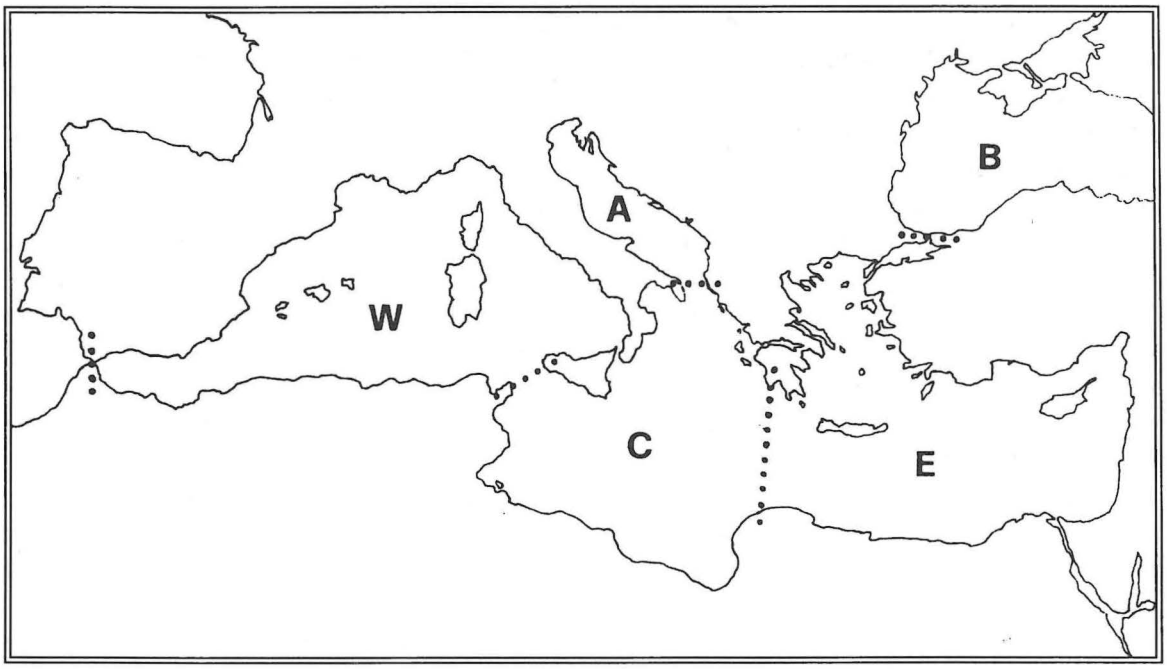

Fig. 1. Mediterranean biogeographical subregions
Legend: E = Eastern Mediterranean subregion, B = Black Sea, C = Central Mediterranean subregion, A = Adriatic Sea, W = Western Mediterranean subregion

Table 1. Checklist of the Mediterranean brachyuran crabs
Legend: E = Eastern Mediterranean subregion, B = Black Sea, C = Central Mediterranean subregion, A = Adriatic Sea, W = Western Mediterranean subregion

Taxa	Distribution				
Section **DROMIACEA** de Haan, 1833	E	B	C	A	W
Family **HOMOLIDAE** de Haan, 1830					
Homola Barbata (Fabricius, 1793)	+	-	+	+	+
Paramola cuvieri (Risso, 1816)	+	-	+	-	+
Family **LATREILLIIDAE** Stimpson, 1852					
Latreillia elegans Roux, 1830	+	-	+	+	+
Family **DROMIIDAE** de Haan, 1833					
Dromia personata (Linnaeus, 1758)	+	-	+	+	+
Dromia spinirostris Miers, 1881	-	-	+	-	-
Family **CYMONOMIDAE** Bouvier, 1898					
Cymonomus granulatus (Norman in Thomson, 1873)	-	-	-	-	+
Family **RANINIDAE** de Haan, 1839					
Notopus dorsipes (Linnaeus, 1758)	+	-	-	-	-
Section **EUBRACHYURA** de Saint Laurent, 1980					
Subsection **HETEROTREMATA** Guinot, 1977					
Family **ATELECYCLIDAE** Ortmann, 1893					
Atelecyclus rotundatus (Olivi, 1792)	+	-	+	+	+
Atelecyclus undecimendatus (Herbst, 1783)	-	-	+	+	+
Family **CANCRIDAE** Latreille, 1803					
Cancer pagurus Linnaeus, 1758	+	+	+	+	?
Family **THIIDAE** Dana, 1852					
Thia scutellata (Fabricius, 1793)	-	-	+	+	+
Family **CORYSTIDAE** Samouelle, 1819					
Corystes cassivelaunus (Pennant, 1777)	+	-	+	+	+
Family **MATUTIDAE** de Haan, 1835					
Matuta banksii Leach, 1817	+	-	-	-	-
Family **PIRIMELIDAE** Alcock, 1899					
Pirimela denticulata (Montagu, 1808)	+	+	+	+	+
Sirpus zariquieyi Gordon, 1953	+	-	+	+	+
Sirpus ponticus Verestchaka, 1989	-	+	-	-	-
Family **ERIPHIIDAE** MacLeay, 1838					
Eriphia verrucosa (Forskal, 1775)	+	+	+	+	+
Sphaerozius nitidus Stimpson, 1858	+	-	-	-	-

Taxa	Distribution				
Family **XANTHIDAE** MacLeay, 1838	E	B	C	A	W
Subfamily **Xanthinae** MacLeay, 1838					
Microcassiope minor (Dana, 1852)	+	-	+	-	+
Xantho granulicarpus Forest, 1953	+	-	+	+	+
Xantho incisus (Leach, 1814)	-	-	+	-	+
Xantho pilipes A. Milne Edwards, 1867	+	-	+	+	+
Xantho poressa (Olivi, 1792)	+	+	+	+	+
Subfamily **Euxanthinae** Alcock, 1898					
Monodaeus couchii (Bell in Couch, 1851)	+	-	+	+	+
Monodaeus guinotae Forest, 1972	+	-	+	+	+
Subfamily **Actaeinae** Alcock, 1898					
Paractaea monodi Guinot, 1969	+	-	+	-	+
Subfamily **Zosiminae** Alcock, 1898					
Atergatis roseus (Rüppell, 1830)	+	-	-	-	-
Subfamily **Panopeinae** Ortmann, 1893					
Rhithropanopeus harrisii (Gould, 1841)	-	+	-	-	-
Family **PILUMNIDAE** Samouelle, 1819					
Heteropanope laevis (Dana, 1852)	+	-	-	-	-
Pilumnopeus vauquelini (Audouin, 1826)	+	-	-	-	-
Pilumnus aestuarii Nardo, 1869	+	+	+	+	+
Pilumnus hirsutus Stimpson, 1858	+	-	-	-	-
Pilumnus hirtellus (Linnaeus, 1761)	+	?	+	+	+
Pilumnus inermis A. Milne Edwards & Bouvier, 1894	-	-	+	-	+
Pilumnus spinifer H. Milne Edwards, 1834	+	+	+	+	+
Pilumnus villosissimus (Rafinesque, 1814)	+	?	+	+	+
Family **GONEPLACIDAE** MacLeay, 1838					
Subfamily **Goneplacinae** MacLeay, 1838					
Goneplax rhomboides (Linnaeus, 1758)	+	-	+	+	+
Subfamily **Euryplacinae** Stimpson, 1871					
Eucrate crenata (de Haan, 1835)	+	-	-	-	-
Family **GERYONIDAE** Colosi, 1923					
Chaecon mediterraneus Manning and Holthuis, 1989	-	-	-	-	+
Geryon longipes A. Milne Edwards, 1882	+	-	+	+	+
Paragalene longicrura (Nardo, 1869)	+	-	+	+	+
Zariquieyon inflatus Manning and Holthuis, 1989	-	-	-	-	+
Family **POTAMIDAE** Ortmann, 1896					
Potamon fluviatile (Herbst, 1785)	+	-	+	+	+
Potamon ibericum (Bieberstein, 1809)	+	-	+	-	-
Potamon potamios (Olivier, 1804)	+	+	-	-	-
Potamon setiger Rathbun, 1904	+	-	-	-	-

Taxa	Distribution				
Family **CALAPPIDAE** de Haan, 1833	E	B	C	A	W
Calappa granulata (Linnaeus, 1758)	+	-	+	+	+
Calappa sp. Pastore, 1993	-	-	+	-	-
Cycloes cristata (Brullé, 1837)	-	-	-	-	+
Family **PARTHENOPIDAE** MacLeay, 1838					
Subfamily **Parthenopinae** MacLeay, 1838					
Parthenope angulifrons Latreille, 1825	+	-	+	+	+
Parthenope expansa (Miers, 1879)	+	-	+	-	-
Parthenope macrohelos (Herbst, 1790)	+	-	+	+	+
Parthenope massena (Roux, 1830)	+	-	+	+	+
Subfamily **Cryptopodiinae** Dana, 1852					
Heterocrypta maltzami Miers, 1881	+	-	+	+	+
Family **PORTUNIDAE** Rafinesque, 1815					
Subfamily **Carcininae** MacLeay, 1838					
Carcinus aestuarii Nardo, 1847	+	+	+	+	+
Carcinus maenas (Linnaeus, 1758)	-	-	-	-	+
Portumnus latipes (Pennant, 1777)	+	+	+	+	+
Portumnus pestai Forest, 1967	+	-	+	+	-
Xaiva biguttata (Risso, 1816)	+	-	+	-	+
Subfamily **Polybiinae** Ortmann, 1893					
Bathynectes longipes (Risso, 1816)	+	-	+	+	+
Bathynectes maravigna (Prestandrea, 1839)	+	-	+	+	+
Liocarcinus arcuatus (Leach, 1814)	+	+	+	+	+
Liocarcinus bolivari (Zariquiey Alvarez, 1948)	-	-	+	+	+
Liocarcinus corrugatus (Pennant, 1777)	+	-	+	+	+
Liocarcinus depurator (Linnaeus, 1758)	+	+	+	+	+
Liocarcinus maculatus (Risso, 1827)	+	-	+	+	+
Liocarcinus marmoreus (Leach, 1814)	+	-	-	-	+
Liocarcinus vernalis (Risso, 1816)	+	+	+	+	+
Liocarcinus zariquieyi (Gordon, 1968)	+	-	+	+	+
Macropipus tuberculatus (Roux, 1830)	+	-	+	+	+
Necora puber (Linnaeus, 1767)	+	-	+	-	+
Polybius henslowii Leach, 1820	-	-	+	-	+
Subfamily **Portuninae** Rafinesque, 1815					
Callinectes danae Smith, 1869	-	-	-	+	-
Callinectes sapidus Rathbun, 1896	+	-	+	+	+
Portunus hastatus (Linnaeus, 1767)	+	-	+	+	+
Portunus pelagicus (Linnaeus, 1758)	+	-	+	-	-
Charybdis helleri (A. Milne Edwards, 1867)	+	-	-	-	-
Charybdis longicollis Leene, 1938	+	-	-	-	-
Thalamita poissonii (Audouin, 1826)	+	-	-	-	-
Family **MAJIDAE** Samouelle, 1819					
Subfamily **Majinae** Samouelle, 1819					
Maja crispata Risso, 1827	+	+	+	+	+
Maja goltziana d'Oliveira, 1888	+	-	+	+	-
Maja squinado (Herbst, 1788)	+	-	+	+	+

Taxa	Distribution				
Subfamily **Pisinae** Dana, 1851	E	B	C	A	W
Anamathia rissoana (Roux, 1828)	-	-	+	+	+
Eurynome aspera (Pennant, 1777)	+	-	+	+	+
Eurynome spinosa Hailstone, 1835	-	-	+	-	+
Herbstia condyliata (Fabricius, 1787)	+	-	+	+	+
Hyastenus hilgendorfi de Man, 1887	+	-	-	-	-
Lissa chiragra (Fabricius, 1775)	+	-	+	+	+
Pisa armata (Latreille, 1803)	+	-	+	+	+
Pisa carinimana Miers, 1879	-	-	+	-	+
Pisa corallina (Risso, 1816)	+	-	+	+	+
Pisa muscosa (Linnaeus, 1758)	+	-	+	+	+
Pisa nodipes (Leach, 1815)	+	-	+	+	+
Pisa tetraodon (Pennant, 1777)	+	-	+	+	+
Subfamily **Epialtinae** MacLeay, 1838					
Acanthonyx lunulatus (Risso, 1816)	+	-	+	+	+
Subfamily **Inachinae** Samouelle, 1819					
Achaeus cranchii Leach, 1817	+	-	+	+	+
Achaeus gracilis (O. G. Costa, 1839)	+	-	+	+	+
Dorhynchus thomsoni Thomson, 1873	+	-	+	+	+
Ergasticus clouei Studer, 1883	+	-	+	+	+
Inachus aguiarii De Brito Capello, 1876	+	-	-	-	+
Inachus communissimus Rizza, 1839	+	-	+	+	+
Inachus dorsettensis (Pennant, 1777)	+	-	+	+	+
Inachus leptochirus Leach, 1817	+	-	+	+	+
Inachus parvirostris (Risso, 1816)	+	-	+	+	-
Inachus phalangium (Fabricius, 1775)	+	-	+	+	+
Inachus thoracicus Roux, 1830	+	-	+	+	+
Macropodia czernjawskii (Brandt, 1880)	+	-	+	+	+
Macropodia linaresi Forest & Zariquiey Alvarez, 1964	+	-	+	+	+
Macropodia longipes (A. Milne Edwards & Bouvier, 1899)	+	-	+	+	+
Macropodia longirostris (Fabricius, 1775)	+	+	+	+	+
Macropodia rostrata (Linnaeus, 1761)	+	+	+	+	+
Family **DORIPPIDAE** MacLeay, 1838					
Subfamily **Dorripinae** MacLeay, 1838					
Medorippe lanata (Linnaeus, 1767)	+	-	+	+	+
Subfamily **Ethusinae** Guinot, 1977					
Ethusa mascarone (Herbst, 1785)	+	-	+	+	+
Family **PALICIDAE** Rathbun, 1898					
Palicus caronii (Roux, 1830)	+	-	+	+	+
Family **LEUCOSIIDAE** Stimpson, 1871					
Subfamily **Ebaliinae** Stimpson, 1871					
Ebalia cranchii Leach, 1817	+	-	+	+	+
Ebalia deshayesi Lucas, 1846	+	-	+	-	+

Taxa	Distribution				
	E	B	C	A	W
Ebalia edwardsi Costa, 1838	+	-	+	+	+
Ebalia granulosa H. Milne Edwards, 1837	+	-	+	+	+
Ebalia nux Norman in A. Milne Edwards, 1883	+	-	+	+	+
Ebalia tuberosa (Pennant, 1777)	+	-	+	+	+
Ebalia tumefacta (Montagu, 1808)	-	-	-	-	+
Merocryptus boletifer A. Milne Edwards, 1894	+	-	+	+	+
Subfamily **Leucosiinae** Samouelle, 1819					
Leucosia signata Paulson, 1875	+	-	-	-	-
Myra fugax (Fabricius, 1798)	+	-	-	-	-
Subfamily **Iliinae** Stimpson, 1871					
Ilia nucleus (Linnaeus, 1758)	+	-	+	+	+
Ixa monodi Holthuis & Gottlieb, 1956	+	-	-	-	-
Subsection **THORACOTREMATA** Guinot, 1977					
Family **GRAPSIDAE** MacLeay, 1838					
Subfamily **Grapsinae** MacLeay, 1838					
Pachygrapsus marmoratus (Fabricius, 1787)	+	+	+	+	+
Pachygrapsus maurus (Lucas, 1846)	+	-	-	-	+
Pachygrapsus transversus (Gibbes, 1850)	+	-	-	-	+
Planes minutus (Linnaeus, 1758)	+	+	+	+	+
Subfamily **Varuninae** H. Milne Edwards, 1853					
Brachynotus atlanticus Forest, 1957	-	-	-	-	+
Brachynotus foresti Zariquiey Alvarez, 1968	+	-	+	+	+
Brachynotus gemmelari (Rizza, 1839)	+	-	+	+	-
Brachynotus sexdentatus (Risso, 1827)	+	+	+	+	+
Euchirograpsus liguricus H. Milne Edwards, 1853	-	-	-	-	+
Family **OCYPODIDAE** Rafinesque, 1815					
Ocypode cursor (Linnaeus, 1758)	+	-	+	-	-
Family **PINNOTHERIDAE** de Haan, 1833					
Subfamily **Asthenognathinae** Stimpson, 1858					
Asthenognathus atlanticus Monod, 1933	-	-	-	-	+
Subfamily **Pinnotherinae** de Haan, 1833					
Pinnotheres marioni Gourret, 1887	+	-	-	-	+
Pinnotheres pinnotheres (Linnaeus, 1758)	+	-	+	+	+
Pinnotheres pisum (Linnaeus, 1767)	+	-	+	+	+

Black Sea the smallest number of species was recorded due to very unfavourable life conditions for the crabs.

When comparing the species number between the eastern and western Mediterranean, one has to take into account the biogeographic composition of the brachyuran fauna. The majority of species inhabiting the Mediterranean Sea are of Atlantic-Mediterranean origin, i.e. they are distributed in the Mediterranean Sea, and in the Eastern Atlantic from the coast of England to Mauritania. The next contigent are endemic

species, i.e. known only from the Mediterranean Sea. The following 15 endemic species could be listed: *Sirpus ponticus, Pilumnus aestuarii, Xantho granulicarpus, Calappa* sp., *Portumnus pestai, Liocarcinus bolivari, L. maculatus, Chaceon mediterraneus, Zariquieyon inflatus, Pisa corallina, P. muscosa, Inachus parvirostris, Brachynotus foresti, B. gemmellari, Pinnotheres marioni.* Four species have been only recently described, such as: *Sirpus ponticus* in the Black Sea (VERESTCHAKA, 1989), and *Chaecon mediterraneus* and *Zariquieyon inflatus* in the Western Mediterranean (MANNING and HOLTHUIS, 1989), and *Calappa* sp. (PASTORE, 1993) will be described later. A considerable number of species earlier considered endemic have been recently recorded from the Eastern Atlantic, mostly in the vicinity of Gibraltar: *Ebalia deshayesi, Carcinus aestuarii* and *Achaeus gracilis* (ZARIQUIEY ALVAREZ, 1968), *Xantho poressa* (ALMAÇA, 1963), *Lissa chiragra* (GUERRA and GUADENCIO, 1981), *Sirpus zariquieyi, Achaeus gracilis, Macropodia longirostris* and *Ebalia edwardsi* (NEVES, 1990), *Pilumnus villosissimus* (FRANSEN, 1991), *Macropodia czernjawskii* (D'UDEKEM D'ACOZ, 1992 b), *Monodaeus guinotae* (GARCÍA RASO, 1992), *Inachus communissimus* and *Parthenope angulifrons* (CUESTA MARISCAL and GONZÁLES GORDILLO, 1992). In this way the number of apparently endemic species was considerably reduced. The endemic species are distributed nearly uniformly in the entire area, whereas in the Black Sea, only two of them have been reported (Table 2).

The third group of brachyuran crabs is composed of immigrants. For the 125 years since the opening of the Suez canal many species penetrated from the Red Sea, of which 17 are brachyuran crabs: *Notopus dorsipes, Matuta banksii, Sphaerozius nitidus, Atergatis roseus, Heteropanope laevis, Pilumnopeus vauquelini, Pilumnus hirsutus, Charybdis helleri, Ch. longicolis, Portunus pelagicus, Hyastenus hilgendorfi, Eucrate crenata, Ixa monodi, Leucosia signata* and *Myra fugax.* Only four species have arrived from the American waters: *Callinectes sapidus, C. danae, Rhithropanopeus harrisii* and *Dyspanopeus sayi.* Some species formerly considered as endemic ones are in fact autochtonous in the Mediterranean Sea. For example *Pachygrapsus transversus* known from the Israeli coasts was recorded in the westernmost Mediterranean near the Strait of Gibraltar (GARCÍA RASO *et al.*, 1987). Similarly, *Microcassiope minor* found in the eastern Mediterranean and previously considered an immigrant from the Eastern Atlantic was also recently reported from the Western Mediterranean (GARCÍA RASO, 1992). D'UDEKEM D'ACOZ (1992 b) considers the swimming crab *Thalamita poissonii* as an autochtonous species, not an immigrant from the Red Sea as supposed previously, because the species was recorded in the Mediterranean Sea before the Suez Canal was opened. It is noteworthy that RELINI-ORSI and MORI (1979) reported *Thalamita gloriensis* from the Western Mediterranean, but later no specimen was sampled, and its occurrence should be considered as accidental in the area. The major part of immigrants have been known for a longer time, only *Matuta banksii* was reported in 1990 by GALIL and GOLANI and both *Callinectes danae* and *Dyspanopeus sayi* were recorded quite recently i.e. in 1993 by MIZZAN resp. FROGLIA and SPERANZA. The geographic distribution of the Mediterranean immigrants (Table 2) is very asymmetrical. The majority of them occur in the eastern part and they originate from the Red Sea (i.e. Lessepsian migrants).

Since the species are variously distributed inside the area, each subregion is inhabited by various combinations of species. If we compare the number of species common to both subregions and the SØRENSEN quotient of similarity of the faunal composition between the subregions, the following results are obtained (Table 3).

Table 3. Actual faunal similarity between subregions

Subregions	Common species	Sørensen quotient
Western-Eastern Medit.	96	84.95
Eastern-Central Medit.	96	85.71
Western-Central Medit.	96	87.96

The number of common species for the three subregions is nearly uniform and the

SØRENSEN quotients are very high indicating a rather uniform distribution of the Mediterranean brachyuran crabs. The maximum quotient is between the Western and Central subregions, and the minimum between Western and Eastern subregions.

If we consider only the marine original (autochtonous) species, i.e. excluding the immigrants and freshwater species, we obtain the following results: Eastern Mediterranean 99 species, Black Sea 17, Central Mediterranean 103, Adriatic 87 and Western Mediterranean 107 species. Accordingly, the brachyuran fauna of the Western Mediterranean subregion is originally richer in species than the Eastern Mediterranean subregion. The similarities between the subregions are presented in Table 4.

Table 4. Original faunal similarity between subregions

Subregions	Common species	Sørensen quotient
Western-Eastern Medit.	90	87.38
Eastern-Central Medit.	94	93.07
Central-Western Medit.	94	89.52

Consequently, if considering only the autochtonous marine species, the maximum similarity is between the Eastern and Central Mediterranean subregions. The SØRENSEN quotient appears to be minimal between the Eastern and Western Mediterranean subregions.

DISCUSSION

According to ALMAÇA's (1985) estimate there are 125 species of 71 genera and 23 families of brachyuran crabs in the Mediterranean. The present work lists 138 species in 77 genera and 27 families (autochtonous: 25 families, 26 genera and 118 species). The increase is due to vigorous attempts of scientists to study the marine life in the Mediterranean.

The present checklist highlights the lacunae in our knowledge - the less studied regions of the sea are still awaiting investigation - such as, for example, the North African coasts, some parts of the Central Mediterranean and the Black Sea, and the bathyal depths of the sea. Only when sufficient data from these areas are made available it will be possible to reliably analyze the fauna. In much the same manner, detailed studies of the Atlantic regions adjoining the Gibraltar Strait ask for a reassessment of the once considered Mediterranean autochtonous species.

Future additions to the checklist will consist, most probably, of Lessepian migrants or accidental introductions, either ship-born or mariculture fugitives, attesting to the man's increasingly significant role in changing the natural environment.

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Popis vrsta sredozemnih kratkorepaca

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KRATKI SADRŽAJ

Zahvaljujući brojnim suvremenim istraživanjima poznavanje faune kratkorepaca (Crustacea Decapoda Brachyura) Sredozemnog mora znatno je uznapredovalo. Broj vrsta za pojedina područja stalno se povećava. Iz priložene liste proizlazi da je u Sredozemlju utvrđena 141 vrsta, koje su svrstane u 27 porodica i 77 rodova. Taj broj obuhvaća, međutim, i useljene vrste iz drugih mora, prvenstveno Crvenog, kao i slatkovodne iz okolnih područja. Broj urođenih vrsta je nešto manji (118, svrstanih u 25 porodica i 65 rodova). Kao posljedica useljavanja sadašnji je broj nešto veći u istočnom dijelu, dok je broj urođenih vrsta veći na zapadnom dijelu Sredozemlja. Vrste su prilično ravnomjerno raspoređene o čemu svjedoči visok broj zajedničkih vrsta kao i visoki Sørensenovi kvocijenti. Broj svojti (taxa) nešto je smanjen u Jadranu, a osobito je nizak u Crnom moru zbog nepovoljnih životnih uvjeta.