

ΕΛΛΗΝΙΚΗ ΖΩΟΛΟΓΙΚΗ ΕΤΑΙΡΙΑ - HELLENIC ZOOLOGICAL SOCIETY

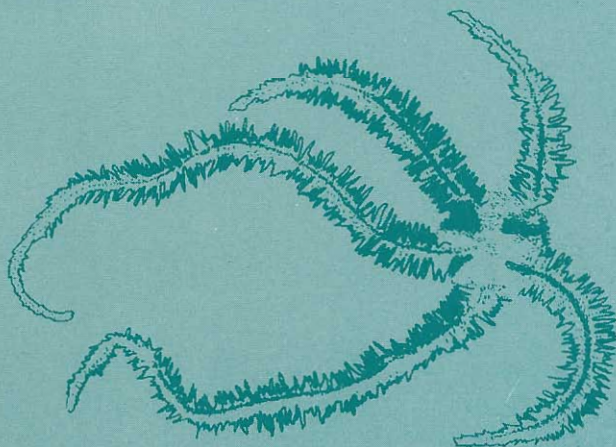
FAUNA GRAECIAE

VI

THE ECHINODERMATA OF GREECE

ΤΑ ΕΧΙΝΟΔΕΡΜΑ ΤΗΣ ΕΛΛΑΔΑΣ

MARIA ANTONIETTA PANCUCCI - PAPADOPOULOU



ΑΘΗΝΑ - ATHENS
1996

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ΑΘΗΝΑ - ATHENS

1996

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ΠΡΟΛΟΓΟΣ

Η Ελληνική Ζωολογική Εταιρεία παρουσιάζει τον έκτο τόμο της σειράς FAUNA GRAECIAE που αφορά το θαλάσσιο φύλο των Εχινοδέρμων της Ελλάδας, γραμμένο από την κα Μ.Α. Pancucci - Παπαδοπούλου.

Μετά από τα Ορθόπτερα, τα Σιφονάπτερα, τα θαλάσσια ψάρια της Ελλάδας και τα χερσαία Μαλάκια Zonitidae, ένα νέο κεφάλαιο αρχίζει για τα θαλάσσια Ασπόνδυλα της Ελλάδας.

Αυτό το σχετικά μικρό φύλο των αποκλειστικά θαλάσσιων ζώων αποτελεί μια από τις βασικές συνιστώσες του θαλάσσιου οικοσυστήματος και συμβάλλει σημαντικά στην τροφική αλυσίδα. Επειδή τα περισσότερα από τα ζώα αυτά είναι μεγάλα σε μέγεθος, υπόκεινται σε συλλογή τόσο για κατανάλωση όσο και για διακόσμηση, γεγονός που συντελεί στη μείωση των πληθυσμών τους. Η παρούσα μελέτη πιστεύουμε ότι θα συμβάλλει μεταξύ άλλων στην καλύτερη γνώση της ομάδας των Εχινοδέρμων και έτσι στην αποτελεσματικότερη προστασία τους.

Η συγγραφέας, Maria Antonietta Pancucci - Παπαδοπούλου, σπούδασε Βιολογία στο Πανεπιστήμιο του Παλέρμο (Ιταλία) και πήρε το Δίπλωμα Μεταπτυχιακών Σπουδών στην Ωκεανογραφία από το Πανεπιστήμιο Αθηνών. Ως εργαζόμενη στο Εθνικό Κέντρο Θαλασσίων Ερευνών από το 1985, ασχολείται ερευνητικά με θέματα που σχετίζονται με τη Συστηματική, Οικολογία και Ζωογεωγραφία των Εχινοδέρμων. Επιπλέον, η συγγραφέας μελετά την επίδραση της ρύπανσης σε πληθυσμούς Εχινοδέρμων, προσεγγίζει θέματα γενετικής του εχινοειδούς *Paracentrotus lividus* και γενικότερα διερευνά τις σχέσεις πλαγκτονικών και βενθικών οικοσυστημάτων. Συνεργάζεται με άλλα επιστημονικά ιδρύματα (Centro Oceanografico de Baleares, Istituto di Zoologia - Univ. di Palermo) και έχει δημοσιεύσει σειρά εργασιών και τεχνικών εκθέσεων. Η διδακτορική της διατριβή, στο Πανεπιστήμιο Αθηνών, αναφέρεται σε απόψεις της οικολογίας και βιολογίας του *Paracentrotus lividus*.

Η Εκδοτική Επιτροπή υιοθέτησε όπως και σε προηγούμενες εκδόσεις τους κανόνες του ΕΛΟΤ (Ελληνικός Οργανισμός Τυποποίησης) για την μεταφορά των ονομάτων και των τοπωνυμίων από τα Ελληνικά στην Λατινική γραφή. Επίσης καθόρισε συγκεκριμένο τρόπο υποδιαίρεσης των θαλασσίων περιοχών της Ελλάδας, σε μια προσπάθεια τυποποίησης της παρουσίασης των κατανομών των ειδών, που θα είναι χρήσιμη και σε μελλοντικές εκδόσεις.

Η Εκδοτική Επιτροπή θα ήθελε να ευχαριστήσει τους Καθ. J.M. Lawrence, Καθ. M. Jangoux και Dr. J.-P. Feral για τα σημαντικά σχόλια και τις υποδείξεις στο χειρόγραφο.

Την έκδοση επιμελήθηκε η Δρ. Μ. Θεσσαλού - Λεγάκη με τη βοήθεια της συγγραφέως.

Η Εκδοτική Επιτροπή

PREFACE

The Hellenic Zoological Society presents the sixth volume of FAUNA GRAECIAE concerning the marine phylum of Echinodermata of Greece, written by M.A. Pancucci - Papadopoulou.

In continuation to the first five volumes on the Orthoptera, the Siphonaptera, the Marine fishes and the Zonitidae terrestrial molluscs, a new chapter for the marine invertebrate fauna of Greece starts.

This relatively small phylum of exclusively marine forms is a very important component of the marine ecosystem since they contribute a lot in marine food webs. Since most of these animals are conspicuous, they are subject to amateur collection and even used as food. This study can, among others, contribute to a better knowledge of this group and therefore to its more effective conservation.

The author, Maria Antonietta Pancucci - Papadopoulou, studied Biology in the University of Palermo in Italy and received a Masters Degree in Oceanography from the University of Athens. After joining the Greek National Center for Marine Research in 1985, she has been involved in research projects related to the taxonomy, ecology and zoogeography of echinoderms. She is also studying the impact of pollution on echinoderm populations, the genetics of the echinoid *Paracentrotus lividus* and generally the relationships between planktonic and benthic ecosystems. She has collaborated with other scientific institutes (Centro Oceanografico de Baleares, Institute of Zoology - Univ. of Palermo) and published several papers and technical reports. She is currently preparing her doctoral thesis in the University of Athens on several aspects of the ecology and biology of the echinoid *Paracentrotus lividus*.

The Editorial Board adopted, as in previous volumes, the rules of ELOT (Hellenic Organization of Standardisation), for writing - translating the names of localities. A subdivision of the marine areas of Greece was adopted in an attempt to standardize the form of presentation of species distribution in future publications.

The editorial committee would like to thank Prof. J.M. Lawrence, Prof. M. Jangoux and Dr. J.-P. Feral, for their most significant comments and suggestions on the manuscript.

The editing of this volume was carried out by Dr. M. Thessalou - Legaki with assistance from the author.

The Editorial Board

THE ECHINODERMATA OF GREECE

by

Maria Antonietta Pancucci - Papadopoulou

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SYNOPSIS

The present work is based on the most possibly complete survey of the literature of the last 150 years, as well as on the study of material collected and still unpublished by the author (data up to 1994). References concerning all types of substrate (soft and hard) at depths ranging between a few centimeters to about 1500 metres are considered here.

107 echinoderm species occur in the Greek seas, including very rare species recorded just once. At present, they represent the 70.4% of the Mediterranean echinoderm fauna. Several species, whose presence must be clearly attributed to erroneous identification have been excluded, or their correct name has been adopted.

The study deals with all the five classes of the phylum : crinoids, 2 species; holothurioids, 34 species; asteroids 26 species, ophiuroids, 23 species; and echinoids, 22 species. Synonyms, geographical distribution based on the division of the seas into several main regions and gulfs as well as local distribution and related references are given.

Distribution maps, a taxonomical table, a table with their geographical distribution within Greece and a general check-list of the species are given.

INTRODUCTION

The eastern Mediterranean Sea is composed of four main seas, with particular characteristics : Adriatic, Ionian, Aegean and Levantine. Greece, occupying the middle of this basin, is surrounded by two of these seas, the Ionian and the Aegean. The "hellenic" Ionian Sea is characterised on one side by deep offshore waters, including the deepest part of the Mediterranean Sea, while on the other hand some large embayments create semi-enclosed gulfs and lagoons. As far as the Aegean Sea is concerned, its particularity lies in the presence of numerous scattered islands and islets and the very rugged coasts. This heterogeneity results in many different habitats, forming ecological niches which permit the development of distinct biocenoses and the isolation of species in defined areas.

Despite the easy approach to the sea, regular researches on the Greek sea fauna began only in recent years, even though several studies had been carried out more than a century ago.

The first available data on the echinoderm fauna of the Greek waters were published by Forbes (1844, 1845) after his expeditions with the research vessel "Beacon" and by Marenzeller (1893a,b; 1895) after the "Pola" expedition in the eastern Mediterranean basin.

Since then, about 50 years passed almost silently until the research of Tortonese (1946) at Rodos island and the general survey of the "Calypso" in the middle of this century, which reached many sites of Greece filling several gaps in the distribution of the echinoderm fauna (Pérès & Picard, 1956; 1958a, b).

The knowledge of the echinoderm fauna has increased significantly during the last decade, when a few purely systematic works on the echinoderms were carried out (Kaspiris & Tortonese, 1982; Koukouras & Sinis, 1981; Pancucci, 1984; Pancucci & Zenetos, 1989; 1990). The present study deals with the fauna recorded in all types of substrata (soft and hard bottom) at various depths (from shallow waters to more than 1500m) as well as in lagoons, taking into account all the published information of the last 150 years. References concerning Bosphorus (e.g. Tortonese & Demir, 1960), Turkish coasts in the Aegean Sea (Chukhchin, 1963; Geldiay & Kocatas, 1972; Ergen et al., 1993) or Cyprus (Demetropoulos & Hadjichristophorou, 1976) have not been considered here, as well as several studies lacking the exact location of sampling stations (Kisseleva & Chukhchin, 1965). As there are few specialised works on echinoderms, the bibliographic research concerns mainly general benthic studies and studies dealing with the taxonomy of Mediterranean echinoderms, including information about Greek seas (Carus, 1885; Sinis, 1977; Tortonese,

1977 & 1980). A more critical review of this phylum has been presented (Pancucci, 1994a), providing the base for several special remarks in the present work.

At present, at least eight more species must be added to the check-list of Mediterranean echinoderms edited by Tortonese in 1980, reaching a total of 152. In the present study, a total of 107 species is reported from Greek seas, representing the 70.4% of the Mediterranean echinoderm-fauna. Among them, 73 species are common for both western and eastern Greece, 2 of them (namely *Leptosynapta galliennei* and *Asterina pancerii*) occur only in western, 1 (*Sclerasterias neglecta*) has been reported only from the sea of Kythira, 21 are known only from eastern, 8 are common for both Aegean and Kythira seas and 2 of them (*Astrospartus mediterraneus* and *Echinus melo*) have been reported from "Greek seas" without locality specification (Distribution Table). Concerning the species reported exclusively from eastern Greece, we must point out that most of them are rare holothurioids, some found just once or in great depths.

A presentation of the taxonomical status of each genus preceeds the reference to each species. For each species synonyms, general distribution in main regions; special distribution within the main chosen areas, pertinent references for each locality or main area and remarks on erroneous determinations, where necessary, are given. As for personal determinations, for every species the exact location of findings is reported, adding some information to that already published. For some species, such as *Stichopus regalis* and *Irpa ludwigi* it has been proposed that they are put into the genera *Eostichopus* (Cutress & Miller, 1982) and *Penilpidia* (Gebruk, 1988). In the present work, I preferred to use the former nomenclature, which is widely known.

A check-list of species in Greek waters and a table showing their complete taxonomical classification are given. A table with the geographical distribution of species within Greece is appended. Distribution maps for each species are given. For several species widely distributed over all Greek seas (e.g. *Paracentrotus lividus* or *Holothuria tubulosa*) maps may appear incomplete. This "discrepancy" is due to the fact that this work is based exclusively on published data or personal observations.

GEOGRAPHICAL DISTRIBUTION

The exact position of a species in the sea is more difficult to locate than on land, because of some “uncertainty” in common geographical names, especially in the open sea. On the other hand, when the research study is conducted on a large grid of stations located all around or in a gulf, it is very difficult to enumerate every site. Otherwise the number of localities mentioned in such a kind of catalogue would be quite large. If we take into account the large number of the gulfs, bays, islands and islets in Greek waters, as well as the seasurface among them, the difficulty of enumerating all the localities and the need to join them into larger units is understandable.

This geographical distribution takes into account two basic criteria : 1) the division of Greek Seas into two main basins, the Ionian and Aegean Seas and 2) the subdivision of each of them into several main areas; within each of them, single localities are listed each time (Fig. 1).

The following division is considered for the Ionian Sea:

- **Coasts** : includes all the coasts of Greece from the Albanian frontiers to Cape Akritas, in the western Peloponnisos.

- **Islands** : from Kerkyra and adjacent islets in the north to Zakynthos in the south.

- **Gulfs** : here are listed the main gulfs (Patraikos, Amvrakikos) and connected lagoons which form embayments of the Ionian Sea, including the Korinthiakos Gulf, as a limit between Sterea Ellada and Peloponnisos.

The division of the Aegean Sea, with its thousands of embayments, islands and islets was quite difficult. For simplification, the Aegean Sea was divided from north to south as follows:

- **Coasts**

- **Islands** : Thasos, Samothraki, Limnos, Agios Efstratios, Lesvos, Chios, Psara and Antipsara, as well as their adjacent islets. Evvoia and Samos were also included in this group, while **Kriti** and its adjacent islets were considered apart.

Moreover, three main insular groups have been retained, namely:

- **N Sporades** : include about eight major islands, together with many islets. It extends between the island of Skiathos in the west to the island of Gioura in the north east.

- **Kyklades** : From Andros and Kea northward to Thira and Anafi southward

and from Antimilos in the west to Amorgos in the east, including the major islands of Paros, Naxos, Sifnos and Milos.

- **Dodekanisos** : or southern Sporades Islands as other authors call it, includes a group of islands from south of Samos and Ikaria down to Karpathos and Kassos, including the island of Rodos.

- **Gulfs and Channels** : From north to south along the eastern coasts of Greece, the Aegean Sea forms some major gulfs, each of them subdivided into minor embayments and kilometers of coasts. Nine main gulfs have been considered for the present catalogue, as well as some narrow passages, indicated as Channels, which connect one sea to the other or stretch between two islands :

- **Kavala Gulf**

- **Singitikos Gulf**

- **Toronaïos Gulf**

- **Strymonikos Gulf**

- **Thermaikos Gulf** and its inner part, Thessaloniki Bay.

- **Trikeri Channel** and **Oreoi Channel**, which connect respectively the

- **Pagassitikos Gulf** and the

- **Maliakos Gulf** to the Aegean Sea

- **Evvoikos Gulf**, formed by the eastern part of Attiki and the island of Evvoia. The city of Chalkis, with its bay, subdivides this narrow gulf into two distinct sections, indicated as North and South Evvoikos Gulf

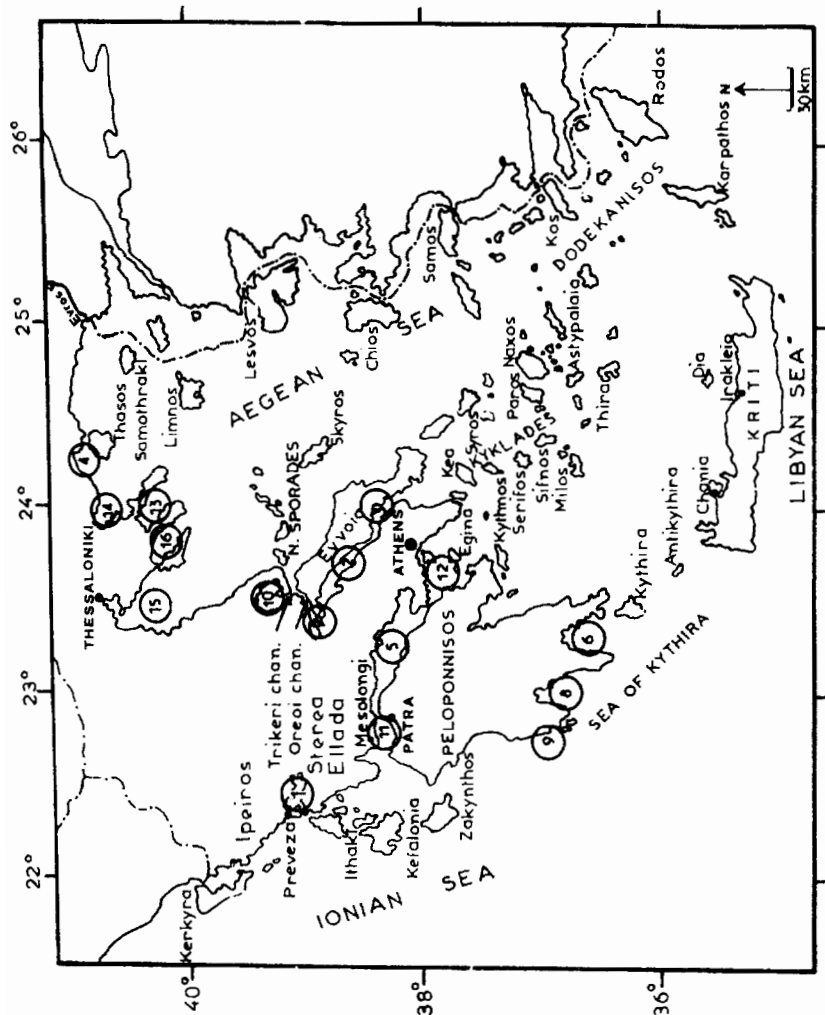
- **Saronikos Gulf** : the gulf of Athens, limited eastwards by Attiki and westwards by Peloponnisos.

A particular area is represented by the south part of the Peloponnisos, situated between Ionian and Aegean Seas, including the Lakonikos and Messiniakos Gulfs, as well as the islands of Kythira and Antikythira and smaller adjacent islets. This area has been indicated as SEA OF KYTHIRA.

References for which it was impossible to establish any particular sampling site are here listed under the general title of GREEK WATERS or AEGEAN SEA.

Fig. 1 Map of the Greek seas including main islands and gulfs.

- 1 = Amvrakikos Gulf
- 2 = N Evoikos Gulf
- 3 = S Evoikos Gulf
- 4 = Kavala Gulf
- 5 = Korinthiakos Gulf
- 6 = Lakonikos Gulf
- 7 = Maliakos Gulf
- 8 = Messiniakos Gulf
- 9 = Navarino Gulf
- 10 = Pagasitikos Gulf
- 11 = Patraikos Gulf
- 12 = Saronikos Gulf
- 13 = Singitikos Gulf
- 14 = Strymonikos Gulf
- 15 = Thermaikos Gulf
- 16 = Toronaikos Gulf



TAXONOMIC TABLE

CLASS	ORDER	FAMILY	GENUS
CRINOIDEA	Articulata	Antedonidae	<i>Antedon</i> <i>Leptometra</i>
HOLOTHURIOIDEA	Aspidochirotida	Holothuriidae	<i>Holothuria</i>
		Stichopodidae	<i>Stichopus</i>
		Synallactidae	<i>Mesothuria</i> <i>Pseudostichopus</i>
	Dendrochirotida	Cucumariidae	<i>Echinocucumis</i> <i>Leptopentacta</i> <i>Ocnus</i> <i>Paracucumaria</i> <i>Pseudocnus</i> <i>Stereoderma</i>
	Apodida	Synaptidae	<i>Labidoplax</i> <i>Leptosynapta</i>
	Elasipodida	Elpidiidae	<i>Irpa</i>
ASTEROIDEA	Paxillida	Astropectinidae	<i>Astropecten</i> <i>Plutonaster</i> <i>Tethyaster</i>
	Valvatida	Luidiidae	<i>Luidia</i>
		Chaetasteridae	<i>Chaetaster</i>
		Goniasteridae	<i>Ceramaster</i> <i>Peltaster</i>

CLASS	ORDER	FAMILY	GENUS
OPHIUROIDEA	Spinulosida	Odontasteridae	<i>Odontaster</i>
		Ophidiasteridae	<i>Ophidiaster</i> <i>Hacelia</i>
		Poraniidae	<i>Marginaster</i>
		Asterinidae	<i>Anseropoda</i> <i>Asterina</i>
		Echinasteridae	<i>Echinaster</i>
	Forcipulatida	Asteriidae	<i>Coscinasterias</i> <i>Marthasterias</i> <i>Sclerasterias</i>
	Brisingida	Brisingidae	<i>Brisingella</i>
	Euryalae	Gorgonocephalidae	<i>Astrospartus</i>
	Ophiurae	Amphiuridae	<i>Amphilepis</i> <i>Amphipholis</i> <i>Amphiura</i>
		Ophiacanthidae	<i>Ophiacantha</i>
		Ophiocomidae	<i>Ophiopsila</i>
		Ophiactidae	<i>Ophiactis</i>
		Ophiodermatidae	<i>Ophioconis</i> <i>Ophioderma</i> <i>Pectinura</i>
		Ophiomyxidae	<i>Ophiomyxa</i>
		Ophiothricidae	<i>Ophiothrix</i>
		Ophiuridae	<i>Ophiocten</i> <i>Ophiura</i>

CLASS	SUBCLASS	ORDER	SUBORDER	FAMILY	GENUS
ECHINOIDEA	PERISCHOECHINOIDEA	Cidaroida		Cidaridae	<i>Cidaris</i> <i>Stylocidaris</i>
	EUECHINOIDEA	Diadematoidea	Aulodonta	Diadematidae	<i>Centrostephanus</i>
		Stirodonta	Arbaciidae		<i>Arbacia</i> <i>Arbaciella</i>
		Camarodonta	Temnopleuridae		<i>Genocidaris</i>
				Toxopneustidae	<i>Sphaerechinus</i>
		Echinidae			<i>Echinus</i> <i>Paracentrotus</i> <i>Psammechinus</i>
		Clypeastroida		Fibulariidae	<i>Echinocyamus</i>
		Spatangoida		Brissidae	<i>Brissopsis</i> <i>Brissus</i> <i>Plagiobrissus</i>
				Loveniidae	<i>Echinocardium</i>
				Schizasteridae	<i>Schizaster</i>
				Spatangidae	<i>Spatangus</i>

DISTRIBUTION TABLE

Species	Geographical distribution	Greek Waters	Ionian Sea		Aegean Sea		Sea of Kythira
			Coast	Islands	N	S	
Crinoidea							
<i>Antedon mediterranea</i>		+	+	+	+	+	+
<i>Leptometra phalangium</i>		+	+	+	+	+	+
Holothurioidea							
<i>Holothuria (Panningothuria) forskali</i>				+	+		
<i>Holothuria (Holothuria) helleri</i>			+	+	+	+	
<i>Holothuria (Thymiosyscia) impatiens</i>			+		+		
<i>Holothuria (Holothuria) mammata</i>			+		+	+	
<i>Holothuria (Lessonothuria) polii</i>			+		+	+	
<i>Holothuria (Platyperona) sanctori</i>					+	+	
<i>Holothuria (Holothuria) stellati</i>					+		
<i>Holothuria (Holothuria) tubulosa</i>			+	+	+	+	
<i>Stichopus regalis</i>		+	+		+	+	+
<i>Mesothuria intestinalis</i>			+			+	+
<i>Pseudostichopus occultatus</i>						+	+
<i>Echinocucumis typica</i>					+		
<i>Leptopentacta elongata</i>		+	+	+	+	+	+
<i>Leptopentacta tergestina</i>			+	+	+	+	
<i>Ocnus planci</i>			+	+	+	+	+
<i>Paracucumaria hyndmani</i>					+	+	
<i>Pseudocnus syracusanus</i>					+		
<i>Stereoderma kirschbergi</i>					+	+	
<i>Havelockia inermis</i>					+	+	
<i>Neocucumis marioni</i>					+		
<i>Phyllophorus granulatus</i>			+		+		
<i>Phyllophorus urna</i>					+	+	
<i>Thyone cherbonnieri</i>					+	+	
<i>Thyone fusus</i>			+		+	+	

Species	Geographical distribution	Greek Waters	Ionian Sea		Aegean Sea		Sea of Kythira
			Coast	Islands	N	S	
<i>Thyone roscovita</i>					+	+	
<i>Labidoplax buski</i>				+	+	+	
<i>Labidoplax digitata</i>			+	+	+	+	+
<i>Labidoplax media</i>						+	
<i>Labidoplax thomsoni</i>			+		+		
<i>Leptosynapta galliennei</i>			+				
<i>Leptosynapta inhaerens</i>				+	+		+
<i>Leptosynapta makrankyra</i>			+		+	+	+
<i>Leptosynapta minuta</i>					+		
<i>Irpa ludwigi</i>						+	+
Asteroidea							
<i>Astropecten aranciaceus</i>		+	+		+	+	
<i>Astropecten bispinosus</i>			+		+	+	
<i>Astropecten irregularis pentacanthus</i>		+	+	+	+	+	
<i>Astropecten jonstoni</i>			+	+	+	+	
<i>Astropecten platyacanthus</i>				+	+		
<i>Astropecten spinulosus</i>			+	+	+	+	
<i>Plutonaster bifrons</i>						+	
<i>Tethyaster subinermis</i>		+	+			+	
<i>Luidia ciliaris</i>			+		+	+	
<i>Luidia sarsi</i>		+			+	+	
<i>Chaetaster longipes</i>			+		+	+	
<i>Ceramaster grenadensis</i>						+	+
<i>Peltaster placenta</i>		+	+	+		+	+
<i>Odontaster mediterraneus</i>						+	
<i>Hacelia attenuata</i>		+	+	+	+	+	+
<i>Ophidiaster ophidianus</i>				+		+	
<i>Marginaster capreensis</i>						+	
<i>Anseropoda placenta</i>		+	+	+	+	+	
<i>Asterina gibbosa</i>			+	+	+	+	
<i>Asterina pancerii</i>			+	+			
<i>Echinaster sepositus</i>		+	+	+	+	+	

Species	Geographical distribution	Greek Waters	Ionian Sea		Aegean Sea		Sea of Kythira
			Coast	Islands	N	S	
<i>Coscinasterias tenuispina</i>			+		+	+	+
<i>Marthasterias glacialis</i>		+	+	+	+	+	
<i>Sclerasterias neglecta</i>							+
<i>Sclerasterias richardi</i>				+		+	+
<i>Brisingella coronata</i>					+	+	+
Ophiuroidea							
<i>Astrospartus mediterraneus</i>		+					
<i>Amphilepis norvegica</i>					+	+	
<i>Amphipholis squamata</i>			+	+	+	+	+
<i>Amphiura (Acrocrida) brachiata</i>			+	+		+	
<i>Amphiura cherbonnieri</i>			+	+	+		
<i>Amphiura chiajei</i>			+	+	+	+	+
<i>Amphiura filiformis</i>			+	+	+	+	+
<i>Amphiura lacazei</i>			+	+	+		
<i>Amphiura mediterranea</i>			+	+	+	+	
<i>Ophiacantha setosa</i>		+	+		+	+	
<i>Ophiactis savignyi</i>						+	
<i>Ophiopsila annulosa</i>			+	+	+	+	
<i>Ophiopsila aranea</i>				+	+	+	+
<i>Ophioconis forbesi</i>				+		+	
<i>Ophioderma longicaudum</i>			+	+	+	+	+
<i>Pectinura vestita</i>						+	
<i>Ophiomyxa pentagona</i>			+	+	+	+	
<i>Ophiothrix fragilis</i>		+	+	+	+	+	+
<i>Ophiocten abyssicolum</i>						+	+
<i>Ophiura albida</i>		+	+	+	+	+	+
<i>Ophiura carnea</i>						+	+
<i>Ophiura grubei</i>			+		+	+	
<i>Ophiura ophiura</i>		+	+	+	+	+	+
Echinoidea							
<i>Cidaris cidaris</i>		+		+	+	+	+
<i>Stylocidaris affinis</i>			+	+	+	+	+

Species \ Geographical distribution	Greek Waters	Ionian Sea		Aegean Sea		Sea of Kythira
		Coast	Islands	N	S	
<i>Centrostephanus longispinus</i>	+	+	+	+	+	
<i>Arbacia lixula</i>		+	+	+	+	+
<i>Arbaciella elegans</i>					+	
<i>Genocidaris maculata</i>		+	+	+	+	+
<i>Sphaerechinus granularis</i>	+	+	+	+	+	+
<i>Echinus acutus</i>		+	+	+	+	+
<i>Echinus melo</i>	+					
<i>Paracentrotus lividus</i>	+	+	+	+	+	+
<i>Psammechinus microtuberculatus</i>		+	+	+		
<i>Echinocyamus pusillus</i>	+	+	+	+	+	+
<i>Brissus unicolor</i>		+		+	+	+
<i>Plagiobrissus costai</i>				+	+	+
<i>Echinocardium cordatum</i>		+		+	+	+
<i>Echinocardium fenauxi</i>		+			+	
<i>Echinocardium flavescens</i>				+	+	
<i>Echinocardium mediterraneum</i>		+	+		+	
<i>Schizaster canaliferus</i>	+	+		+	+	+
<i>Spatangus purpureus</i>	+	+	+	+	+	+

<i>Brissopsis lyrifera</i>		+		+	+	+
<i>Brissopsis mediterranea</i>				+	+	+

LIST OF SPECIES

Crinoidea

- | | |
|--------------------------------|-------------------|
| 1 <i>Antedon mediterranea</i> | (Lamarck, 1816) |
| 2 <i>Leptometra phalangium</i> | (J. Müller, 1841) |

Holothurioidea

- | | |
|---|---------------------------|
| 3 <i>Holothuria (Panningothuria) forskali</i> | Delle Chiaje, 1823 |
| 4 <i>Holothuria (Holothuria) helleri</i> | Marenzeller, 1878 |
| 5 <i>Holothuria (Thymiosyscia) impatiens</i> | Forskål, 1775) |
| 6 <i>Holothuria (Holothuria) mammata</i> | Grube, 1840 |
| 7 <i>Holothuria (Lessonothuria) polii</i> | Delle Chiaje, 1823 |
| 8 <i>Holothuria (Platyperona) sanctori</i> | Delle Chiaje, 1823 |
| 9 <i>Holothuria (Holothuria) stellati</i> | Delle Chiaje, 1823 |
| 10 <i>Holothuria (Holothuria) tubulosa</i> | Gmelin, 1788 |
| 11 <i>Stichopus regalis</i> | (Cuvier, 1817) |
| 12 <i>Mesothuria intestinalis</i> | (Ascanius & Rathke, 1867) |
| 13 <i>Pseudostichopus occultatus</i> | Marenzeller, 1893 |
| 14 <i>Echinocucumis typica</i> | M. Sars, 1861 |
| 15 <i>Leptopentacta elongata</i> | (Düben & Koren, 1844) |
| 16 <i>Leptopentacta tergestina</i> | (M. Sars, 1857) |
| 17 <i>Ocnus planci</i> | (Brandt, 1835) |
| 18 <i>Paracucumaria hyndmani</i> | (Thomson, 1840) |
| 19 <i>Pseudocnus syracusanus</i> | (Grube, 1840) |
| 20 <i>Stereoderma kirschsbergi</i> | (Heller, 1868) |
| 21 <i>Havelockia inermis</i> | (Heller, 1868) |
| 22 <i>Neocucumis marioni</i> | (Marenzeller, 1878) |
| 23 <i>Phyllophorus granulatus</i> | (Grube, 1840) |
| 24 <i>Phyllophorus urna</i> | Grube, 1840 |
| 25 <i>Thyone cherbonnieri</i> | Reis, 1959 |
| 26 <i>Thyone fusus</i> | (O.F. Müller, 1788) |
| 27 <i>Thyone roscovita</i> | Hérourard, 1890 |
| 28 <i>Labidoplax buski</i> | (McIntosh, 1866) |
| 29 <i>Labidoplax digitata</i> | (Montagu, 1815) |
| 30 <i>Labidoplax media</i> | Oestergren, 1905 |
| 31 <i>Labidoplax thomsoni</i> | (Herapath, 1865) |
| 32 <i>Leptosynapta galliennei</i> | (Herapath, 1865) |
| 33 <i>Leptosynapta inhaerens</i> | (O.F. Müller, 1776) |
| 34 <i>Leptosynapta makrankyra</i> | (Ludwig, 1898) |

35 *Leptosynapta minuta*

(Becher, 1906)

36 *Irpa ludwigi*

(Marenzeller, 1893)

Asteroidea

37 *Astropecten aranciatus*

(Linnaeus, 1758)

38 *Astropecten bispinosus*

(Otto, 1823)

39 *Astropecten irregularis pentacanthus*

(Delle Chiaje, 1825)

40 *Astropecten jonstoni*

(Delle Chiaje, 1825)

41 *Astropecten platyacanthus*

(Philippi, 1837)

42 *Astropecten spinulosus*

(Philippi, 1837)

43 *Plutonaster bifrons*

W. Thomson, 1873

44 *Tethyaster subinermis*

(Philippi, 1837)

45 *Luidia ciliaris*

(Philippi, 1837)

46 *Luidia sarsi*

Düben & Koren, 1846

47 *Chaetaster longipes*

(Retzius, 1805)

48 *Ceramaster grenadensis*

(Perrier, 1881)

49 *Peltaster placenta*

(Müller & Troschel, 1842)

50 *Odontaster mediterraneus*

Marenzeller, 1891

51 *Hacelia attenuata*

(Gray, 1840)

52 *Ophidiaster ophidianus*

(Lamarck, 1816)

53 *Marginaster capreensis*

(Gasco, 1876)

54 *Anseropoda placenta*

(Pennant, 1777)

55 *Asterina gibbosa*

(Pennant, 1777)

56 *Asterina pancerii*

(Gasco, 1870)

57 *Echinaster sepositus*

(Retzius, 1783)

58 *Coscinasterias tenuispina*

(Lamarck, 1816)

59 *Marthasterias glacialis*

(Linnaeus, 1758)

60 *Sclerasterias neglecta*

(Perrier, 1891)

61 *Sclerasterias richardi*

(Perrier, 1882)

62 *Brisingella coronata*

(O. Sars, 1871)

Ophiuroidea

63 *Astrospartus mediterraneus*

(Risso, 1826)

64 *Amphilepis norvegica*

Ljungman, 1874

65 *Amphipholis squamata*

(Delle Chiaje, 1828)

66 *Amphiura (Acrocrida) brachiata*

(Montagu, 1804)

67 *Amphiura cherbonnieri*

Guille, 1972

68 *Amphiura chiajei*

Forbes, 1843

69 *Amphiura filiformis*

(O.F. Müller, 1776)

70 *Amphiura lacazei*

Guille, 1976

71 *Amphiura mediterranea*

Lyman, 1882

72 *Ophiacantha setosa*

(Retzius, 1805)

73 <i>Ophiactis savignyi</i>	Müller & Troschel, 1842
74 <i>Ophiopsila annulosa</i>	(M.Sars, 1857)
75 <i>Ophiopsila aranea</i>	Forbes, 1843
76 <i>Ophioconis forbesi</i>	(Heller, 1863)
77 <i>Ophioderma longicaudum</i>	(Retzius, 1805)
78 <i>Pectinura vestita</i>	Forbes, 1843
79 <i>Ophiomyxa pentagona</i>	(Lamarck, 1816)
80 <i>Ophiothrix fragilis</i>	(Abildgaard, 1789)
81 <i>Ophiocten abyssicolum</i>	(Forbes, 1845)
82 <i>Ophiura albida</i>	Forbes, 1839
83 <i>Ophiura carnea</i>	(Lütken, 1859)
84 <i>Ophiura grubei</i>	Heller, 1863
85 <i>Ophiura ophiura</i>	(Linnaeus, 1758)

Echinoidea

86 <i>Cidaris cidaris</i>	(Linnaeus, 1758)
87 <i>Stylocidaris affinis</i>	(Philippi, 1845)
88 <i>Centrostephanus longispinus</i>	A. Agassiz, 1869
89 <i>Arbacia lixula</i>	(Linnaeus, 1758)
90 <i>Arbaciella elegans</i>	Mortensen, 1910
91 <i>Genocidaris maculata</i>	A. Agassiz, 1869
92 <i>Sphaerechinus granularis</i>	(Lamarck, 1816)
93 <i>Echinus acutus</i>	Lamarck, 1816
94 <i>Echinus melo</i>	Lamarck, 1816
95 <i>Paracentrotus lividus</i>	(Lamarck, 1816)
96 <i>Psammechinus microtuberculatus</i>	(Blainville, 1825)
97 <i>Echinocyamus pusillus</i>	(O.F.Müller, 1776)
98 <i>Brissopsis lyrifera</i>	(Forbes, 1841)
99 <i>Brissopsis mediterranea</i>	Mortensen, 1913
100 <i>Brissus unicolor</i>	(Leske, 1778)
101 <i>Plagiobrissus costai</i>	(Gasco, 1876)
102 <i>Echinocardium cordatum</i>	(Pennant, 1777)
103 <i>Echinocardium fenauxi</i>	Péquignat, 1963
104 <i>Echinocardium flavescens</i>	(O.F.Müller, 1776)
105 <i>Echinocardium mediterraneum</i>	(Forbes, 1843)
106 <i>Schizaster canaliferus</i>	(Lamarck, 1816)
107 <i>Spatangus purpureus</i>	(O.F.Müller, 1776)

REVIEW OF THE SPECIES

Class
CRINOIDEA
Order
ARTICULATA
Family
ANTEDONIDAE

Genus *Antedon* De Freminville, 1811

1. *Antedon mediterranea* (Lamarck, 1816)

(Map 1)

Synonyms : *Comatula mediterranea* Lamarck, 1816; *Comatula rosacea* Forbes, 1844; *Antedon rosacea* : Carus 1885, Marenzeller 1893, Vatova 1928; *Antedon adriatica* (A.H. Clark, 1911); *Antedon mediterranea*: A. H. Clark 1918, Koehler 1921, 1927, Cherbonnier 1956, Tortonese 1965.

GREEK WATERS (Belloc 1948).

IONIAN SEA

NE of Zakynthos : Montague reef (Christomanos & Giannitsis 1962).

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Kaspiris & Tortonese 1982) - W of Rio; E of Patra; Tourlida (Pancucci & Zenetos 1989).

SEA OF KYTHIRA

Messiniakos Gulf (Pérès & Picard 1958a).

AEGEAN SEA (Voultsiadou-Koukoura 1986).

Trikeri Channel (Koukouras & Sinis 1981).

Oreoi Channel (Bogdanos 1976).

Islands

Between Skyros and Chios; W, S, SW of Limnos (Kisseleva 1963) - N of Samothraki; W, SE of Chios (Koukouras & Sinis 1981) - Lesvos : Baria (Koukouras & Sinis 1981) - NE of Samotraki (Jacquotte 1962) - E of Limnos (Kisseleva 1961) - Ydra (Bogdanos 1983).

N Sporades : N coasts of Alonnisos (Koukouras et al. 1985b).

Kyklades : (Forbes 1844) - Syros; between Paros and Naxos (Pérès & Picard

1958a) - Between Syros and Nata (Pérès & Picard 1958a; Jacquotte 1962) - S of Milos (Kisseleva 1963) - Thira : Nea Kameni (Ledoyer 1969).

Dodekanisos : Rodos : Northern coasts (Tortonese 1946) - S of Kos (Kisseleva 1963).

NW of Kriti (Kisseleva 1963).

Gulfs

Kavala (Koukouras & Sinis 1981).

Strymonikos (Koukouras & Sinis 1981).

Thermaikos : Thessaloniki Bay (Koukouras & Sinis 1981).

Pagazitikos : (Koukouras & Sinis 1981) - Volos Bay (Bogdanos 1990).

N Evvoikos : (Koukouras & Sinis 1981) - Larymna Bay (Pancucci 1987, 1991, 1993, unpublished data) - Chalkis Bay (Pancucci 1991, unpublished data).

Saronikos : Off Methana (Vamvakas 1971).

NOTE. Very probably, specimens referred as *A. bifida* by Christomanos (1963) in the N Evvoikos Gulf must be considered as *A. mediterranea*. They are not included here, considering the impossibility of checking their identity.

Genus *Leptometra* A.H. Clark, 1908

2. *Leptometra phalangium* (J. Müller, 1841)

(Map 2)

Synonyms : *Alecto phalangium* J. Müller, 1841; *Antedon phalangium* : Ludwig 1879, 1881, Carus 1885; *Antedon adriatica* (A. H. Clark, 1911); Boone 1943; *Leptometra phalangium* : Koehler 1921, Cherbonnier 1958, Tortonese 1965.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Korinthiakos (Kaspiris & Tortonese 1982).

SEA OF KYTHIRA

Kythira (Cerigo) (Marenzeller 1893b).

AEGEAN SEA

Central Aegean (Kisseleva & Chukhchin 1965) - NE of Magnisia (Koukouras & Sinis 1981) - SE of Cape Malea; between Cape Malea and Milos

(Marenzeller 1893b) - Between Kriti and Kythira (Cerigo); Cape Malea (Marenzeller 1895).

Islands

Thasos : Panagia (Christomanos 1960) - **W of Chios** (Koukouras & Sinis 1981).

N Sporades : SW of Skiathos; N, E, S of Alonnisos (Koukouras & Sinis 1981).

Kyklades : SW Andros; NW of Paros (Kisseleva 1963) - Between Milos and Serifos (Serpho); E of Serifos (Serpho) (Marenzeller 1895).

Dodekanisos : N and E of Astypalaia (Stampaglia) (Marenzeller 1895).

Kriti : Messaras Gulf; off Irakleio (Tselepides 1992).

Gulfs

Singitikos (Koukouras & Sinis 1981).

Class
HOLOTHURIOIDEA
Order
ASPIDOCHIROTIDA
Family
HOLOTHURIIDAE

Genus *Holothuria* Linnaeus, 1767

3. *Holothuria (Panningothuria) forskali* Delle Chiaje, 1823

(Map 3)

Synonyms : *Holothuria catanensis* Grube, 1840 : Vatova 1928; *Holothuria nigra* Bell, 1884, 1892; *Holothuria forskali* Delle Chiaje, 1823 : Ludwig 1879, Koehler 1921, 1927, Tortonese 1965; *Holothuria (Panningothuria) forskali* : Rowe 1969, Koukouras & Sinis 1981.

IONIAN SEA

Islands

Kefalonia : Argostoli Bay (Kilian & Strauss 1981) - SW of Sapienza (Pérès 1968).

AEGEAN SEA

Islands

Thasos : Theologos (Koukouras & Sinis 1981) - Limnos : Plaka; Moudros; Kondia (Koukouras & Sinis 1981) - Agios Efstratios (Koukouras & Sinis 1981).

N Sporades : NE of Skyros (Koukouras & Sinis 1981).

Gulfs

Kavala : Iraklitsa; Keramoti (Koukouras & Sinis 1981).

N Evvoikos : Off Larymna Bay (Koukouras & Sinis 1981).

4. *Holothuria (Holothuria) helleri* Marenzeller, 1878

(Map 4)

Synonyms : *Holothuria affinis* (nec Brandt 1835) Heller, 1868; *Holothuria helleri* Marenzeller, 1878 : Carus 1885, Koehler 1921, 1927, Panning 1935, Tortonese 1965, 1980; *Holothuria (Holothuria) helleri* : Rowe 1969, Koukouras & Sinis 1981.

IONIAN SEA

Islands

Zakynthos : Alykes (Pancucci & Zenetos 1989) - Kefalonia : E of Sami (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Alykes; Kaminia (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

Thasos : Limenaria (Koukouras & Sinis 1981) - Limnos : Moudros (Koukouras & Sinis 1981) - Psara (Koukouras & Sinis 1981) - Lesvos : Geras Gulf (Pancucci & Zenetos 1990); Sigri (Koukouras & Sinis 1981).

N Sporades : Skopelos : Agnontas (Koukouras & Sinis 1981).

Gulfs

Toronaioi : Nikiti; Moni Megistis; Lavras; Agios Dimitrios (Koukouras & Sinis 1981).

Saronikos : Off Methana (Vamvakas 1971).

5. *Holothuria (Thymiosycia) impatiens* (Forskål, 1775)

(Map 5)

Synonyms : *Fistularia impatiens* Forskål, 1775; *Holothuria impatiens* : Semper 1867, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Cherbonnier 1955, Tortonese 1965, 1980; *Holothuria (Thymiosycia) impatiens* : Rowe 1969, Koukouras & Sinis 1981.

IONIAN SEA

Gulfs

Patraikos : Off Mesolongi Lagoon (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

Limnos : Kondia (Koukouras & Sinis 1981) - Chios : Stefanos (Koukouras & Sinis 1981) - Lesvos : Perama (Koukouras & Sinis 1981); Geras Gulf (Pancucci & Zenetos 1990).

Gulfs

Singitikos : Agios Nikolaos (Koukouras & Sinis 1981).

Thermaikos : Epanomi; N. Iraklia; Mikro Emvolo (Koukouras & Sinis 1981).

Pagasitikos : Amaliapolis (Koukouras & Sinis 1981).

N Evvoikos : Manika; Chalkis Bay; Glyfa; Englezonisi (Koukouras & Sinis 1981).

S Evvoikos : Nea Styra; Paliobori (Koukouras & Sinis 1981).

6. *Holothuria (Holothuria) mammata* Grube, 1840

(Map 6)

Synonyms : *Holothuria mammata* Grube, 1840 : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Panning 1934, Cherbonnier 1960, Tortonese 1965, 1980; *Holothuria stellati mammata* : Panning 1939; *Holothuria (Holothuria) mammata* : Rowe 1969, Koukouras & Sinis 1981.

IONIAN SEA

Gulfs

Patraikos : W of Antirio (Pancucci & Zenetos 1989).

AEGEAN SEA

Trikeri Channel (Koukouras & Sinis 1981).

Islands

Thasos : Limenaria; Theologos (Koukouras & Sinis 1981) - **Limnos :** Plaka; Moudros; Kondia (Koukouras & Sinis 1981) - **Psara :** Psara (Koukouras & Sinis 1981) - **Chios :** Chora; Agios Stefanos (Koukouras & Sinis 1981).

N Sporades : Skopelos; Stafylos (Koukouras & Sinis 1981).

Kriti : Elounta (Pancucci 1993, personal collection).

Gulfs

Kavala : Iraklitsa (Koukouras & Sinis 1981).

Singitikos : Pyrgadikia; Ouranoupolis (Koukouras & Sinis 1981).

Toronaïos : N. Marmaras; Porto Koufo (Koukouras & Sinis 1981).

Thermaikos : Leptokaria; N. Plagia (Koukouras & Sinis 1981).

Strymonikos : (Dounas 1986) - Marmari; Olympiada (Koukouras & Sinis 1981).

S Evvoikos : Nea Styra; Paliobori (Koukouras & Sinis 1981).

7. *Holothuria (Lessonothuria) polii* Delle Chiaje, 1823

(Map 7)

Synonyms : *Holothuria polii* Delle Chiaje, 1823 : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Panning 1934, Mortensen & Steuer 1937, Tortonese 1965, 1980, Ocana et al. 1982, Zavodnik 1980; *Holothuria (Lessonothuria) polii* : Rowe 1969, Koukouras & Sinis 1981.

IONIAN SEA

Gulfs

Amvrakikos : Agios Thomas (Pancucci 1994, personal collection).

AEGEAN SEA

Northern Coasts : Loutra Eleftheron; Ormos Eleftheron; Porto Lagos

(Koukouras & Sinis 1981).

Islands

Thasos : Kalirachi; Theologos (Koukouras & Sinis 1981) - Limnos : Kondia; Myrina (Koukouras & Sinis 1981) - Lesvos (Tortonese 1984, in litteram) - Sigrí; Petra; Makrys Gialos; Baria; Loutra; Kalloni (Koukouras & Sinis 1981) - Chios : Volissos; Chora (Koukouras & Sinis 1981) - Evvoia : Petries (Koukouras & Sinis 1981).

N Sporades : Kyra Panagia (Koukouras et al. 1985b) - Alonnisos : Patitiri (Koukouras & Sinis 1981) - Skopelos : Chora; Stafylos (Koukouras & Sinis 1981) - Skiathos : Mandraki (Koukouras & Sinis 1981) - Skyros : Linaria (Koukouras & Sinis 1981).

Kyklades : Syros (Syra) : Port; Dellagratsia (Politis 1928) - Between Paros and Antiparos (Pérès & Picard 1958a).

Gulfs

Kavala : Iraklitsa (Koukouras & Sinis 1981).

Strymonikos : (Dounas 1986) - Marmari; Olympiada (Koukouras & Sinis 1981).

Ierissou : N. Roda (Koukouras & Sinis 1981).

Singitikos : Sykia; Agios Nikolaos; Xyropotamos (Koukouras & Sinis 1981).

Toronaiois : Polychrono; Gerakini; Nikiti; N. Marmaras (Koukouras & Sinis 1981).

Thermaikos : Mikro; Megalo Emvolo; Michaniona; Epanomi; N. Irakleia; N. Potidea; Akrotiri Pyrgos (Koukouras & Sinis 1981).

Pagasitikos : Amaliapolis; Trikeri (Koukouras & Sinis 1981).

S Evvoikos : Lampsako (Chalkis); Eretria (Koukouras & Sinis 1981).

Saronikos : Legraina; Anavyssos (Pancucci 1992, 1993 personal collection).

8. *Holothuria (Platyperona) sanctori* Delle Chiaje, 1823

(Map 8)

Synonyms : *Holothuria sanctori* Delle Chiaje, 1823 : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Cherbonnier 1958, Tortonese 1965, 1980; *Holothuria farcimen* Mortensen, 1933; *Holothuria (Platyperona) sanctori* : Rowe 1969, Koukouras & Sinis 1981.

AEGEAN SEA

Islands

Limnos : Myrina (Koukouras & Sinis 1981) - Evvoia : Karystos (Koukouras & Sinis 1981).

N Sporades : Alonnisos : Votsi (Koukouras & Sinis 1981) - Skyros : Linaria (Koukouras & Sinis 1981).

Gulfs

Singitikos : Sykia; Agios Nikolaos (Koukouras & Sinis 1981).

Toronaiois : N. Marmaras (Koukouras & Sinis 1981).

Thermaikos : Kalandra (Koukouras & Sinis 1981).

9. *Holothuria (Holothuria) stellati* Delle Chiaje, 1823

(Map 8)

Synonyms : *Holothuria stellati* Delle Chiaje, 1823 : Ludwig 1879, Koehler 1921, 1927, Cherbonnier 1958, Tortonese 1980; *Holothuria (Holothuria) stellati* : Rowe 1969, Koukouras & Sinis 1981.

AEGEAN SEA

Gulfs

Pagasitikos (Koukouras & Sinis 1981).

10. *Holothuria (Holothuria) tubulosa* Gmelin, 1788

(Map 9)

Synonyms : *Holothuria tubulosa* Gmelin, 1788 : Heller 1868, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Panning 1934, Cherbonnier 1956, 1958, Tortonese 1965, 1980; *Holothuria (Holothuria) tubulosa* : Rowe 1969, Koukouras & Sinis 1981.

IONIAN SEA

Coasts

Peloponnisos : (Kaspiris & Tortonese 1982) - Kalogria (Pancucci & Zenetos 1989).

Islands

Zakynthos : Kalamaki; Alikanas; Alykes (Pancucci & Zenetos 1989) - **Kefalonia** : coasts W of Argostoli (Kilian & Strauss 1981); Lixouri; S and N of Lixouri (Pancucci & Zenetos 1989).

Gulfs

Patraikos : W of Antirio; off Mesolongi Lagoon; Kaminia (Pancucci & Zenetos 1989).

Korinthiakos : SE Trizonia island (Pérès & Picard 1958a).

AEGEAN SEA

Northern Coasts : Ormos Eleftheron; Loutra Eleftheron; Porto Lagos; Makri (Koukouras & Sinis, 1981).

Islands

Limnos : Myrina (Koukouras & Sinis 1981) - **Lesvos** : Loutra; Perama

(Koukouras & Sinis 1981); Geras Gulf (Pancucci & Zenetos 1990) - Evvoia : Tsakei (Koukouras & Sinis 1981).

N Sporades : Skiathos : Mandraki (Koukouras & Sinis 1981) - Skopelos : Chora; Stafylos (Koukouras & Sinis 1981).

Kyklades : Paros : Naoussa Bay (Forbes 1844) - W Kea (Zea); between Paros and Antiparos (Pérès & Picard 1958a).

Kriti : Mirabello Gulf (Pancucci 1993, personal collection).

Gulfs

Kavala : Keramoti (Koukouras & Sinis 1981).

Ierissou : N. Roda (Koukouras & Sinis 1981).

Singitikos : Agios Nikolaos (Koukouras & Sinis 1981).

Toronaïos : N. Potidea; Gerakini; N. Marmaras; Porto Koufo (Koukouras & Sinis 1981).

Strymonikos : Olympiada (Koukouras & Sinis 1981).

Thermaikos : Michaniona; Epanomi; N. Iraklia; Mikro Emvolo; Megalo Emvolo; Litochoron (Koukouras & Sinis 1981).

Pagazitikos : Amaliapolis; N. Anchialos; Trikeri (Koukouras & Sinis 1981).

Maliakos (Koukouras & Sinis 1981).

N Evvoikos : Chalkis (Koukouras & Sinis 1981).

Saronikos : Faliron Bay (Panagiotopoulos 1916).

Family

STICHOPODIDAE

Genus *Stichopus* Brandt, 1835

11. *Stichopus regalis* (Cuvier, 1817)

(Map 10)

Synonyms : *Holothuria regalis* Cuvier, 1817 : Grube 1840, Heller 1868; *Holothuria columnae* Cuvier, 1817; *Holothuria triquerta* Delle Chiaje, 1841; *Eostichopus regalis* : Cutress & Miller 1982, Lopez-Ibor 1987; *Stichopus regalis* : Selenka 1867, Ludwig 1879, Carus 1885, Marenzeller 1893, Koehler 1921, 1927, Deichmann 1940, Madsen 1947, Cherbonnier 1956, Tortonese 1965, 1980, Zavodnik 1980, Olaso Toca 1982, Ocana et al. 1982, Riedl 1983.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

Korinthiakos (Kaspiris & Tortonese 1982).

SEA OF KYTHIRA

E of Kythira (Cerigo) (Marenzeller 1893b).

AEGEAN SEA (Steindachner 1891).

Trikeri Channel (Koukouras & Sinis 1981).

Islands

E and SW of Thasos; N of Samothraki; S, W and SW of Limnos; W of Chios (Koukouras & Sinis 1981) - Evvoia : Kymi (Koukouras & Sinis 1981).

Kyklades : N of Thira (Santorin); W of Milos (Marenzeller 1893b).

Dodekanisos : N of Astypalaia (Stampaglia) (Marenzeller 1895).

Gulfs

Kavala (Koukouras & Sinis 1981).

Strymonikos (Koukouras & Sinis 1981).

Singitikos (Koukouras & Sinis 1981).

Toronaïos (Koukouras & Sinis 1981).

Thermaikos (Koukouras & Sinis 1981).

Thessaloniki (Koukouras & Sinis 1981).

Pagazitikos (Koukouras & Sinis 1981).

N Evvoikos : Larymna Bay (Pancucci 1991, 1993, unpublished data) - Chalkis Bay (Pancucci 1991, unpublished data).

Saronikos : Between Salamina and Aigina (Vamvakas 1971).

Family

SYNALLACTIDAE

Genus *Mesothuria* Ludwig, 1894

12. *Mesothuria intestinalis* (Asçanius & Rathke, 1867)

(Map 11)

Synonyms : *Holothuria intestinalis* Asçanius & Rathke, 1867 : Theel 1886, Marenzeller 1893, 1895; *Mesothuria verrilli* (nec Theel) Tortonese, 1952; *Mesothuria intestinalis* : Perrier 1902, Koehler 1927, Mortensen 1927, Nobre 1931, Heding 1942, Deichmann 1954, Tortonese 1965, 1980, Cherbonnier 1969.

IONIAN SEA

Gulfs

Patraikos : Limanaki (Pancucci & Zenetos 1989).

SEA OF KYTHIRA

S of Kythira (Cerigo) (Marenzeller 1893a, b).

AEGEAN SEA

Islands

N of Samos (Marenzeller 1895).

Kyklades : Antimilos (Anti-Milos) (Marenzeller 1893a, b).

LIBYAN SEA

SW of Kriti (Marenzeller 1893b).

Genus *Pseudostichopus* Theel, 1882

13. *Pseudostichopus occultatus* Marenzeller, 1893

(Map 11)

SEA OF KYTHIRA

Around Kythira (Cerigo); SW of Cape Tainaro (Matapan) (Marenzeller 1893b).

AEGEAN SEA

Between Kythira (Cerigo) and Kriti (Candia); N of Kriti (Marenzeller 1895).

Islands

Kyklades : S and W of Milos; Antimilos (Anti-Milos) (Marenzeller 1893a,b).

Dodekanisos : E and N of Astypalaia (Stampaglia) (Marenzeller 1895).

LIBYAN SEA

S and W of Kriti (Marenzeller 1893a,b).

Order

DENDROCHIROTIDA

Family

CUCUMARIIDAE

Genus *Echinocucumis* M. Sars, 1861

14. *Echinocucumis typica* Sars, 1861

(Map 12)

Synonyms : *Cucumaria hispida* Bell, 1892; *Echinocucumis typica* Sars, 1861 : Mortensen 1924, Kochler 1927.

AEGEAN SEA

Gulfs

Kavala (Papazacharias 1991).

Genus *Leptopentacta* Panning, 1966

15. *Leptopentacta elongata* (Düben & Koren, 1844)

(Map 13)

Synonyms : *Cucumaria elongata* Düben & Koren, 1844 : Marenzeller 1874, Kochler 1921, 1927, Mortensen 1927, Nobre 1930, Vatova 1958; *Cucumaria pentactes* (nec Linnaeus) Forbes, 1841 : Ludwig 1879, Carus 1885; *Cucumaria cucumis* Belloc, 1948; *Trachythyone elongata* : Panning 1949, Cherbonnier 1958, Tortonesc 1965, 1980; *Leptopentacta elongata* : Panning 1966, Koukouras & Sinis 1981.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Islands

Kerkyra : Off NE coasts (Bogdanos in Gotsis et al. 1991a).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - Agia (Pancucci & Zenetos 1989).

Amvrakikos : Off Louros River estuary (Bogdanos et al. 1989).

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio (Pancucci in Zenetos et al. 1992a).

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989, unpublished data).

Kyklades : Milos : Adamas Bay (Pancucci in N.C.M.R. 1989).

Kriti : Irakleio (Candia) Bay (Pérès & Picard 1958a) - Siteia; Messaras Gulf (Karakassis, 1991).

Gulfs

Kavala : (Papazacharias 1991) - Kalamitsa; Karvali; Kalamoti (Koukouras & Sinis 1981).

Strymonikos : (Dounas 1986) - Marmari; Olympiada; Stavros; Kariani (Koukouras & Sinis 1981).

Thermaikos : Makrygialos; Alykes Katerinis; N. Agathoupoli; Aliakmon; Loudias and Axios River estuaries; Lefkoudi; Paliomana; Thessaloniki Bay; Mikro Emvolo; Trimini; Agia Triada; Megalo Emvolo (Koukouras & Sinis 1981) - offshore and Eastern coasts of the Gulf (Zarkanellas 1980) - Off Cape Atherida (Pancucci in NCMR Data Report 1993a) - Megalo Emvolo (Pancucci in NCMR Data Report 1993a, b).

Pagasitikos : (Bogdanos & Satsmadjis 1983) - Volos Bay (Bogdanos 1975, 1989, 1993).

N Evvoikos : Larymna Bay (Pancucci in Papadopoulos 1986; Nicolaidou et al. 1993) - Atalanti Bay (Pancucci in Zenetos et al. 1987).

Saronikos : Elefsis Bay (Zenetos & Bogdanos 1987) - Off Agios Kosmas; off Vouliagmeni (Pancucci in Zenetos et al. 1991).

16. *Leptopentacta tergestina* (M. Sars, 1857)

(Map 14)

Synonyms : *Cucumaria tergestina* M. Sars, 1857 : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Nobre 1930, Tortonese 1952; *Cucumaria pentactes* Marchisio, 1896; *Cucumaria incurvata* Perrier, 1902; *Trachythyone tergestina* : Panning 1949, Cherbonnier 1958, Tortonese 1965, 1980, Cherbonnier 1980; *Leptopentacta tergestina* : Panning 1966, Koukouras & Sinis 1981.

IONIAN SEA

Islands

Kerkyra : Potamos Bay (Bogdanos in Gotsis et al. 1991a).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - Agia; Patra; Rogitika (Pancucci & Zenetos 1989).

AEGEAN SEA

Trikeri Channel (Koukouras & Sinis 1981).

Islands

Lesvos : Geras Gulf (Diapoulis & Bogdanos 1983; Pancucci & Zenetos 1990).

Kriti : Irakleio (Eleftheriou et al. 1990) - Mirabello Gulf (Pancucci 1993, personal collection).

Gulfs

Kavala : (Papazacharias 1991) - Iraklitsa (Koukouras & Sinis 1981).

Strymonikos (Koukouras & Sinis 1981).

Thermaikos : Alykes Katerinis (Koukouras & Sinis 1981) - Megalo Emvolo (Pancucci in NCMR Data Report 1993a).

Pagositikos : (Koukouras & Sinis 1981); (Bogdanos & Satsmadjis 1983, 1985) - Volos Bay (Bogdanos 1989, 1993).

Saronikos : W of Aigina; between Aigina and Salamina (Vamvakas 1970, 1971).

Genus *Ocnus* Forbes, 1841

17. *Ocnus planci* (Brandt, 1835)

(Map 15)

Synonyms : *Cladodactyla planci* Brandt, 1835; *Cucumaria planci* : Marenzeller 1874, Carus 1885, Koehler 1921, 1927, Mortensen 1927, Cherbonnier 1951, Tortonese 1965; *Ludwigia planci* : Panning 1949, Cherbonnier 1958; *Pentacucumis planci* : Deichmann 1957; *Ocnus planci* : Rowe 1970, Panning 1971, Tortonese 1980, Koukouras & Sinis 1981.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Islands

Kerkyra : Off NE coasts (Bogdanos in Gotsis et al. 1991b).

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio; off Evrotas River estuary (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Trikeri Channel (Koukouras & Sinis 1981).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990) - Evvoia : Petries (Koukouras & Sinis 1981).

Kyklades : NW Sifnos (Pancucci in N.C.M.R. 1989) - Milos : Adamas Bay (Pancucci in N.C.M.R. 1989).

Gulfs

Strymonikos (Koukouras & Sinis 1981).

Thermaikos : Mikro Emvolo; Megalo Emvolo; Thessaloniki Bay (Koukouras & Sinis 1981) - Epanomi; off Axios River estuary; Western coasts of the outer Gulf (Pancucci in NCMR Data Reports 1993a, b, c).

Pagazitikos : N. Anchialos (Koukouras & Sinis 1981).

N Evvoikos : (Koukouras & Sinis 1981) - Larymna Bay (Pancucci in Papadopoulos 1986; Nicolaidou et al. 1993; Pancucci in N.C.M.R. 1992).

S Evvoikos (Koukouras & Sinis 1981); (Pancucci in N.C.M.R. 1992).

Genus *Paracucumaria* Panning, 1949

18. *Paracucumaria hyndmani* (Thomson, 1840)

(Map 12)

Synonyms: *Holothuria hyndmanni* Thomson, 1840; *Cucumaria hyndmanni* : Koehler 1921, 1927, Tortonese 1965; *Paracucumaria hyndmani*: Panning 1949, Cherbonnier 1958, Tortonese 1980.

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Gulfs

Thermaikos : Trimini; Agia Triada; Epanomi (Koukouras & Sinis 1981).

Saronikos (Pancucci in Zenetos et al. 1991).

Genus *Pseudocnus* Panning, 1962

19. *Pseudocnus syracusanus* (Grube, 1840)

(Map 12)

Synonyms : *Cladodactyla syracusana* Grube, 1840; *Cucumaria syracusana* : M. Sars 1857, Marenzeller 1874, Carus 1885, Koehler 1921, 1927, Cherbonnier 1956, Tortonese 1965; *Ocnus syracusanus* : Panning 1949; *Pseudocnus syracusanus* : Panning 1962, Tortonese 1980.

AEGEAN SEA

Islands

Off Lesvos : Bruker Bank (Makkavieva 1963).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Genus *Stereoderma* Ayres, 1851

20. *Stereoderma kirschbergi* (Heller, 1868)

(Map 15)

Synonyms : *Cucumaria kirschbergi* Heller, 1868 : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Gauthier-Michaz 1958, Tortonese 1965; *Ocnus? kirschbergi* : Marenzeller 1874; *Stereoderma kirschbergi* : Panning 1949, Cherbonnier 1958, 1960, Tortonese 1980.

AEGEAN SEA

Gulfs

Kavala : Iraklitsa (Koukouras & Sinis 1981) - Off Cape Vrasidas (Papazacharias 1991).

Saronikos : NW of Aigina (Vamvakas 1971).

Family

PHYLLOPHORIDAE

Genus *Havelockia* Pearson, 1903

21. *Havelockia inermis* (Heller, 1868)

(Map 16)

Synonyms : *Thyone inermis* Heller, 1868 : Ludwig 1879, Carus 1885, Marenzeller 1893, Koehler 1921, 1927, Mortensen 1927; *Uroxia aurantiaca* Costa, 1869; *Thyone aurantiaca* : Ludwig 1881, Carus 1885; *Havelockia inermis* : Cherbonnier 1958, Tortonese 1965, 1980.

AEGEAN SEA

Oreoi Channel (Pancucci 1991, unpublished data).

Islands

Chios : Katarraktis (Koukouras & Sinis 1981) - S and SW of Lesbos : (Koukouras & Sinis 1981).

Gulfs

Toronaioi (Koukouras & Sinis 1981).

Saronikos : Between Salamina and Aigina (Pancucci 1994a).

Genus *Neocucumis* Deichmann, 1944

22. *Neocucumis marioni* (Marenzeller, 1878)

(Map 16)

Synonyms : *Cucumaria marioni* Marenzeller, 1878 : Carus 1885; *Pseudocucumis marioni* : Koehler 1921, 1927, Gautier-Micaz 1958; *Neocucumis marioni* : Heding-Panning 1954, Cherbonnier 1958, Tortonese 1965, 1980.

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

Genus *Phyllophorus* Grube, 1840

23. *Phyllophorus granulatus* (Grube, 1840)

(Map 17)

Synonyms : *Psolus granulatus* Grube, 1840; *Euphylllophorus granulatus* : Deichmann 1938; *Phyllophorus granulatus* : Koehler 1927, Cherbonnier & Guille 1972, Tortonese 1980, Koukouras & Sinis 1981.

IONIAN SEA

Gulfs

Patraikos : Alissos (Pancucci & Zenetos 1989).

AEGEAN SEA

Gulfs

Strymonikos (Dounas 1986).

Thermaikos : Alykes Katerinis (Koukouras & Sinis 1981).

24. *Phyllophorus urna* Grube, 1840

(Map 17)

AEGEAN SEA

Islands

Chios : Chora (Koukouras & Sinis 1981).

Gulfs

Strymonikos (Koukouras & Sinis 1981); (Dounas 1986).

Thermaikos : Alykes Katerinis (Koukouras & Sinis 1981).
N Evvoikos : Chalkis Bay (Pancucci 1991, unpublished data).
Saronikos : Between Methana and Aigina (Vamvakas 1971).

Genus *Thyone* Oken, 1815

25. *Thyone cherbonnieri* Reis, 1959

(Map 18)

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Gulfs

Kavala : Karvali (Koukouras & Sinis 1981).

Strymonikos : (Dounas 1986) - Stavros (Koukouras & Sinis 1981).

Thermaikos : Makrygialos; Alykes Katerinis N. Agathoupolis; Thessaloniki Bay; Trimini; Agia Triada; Megalo Emvolo; Epanomi (Koukouras & Sinis 1981) - Off Cape Atherida (Pancucci in NCMR Data Report 1993c).

N Evvoikos : Chalkis Bay (Pancucci in N.C.M.R. 1992).

Saronikos : NW of Aigina (Vamvakas 1970, 1971).

26. *Thyone fusus* (O.F. Müller, 1788)

(Map 18)

Synonyms : *Holothuria fusus* O.F. Müller, 1788; *Thyone fusus mediterranea* : Madsen 1941, Tortonese 1952, 1980; *Thyone fusus* : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Cherbonnier 1958, Tortonese 1965.

IONIAN SEA

Gulfs

Patraikos (Bogdanos & Nicolaidou 1985).

AEGEAN SEA

Trikeri Channel (Koukouras & Sinis 1981).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Kyklades : SW of Tinos (Pancucci in N.C.M.R. 1989).

Gulfs

Strymonikos : (Dounas 1986) - Olympiada (Koukouras & Sinis 1981).

Toronaïos : Porto Koufo (Koukouras & Sinis 1981).

Thermaïkos : (Koukouras & Sinis 1981) - Eastern coasts between Mikro and Megalo Emvolo (Zarkanellas 1980).

Pagasitikos : (Bogdanos & Satsmadjis 1983, 1985) - Volos Bay (Bogdanos 1989).

Saronikos : W of Aigina; between Aigina and Salamina (Vamvakas 1971).

27. *Thyone roscovita* Hérouard, 1890

(Map 18)

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Gulfs

Saronikos : Between Salamina and Aigina (Pancucci 1994a).

Order

APODIDA

Family

SYNAPTIDAE

Genus *Labidoplax* Oestergren, 1898

28. *Labidoplax buski* (McIntosh, 1866)

(Map 19)

Synonyms : *Synapta buskii* McIntosh, 1866 : Theel 1885; *Synapta tenera* Norman, 1864; Bredy et Robertson 1871; *Labidoplax tenera* : Oestergren 1898; *Labidoplax buski*: Oestergren 1902, 1905, Clark 1907, Mortensen 1924, 1927, Koehler 1927, Salvini-Plawen 1972, Zavodnik 1980.

IONIAN SEA

Islands

Eastern Coasts of Kerkyra (Corfu) (Salvini-Plawen 1977).

AEGEAN SEA

Oreoi Channel (Pancucci 1991, unpublished data).

Islands

Kriti : Kissamos; Chania; Siteia (Karakassis 1991).

29. *Labidoplax digitata* (Montagu, 1815)

(Map 20)

Synonyms : *Holothuria digitata* Montagu, 1815; *Synapta digitata* : Heller 1868, Ludwig 1879, Carus 1885, Marenzeller 1895; *Oestergrenia digitata* : Tortonese 1937-38, 1959, Cherbonnier 1958, Zavodnik 1973, 1977, Zavodnik et al. 1978; *Labidoplax* (*Oestergrenia*) *digitata* var. *adriatica* Salvini-Plawen, 1972; *Oestergrenia adriatica* : Salvini-Plawen 1977, Riedl 1983; *Labidoplax digitata* : H.L. Clark 1907, Koehler 1921, 1927, Mortensen 1927, Tortonese 1935, 1965, 1980, Zavodnik 1980.

IONIAN SEA

Off Preveza Channel (Bogdanos et al. 1989) - Between Kerkyra and Ipeiros coasts (Bogdanos in Gotsis et al. 1991a, b).

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos : Navarino Bay (Bogdanos et al. 1984).

Islands

Kerkyra : N coasts (Salvini-Plawen 1977) - Off NE coasts (Bogdanos in Gotsis et al. 1991a, b; 1992) - NW of Kerkyra Port (Bogdanos et al. 1993).

Gulfs

Patraikos (Bogdanos & Nicolaidou 1985).

Amvrakikos : Off Louros River estuary; off Alyki (Ignatiades et al. 1981) - Off Louros River estuary (Nicolaidou et al. 1983) - Amfilochia; Preveza Bay; offshore stations (Bogdanos et al. 1989).

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Between Limnos and Lesvos (Mytilene); S and N of Samos (Marenzeller 1895).

Trikeri Channel (Koukouras & Sinis 1981); (Bogdanos 1993).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Northern Coasts : Ormos Eleftheron (Koukouras & Sinis 1981).

Islands

Lesvos : Geras Gulf (Diapoulis & Bogdanos 1983; Pancucci & Zenetos 1990) - Kalloni Gulf (Pancucci 1989, unpublished data) - W of Chios; W of Limnos (Koukouras & Sinis 1981).

Kyklades : NW Sifnos (Pancucci in N.C.M.R. 1989) - Milos : NE coasts (Bogdanos et al. 1990) - Between Serifos (Serpho) and Milos (Marenzeller 1895) - N of Thira (Vamvakas 1970).

Dodekanisos : Rodos : NW coasts (Pancucci in Karydis et al. 1987; Pancucci et al. in preparation).

Kriti : Irakleio (Vamvakas 1970) - **Ierapetra** (Eleftheriou et al. 1990) - **Chania, Ierapetra** (Karakassis 1991) - **Off Irakleio** (Tselepides 1992).

Gulfs

Kavala: (Papazacharias 1991) - **Keramoti; Karvali; Kavala; Kalamitsa** (Koukouras & Sinis 1981) - **N. Karvali** (Bogdanos et al. 1984).

Strymonikos : (Dounas 1986); (Dounas & Koukouras 1992) - **Marmari; Olympiada; Stavros; Asprovalta; Kyani akti; Kariani** (Koukouras & Sinis 1981).

Thermaikos : (Zarkanella & Kattoulas 1982) - Thessaloniki Bay; offshore stations (Zarkanellas 1980; Koukouras & Sinis 1981) - **Megalo Emvolo; W coasts of the outer Gulf; Epanomi; off Axios River estuary; Cape Atherida** (Pancucci in NCMR Data Reports 1993a, b, c).

Pagazitikos : (Bogdanos & Satsmadjis 1983, 1985) - **Volos Bay** (Bogdanos 1975, 1989, 1993).

Maliakos : (Pancucci in N.C.M.R. 1992); (Pancucci 1993, unpublished data).

N Evvoikos : Larymna Bay (Pancucci in Papadopoulos 1986; Nicolaidou et al. 1993; Pancucci in N.C.M.R. 1992) - **Theologos Gulf** (Pancucci 1991, unpublished data).

S Evvoikos (Pancucci in N.C.M.R. 1992).

Saronikos : Between Salamina and Aigina (Vamvakas 1970, 1971) - **Elefsis Bay** (Zenetos & Bogdanos 1987).

30. *Labidoplax media* Oestergren, 1905

(Map 19)

Synonyms : *Oestergrenia media* : Vamvakas 1971.

AEGEAN SEA

Gulfs

Saronikos : NW of Aigina (Vamvakas 1971).

31. *Labidoplax thomsoni* (Herapath, 1865)

(Map 19)

Synonyms : *Synapta thomsoni* Herapath, 1865 : Ludwig 1898; *Oestergrenia thomsoni* : Tortonese 1938; *Labidoplax thomsoni* : H.L. Clark 1907, Koehler 1921, 1927, Tortonese 1965, 1980, Salvini-Plawen 1972.

IONIAN SEA

Gulfs

Amvrakikos (Nicolaidou 1980, unpublished data).

AEGEAN SEA

Gulfs

Kavala : Karvali (Koukouras & Sinis 1981).

Genus *Leptosynapta* Verrill, 1867

32. *Leptosynapta galliennei* (Herapath, 1865)

(Map 21)

Synonyms : *Synapta galliennei* Herapath, 1865; *Synapta sarniensis* Herapath, 1865; *Leptosynapta galliennei* : Clark 1907, Cuenot 1912, Koehler 1921, 1927, Mortensen 1927, Vatova 1949, Cherbonnier 1953, Salvini-Plawen 1972, Allain 1973.

IONIAN SEA

Coasts

Peloponnisos : Glyfa; off Pineios River estuary (Pancucci & Zenetos 1989).

33. *Leptosynapta inhaerens* (O.F. Müller, 1776)

(Map 21)

Synonyms : *Holothuria inhaerens* O.F. Müller, 1776; *Synapta inhaerens* : Heller 1868, Ludwig 1879, Carus 1885, Becher 1906; *Synapta inhaerens* (Holothuria) : Theel 1886; *Leptosynapta inhaerens* : H.L. Clark 1907, Koehler 1921, 1927, Mortensen 1927, Cherbonnier 1953, 1963, Tortonese 1965, 1980.

IONIAN SEA

Islands

Kerkyra : NE coasts (Salvini-Plawen 1977).

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Gulfs

N Evvoikos (Pancucci in N.C.M.R. 1992).

34. *Leptosynapta makrankyra* (Ludwig, 1898)

(Map 22)

Synonyms : *Synapta makrankyra* Ludwig, 1898; *Leptosynapta galliennei* var. *makrankyra* : Koehler 1921, Salvini-Plawen 1972; *Leptosynapta makrankyra* : Heding 1928, Tortonese 1965, 1980, Zavodnik 1980.

IONIAN SEA

Coasts

Peloponnisos : Cape Katakolo (Pancucci & Zenetos 1989).

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Northern Coasts : Ormos Eleftheron (Koukouras & Sinis 1981).

Islands

Kyklades : S of Paros (Pancucci in N.C.M.R. 1989).

Gulfs

Kavala (Papazacharias 1991).

Thermaikos : Alykes Katerinis; Thessaloniki Bay (Koukouras & Sinis 1981).

35. *Leptosynapta minuta* (Becher, 1906)

(Map 21)

Synonyms : *Synapta minuta* Becher, 1906; *Leptosynapta minuta* : Clark 1907, Mortensen 1924, 1927, Koehler 1927, Cherbonnier 1953, Moncharmont 1968, Salvini-Plawen 1977, Tortonese 1980.

AEGEAN SEA

Oreoi Channel (Pancucci 1994b).

Gulfs

N Evvoikos : Larymna Bay (Pancucci 1994b).

Order

ELASIPODIDA

Family

ELPIDIIDAE

Genus *Irpa* Hansen, 1975

36. *Irpa ludwigi* (Marenzeller, 1893)

(Map 23)

Synonyms : *Kolga ludwigi* Marenzeller, 1893 : Tortonese 1965; *Periamma ludwigi* : Herouard 1923; *Penilpidia ludwigi* : Gebruk 1988, Fiege & Yulin 1994; *Irpa ludwigi* : Hansen 1975, Tortonese 1980, Billet & Hansen 1982.

SEA OF KYTHIRA

Kythira (Cerigo) (Marenzeller 1893b).

AEGEAN SEA

SE of Cape Malea; between Kythira (Cerigo) and Kriti (Candia) Marenzeller (1893a) - S of Peloponnisos (Fiege & Yulin 1994).

Class
ASTEROIDEA
Order
PAXILLIDA
Family
ASTROPECTINIDAE

Genus *Astropecten* Gray, 1840

37. *Astropecten aranciatus* (Linnaeus, 1758)
(Map 24)

Synonyms : *Asterias aranciaca* Linnaeus, 1758; *Astropecten aurantiacus* Müller & Troschel, 1842 : Carus 1885, Koehler 1921, 1924, Tortonese 1935, Cherbonnier 1958; *Astropecten gruveli* Koehler, 1912; *Astropecten aranciatus* : Doderlein, 1917, Tortonese 1948, 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Bogdanos & Nicolaidou 1985).

Amvrakikos : Offshore stations (Bogdanos et al. 1989).

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

N Sporades : Between Gioura and Prasso (Christomanos 1963) - Psathoura (Koukouras et al. 1985b).

Dodekanisos : Rodos : Cum Burnu; Rodos Harbour (Tortonese 1946).

Kriti : S of Kaloi Limenes (Kalo - Limniones) Bay (Pérès & Picard 1958a).

Gulfs

Thermaikos : Cape Kissavos (Dermatas) (Christomanos 1960).

Pagazitikos : Volos Bay (Bogdanos 1989, 1993).

N Evvoikos : Larymna Bay (Pancucci 1987, 1991, 1993 unpublished data).

Saronikos : Faliron Bay (Athanasopoulos 1921).

38. *Astropecten bispinosus* (Otto, 1823)

(Map 25)

Synonyms : *Asterias bispinosa* Otto, 1823; *Astropecten bispinosus* : Müller & Troschel 1842, Marenzeller 1875, Carus 1885, Ludwig 1897, Koehler 1921, 1924, Tortonese 1935, 1965, 1980, Madsen 1950, Cherbonnier 1956, 1958.

IONIAN SEA

Coasts

Peloponnisos : Kounoupeli; Spiantza; Manolada (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

N Sporades : Psathoura (Koukouras et al. 1985b).

Dodekanisos : Rodos : Cum Burnu (Tortonese 1946).

Gulfs

Strymonikos (Dounas 1986).

39. *Astropecten irregularis pentacanthus* (Delle Chiaje, 1825)

(Map 26)

Synonyms : *Asterias pentacantha* Delle Chiaje, 1825; *Astropecten pentacanthus* : Müller & Troschel 1842, Heller 1868, Marenzeller 1893, Ludwig 1897, Vatova 1928; *Astropecten irregularis* Koehler, 1821, 1824; *Astropecten irregularis pentacanthus* : Doderlein 1917, Mortensen 1925, Madsen 1950, Vatova 1950, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos : Kilini (Pancucci & Zenetos 1989)

Islands

Kefalonia : (Kaspiris & Tortonese 1982) - Kerkyra : Potamos Bay (Bogdanos in Gotsis et al. 1991b).

Gulfs

Patraikos : (Kaspiris & Tortonese 1982) - Rogitika (Pancucci & Zenetos 1989).

Korinthiakos (Kaspiris & Tortonese 1982).

AEGEAN SEA

Kyklades : Antimilos (Anti-Milos) (Marenzeller 1893b).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986).

N Evvoikos : Cape Korakas (Christomanos & Giannitsis 1962) - Chalkis Bay (Pancucci 1991, unpublished data).

40. *Astropecten jonstoni* (Delle Chiaje, 1825)

(Map 27)

Synonyms : *Asterias jonstoni* Delle Chiaje, 1825; *Astropecten squamatus* Müller & Troschel, 1844 : Carus 1885, Ludwig 1897; *Astropecten aster* De Filippi, 1859 : Lutken 1864; *Astropecten jonstoni* : Perrier 1876, Koehler 1921, 1924, Cherbonnier 1956, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos : Kalogria; Kilini; Loutra Kilinis; Douneika; off Alfeios River estuary; Spiantza; Samiko (Pancucci & Zenetos 1989).

Islands

Zakynthos : Kalamaki (Pancucci & Zenetos 1989) - Kefalonia : Vlachata; Platy Gialos (Pancucci & Zenetos 1989) - Ithaki : Agios Ioannis; Afales Bay (Pancucci 1979, personal collection).

Gulfs

Patraikos : Alykes; Niforeika (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

Kyklades : Milos : NE coasts (Bogdanos et al. 1990).

Dodekanisos: Rodos : NW coasts (Pancucci et al. in preparation) - Kos : Coast between Tigaki and Marmari (Bianchi & Morri 1983a, b) - Kalymnos : Saris (Kastritsi 1993, unpublished data).

Kriti : S of Kaloi Limenes (Kalo-Limniones) Bay (Pérès & Picard 1958a).

Gulfs

N Evvoikos (Pancucci in N.C.M.R. 1992).

Saronikos : Palaia Fokaia (Pancucci 1987, personal collection).

41. *Astropecten platyacanthus* (Philippi, 1837)

(Map 26)

Synonyms : *Asterias platyacantha* Philippi, 1837; *Astropecten bispinosus platyacanthus*:

Ludwig 1897, Koehler 1921, 1924, Tortonese 1935; *Astropecten platyacanthus* : Müller & Troschel 1842, Carus 1885, Vatova 1950, Tortonese 1947, 1965, 1980.

IONIAN SEA

Islands

Kefalonia : Lixouri (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

N Sporades : Skiathos : Agia Paraskevi (Nicolaidou et al. 1986).

42. *Astropecten spinulosus* (Philippi, 1837)

(Map 28)

Synonyms : *Asterias spinulosa* Philippi, 1837; *Astropecten spinulosus* : Müller & Troschel 1842, Carus 1885, Ludwig 1897, Koehler 1921, 1924, Cherbonnier 1956, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos : (Kaspiris & Tortonese 1982) - Kilini (Pancucci & Zenetos 1989) - Navarino Bay (Pancucci 1993, personal collection).

Islands

Kefalonia : Vlachada; Sami (Pancucci & Zenetos 1989).

Gulfs

Patraikos : (Bogdanos & Satsmadjis 1987) - W of Antirio; Paralia (Pancucci & Zenetos 1989).

Amvrakikos : Amfilochia Bay (Bogdanos et al. 1989).

AEGEAN SEA

Islands

Kriti : Elounta; Mirabello Gulf (Pancucci 1993, personal collection).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986).

Thermaikos : Off Axios River estuary (Pancucci in NCMR Data Report 1993c).

Pagazitikos : (Bogdanos & Satsmadjis 1983) - Volos Bay (Bogdanos 1975, 1990).

Genus *Plutonaster* Sladen, 1885

43. *Plutonaster bifrons* (W. Thomson, 1873)

(Map 29)

Synonyms : *Archaster bifrons* W. Thomson, 1873 ; Carus 1885; *Plutonaster bifrons* : Sladen 1885, Marenzeller 1893, Tortonese 1965, 1980.

AEGEAN SEA

W of Kriti (Candia) (Marenzeller 1893b).

Genus *Tethyaster* Sladen, 1889

44. *Tethyaster subinermis* (Philippi, 1837)

(Map 29)

Synonyms : *Asterias subinermis* Philippi, 1837; *Astropecten subinermis* : Müller & Troschel 1832, Carus 1885; *Plutonaster subinermis* : Ludwig 1897; *Tethyaster subinermis* : Koehler 1896, 1921, 1924, Madsen 1950, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

AEGEAN SEA

Islands

Dodekanisos : Rodos : Northern coasts (Tortonese 1946).

Family

LUIDIIDAE

Genus *Luidia* Forbes, 1839

45. *Luidia ciliaris* (Philippi, 1837)

(Map 30)

Synonyms : *Asterias ciliaris* Philippi, 1837; *Luidia fragilissima* Forbes, 1839; *Luidia*

ciliaris : Gray 1840, Carus 1885, Ludwig 1897, Koehler 1921, 1924, Madsen 1950, Cherbonnier 1956, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

AEGEAN SEA

Islands

Kyklades : S of Thira (Jacquotte 1962).

Dodekanisos : Rodos : Acandia Bay (Tortonese 1946).

Gulfs

N Evvoikos : Larymna Bay (Pancucci 1991, unpublished data).

46. *Luidia sarsi* Düben & Koren, 1846

(Map 30)

Synonyms : *Luidia paucispina* Marenzeller, 1893.

GREEK WATERS (Belloc 1948).

AEGEAN SEA

W of Kriti; SE of Cape Maleas (Marenzeller 1893a,b) - Between Cape Malea and Milos (Marenzeller 1895).

Islands

Kyklades : Between Paros and Naxos (Pérès & Picard 1958a).

Gulfs

N Evvoikos : Larymna Bay (Pancucci 1991, unpublished data).

Order

VALVATIDA

Family

CHAETASTERIDAE

Genus *Chaetaster* Müller & Troschel, 1842

47. *Chaetaster longipes* (Retzius, 1805)

(Map 31)

Synonyms : *Asterias longipes* Retzius, 1805; *Asterias subulata* Lamarck, 1816 : Grube

1840; *Chaetaster longipes* : Müller & Troschel 1842, Perrier 1875, Carus 1885, Koehler 1921, 1924, Madsen 1950, Cherbonnier 1956, Tortonese 1965, 1980.

IONIAN SEA

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

AEGEAN SEA

Islands

Dodekanisos : Rodos (Tortonese 1984, in litteram).

Gulfs

N Evvoikos : Larymna Bay (Pancucci 1991, 1993 unpublished data).

Family

GONIASTERIDAE

Genus *Ceramaster* Verrill, 1899

48. *Ceramaster grenadensis* (Perrier, 1881)

(Map 32)

Synonyms : *Pentagonaster grenadensis* Perrier, 1881; *Pentagonaster gosselini* Perrier, 1881; *Pentagonaster hystricis* Marenzeller, 1893, 1895; *Ceramaster balteatus* Sladen, 1889 : Tortonese 1955, 1965; *Ceramaster hystricis* : Koehler 1924; *Ceramaster grenadensis* Halpern, 1970 : Tortonese 1980.

SEA OF KYTHIRA

S of Kythira (Cerigo) (Marenzeller 1893a, b).

AEGEAN SEA

Between Cape Maleas and Thira (Santorin) (Marenzeller 1895).

Islands

Kriti : NW Kriti (off Rethymno) (Marenzeller 1893a, b).

Genus *Peltaster* Halpern, 1970

49. *Peltaster placenta* (Müller & Troschel, 1842)

(Map 32)

Synonyms : *Goniodiscus placenta* Müller & Troschel, 1842; *Goniaster placenta* :

Marenzeller 1875; *Goniaster acutus* Marenzeller, 1875; *Pentagonaster placenta* : Carus 1885, Kochler 1896, Marenzeller 1895; *Ceramaster placenta* : Kochler 1921, Tortonese 1952, Cherbonnier 1958; *Sphaeriodiscus placenta* : Tortonese & Clark 1956, Madsen 1958, Tortonese 1965; *Peltaster placenta* : Halpern 1970, Tortonese 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Kaspiris & Tortonese 1982); (Bogdanos & Satsmadjis 1987).

SEA OF KYTHIRA

Between Kythira (Cerigo) and Antikythira (Cerigotto) (Marenzeller 1895).

AEGEAN SEA

Islands

Kyklades : S of Thira (Santorin) (Pérès & Picard 1958a).

Dodekanisos : Rodos : Trianda Bay (Tortonese 1946).

Family

ODONTASTERIDAE

Genus *Odontaster* Verrill, 1880

50. *Odontaster mediterraneus* Marenzeller, 1891

(Map 32)

Synonyms : *Gnathaster mediterraneus* Marenzeller, 1893; *Odontaster mediterraneus* : Marenzeller 1895.

AEGEAN SEA

Islands

Kyklades : W of Milos (Marenzeller 1893a, b) - Between Serifos (Serpho) and Milos; S of Serifos (Marenzeller 1895).

Family
OPHIDIASTERIDAE

Genus *Hacelia* Gray, 1840

51. *Hacelia attenuata* (Gray, 1840)

(Map 33)

Synonyms : *Ophidiaster attenuatus* Gray, 1840 : Müller & Troschel 1842, Marenzeller 1895; *Ophidiaster lessonae* Gasco, 1876 : Carus 1885; *Hacelia attenuata* : Ludwig 1879, Kochler 1921, 1924, Cherbonnier 1958, Gautier-Michaz 1958, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948); (Laborel 1956).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Ithaki : Sarakiniko Bay; Frikes Bay; Piso Aetos (Pancucci 1979, personal collection).

SEA OF KYTHIRA

Between Kythira (Cerigo) and Antikythira (Cerigotto) (Marenzeller 1895).

AEGEAN SEA

Islands

W Antipsara (Pérès & Picard 1958a) - SW of Lesbos : Stocks Bank (Kisseleva 1983).

N Sporades : (Tortonese 1984, in litteram) - Piperi (Koukouras et al. 1985b).

Kyklades : Thira (Santorin) : Cape Mesa Vouno (Messa Vuno) (Pérès & Picard 1958a) - W of Syros; Paros (Pérès & Picard 1958a) - Serfopoula (Serpho-Poulo) (Pérès & Picard 1958a; Laborel 1962).

Kriti : Dia (Standia) islet (Pérès & Picard 1958a).

Gulfs

Saronikos : Off Methana (Vamvakas 1971).

Genus *Ophidiaster* L. Agassiz, 1835

52. *Ophidiaster ophidianus* (Lamarck, 1816)

(Map 33)

Synonyms : *Asterias ophidiana* Lamarck, 1816; *Ophidiaster laevigata* Forbes, 1844;

Ophidiaster ophidianus : Müller & Troschel 1842, Carus 1885, Ludwig 1897, Madsen 1950, Gautier-Michaz 1958, Tortonese 1965, 1980.

IONIAN SEA

Islands

Ithaki : Frikes Bay; Piso Aetos (Pancucci 1979, personal collection).

AEGEAN SEA (Forbes 1844).

Islands

Dodekanisos : Rodos : Rodos Harbour (Tortonese 1946) - Kos : Coast between Cape Agios Fokas and Bros Terma (Bianchi & Morri 1983a, b).

Family

PORANIIDAE

Genus *Marginaster* Perrier, 1881

53. *Marginaster capreensis* (Gasco, 1876)

(Map 33)

Synonyms : *Asteropsis capreensis* Gasco 1876 : Carus 1885; *Marginaster capreensis* : Marenzeller 1893, Koehler 1924, Mortensen 1927, Tortonese 1965, 1980.

AEGEAN SEA (Marenzeller 1893b).

Islands

Dodekanisos : N of Astypalaia (Stampaglia) (Marenzeller 1895).

Order

SPINULOSIDA

Family

ASTERINIDAE

Genus *Anseropoda* Nardo, 1834

54. *Anseropoda placenta* (Pennant, 1777)

(Map 34)

Synonyms : *Asterias placenta* Pennant, 1777; *Asteriscus palmipes* Müller & Troschel,

1842 : Heller 1868; *Palmipes membranaceus* Ludwig, 1879: Ludwig 1897, Carus 1885, Vatova 1928; *Anseropoda membranacea* : Koehler 1921, 1924, Tortonese 1934, 1935; *Palmipes placenta* : Tortonese 1935-36; *Anseropoda placenta* : Tortonese 1952, 1965, 1980, Cherbonnier 1956, 1958.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

AEGEAN SEA (Forbes 1844).

Islands

Evvoia : Cavo D'Oro (Cape Doro) (Pérès & Picard 1958a).

Kyklades : W Kea (Zea); Syros (Pérès & Picard 1958a) - W of Kea (Zea) (Jacquotte 1962)

Dodekanisos : Rodos : Northern coasts (Tortonese 1946).

Kriti : S of Kaloi Limenes (Kalo-Limniones) Bay (Pérès & Picard 1958a) - Rethymno (Karakassis 1991).

Gulfs

N Evvoikos : Strongyli islet (Christomanos 1963) - Larymna Bay (Pancucci 1987, 1991, 1993, unpublished data).

Saronikos : Off Methana (Vamvakas 1971).

Genus *Asterina* Nardo, 1834

55. *Asterina gibbosa* (Pennant, 1777)

(Map 35)

Synonyms : *Asterias gibbosa* Pennant, 1777; *Asterias exigua* Delle Chiaje, 1823; *Asteriscus verruculatus* Müller & Troschel, 1842 : Heller 1868; *Asterina gibbosa* : Perrier 1876, Carus 1885, Ludwig 1897, Koehler 1921, 1924, Mortensen 1927, Madsen 1950, Vatova 1950, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

IONIAN SEA

Between Kerkyra and Ipeiros coasts (Bogdanos in Gotsis et al. 1991b).

Coasts

Peloponnisos : (Kaspiris & Tortonese 1982) - Cape Araxos; Megalo Pefko; Lechena; Cape Katakolo (Pancucci & Zenetos 1989) - Navarino Bay

(Bogdanos et al. 1984).

Islands

Zakynthos : Laganas (Pancucci & Zenetos 1989) - **Kefalonia** : Fiskardo (Kilian & Strauss 1981); N of Lixouri (Pancucci & Zenetos 1989).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - **Tourlida**; W of Antirio; off Mesolongi Lagoon; Kaminia (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

N Sporades : Piperi (Nicolaidou et al. 1985) - **Kyra Panagia** (Koukouras et al. 1985b).

Kyklades : **Naxos** : Ligaridia (Nicolaidou et al. 1986).

Dodekanisos : **Rodos** : Rodos Harbour; Mandraki (Mandrachio) Bay (Tortonese 1946) - **Kalymnos** : Saris; Kefala; Emporeio (Kastritsi 1993, unpublished data).

Gulfs

Kavala : (Papazacharias 1991) - **Prinos** (Bogdanos et al. 1984).

Thermaikos (Chintiroglou 1987).

Pagazitikos (Bogdanos & Satsmadjis 1983).

N Evvoikos : Atalanti Bay (Pancucci in Zenetos et al. 1987) - **Larymna Bay** (Pancucci 1993, unpublished data).

Saronikos (Athanassopoulos 1917).

56. *Asterina pancerii* (Gasco, 1870)

(Map 36)

Synonyms : *Asteriscus pancerii* Gasco, 1870; *Asterina gibbosa* var. *panceri* : Ludwig 1896, Koehler 1924; *Asterina pancerii* : Tortonese 1952, 1965, 1980.

IONIAN SEA

Islands

Kefalonia : Lixouri Bay (Pancucci & Zenetos 1989).

Gulfs

Patraikos : W of Antirio; off Mesolongi Lagoon; Niforeika (Pancucci & Zenetos 1989).

Family
ECHINASTERIDAE

Genus *Echinaster* Müller & Troschel, 1842

57. *Echinaster sepositus* (Retzius, 1783)

(Map 37)

Synonyms : *Asterias seposita* Retzius, 1783; *Rhophia seposita* : Gray 1840; *Cribrella seposita* : Forbes 1844; *Echinaster sepositus* : Müller & Troschel 1842, Carus 1885, Ludwig 1897, Koehler 1921, 1924, Madsen 1950, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia (Kaspiris & Tortonese 1982) - Ithaki : Vathy; Afales; Agios Ioannis (Pancucci 1979, personal collection).

Gulfs

Patraikos : (Christomanos & Giannitsis 1962, as *Asterias rubens*); (Kaspiris & Tortonese 1982) - Tourlida (Pancucci & Zenetos 1989).

Korinthiakos : SE Trizonia island (Pérès & Picard 1958a) - W coast of Cape Psaromyttas (Christomanos & Giannitsis 1962, as *Asterias rubens*).

AEGEAN SEA (Forbes 1844).

N Sporades : (Tortonese 1984, in litteram) - Kyra Panagia (Koukouras et al. 1985b) - Pelagonisi (Christomanos 1963, as *Henricia sanguinolenta*) - Between Adelfopoulo and Skantzoura (Christomanos 1963 as *Asterias rubens*).

Kyklades : W Kea (Zea); Antiparos (Pérès & Picard 1958a) - Thira (Thera) : Cape Mesa Vouno (Messa Vuno) (Pérès & Picard 1958a) - S of Syros (Jacquotte 1962).

Dodekanisos : Rodos : Cape Voudi (Vodi) (Tortonese 1946).

Kriti : Dia (Standia) islet (Pérès & Picard 1958a).

Gulfs

N Evvoikos : Strongyli islet (Christomanos 1963 as *Henricia sanguinolenta*) - Larymna Bay (Pancucci 1991, 1993 unpublished data).

Saronikos : Between Methana and Aigina (Vamvakas 1971).

NOTE. This species has often been confused with two typically Atlantic species, *Asterias rubens* and *Henricia sanguinolenta*. This is the case of the specimens determined by Christomanos (1963) and Christomanos & Giannitsis (1962).

Order
FORCIPULATIDA

Family
ASTERIIDAE

Genus *Coscinasterias* Verrill, 1867

58. *Coscinasterias tenuispina* (Lamarck, 1816)

(Map 38)

Synonyms : *Asterias tenuispina* Lamarck, 1816 : Ludwig 1879, 1897, Carus 1885; *Asteracanthion tenuispinus* : Müller & Troschel 1842; *Stolasterias tenuispina* : H.L. Clark 1933; *Coscinasterias tenuispina* : Koehler 1921, 1924, Mortensen 1933, Madsen 1950, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

SEA OF KYTHIRA

Cape Tainaro (Matapan) (Pérès & Picard 1958a).

AEGEAN SEA

Islands

N Sporades : Piperi (Koukouras et al. 1985b).

Dodekanisos : Rodos : Rodos Harbour (Tortonese 1946).

Gulfs

N Evvoikos : Larymna Bay (Pancucci 1991, 1993 unpublished data).

Genus *Marthasterias* Jullien, 1878

59. *Marthasterias glacialis* (Linnaeus, 1758)

(Map 39)

Synonyms : *Asterias glacialis* Linnaeus, 1758 : Ludwig 1879, 1897, Carus 1885; *Asterias*

echinophora Delle Chiaje, 1825; *Asterias angulosa* Delle Chiaje, 1841; *Asteracanthion glaciale*: Müller & Troschel 1842, Heller 1868; *Uraster glacialis*: Forbes 1844; *Marthasterias glacialis*: Kochler 1921, 1924, Mortensen 1927, Madsen 1950, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

GREEK WATERS (Athanasopoulos 1917); (Belloc 1948).

IONIAN SEA

Islands

Kefalonia : Argostoli Bay; Fiskardo (Kilian & Strauss 1981) - Ithaki : Agios Ioannis; Sarakiniko Bay; Schoinos (Pancucci 1979, personal collection).

Gulfs

Korinthiakos (Kaspiris & Tortonese 1982).

AEGEAN SEA (Forbes 1844).

N Sporades : Between Adelfopoulo and Skatzoura (Christomanos 1963).

Kyklades : Nata; Syros (Pérès & Picard 1958a) - Serfopoula (Serpho-Poulo) (Pérès & Picard 1958a; Laborel 1960).

Dodekanisos : Kos : Coast between Kos city and Cape Psalidi (Bianchi & Morri 1983b).

Gulfs

Kavala (Papazacharias 1991).

Thermaikos (Chintiroglou 1987).

N Evvoikos : Cape Korakas (Christomanos & Giannitsis 1962).

Saronikos : Salamina (Pérès & Picard 1958a).

Genus *Sclerasterias* Perrier, 1891

60. *Sclerasterias neglecta* (Perrier, 1891)

(Map 40)

Synonyms : *Stolasterias neglecta* Perrier, 1891 : Marenzeller 1895; *Stolaster neglecta* : Marenzeller 1895; *Asterias edmundi* Ludwig, 1897; *Sclerasterias neglecta* : Tortonese 1956, 1958, 1965, 1980.

SEA OF KYTHIRA

Between Kythira (Cerigo) and Antikythira (Cerigotto) (Marenzeller 1895).

61. *Sclerasterias richardi* (Perrier, 1882)

(Map 40)

Synonyms: *Asterias richardi* Perrier, 1882 : Carus 1885, Marenzeller 1893, 1895;

Hydrasterias richardi : Koehler 1924; *Sclerasterias richardi* : Tortonese 1951, 1965, 1980, Cherbonnier 1958.

IONIAN SEA

Islands

S of Zakynthos (Marenzeller 1893b).

SEA OF KYTHIRA

Kythira (Cerigo) (Marenzeller 1893b) - S of Kythira (Marenzeller 1895).

AEGEAN SEA

Between Cape Malea and Thira (Santorin) (Marenzeller 1895).

Islands

Kyklades : Antimilos (Anti-Milos) (Marenzeller 1893b).

Dodekanisos : N of Astypalaia (Stampaglia) (Marenzeller 1895).

Order

BRISINGIDA

Family

BRISINGIDAE

Genus *Brisingella* Fisher, 1917

62. *Brisingella coronata* (O. Sars, 1871)

(Map 41)

Synonyms : *Brisinga coronata* O. Sars, 1871 : Carus 1885, Marenzeller 1893, 1895, Ludwig 1897, Koehler 1924; *Brisinga mediterranea* Perrier, 1894; *Brisingella coronata* : Mortensen 1927, Cherbonnier 1958, Tortonese 1965, 1980.

SEA OF KYTHIRA

S, SW of Kythira (Cerigo) (Marenzeller 1893b, 1895).

AEGEAN SEA

Between Cape Maleas and Milos; between Cape Maleas and Thira (Santorin); SW of Samothraki (Marenzeller 1895) - N of Kriti (Marenzeller 1893b, 1895).

Islands

N of Samos (Marenzeller 1895).

Kyklades : W of Milos; Antimilos (Anti-Milos) (Marenzeller 1893b, 1895)

Class
OPHIUROIDEA
Order
EURYALAE
Family
GORGONOCEPHALIDAE

Genus *Astrospartus* Doderlein, 1911

63. *Astrospartus mediterraneus* (Risso, 1826)

Synonyms : *Euryale mediterraneus* Risso, 1826; *Euryale arborescens* L. Agassiz, 1838; *Gorgonocephalus verrucosus* Grube, 1840; *Astrophyton arborescens* : Müller & Troschel 1842, Ludwig 1879, Carus 1885; *Gorgonocephalus arborescens* : Lyman 1882; *Astrospartus arborescens* : Koehler 1921, 1924; *Astrospartus mediterraneus* : Doderlein 1911, Mortensen 1925, Cherbonnier 1956, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

Order
OPHIURAE
Family
AMPHIURIDAE

Genus *Amphilepis* Ljungman, 1864

64. *Amphilepis norvegica* (Ljungman, 1864)
(Map 42)

Synonyms : *Amphiura norvegica* Ljungman, 1864; *Amphiura florifera* Forbes, 1845; *Amphilepis florifera* : Marenzeller 1895; *Amphilepis norvegica* : Mortensen 1927, 1933, Tortonese 1965, 1980.

AEGEAN SEA

Offshore stations SW of the Chalkidiki peninsula (Chardy et al. 1973) - NW of Limnos (Chardy et al. 1973).

Islands

Kyklades : W of Thira (Vamvakas 1970) - Thira : S of Thirasia (Pancucci in N.C.M.R. 1989) - Milos (Forbes 1845).

Dodekanisos : E of Astypalaia (Stampaglia) (Marenzeller 1895).

Gulfs

Saronikos : NW of Aigina (Vamvakas 1971).

Genus *Amphipholis* Ljungman, 1866

65. *Amphipholis squamata* (Delle Chiaje, 1828)

(Map 43)

Synonyms : *Asterias squamata* Delle Chiaje, 1828; *Ophiopsis squamata* : Müller & Troschel 1842; *Amphiura neglecta* Forbes, 1843; *Amphiura squamata* : Heller 1868, Carus 1885; *Amphipholis squamata* : H.L. Clark 1902, Koehler 1921, 1924, Vatova 1950, Cherbonnier 1958, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos : Kilini; Cape Katakolo (Pancucci & Zenetos 1989).

Islands

Zakynthos : Laganas; Porto Roma; Vasilikos (Pancucci & Zenetos 1989) - Kefalonia : Agia Pelagia; S of Lixouri; Atheras; Antipata; Plagia; E of Sami (Pancucci & Zenetos 1989) - Kerkyra : Potamos Bay (Bogdanos in Gotsis et al. 1991b) - off Kerkyra city (Bogdanos in Gotsis et al. 1992).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - W of Antirio; Kryoneri; Patra (Pancucci & Zenetos 1989).

Korinthiakos : SE Trizonia island (Pérès & Picard 1958a) - Arachovitika (Pancucci & Zenetos 1989).

Amvrakikos : Off Louros River estuary (Nicolaidou et al. 1983).

SEA OF KYTHIRA

Lakonikos Gulf : Off Evrotas River estuary (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Coasts

Chalkidiki peninsula (Koukouras et al. 1985a).

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989 unpublished data).

N Sporades : Pelagonisi; Piperi (Nicolaidou et al. 1985) - Skiathos : Port; Agia Paraskevi (Nicolaidou et al. 1986).

Kyklades : Naxos : Port; Agia Anna (Nicolaidou et al. 1986) - Milos : NE coasts (Bogdanos et al. 1990) - Thira : Nea Kameni; Cape Tourlos (Ledoyer 1969).

Dodekanisos : Rodos : Rodos Harbour (Tortonese 1946); NW coasts (Pancucci in Karydis et al. 1987; Pancucci et al., in preparation) - Nisyros : Agia Eirini (Bogdanos in N.C.M.R. 1993d) - Kalymnos : Sari; Pothia; Kefala; Melitsochos; Emporeio (Kastritsi 1993, unpublished data).

Kriti : Kaloi Limenes (Kalolimniones); Dia (Standia) islet (Ledoyer 1969); Souda (Eleftheriou et al. 1990); Rethymno (Karakassis 1991); Elounta; Mirabello Bay (Pancucci 1993, personal collection).

Gulfs

Kavala (Papazacharias 1991).

Thermaikos : Thessaloniki Bay (Pancucci in NCMR Data Report 1993a).

N Evvoikos : Larymna Bay (Pancucci in Papadopoulos 1986); (Nicolaidou et al. 1993); (Pancucci in N.C.M.R. 1992) - Atalanti Bay (Pancucci in Zenetos et al. 1987) - Chalkis Bay (Pancucci in N.C.M.R. 1992).

S Evvoikos (Pancucci in N.C.M.R. 1992).

Saronikos : NW of Aigina (Vamvakas 1971) - Offshore stations along Attiki coasts (Pancucci in N.C.M.R. 1989) - Off Agios Kosmas; off Vouliagmeni (Pancucci in Zenetos et al. 1991) Elefsis Bay (Zenetos & Bogdanos 1987) - Faliron Bay (Pancucci in Panayotidis et al. 1991).

Genus *Amphiura* Forbes, 1842

66. *Amphiura* (*Acrocnida*) *brachiata* (Montagu, 1804)

(Map 44)

Synonyms : *Asterias brachiata* Montagu, 1804; *Amphiura neapolitana* M. Sars, 1857; *Ophiocnida brachiata* : Ludwig 1879, Carus 1885; *Ophiocentrus brachiatus* : Koehler 1921, 1924; *Acrocnida brachiata* : Gislen 1926, Tortonese 1965; *Amphiura* (*Acrocnida*) *brachiata* : A.M. Clark 1970, Tortonese 1980.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos : Loutra Kilinis; Agios Andreas; Spiantza (Pancucci & Zenetos 1989).

Islands

Zakynthos : Laganas; Zakynthos; Akrotiri (Pancucci & Zenetos 1989) - Kefalonia: S of Lixouri; Skala (Pancucci & Zenetos 1989).

Gulfs

Patraikos : W of Mesolongi Lagoon; Agia; Kaminia; Niforeika (Pancucci & Zenetos 1989). Amvrakikos (Nicolaidou 1980, personal collection).

AEGEAN SEA

Islands

Kyklades : Milos : Adamas Bay (Pancucci in N.C.M.R. 1989).

67. *Amphiura cherbonnieri* Guille, 1972

(Map 44)

IONIAN SEA

Coasts

Peloponnisos : Navarino Bay (Pancucci 1993, personal collection).

Islands

Kerkyra : Potamos Bay (Bogdanos in Gotsis et al. 1991b).

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989 unpublished data).

Dodekanisos : Kalymnos : Emporeio (Kastritsi 1993, unpublished data).

Gulfs

Thermaikos : Megalo Emvolo; off Axios River estuary; Mikro Emvolo; Thessaloniki Bay (Pancucci in NCMR Data Report 1993a).

N Evvoikos : Chalkis Bay (Pancucci in N.C.M.R. 1992) - Atalanti Bay (Pancucci 1991, unpublished data).

68. *Amphiura chiajei* Forbes, 1843

(Map 45)

IONIAN SEA

Between Kerkyra and Ipeiros coasts (Bogdanos in Gotsis et al. 1991a, b; 1992).

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos : Kilini (Pancucci & Zenetos 1989) - Navarino Bay (Bogdanos et al. 1984; Pancucci 1993, personal collection).

Islands

Zakynthos : Laganas (Pancucci & Zenetos 1989) - **Kefalonia** : Lixouri; Mantzavinata; Karavomilos (Pancucci & Zenetos 1989) - **Kerkyra** : Off NE coasts; S of Vidos islet; off Kerkyra port; Potamos Bay (Bogdanos in Gotsis et al. 1991a, b; 1992).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - Tourlida; Evinochori; Kryoneri; off Mesolongi Lagoon; Patra; Paralia; Rogitika; Agia (Pancucci & Zenetos 1989).

Amvrakikos : Off Koronisia (Ignatiades et al. 1981) - Preveza Bay (Bogdanos et al. 1989).

Amvrakikos Lagoons : Tsoukalio (Bogdanos 1989).

Mesolongi Lagoon : (Bogdanos & Diapoulis 1984); (Bogdanos & Satsmadjis 1992).

Klisova Lagoon : (Bogdanos & Diapoulis 1984); (Bogdanos & Satsmadjis 1992).

SEA OF KYTHIRA

Between Peloponnisos (Morea) and Kythira (Cerigo) (Forbes 1844).

Lakonikos Gulf : Off Evrotas River estuary; Gytheio (Pancucci in Zenetos et al. 1992a).

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Between Limnos and Lesvos (Mytilene) (Marenzeller 1895) - Between Thasos and Limnos (Tselepides 1992).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Lesvos : Geras Gulf (Diapoulis & Bogdanos 1983; Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989, unpublished data).

N Sporades : Pelagonisi (Nicolaidou et al. 1985) - Skiathos : Port; Agia Paraskevi (Nicolaidou et al. 1986).

Kyklades : NW Sifnos; N of Kimolos; SW of Antiparos (Pancucci in N.C.M.R. 1989) - Thira : Caldera (Pancucci 1987, personal collection) - Milos : Adamas Bay (Pancucci in N.C.M.R. 1989); NE coasts (Bogdanos et al. 1990).

Dodekanisos : Rodos : NW coasts (Pancucci in Karydis et al. 1987; Pancucci et al. in preparation).

Kriti : Dia (Standia) islet (Pérès & Picard 1958a) - Irakleio; Soudal; Chania; Messaras Gulf; Ierapetra; Siteia (Eleftheriou et al. 1990) - Kissamos; Chania; Irakleio; Mirabello; Siteia; Messaras Gulf; Ierapetra; SE coast; Rethymno (Karakassis 1991) - Messaras Gulf; off Irakleio (Tselepides 1992) - Elouda; Mirabello Gulf (Pancucci 1993, personal collection).

Gulfs

Kavala : (Zarkanellas 1977); (Papazacharias 1991) - Prinos (Bogdanos et al. 1984; Bogdanos & Verikokakis 1991).

Strymonikos (Dounas 1986); (Dounas & Koukouras 1992).

Thermaikos : Many stations all over the Gulf (Zarkanellas 1980) - Offshore stations (Zarkanellas & Kattoulas 1982) - Off Magnisia coasts (Tselepides 1992) - W coasts of the outer Gulf; Megalo Emvolo; Mikro Emvolo; Epanomi; off Axios River estuary; Thessaloniki Bay (Pancucci in NCMR Data Report 1993a, b, c).

Pagazitikos : (Bogdanos & Satsmadjis 1983) - Many stations all over the Gulf (Bogdanos 1975) - Volos Bay; W part of the Gulf (Bogdanos 1989) - Volos Bay (Bogdanos 1993).

Maliakos (Pancucci 1993, unpublished data).

N Evvoikos : Chalkis Bay (Pancucci in N.C.M.R. 1992) - Larymna Bay (Pancucci in Papadopoulos 1986; Pancucci in N.C.M.R. 1992) - Atalanti Bay (Pancucci in Zenetos et al. 1987).

S Evvoikos (Pancucci in N.C.M.R. 1992).

Saronikos : Elefsis Bay (Zenetos & Bogdanos 1987).

69. *Amphiura filiformis* (O.F. Müller, 1776)

(Map 46)

Synonyms : *Asterias filiformis* O.F. Müller, 1776, 1788; *Ophiolepis filiformis* : Müller & Troschel 1842; *Amphiura filiformis* : Lutken 1858, Carus 1885, Koehler 1921, 1924, Mortensen 1927, Vatova 1950, Tortonese 1965, 1980.

IONIAN SEA

Off Preveza Channel (Bogdanos et al. 1989) - Between Kerkyra and Ipeiros coasts (Bogdanos in Gotsis et al. 1991a).

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos : Navarino Bay (Bogdanos et al. 1984); (Pancucci 1993, personal collection).

Islands

Kefalonia : Lixouri (Pancucci & Zenetos 1989) - Kerkyra : Off Kerkyra city, off

NE coasts (Bogdanos in Gotsis et al. 1991a, b; 1992).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - Off Mesolongi Lagoon; Patra (Pancucci & Zenetos 1989).

Amvrakikos : Off Louros River estuary; Preveza Bay (Bogdanos et al. 1989).

Mesolongi Lagoon (Bogdanos & Diapoulis 1984); (Bogdanos & Sastmadjis 1992).

Klisova Lagoon (Bogdanos & Diapoulis 1984); (Bogdanos & Sastmadjis 1992).

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Between Kavala Gulf and Thasos island (Zarkanelas 1977) - Between Limnos and Lesvos (Mytilene); SW of Samotraki (Marenzeller 1895) - Pre-Dardanellian region (Kisseleva & Chukhchin 1965) - S, W, SW of Limnos (Kisseleva 1963) - Off Lesvos (Kisseleva 1983) - Between Thasos and Limnos (Tselepides 1992) - Between Skyros and Chios; off NW Kriti (Kisseleva 1963).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Lesvos : Geras Gulf (Diapoulis & Bogdanos 1983); (Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989, unpublished data) - NW coasts of Limnos (Kisseleva 1963) - S and N of Samos (Marenzeller 1895).

N Sporades : Skiathos : Koukounaries (Nicolaidou et al. 1986).

Kyklades : NW Syros; between Kythnos and Serifos; between Serifos and Sifnos; NW Sifnos; NW of Kimolos; W, SW of Antiparos; NW, E of Paros (Pancucci in N.C.M.R. 1989) - SW Tinos; E of Serifos; SE of Sifnos; S of Milos (Kisseleva 1963) - **Antimilos** (Anti-Milos) (Marenzeller 1893b) - **Milos** : NE coasts (Bogdanos et al. 1990) - Milos : Adamas Bay; SW, NW coasts (Pancucci in N.C.M.R. 1989) - Between Milos and Serifos (Serpho) (Marenzeller 1895) - **Thira** : (Vamvakas 1970); Palia Kameni (Pancucci in N.C.M.R. 1989).

Dodekanisos : E of Astypalaia (Stampaglia) (Marenzeller 1895) - **Rodos** : NW coasts (Pancucci in Karydis et al. 1987); (Pancucci et al. in preparation) - S of Kos (Kisseleva 1963 - Nisyros : **Agia Eirini** (Bogdanos in N.C.M.R. 1993d).

Kriti : Irakleio; Rethymno; Chania; Ierapetra; Siteia; Souda (Eleftheriou et al. 1990) - Chania; Irakleio; Mirabello Gulf; Siteia; Ierapetra; Messaras Gulf; Rethymno (Karakassis 1991) - Messaras Gulf; off Irakleio (Tselepides 1992) - N of Irakleio (Tselepides & Eleftheriou 1992) - Elounta (Pancucci 1993, personal collection).

Gulfs

Kavala : Kavala port; Nea Karvali (Papazacharias 1991) - **Prinos**; Nea Karvali (Bogdanos et al. 1984) - **Prinos** (Bogdanos & Verikokakis 1991).

Strymonikos (Dounas 1986).

Thermaikos : Off Magnisia coasts (Tselepidis 1992) - Eastern coasts of the Gulf; Epanomi; Megalo Emvolo (Zarkanellas 1980) - Thessaloniki Bay; Epanomi; off Cape Atherida; Megalo Emvolo; Mikro Emvolo; Western coasts of the outer Gulf (Pancucci in NCMR Data Report 1993a,b,c).

Pagasitikos : (Bogdanos & Satsmadjis 1983, 1985) - Volos Bay; Trikeri (Bogdanos 1975, 1989) - Volos Bay (Bogdanos 1993).

Maliakos (Pancucci 1993, unpublished data).

N Evvoikos : Chalkis Bay (Pancucci in N.C.M.R. 1992) - Larymna Bay (Pancucci in Papadopoulos 1986; Nicolaidou et al. 1993; Pancucci in N.C.M.R. 1992) - Aidipsos Bay (Pancucci in N.C.M.R. 1992).

S Evvoikos (Pancucci in N.C.M.R. 1992).

Saronikos : NW of Aigina; between Salamina and Aigina (Vamvakas 1971) - Off Psitalia islet; offshore stations along Attiki coasts (Pancucci in Panayotidis & Zenetos 1989) - Between Salamina and Aigina; off Vouliagmeni; off Agios Kosmas (Pancucci in Zenetos et al. 1991) - Elefsis Bay (Zarkanellas & Bogdanos 1977; Zenetos & Bogdanos 1987; Nicolaidou et al. 1993).

70. *Amphiura lacazei* Guille, 1976

(Map 47)

IONIAN SEA

Islands

Petalas (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Patra (Pancucci & Zenetos 1989).

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Gulfs

Saronikos : Faliro Bay (Pancucci in Panayotidis et al. 1991).

71. *Amphiura mediterranea* Lyman, 1882

(Map 47)

IONIAN SEA

Coasts

Stereia Ellada : Astakos (Pancucci & Zenetos 1989).

Islands

Petalas (Pancucci & Zenetos 1989) - Zakynthos : Akrotiri (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Kryoneri; off Mesolongi Lagoon; Agia (Pancucci & Zenetos 1989).

AEGEAN SEA

SW of Lesvos; SW of Limnos; off SE coasts of Evvoia island (Kisseleva 1963).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

Dodekanisos : Rodos : NW coasts (Pancucci et al. in preparation)

Kriti : Elounta; Mirabello Gulf (Pancucci 1989, 1993, personal collection) - Messaras Gulf (Karakassis 1991).

Gulfs

Kavala : Off N. Iraklitsa; off Cape Vrasidas (Papazacharias 1991).

Strymonikos (Dounas 1986).

Thermaikos : Off Cape Vardaris (Pancucci in NCMR Data Report 1993b).

N Evvoikos : Larymna Bay (Pancucci in I.O.F.R. 1985).

Family

OPHIACANTHIDAE

Genus *Ophiacantha* Müller & Troschel, 1842

72. *Ophiacantha setosa* (Retzius, 1805)

(Map 48)

Synonyms : *Ophiura setosa* Retzius, 1805; *Ophiacantha setosa* : Müller & Troschel 1842, Carus 1885, Koehler 1921, 1924, Cherbonnier 1956, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos (Kaspiris & Tortonese 1982).

AEGEAN SEA

Islands

Limnos (Christomanos 1960).

Kyklades : Syros (Pérès & Picard 1958a).

Dodekanisos : W of Karpathos (Pancucci 1987, personal collection) -
Kalymnos: Pothia (Kastritsi 1993, unpublished data).

Family

OPHIACTIDAE

Genus *Ophiactis* Lütken, 1856

73. *Ophiactis savignyi* Müller & Troschel, 1842
(Map 48)

AEGEAN SEA

Islands

Dodekanisos : Nisyros : Agia Eirini (Bogdanos in N.C.M.R. 1993d; Pancucci 1994b).

Family

OPHIOCOMIDAE

Genus *Ophiopsila* Forbes, 1843

74. *Ophiopsila annulosa* (M. Sars, 1857)
(Map 49)

Synonyms : *Ophianoplus annulosus* M. Sars, 1857; *Ophiopsila annulosa* : Carus, 1885 :
Koehler 1914, 1921, 1924, Mortensen 1927, Cherbonnier 1958, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Islands

Kerkyra : Off NE coasts (Bogdanos in Gotsis et al. 1991a) - S of Vidos isl.

(Bogdanos in Gotsis et al. 1991b).

Gulfs

Korinthiakos : SE Trizonia island (Pérès & Picard 1958a).

AEGEAN SEA

Islands

Lesvos : Kalloni Gulf (Pancucci 1989, unpublished data).

Kriti : Chania (Eleftheriou et al. 1990) - Irakleio (Karakassis 1991).

75. *Ophiopsila aranea* Forbes, 1843

(Map 49)

IONIAN SEA

Islands

Off S coasts of **Kerkyra** (Corfu) (Marenzeller 1895).

SEA OF KYTHIRA

Karavi islet (Pérès & Picard 1958a).

AEGEAN SEA (Forbes 1844, 1845).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989, unpublished data).

Kyklades : SW Syros, between Paros and Naxos (Pérès & Picard 1958a) -
Milos: NE coasts (Bogdanos et al. 1990) - **Thira** : Cape Tourlos (Ledoyer 1969).

Gulfs

Kavala : Off Iraklitsa; off Cape Vrasidas (Papazacharias 1991).

Pagasitikos : Volos Bay (Bogdanos 1990).

Saronikos : NW of Aigina; off Vouliagmeni (Pancucci in Panayotidis & Zenetos 1989).

N Evvoikos : Chalkis Bay (Pancucci 1991, unpublished data).

Family

OPHIODERMATIDAE

Genus *Ophioconis* Lütken, 1869

76. *Ophioconis forbesi* (Heller, 1863)

(Map 50)

Synonyms : *Pectinura forbesi* Heller, 1863, 1868; *Ophioconis forbesi* : Carus 1885, Kochler 1921, 1924, Mortensen 1927, Cherbonnier 1958, Tortonese 1965, 1980.

IONIAN SEA

Islands

SW of Kerkyra (Corfu) (Marenzeller 1895).

AEGEAN SEA

Islands

Evvoia : Cavo D'oro (Cape Doro) (Pérès & Picard 1958a).

Kyklades : S of Thira (Santorin); between Nata and Syros; between Paros and Naxos (Pérès & Picard 1958a) - Between Syros and Nata; S of Thira (Santorin) (Jacquotte 1962).

Dodekanisos : Rodos : NW coasts (Pancucci et al. in preparation).

Gulfs

Saronikos : NW of Aigina (Vamvakas 1971).

Genus *Ophioderma* Müller & Troschel, 1842

77. *Ophioderma longicaudum* (Retzius, 1805)

(Map 50)

Synonyms : *Asterias longicauda* Retzius, 1805; *Ophioderma longicauda* : Carus 1885, Koehler 1921, Mortensen & Steuer 1937, Cherbonnier 1956, Gautier-Michaz 1958; *Ophioderma lacertosa* Forbes, 1843; *Ophioderma lacertosum* : Vatova 1928; *Ophioderma longicaudum* : Tortonese 1965, 1980, 1983, Zavodnik 1979, 1980, Lopez-Ibor et al. 1982, Ocana et al. 1982.

IONIAN SEA

Coasts

Peloponnisos : Agios Andreas (Pancucci & Zenetos 1989).

Islands

Zakynthos : Alikanas (Pancucci & Zenetos 1989).

Gulfs

Patraikos (Kaspiris & Tortonese 1982); (Bogdanos & Satsmadjis 1987).

SEA OF KYTHIRA

Elafonisos (Head of Cervi Bay, Morea) (Forbes 1844).

AEGEAN SEA

Oreoi Channel (Bogdanos 1976).

Islands

Kyklades : Amorgos (Forbes 1844).

Dodekanisos : Rodos : Rodos Harbour (Tortonese 1946) - Kalymnos : Kefala (Kastritsi 1993, unpublished data).

Gulfs

Strymonikos (Dounas 1986).

Pagasitikos : Volos Bay (Bogdanos 1976).

N Evvoikos : Chalkis Bay; between Theologos Gulf and Atalanti island (Christomanos & Giannitsis 1962).

NOTE. - This is the only species of the genus present in the Mediterranean Sea. Specimens referred by Christomanos & Giannitsis (1962) in the N Evvoikos Gulf as *Ophioderma brevispinum* must be included here.

Genus *Pectinura* Forbes, 1843

78. *Pectinura vestita* Forbes, 1843

(Map 50)

AEGEAN SEA

Islands

Kyklades : Ananes (Ananas) rocks, off Milos (Forbes 1844).

Family

OPHIOMYXIDAE

Genus *Ophiomyxa* Müller & Troschel, 1840

79. *Ophiomyxa pentagona* (Lamarck, 1816)

(Map 51)

Synonyms : *Ophiura pentagona* Lamarck, 1816; *Ophiomyxa lubrica* Forbes, 1845; *Ophiomyxa pentagona* : Müller & Troschel 1842, Ludwig 1879, Carus 1885, Koehler 1921, 1924, Cherbonnier 1956, Tortonese, 1965, 1980.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b)

Peloponnisos : Agios Andreas (Pancucci & Zenetos 1989).

Islands

Petalas (Pancucci & Zenetos 1989) - Zakynthos : Laganas (Pancucci & Zenetos 1989), Kefalonia (Kaspiris & Tortonese 1982) - Atheras (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Off Mesolongi Lagoon (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

NE of Samotraki (Jacquotte 1962) - S of Samos (Marenzeller 1895).

N Sporades : NNE of Tsoungria; between Skopelos and Alonnisos (Christomanos 1963).

Kyklades : (Forbes 1845) - Between Nata and Syros; between Paros and Naxos (Pérès & Picard 1958a) - S of Thira (Santorin) (Jacquotte 1962).

Dodekanisos : Rodos : Northern coasts (Tortonese 1946).

Kriti : Irakleio (Candia) Bay (Pérès & Picard 1958a).

Gulfs

Strymonikos (Dounas 1986).

Saronikos : Megara Bay (Pérès & Picard 1958a).

Family

OPHIOTHRICIDAE

Genus *Ophiothrix* Müller & Troschel, 1842

80. *Ophiothrix fragilis* (Abildgaard, 1789)

(Map 52)

Synonyms : *Asterias fragilis* Abildgaard in O.F.Müller, 1789; *Asterias echinata* Delle Chiaje, 1822-29; *Ophiothrix rosula* Forbes, 1843; *Ophiothrix alopecurus* Marenzeller, 1895; *Ophiothrix quinque maculata* Müller & Troschel, 1842; *Ophiothrix fragilis* : Müller & Troschel 1842, Ludwig 1879, Carus 1885, Koehler 1921, 1924, Mortensen 1927, Vatova 1928, Cherbonnier 1958, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Islands

Kefalonia : N of Lixouri (Pancucci & Zenetos 1989).

Gulfs

Patraikos : (Kaspiris & Tortonese 1982 ; Bogdanos & Satsmadjis 1987) - W of Antirio, Kryoneri, off Mesolongi Lagoon (Pancucci & Zenetos 1989).

Korinthiakos : (Kaspiris & Tortonese 1982) - SE Trizonia island (Pérès & Picard 1958a).

Amvrakikos : Off Koronisia (Ignatiades et al. 1981).

SEA OF KYTHIRA

Between Kythira (Cerigo) and Antikythira (Cerigotto) (Marenzeller 1895) - Karavi islet (Pérès & Picard 1958a).

AEGEAN SEA (Forbes 1844, 1845).

Pre-Dardanellian region (Kisseleva & Chukhchin 1965) - Sea area between Kos, Kalymnos, Samos and Asia Minor coasts (Pérès & Picard 1958b).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Coasts

Chalkidiki peninsula (Koukouras et al. 1985a; Voultsiadou-Koukoura et al. 1987).

Islands

NE of Samothraki (Jacquotte 1962) - Lesvos : Geras Gulf (Diapoulis & Bogdanos 1983; Pancucci & Zenetos 1990); Kalloni Gulf (Pancucci 1989 unpublished data) - W Antipsara (Pérès & Picard 1958a) - S of Samos (Marenzeller 1895) - Evvoia : Cavo D'oro (Cape Doro) (Pérès & Picard 1958a).

N Sporades : Pelagonisi; Piperi (Nicolaidou et al. 1985) - Piperi (Koukouras et al. 1985b) - Pelagonisi; SE of Skiathos; between Skopelos and Alonnisos (Christomanos 1963) - **Skiathos** : Port; Koukounaries; Agia Paraskevi (Nicolaidou et al. 1986).

Kyklades : Syros; between Paros and Naxos (Pérès & Picard 1958a) - **Milos** : Adamas Bay (Pancucci in N.C.M.R. 1989) - Thira : Nea Kameni; Cape Tourlos (Ledoyer 1969) - Naxos : Agia Anna; Ligaridia (Nicolaidou et al. 1986).

Dodekanisos : Rodos : NW coasts (Pancucci et al. in preparation) - Kalymnos : Saris, Kefala (Kastritsi 1993, unpublished data).

Kriti : Souda (Eleftheriou et al. 1990) - Elounta; Mirabello Gulf (Pancucci 1993, personal collection).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986).

Thermaikos (Chintiroglou 1987).

Pagasitikos : (Bogdanos & Satsmadjis 1983) - Volos Bay (Bogdanos 1990).

N Evvoikos : Theologos Bay (Christomanos & Giannitsis 1962; Pancucci in N.C.M.R. 1992) - Larymna Bay; Chalkis Bay (Pancucci in N.C.M.R. 1992).

Saronikos : (Athanassopoulos 1917) - NW of Methana; between Aigina and Salamina (Vamvakas 1971) - Faliron Bay (Panagiotopoulos 1916).

NOTE. - Under the name *O. fragilis* are also included specimens determined as *O. quinquemaculata*, on the base of Guille's studies (1964) on the ecology and taxonomy of this species. Taking into account the union of these two species, specimens determined by mistake as *O. angulata* (Christomanos, 1960, 1963; Christomanos & Giannitsis, 1962) are here reunited to the sole species present in Mediterranean, namely *O. fragilis*.

Family

OPHIURIDAE

Genus *Ophiecten* Lütken, 1854

81. *Ophiecten abyssicolum* (Forbes, 1845)

(Map 53)

Synonims : *Ophiura abyssicola* Forbes, 1845; *Ophioglypha abyssicola* : Ljungman 1866; *Ophiecten abyssicolum* : Carus 1885, Marenzeller 1893, Cherbonnier 1958, Tortonese 1965, 1980.

SEA OF KYTHIRA

S of Kythira (Cerigo) (Marenzeller 1893b, 1895).

AGEAN SEA

Islands

Kyklades : Off Amorgos (Forbes 1844).

Dodekanisos : E of Astypalaia (Stampaglia) (Marenzeller 1895).

Genus *Ophiura* Lamarck, 1816

82. *Ophiura albida* Forbes, 1839

(Map 54)

Synonyms : *Ophioglypha albida* : Heller 1868, Carus 1885.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Off Preveza Channel (Bogdanos et al. 1989).

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos : (Kaspiris & Tortonese 1982) - Kilini (Pancucci & Zenetos 1989) - Navarino Bay (Bogdanos et al. 1984; Pancucci 1993, personal collection).

Islands

Kerkyra : Off Kerkyra city; off NE coasts; Potamos Bay (Bogdanos in Gotsis et al. 1991a, b, 1992).

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - Evinochori; off Evinos River estuary; W of Antirio; off & W of Mesolongi Lagoon; Patra; Paralia; Rogitika; Agia (Pancucci & Zenetos 1989).

Amvrakikos : Off Louros River estuary (Ignatiades et al. 1981) - Offshore stations; off Louros River estuary; Amfilochia Bay; off Menidi (Bogdanos et al. 1989).

Korinthiakos : Arachovitika (Pancucci & Zenetos 1989).

SEA OF KYTHIRA

Karavi islet (Pérès & Picard 1958a).

Lakonikos Gulf : Off Evrotas River estuary (Pancucci in Zenetos et al. 1992a).

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Between Thasos and Limnos (Tselepides 1992) - W, S, SW of Limnos; between Skyros and Chios; off NW Kriti (Kisseleva 1963) - Between Kythira and Rodos (Forbes 1845).

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

W of Lesvos : Mansell Bank, Bruker Bank (Makkavieva 1963) - Lesvos : Geras Gulf (Diapoulis & Bogdanos 1983; Pancucci & Zenetos 1990); Kalloni Gulf

(Pancucci 1989, unpublished data) - NE of Samothraki (Jacquotte 1962) - W Limnos; SW of Lesbos (Kisseleva 1963) - Evvoia : Cavo D'oro (Cape Doro) (Pérès & Picard 1958a).

N Sporades : Skiathos : Agia Paraskevi (Nicolaidou et al. 1986).

Kyklades : Between Syros and Nata; SW of Syros; between Paros and Naxos (Pérès & Picard 1958a) - S of Milos (Kisseleva 1963) - Milos : Adamas Bay (Pancucci in N.C.M.R. 1989); NE coasts (Bogdanos et al. 1990) - Thira : Palia Kameni (Pancucci in N.C.M.R. 1989) - Paros (Forbes 1844).

Dodekanisos : Rodos : NW coasts (Pancucci in Karydis et al. 1987; Pancucci et al. in preparation) - S of Kos (Kisseleva 1963) - Kalymnos : Kalogries; Saris (Kastritsi 1993, unpublished data).

Kriti : Irakleio; Rethymno; Chania (Eleftheriou et al. 1990) - Irakleio; Rethymno (Karakassis 1991) - Off Irakleio (Tselepides 1992) - Elounta; Mirabello Gulf (Pancucci 1993, personal collection) - Irakleio (Candia) Bay (Pérès & Picard 1958a).

Gulfs

Kavala : (Papazacharias 1991) - Prinos (Bogdanos et al. 1984).

Pagazitikos : (Bogdanos & Satsmadjis 1983) - Volos Bay (Bogdanos 1976) - Volos Bay; Trikeri; Western part of the Gulf (Bogdanos 1989).

N Evvoikos : Larymna Bay (Pancucci in Papadopoulos 1986; Nicolaidou et al. 1993; Pancucci in N.C.M.R. 1992) - Chalkis Bay (Pancucci in N.C.M.R. 1992).

Saronikos : Megara Bay (Pérès & Picard 1958a) - N, NW of Aigina (Vamvakas 1971) - Elefsis Bay (Zenetos & Bogdanos 1987).

83. *Ophiura carnea* (Lütken, 1859)

(Map 53)

Synonyms : *Ophioglypha carnea* Lütken, 1859 : Marenzeller 1893; *Dictenophiura carnea* : H. L. Clark 1923; *Ophiura carnea* : Madsen 1970, Tortonese 1977, 1980.

SEA OF KYTHIRA

SW of Kythira (Cerigo) (Marenzeller 1893a, b; 1895).

AEGEAN SEA

Islands

Kyklades : Between Milos and Serifo (Serpho) (Marenzeller 1893b, 1895).

Dodekanisos : N of Astypalaia (Stampaglia) (Marenzeller 1893b, 1895).

84. *Ophiura grubei* Heller, 1863

(Map 55)

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Gulfs

Amvrakikos : Off Koronisia (Ignatiades et al. 1981; Nicolaidou et al. 1983).

AEGEAN SEA

Oreoi Channel (Pancucci 1991, unpublished data).

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

N Sporades : Piperi (Nicolaidou et al. 1985).

Kyklades : Between Serifos and Sifnos; N of Kimolos; S of Paros (Pancucci in N.C.M.R. 1989).

Kriti : Irakleio; Mirabello Gulf (Karakassis 1991).

Gulfs

Kavala (Papazacharias 1991).

N Evvoikos : Larymna Bay (Pancucci in I.O.F.R. 1985; Pancucci in N.C.M.R. 1992) - Aidipsos Bay; Chalkis Bay (Pancucci 1991 unpublished data).

Saronikos : NW of Aigina (Vamvakas 1971) - Off Vouliagmeni (Pancucci in Zenetos et al. 1991).

85. *Ophiura ophiura* (Linnaeus, 1758)

(Map 55)

Synonyms : *Asterias ophiura* Linnaeus, 1758; *Ophiura texturata* Lamarck, 1816 : Kochler 1924, Cherbonnier 1958, Tortonese 1965, 1980; *Ophioglypha lacertosa* Ludwig, 1879 : Carus 1885; *Ophiura lacertosa* : Koehler 1921; *Ophiura ophiura* : H.L. Clark 1915, Kaspiris & Tortonese, 1982.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos : (Kaspiris & Tortonese 1982) - Navarino Bay (Bogdanos et al. 1984).

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Patraikos : (Kaspiris & Tortonese 1982); (Bogdanos & Satsmadjis 1987) -
Agia (Pancucci & Zenetos 1989).

Korinthiakos (Kaspiris & Tortonese 1982).

Amvrakikos : Off Alyki (Nicolaidou et al. 1983).

SEA OF KYTHIRA

Kythira (Cerigo) (Forbes 1844).

AEGEAN SEA (Forbes 1845).

Pre-Dardanellian region (Kisseleva & Chukhchin 1965).

Islands

NE of Samothraki (Jacquotte 1962) - Lesvos : Geras Gulf (Diapoulis &
Bogdanos 1983; Pancucci & Zenetos 1990).

N **Sporades** : Skiathos : Agia Paraskevi (Nicolaidou et al. 1986).

Kyklades : Between Paros and Naxos; between Paros and Antiparos (Péres &
Picard 1958a).

Dodekanisos : Rodos : Northern coasts (Tortonese 1946) - NW coasts
(Pancucci et al. in preparation).

Kriti : Irakleio; Rethymno; Chania; Siteia (Eleftheriou et al. 1990) - Kissamos;
Chania; Irakleio; Ierapetra; Rethymno (Karakassis 1991).

Gulfs

Strymonikos (Dounas 1986).

Saronikos : NW of Aigina (Vamvakas 1971).

Class
ECHINOIDEA
 Subclass
PERISCHOECHINOIDEA
 Order
CIDAROIDA
 Family
CIDARIDAE

Genus *Cidaris* Leske, 1778

86. *Cidaris cidaris* (Linnaeus, 1758)

(Map 56)

Synonyms : *Echinus cidaris* Linnaeus, 1758; *Cidaris papillata* Leske, 1778; *Cidarites hystrix* Lamarck, 1816; *Cidaris hystrix* : Forbes 1844; *Dorocidaris papillata* : Prouho 1887, Mortensen 1903, Clark 1907, Koehler 1921, 1927, Pérès & Picard 1958; *Cidaris cidaris* : Mortensen 1913, 1927, 1928, Cherbonnier 1956, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Islands

S of Zakynthos (Marenzeller 1893b).

SEA OF KYTHIRA

S, SE, SW of Kythira (Cerigo); E of Antikythira (Marenzeller 1893b) - Cape Tainaro (Matapan); Elafonisos (Cervi) (Pérès & Picard 1958a).

Messiniakos Gulf : Kalamata (Marenzeller 1893b).

AEGEAN SEA

Between Kythira (Cerigo) and Kriti; between Milos and Kriti (Marenzeller 1895).

Islands

W of Lesvos : Mansell Bank (Kisseleva 1983) - W Antipsara (Pérès & Picard 1958a).

N Sporades : W Kea (Zea) (Pérès & Picard 1958a).

Kyklades : (Forbes 1844) - Between Kythnos and Serifos; NW Sifnos; S of Paros; S of Milos (Pancucci in N.C.M.R. 1989) - SW of Syros (Syrá); Serfopoulo (Serpho-Poulo) (Pérès & Picard 1958a) - SE of Milos; E of Serifos (Serpho) (Marenzeller 1895).

Dodekanisos : E of Astypalaia (Stampaglia) (Marenzeller 1895).

Kriti : Cape Lithinos (Littinos); S of Kaloi Limenes (Kalo-Limniones) Bay (Pérès & Picard 1958a).

Genus *Stylocidaris* Mortensen, 1909

87. *Stylocidaris affinis* (Philippi, 1845)

(Map 57)

Synonyms : *Cidaris affinis* Philippi, 1845 : Koehler 1909; *Tetrocidaris affinis* : Clark 1907; *Dorocidaris affinis* : Stefanini 1914; *Stylocidaris affinis* : Mortensen 1913, 1928, Clark 1925, Koehler 1921, 1927, Cherbonnier 1956, Gautier-Michaz 1958, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

SEA OF KYTHIRA

Cape Tainaro (Matapan) (Pérès & Picard 1958a).

AEGEAN SEA

Islands

Off Lesvos : Bruker Bank, Mansell Bank (Kisseleva 1963) - Evvoia : Cavo D'Oro (Cape Doro) (Pérès & Picard 1958a).

N Sporades : W Kea (Zea) (Pérès & Picard 1958a).

Kyklades : S of Thira (Santorin); Nata; Syros; between Paros and Naxos; between Paros and Antiparos (Pérès & Picard 1958a) - Between Syros and Nata; S of Thira (Santorin) (Jacquotte 1962).

Dodekanisos : Rodos : Cum Burnu, dead specimen (Tortonese 1946).

Kriti : Dia (Standia) islet; S of Kaloi Limenes (Kalo-Limniones) Bay (Pérès & Picard 1958a).

Gulfs

Saronikos : Off Methana; between Salamina and Aigina; NW of Aigina; between Methana and Aigina (Vamvakas 1971).

Subclass
EUECHINOIDEA
Order
DLADEMATOIDA
Suborder
AULODONTA
Family
DLADEMATIDAE

Genus *Centrostephanus* Peters, 1855

88. *Centrostephanus longispinus* (Philippi, 1845)

(Map 58)

Synonyms : *Diadema longispina* Philippi, 1845; *Centrostephanus longispinus* : A. Agassiz 1872, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Mortensen 1913, 1940, Clark 1925, Cherbonnier 1956, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

AEGEAN SEA

Islands

N Sporades : Pelagonisi; Piperi (Nicolaidou et al. 1985).

Kyklades : Thira (Santorin) : Mesa Vouno (Messa Vuno) (Pérès & Picard 1958a); Nea Kameni; Akrotirio (Laborel 1960) - Naxos : Port; Agia Anna (Nicolaidou et al., 1986).

Dodekanisos : Rodos : Northern coasts (Tortonese 1946) - NW coasts (Pancucci et al., in preparation).

Kriti : Rethymno (Eleftheriou et al. 1990; Karakassis 1991).

Suborder
STIRODONTA
Family
ARBACIIDAE

Genus *Arbacia* Gray, 1835

89. *Arbacia lixula* (Linnaeus, 1758)

(Map 59)

Synonyms : *Echinus lixula* Linnaeus, 1758; *Cidaris pustulosa* Leske, 1778; *Echinus aequituberculatus* Blainville, 1825; *Arbacia pustulosa*: A. Agassiz 1872, Ludwig 1879, Carus 1885; *Arbacia aequituberculata* : Koehler 1921, 1927; *Arbacia lixula* : Mortensen 1913, Vatova 1928, Cherbonnier 1956; Tortonese 1965, 1980.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Mytikas (Pancucci 1991, 1992 personal collection).
Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia : Coasts W of Argostoli; Fiskardo; Argostoli Bay (Kilian & Strauss 1981) - Kerkyra : Koliviri; Paleokastritsa (Laborel 1960).

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

Korinthiakos : (Kaspiris & Tortonese 1982) - SE Trizonia island (Pérès & Picard 1958a).

SEA OF KYTHIRA

Cape Tainaro (Matapan) (Pérès & Picard 1958a; Laborel 1960).

AEGEAN SEA

Islands

NW of Limnos (Laborel 1960) - W Antipsara (Pérès & Picard 1958a) - Evvoia : Cavo D'Oro (Cape Doro) (Pérès & Picard 1958a).

N Sporades : Kyra Panagia (Koukouras et al. 1985b).

Kyklades : W Kea (Zea); Antiparos; W of Syros (Pérès & Picard 1958a) - Thira : Nea Kameni (Laborel 1960; Pérès & Picard 1958a) - Serfopoula (Serpho-Poulo) (Pérès & Picard 1958a; Laborel 1960).

Dodekanisos : Kos : Port (Issel 1928); coasts between Kos city and Cape Psalidi; Kardamena; Agios Nikolaos (Bianchi & Morri 1983a, b).

Kriti : Cape Lithinos (Littinos); S of Kaloi Limenes (Kalo-Limniones) Bay;

Dia (Standia) islet (Pérès & Picard 1958a) - Cape Lithinos (Littinos) (Laborel 1960).

Gulfs

Saronikos : Pera islet (Pérès & Picard 1958a).

Genus *Arbaciella* Mortensen, 1910

90. *Arbaciella elegans* Mortensen, 1910

(Map 59)

AEGEAN SEA

Islands

Kriti : Chania (Karakassis 1991).

Suborder

CAMARODONTA

Family

TEMNOPLEURIDAE

Genus *Genocidaris* A. Agassiz, 1869

91. *Genocidaris maculata* A. Agassiz, 1869

(Map 60)

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Islands

Kefalonia : Lixouri; N of Lixouri (Pancucci & Zenetos 1989) - Zakynthos : Zakyntho (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Tourlida; E of Evinos River estuary; W of Antirio; Kryoneri; off and W of Mesolongi Lagoon; Kaminia (Pancucci & Zenetos 1989).

Korinthiakos : SE Trizonia island (Pérès & Picard 1958a).

SEA OF KYTHIRA

Cape Tainaro (Matapan); Elafonisos (Cervi) (Pérès & Picard 1958a).

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a; Jacquotte 1962).

AEGEAN SEA

Islands

NE of Samothraki; W of Lesbos (Mytilene) (Jacquotte 1962) - Lesbos : Geras Gulf (Jacquotte 1962; Pancucci & Zenetos 1990) - W Antipsara (Pérès & Picard 1958a) - Evvoia : Cavo D'Oro (Cape Doro) (Pérès & Picard, 1958a).

N Sporades : Pelagonisi; Piperi (Nicolaidou et al. 1985) - Skiathos : Koukounaries (Nicolaidou et al. 1986).

Kyklades : W Kea (Zea); Syros; between Syros and Nata; S of Thira (Santorin); between Paros and Antiparos (Pérès & Picard 1958a) - Syros; Nata; S of Thira (Santorin) (Jacquotte 1962) - Milos : NE coasts (Bogdanos et al., 1990).

Dodekanisos : Rodos : NW coasts (Pancucci et al., in preparation) - Nisyros : Agia Eirini (Bogdanos in N.C.M.R., 1993d) - Kalymnos : Kalogries; Saris (Kastritsi 1993, unpublished data).

Kriti : Mirabello Gulf (Pancucci 1993, personal collection).

Gulfs

Saronikos : Off Methana; NW of Aigina (Vamvakas 1971) - Off Alimos; off Agios Kosmas (Pancucci in Panayotidis & Zenetos 1989).

Family

TOXOPNEUSTIDAE

Genus *Sphaerechinus* Desor, 1856

92. *Sphaerechinus granularis* (Lamarck, 1816)

(Map 61)

Synonyms : *Echinus granularis* Lamarck, 1816; *Echinus brevispinosus* Risso, 1826; *Echinus esculentus* Forbes, 1844; *Toxopneustes brevispinosus* : Heller 1868; *Sphaerechinus granularis* : A. Agassiz 1872-74, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Mortensen 1903, 1913, 1927, Clark 1925, Vatova 1928, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

GREEK WATERS (Athanasopoulos 1921); (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia : Coasts W of Argostoli; Fiskardo (Kilian & Strauss 1981).

Gulfs

Patraikos : (Kaspiris & Tortonese 1982) - W of Antirio; Kryoneri (Pancucci & Zenetos 1989).

Korinthiakos : (Kaspiris & Tortonese 1982) - SE Trizonia island (Pérès & Picard 1958a).

SEA OF KYTHIRA

Cape Tainaro (Matapan) (Pérès & Picard 1958a).

AEGEAN SEA

Islands

W of Lesbos (Jacquotte 1962).

N Sporades : NE of Gioura (Koukouras et al. 1985b).

Kyklades : W Kea (Zea); Nata; Syros; Paros; Antiparos; between Paros and Naxos; between Paros and Antiparos (Pérès & Picard 1958a) - Serfopoula (Serpho-Poulo) (Pérès & Picard 1958a; Laborel 1960).

Dodekanisos : Rodos : Rodos Harbour (Tortonese 1946).

Kriti : Cape Lithinos (Littinos); S of Kaloi Limenes (Kalo-Limniones) Bay (Pérès & Picard 1958a).

Gulfs

Saronikos : Off Methana (Vamvakas 1971) - Megara bay; Salamina (Pérès & Picard 1958a).

Family

ECHINIDAE

Genus *Echinus* Linnaeus, 1758

93. *Echinus acutus* Lamarck, 1816

(Map 62)

Synonyms : *Echinus sardicus* Delle Chiaje, 1841; *Echinus norvegicus* Marenzeller, 1893; *Echinus acutus mediterraneus* : Tortonese 1933.

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia (Kaspiris & Tortonese 1982) - Off SW coasts of **Kerkyra** (Corfu) (Marenzeller 1893b as *Echinus melo*).

Gulfs

Patraikos (Kaspiris & Tortonese 1982).

SEA OF KYTHIRA

S, SE of Kythira (Cerigo); SE of Cape Tainaro (**Matapan**) (Marenzeller 1893b) - E of Antikythira (Marenzeller 1893b) - E of Kythira (Cerigo) (Marenzeller 1895).

AEGEAN SEA

Between Cape Malea and Thira (Santorin); between Cape Malea and Milos (Marenzeller 1895).

Islands

Off Lesvos : Bruker Bank (Makkavieva 1963).

Kyklades : Antimilos (Anti-Milos) (Marenzeller 1893b) - E of Serifos (Serpho) (Marenzeller 1895).

Dodekanisos : E of Astypalaia (Stampaglia) (Marenzeller 1895).

Kriti : NW coasts and N of Kriti (Marenzeller 1893b).

Gulfs

Strymonikos (Dounas 1986).

N Evvoikos : Larymna Bay (Pancucci 1991, unpublished data).

94. *Echinus melo* Lamarck, 1816

GREEK WATERS (Belloc 1948).

Genus *Paracentrotus* Mortensen, 1903

95. *Paracentrotus lividus* (Lamarck, 1816)

(Map 63)

Synonyms : *Echinus lividus* Lamarck, 1816 : Forbes 1843; *Toxopneustes lividus* : Heller 1868; *Strongylocentrotus lividus* : A. Agassiz 1872, Koehler 1883, Carus 1885; *Paracentrotus lividus* : Mortensen 1903, 1913, 1927, Koehler 1921, 1927, Cherbonnier

1956, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Mytikas (Pancucci et al. 1993; Pancucci & Panayotidis 1994).

Stereia Ellada : Astakos (Pancucci & Zenetos 1989).

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

Kefalonia : Coasts W of Argostoli; Fiskardo (Kilian & Strauss 1981).

Gulfs

Patraikos : (Kaspiris & Tortonese 1982) - Kryoneri (Pancucci & Zenetos 1989).

Korinthiakos (Kaspiris & Tortonese 1982).

Amvrakikos : (Bogdanos et al. 1989); (Pancucci & Panayotidis 1994); (Pancucci et al. 1993).

SEA OF KYTHIRA

Cape Tainaro (Matapan) (Pérès & Picard 1958a).

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

N Sporades : Kyra Panagia; Piperi (Koukouras et al. 1985b).

Kyklades : (Forbes 1844) - Naxos : Port (Nicolaidou et al. 1986) - Syros; Antiparos; between Paros and Naxos (Pérès & Picard 1958a) - Serfopoula (Serpho-Poulo) (Pérès & Picard 1958a; Laborel 1960).

Dodekanisos : Rodos : Rodos Harbour; Acandia Bay; Cum Burnu (Tortonese 1946) - Kos : Agios Nikolaos (Bianchi & Morri 1983a, b) - Kalymnos : Emporeio (Kastritsi 1993, unpublished data).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986).

Thermaikos (Chintiroglou 1987).

Saronikos : Faliron Bay (Panagiotopoulos 1916) - Agios Kosmas; Palaia Fokaia; Anavyssos; Legraina (Pancucci, personal observations).

Genus *Psammechinus* L. Agassiz, 1846

96. *Psammechinus microtuberculatus* (Blainville, 1825)

(Map 64)

Synonyms : *Echinus microtuberculatus* Blainville, 1825 : A. Agassiz 1872-74, Ludwig 1879, Carus 1885; *Psammechinus microtuberculatus* : Heller 1868, Koehler 1921, 1927, Clark 1925, Cherbonnier 1956, 1958, Tortonese 1965, 1980.

IONIAN SEA

Islands

Kefalonia (Kaspiris & Tortonese 1982).

Gulfs

Amvrakikos : Offshore stations (Bogdanos et al. 1989).

AEGEAN SEA

Islands

SW of Lesbos : Bruker Bank (Kisseleva 1983) - Lesbos : Geras Gulf (Pancucci & Zenetos 1990).

N Sporades : Pelagonisi; between Skopelos and Alonnisos (Christomanos 1963).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986).

Thermaikos (Koukouras 1979, dead specimens).

NOTE. Some specimens of this Mediterranean species have been erroneously attributed to the Atlantic form *Psammechinus granularis* (Christomanos 1963).

Order

CLYPEASTROIDA

Family

FIBULARIIDAE

Genus *Echinocyamus* Phelsum, 1774

97. *Echinocyamus pusillus* (O.F. Müller, 1776)

(Map 65)

Synonyms : *Spatangus pusillus* O.F. Müller, 1776; *Fibularia equina* Aradas, 1850;

Echinocyamus minutus H.L. Clark, 1925 : Tortonese 1933; *Echinocyamus pusillus* : Heller 1868, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Cherbonnier 1958, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Off Preveza Channel (Bogdanos et al. 1989).

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Islands

Zakynthos : Laganas; between Argassi and Vasilikos (Pancucci & Zenetos 1989) - Kefalonia : N of Lixouri (Pancucci & Zenetos 1989).

Gulfs

Patraikos : W of Antirio; off Mesolongi Lagoon (Pancucci & Zenetos 1989).

SEA OF KYTHIRA

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Oreoi Channel (Bogdanos 1975); (Pancucci in N.C.M.R. 1992).

Islands

W of Lesbos : Mansell Bank (Kisseleva 1983) - W of Lesbos (Jacquotte 1962) - Lesbos : Geras Gulf (Diapoulis & Bogdanos 1983; Pancucci & Zenetos 1990) - Evvoia : Cavo D'Oro (Cape Doro) (Pérès & Picard 1958a).

N Sporades : Piperi; Gioura (Nicolaidou et al. 1985) - Skiathos : Koukounaries; Agia Paraskevi; Aselinos (Nicolaidou et al. 1986).

Kyklades : W Kea (Zea) (Pérès & Picard 1958a) - Amorgos : Vathy Bay (Forbes 1844, dead specimens) - NW of Paros (Pancucci in N.C.M.R., 1989) - Off extreme N of Paros (Forbes 1844) - Milos : Adamas Bay (Pancucci in N.C.M.R. 1989); NE coasts (Bogdanos et al. 1990) - Antiparos; between Paros and Naxos; between Paros and Antiparos (Pérès & Picard 1958a) - Off E coast of Naxos (Naxia); off Ananes (Ananas) Rocks; Serfopoula (Serpho-Poulo) (Forbes 1844) - Naxos : Agia Anna (Nicolaidou et al. 1986).

Dodekanisos : Rodos : Northern coasts (Tortonese 1946); NW coasts (Pancucci et al. in preparation) - Kalymnos : Saris; Pothia; Vlichadia (Kastritsi 1993, unpublished data).

Kriti : Chania Bay; Rethymno; Irakleio; Siteia (Eleftheriou et al. 1990) - Irakleio; Marabello; SE coasts; Rethymno (Karakassis 1991) - Elounta; Mirabello (Pancucci 1993, personal collection).

Gulfs

Kavala : Prinos (Bogdanos et al. 1984) - Off Nea Iraklitsa; off Cape Vrasidas (Papazacharias 1991).

Strymonikos (Dounas 1986).

Pagazitikos : (Bogdanos & Satsmadjis 1983) - Trikeri (Bogdanos 1989).

N Evvoikos : Larymna Bay (Pancucci in Papadopoulos 1986).

Saronikos : NW of Aigina; between Methana and Aigina (Vamvakas 1971) - W of Aigina (Pancucci in Panayotidis & Zenetos 1989) - Elefsis Bay (Zenetos & Bogdanos 1987).

Order

SPATANGOIDA

Family

BRISSIDAE

Genus *Brissopsis* L. Agassiz, 1840

98. *Brissopsis lyrifera* (Forbes, 1841)

(Map 66)

Synonyms : *Brissus lyrifer* Forbes, 1841; *Schizaster incertus* Aradas, 1850; *Brissopsis lyrifera* : Ludwig 1879, Carus 1885, Koehler 1921, 1927, Cherbonnier 1958, Tortonese 1965, 1980.

IONIAN SEA

Gulfs

Patraikos : (Bogdanos & Nicolaidou 1985) - W of Antirio (Pérès & Picard 1958a).

SEA OF KYTHIRA

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Islands

SW of Samothraki, S of Samos (Marenzeller 1895).

Kyklades : NW Syros (Pancucci in N.C.M.R. 1989) - **Thira (Santorin)** : SE of Palia Kameni (Pérès & Picard 1958a).

Dodekanisos : Rodos : NW coasts (Pancucci et al. in preparation).

Kriti : Siteia (Karakassis 1991).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986); (Dounas & Koukouras 1992).

Thermaikos : Off Axios River estuary (Pancucci in NCMR Data Report 1993b).

Pagositikos (Bogdanos & Satsmadjis 1983).

N Evvoikos : Larymna Bay (Pancucci in Papadopoulos 1986).

S Evvoikos (Pancucci 1991, unpublished data).

99. *Brissopsis mediterranea* (Mortensen, 1913)

(Map 66)

Synonyms : *Brissopsis atlantica mediterranea* Mortensen, 1913 : Tortonese 1965;
Brissopsis mediterranea : Tortonese, 1979.

SEA OF KYTHIRA

Lakonikos Gulf : Gytheio (Pancucci in Zenetos et al. 1992a).

AEGEAN SEA

Oreoi Channel (Pancucci in N.C.M.R. 1992).

Islands

Kyklades : Thira : Caldera (Pancucci 1987, personal collection)

Dodekanisos : Rodos : NW coasts (Pancucci 1994a).

Kriti : Off Irakleio (Tselepides 1992).

Gulfs

Kavala (Papazacharias 1991).

Maliakos (Pancucci 1993, unpublished data).

N Evvoikos : (Pancucci 1994a) - Larymna Bay (Pancucci in N.C.M.R. 1992).

Genus *Brissus* Gray, 1825

100. *Brissus unicolor* (Leske, 1778)

(Map 67)

Synonyms : *Spatangus Brissus unicolor* Leske, 1778; *Spatangus columbaris* Lamarck, 1816; *Brissus scillae* L. Agassiz, 1836; *Brissus brissus* H.L. Clark, 1925 : Cherbonnier 1956, 1958; *Brissus unicolor* : A. Agassiz 1872-74, Ludwig 1879, Carus 1885, Mortensen 1913, Koehler 1921, 1927, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos (Kaspiris & Tortonese 1982).

Gulfs

Patraikos (Bogdanos & Satsmadjis 1987).

SEA OF KYTHIRA

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Islands

Kyklades : Nata (Pérès & Picard 1958a).

Dodekanisos : Rodos : NW coasts (Pancucci et al. in preparation) - Symi : Panormiti (Tortonese 1984, in litteram).

Kriti : SE coasts (Karakassis 1991).

Gulfs

Pagazitikos : (Bogdanos & Satsmadjis 1983) - Volos Bay; Northern part of the Gulf (Bogdanos 1975) - Trikeri (Bogdanos 1989) - Offshore stations (Bogdanos 1993).

Genus *Plagiobrissus* Pomel, 1883

101. *Plagiobrissus costai* (Gasco, 1876)

(Map 67)

Synonyms : *Metalia costae* Gasco, 1876 : Carus 1885, Koehler 1927, Cherbonnier 1956, Gautier-Michaz 1958; *Plagiobrissus costae* : Mortensen 1933, Tortonese 1957, 1961; *Plagiobrissus (Rhabdobrissus) costae* : Mortensen 1951; *Plagiobrissus (Rhabdobrissus) costai* : Tortonese 1961, *Plagiobrissus costai* : Tortonese 1965.

SEA OF KYTHIRA

W of Karavi islet (Pérès & Picard 1958a).

Messiniakos Gulf : Kalamata (Jacquotte 1962).

AEGEAN SEA

Islands

Kriti : Chania; Rethymno; Siteia (Eleftheriou et al. 1990).

Family

LOVENIIDAE

Genus *Echinocardium* Gray, 1825

102. *Echinocardium cordatum* (Pennant, 1777)

(Map 68)

Synonyms *Echinus cordatus* Pennant, 1777; *Spatangus arcuarius* Lamarck, 1816; *Amphidetus cordatus* : L. Agassiz-Desor 1847; *Echinocardium cordatum* : L. Agassiz 1872-74, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Vatova 1950, Cherbonnier 1958, Tortonese 1965, 1980.

IONIAN SEA

Coasts

Peloponnisos : (Kaspiris & Tortonese 1982) - Metochi; Megalo Pefko; Manolada; Kilini; Loutra Kilinis; off Pineios River estuary; Agios Andreas; Cape Katakolo (Pancucci & Zenetos 1989) - Navarino Bay (Bogdanos et al. 1984).

Islands

Zakynthos : Vasilikos; Akrotiri; Alykes (Pancucci & Zenetos 1989) - Kefalonia: Vlachata; S of Lixouri; Agia Pelagia; Katelios (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Evinochori; W of Antirio; off Mesolongi Lagoon; Patra; Paralia; Agia; Kaminia; Niforeika (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

Kyklades : Milos : NE coasts (Bogdanos et al. 1990).

Kriti : S of Kaloi Limenes (Kalo-Limniones) Bay (Pérès & Picard 1958a) - Irakleio (Eleftheriou et al. 1990).

Gulfs

Kavala : Off N Iraklitsa; off Cape Vrasidas (Papazacharias 1991).

Thermaikos (Koukouras 1979, dead specimens).

Pagazitikos : Volos Bay (Bogdanos 1989).

Maliakos (Pancucci 1992, unpublished data).

103. *Echinocardium fenauxi* Péquignat, 1963

(Map 68)

Synonyms : *Echinocardium cordatum* (nec Pennant) Tortonese, 1952; *Echinocardium fenauxi* Péquignat, 1963 : Tortonese 1965, 1980.

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b; Pancucci 1994b).

AEGEAN SEA

Islands

Ydra (Borghi 1994).

104. *Echinocardium flavescens* (O.F. Müller, 1776)

(Map 69)

Synonyms : *Spatangus flavescens* O.F. Müller, 1776; *Echinocardium flavescens* : A. Agassiz 1872-74, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Cherbonnier 1958, Tortonese 1965, 1980.

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

Kyklades : Syros (Pérès & Picard 1958a).

Dodekanisos : Kalymnos : Saris (Kastritsi 1993, unpublished data).

105. *Echinocardium mediterraneum* (Forbes, 1843)

(Map 69)

Synonyms : *Amphidetus mediterraneus* Forbes, 1843; *Amphidetus gibbosus* L. Agassiz-Desor, 1847; *Echinocardium mediterraneum* : Heller 1868, Ludwig 1879, Carus 1885, Koehler 1921, 1927, Tortonese 1965, 1980.

IONIAN SEA

Islands

Zakynthos : Alikanas (Pancucci & Zenetos 1989) - Kefalonia : Platy Gialos; Poros (Pancucci & Zenetos 1989).

Gulfs

Patraikos : Agia (Pancucci & Zenetos 1989).

AEGEAN SEA

Islands

Kyklades : near Paros (Forbes in Carus 1885).

Family

SCHIZASTERIDAE

Genus *Schizaster* L. Agassiz, 1836

106. *Schizaster canaliferus* (Lamarck, 1816)

(Map 70)

Synonyms : *Spatangus canaliferus* Lamarck, 1816; *Ova canalifera* : H.L. Clark 1925, Tortonese 1933; *Schizaster canaliferus* : Aradas 1850, Heller 1868, Ludwig 1879, Koehler 1921, 1927, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Peloponnisos : (Kaspiris & Tortonese 1982) - Glyfa (Pancucci & Zenetos 1989) - Navarino Bay (Bogdanos et al. 1984).

SEA OF KYTHIRA

Messiniakos Gulf : Kalamata (Pérès & Picard 1958a).

AEGEAN SEA

Islands

Lesvos : Geras Gulf (Pancucci & Zenetos 1990).

Dodekanisos : Rodos : NW coasts (Pancucci et al. in preparation) - Symi : Panormiti (Tortonese 1984, in litteram).

Kriti : Mirabello, Messaras (Karakassis 1991) - Mirabello (Pancucci 1993, personal collection).

Gulfs

Kavala (Papazacharias 1991).

Strymonikos (Dounas 1986).

Family

SPATANGIDAE

Genus *Spatangus* Gray, 1825

107. *Spatangus purpureus* (O.F. Müller, 1776)

(Map 71)

Synonyms : *Spatangus purpureus* O.F. Müller, 1776; *Spatangus meridionalis* Risso, 1825 : Heller 1868; *Spatangus purpureus* : Gray 1825, Ludwig 1879, Carus 1885, Koehler

1921, 1927, Cherbonnier 1956, Tortonese 1965, 1980.

GREEK WATERS (Belloc 1948).

IONIAN SEA

Coasts

Ipeiros : Off Preveza city : Kalamitsi (Pancucci in Zenetos et al. 1992b).

Peloponnisos (Kaspiris & Tortonese 1982).

Islands

W of Kerkyra (Corfu) (Marenzeller 1893b).

SEA OF KYTHIRA

S of Kythira (Cerigo) (Marenzeller 1893b) - Cape Tainaro (Matapan) (Laborel 1960).

AEGEAN SEA (Forbes (1844)

SW of Samothraki (Marenzeller 1895).

Islands

Kyklades : SW Thira (Santorin); between Paros and Naxos; between Paros and Antiparos; Antiparos (dead specimens) (Pérès & Picard 1958a).

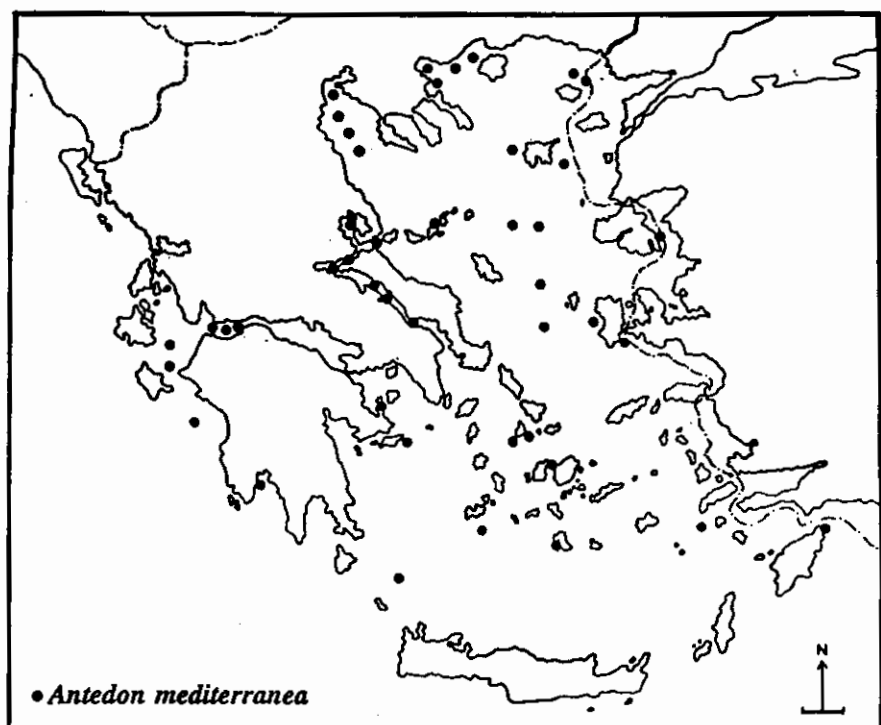
Gulfs

Pagazitikos : (Bogdanos & Satsmadjis 1983) - Volos Bay (Bogdanos 1975, 1993).

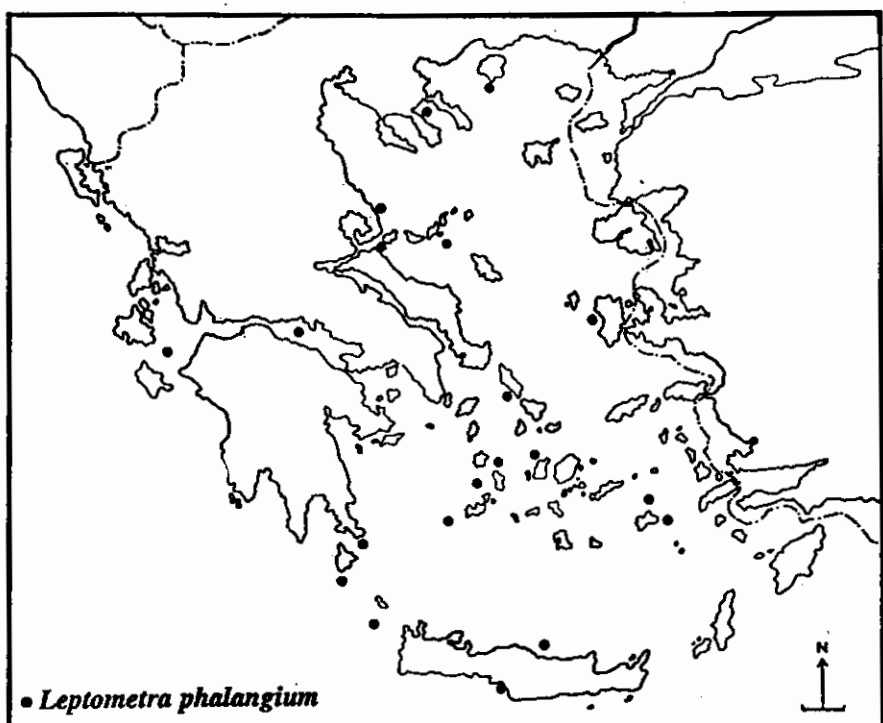
Saronikos : W of Aigina (Vamvakas 1971).

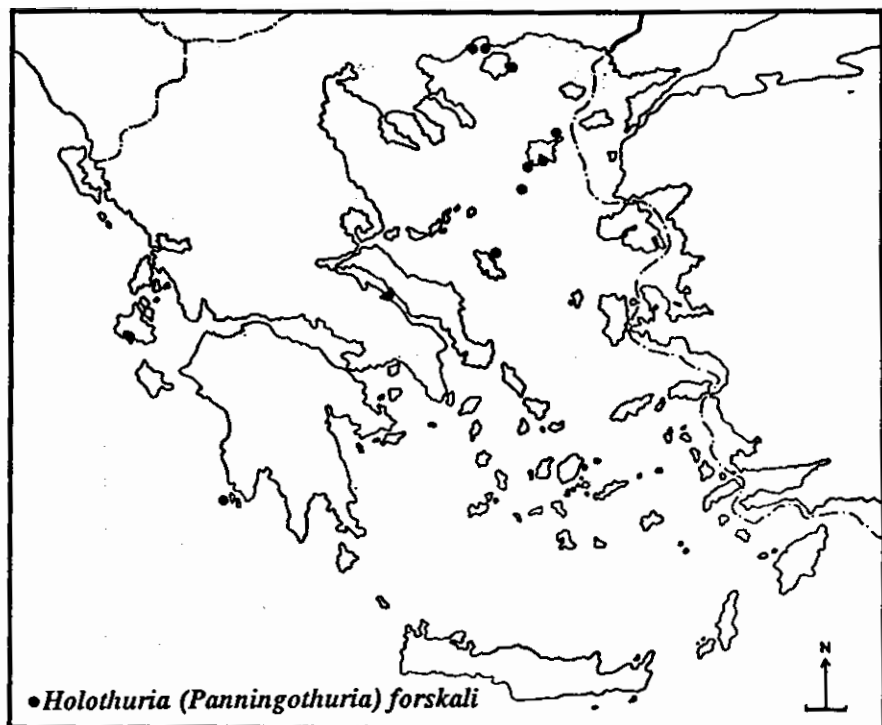
DISTRIBUTION MAPS

Map 1

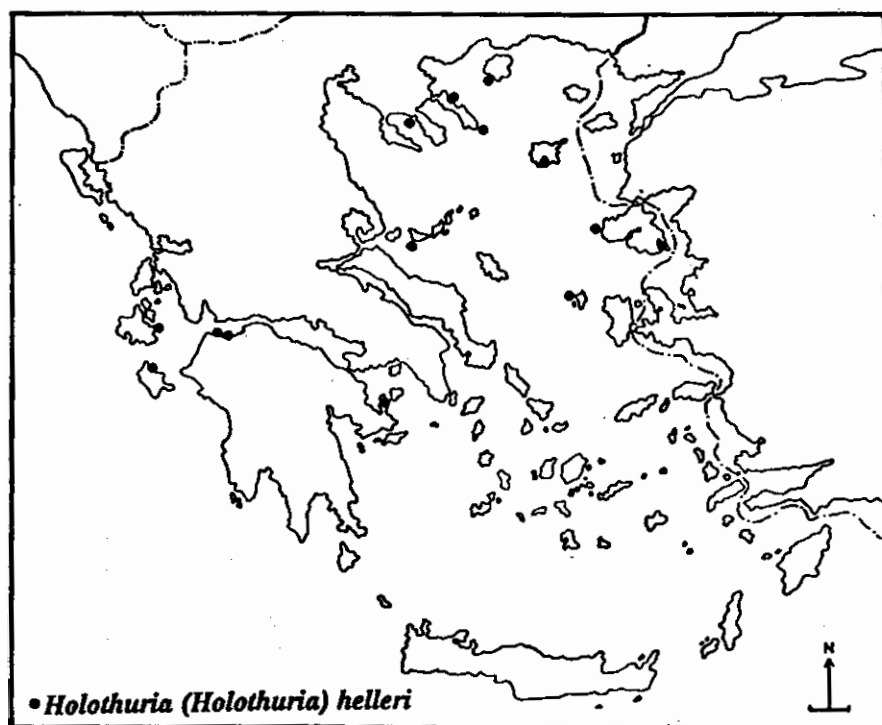


Map 2



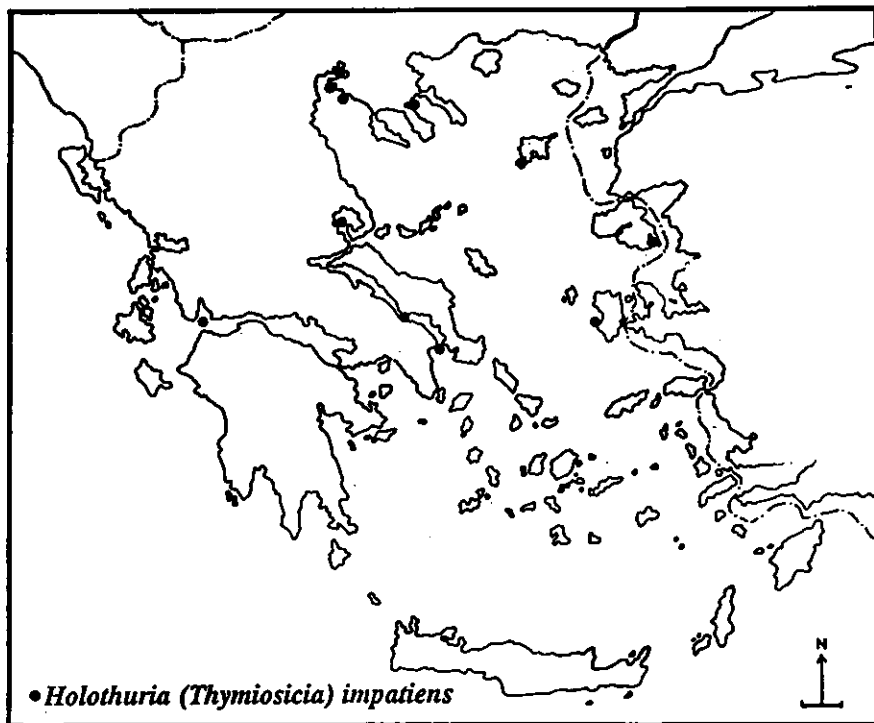


Map 3

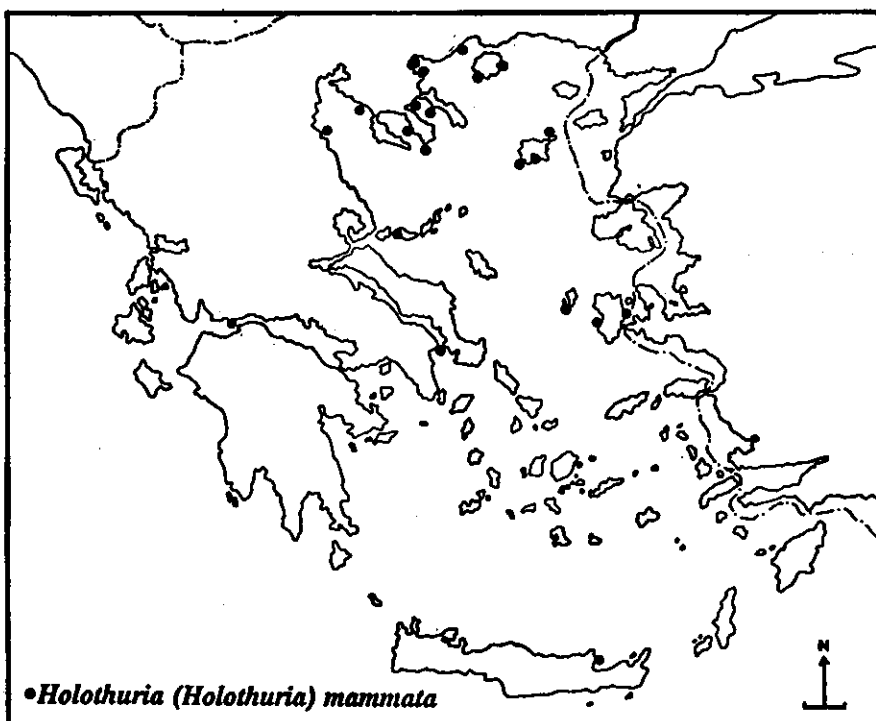


Map 4

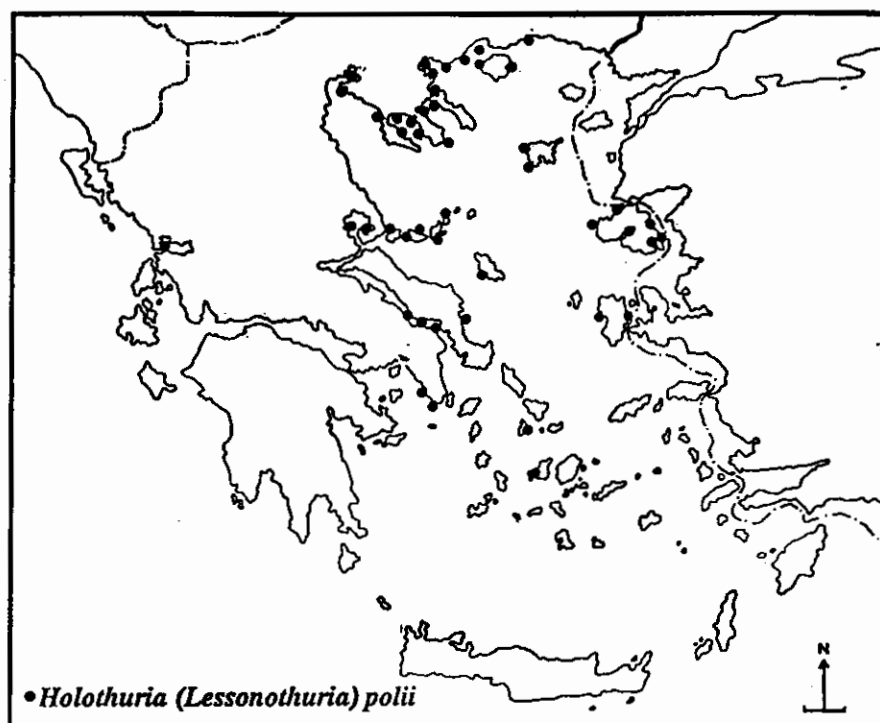
Map 5



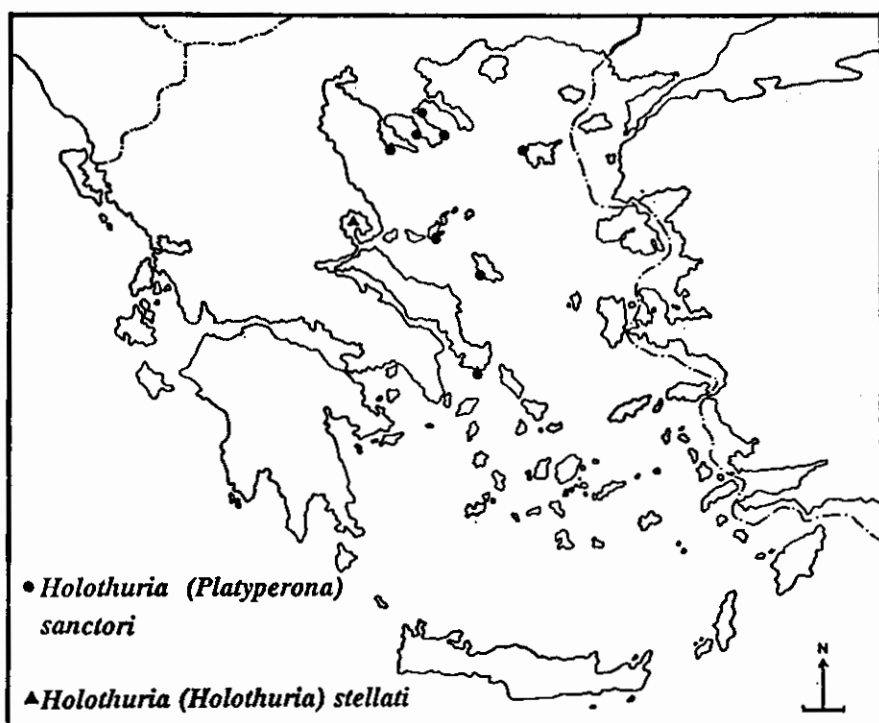
Map 6



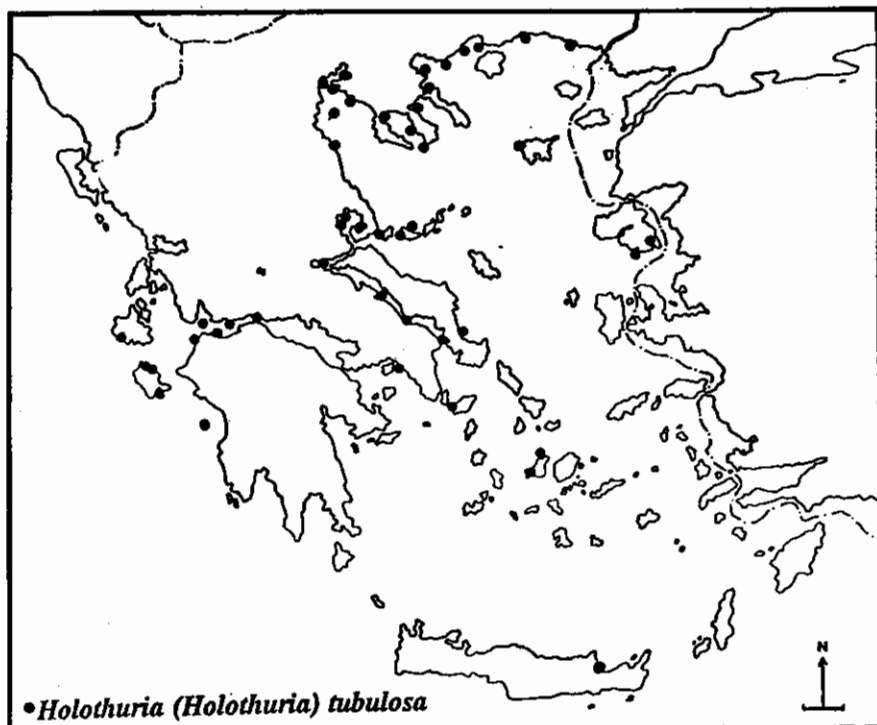
Map 7



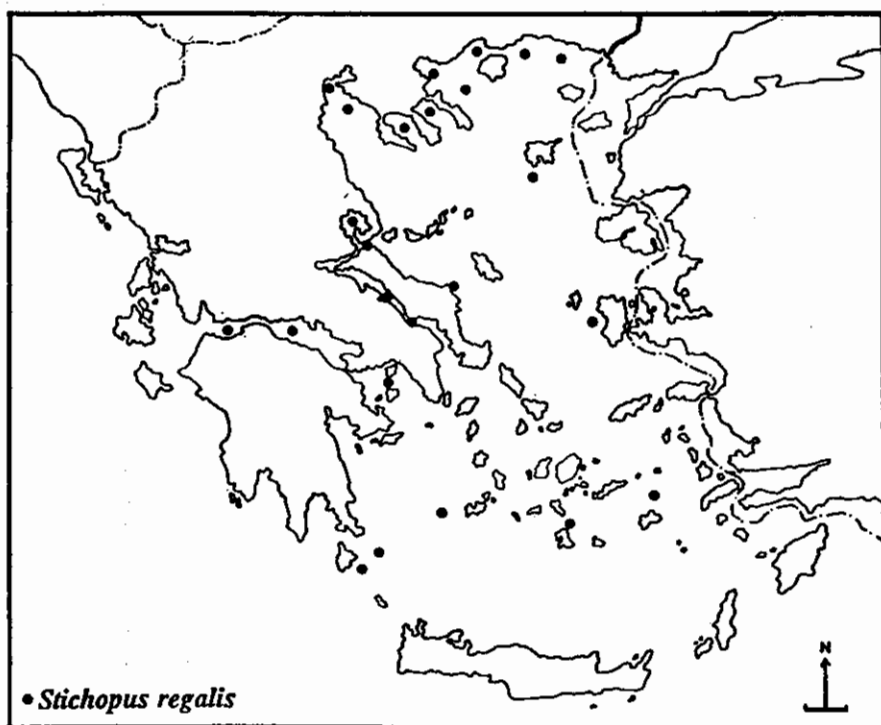
Map 8



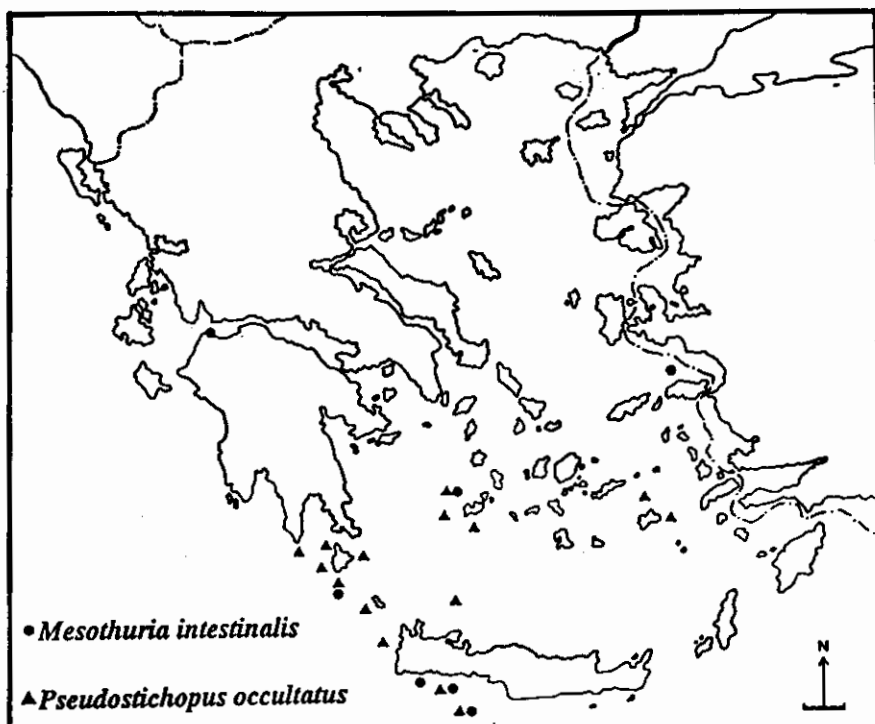
Map 9



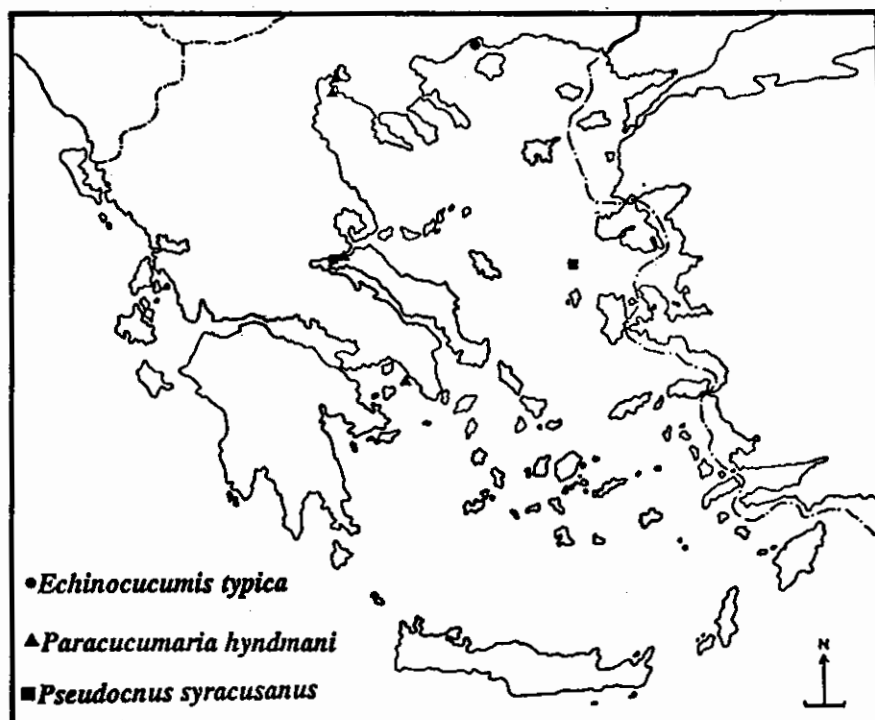
Map 10



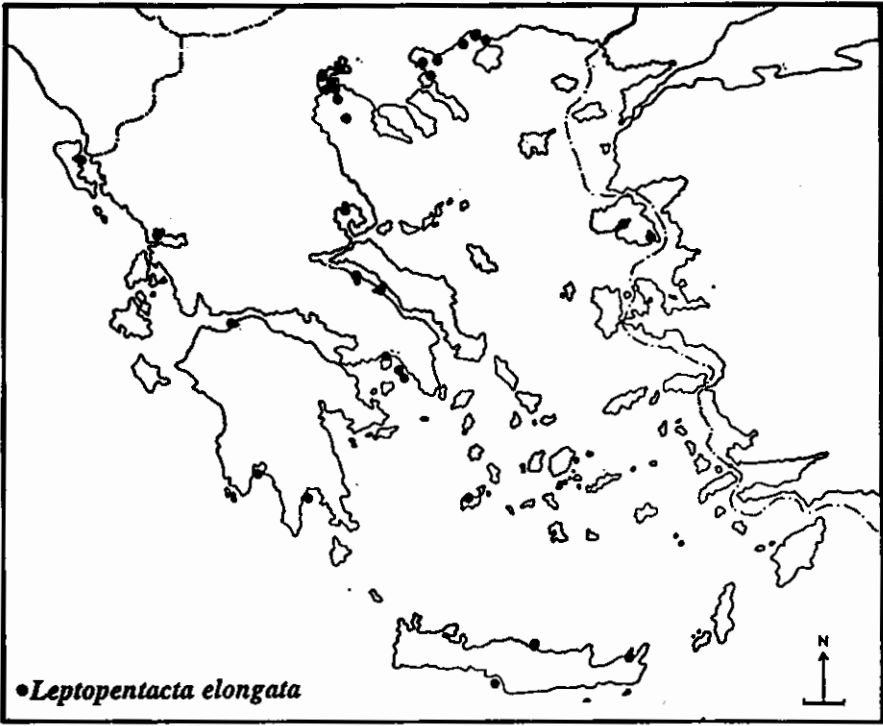
Map 11



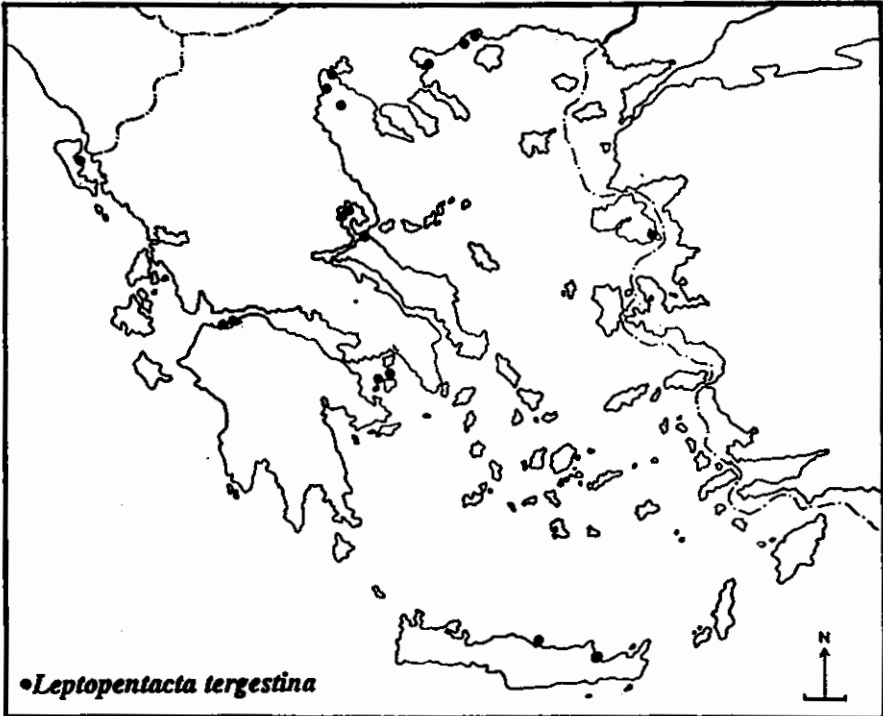
Map 12

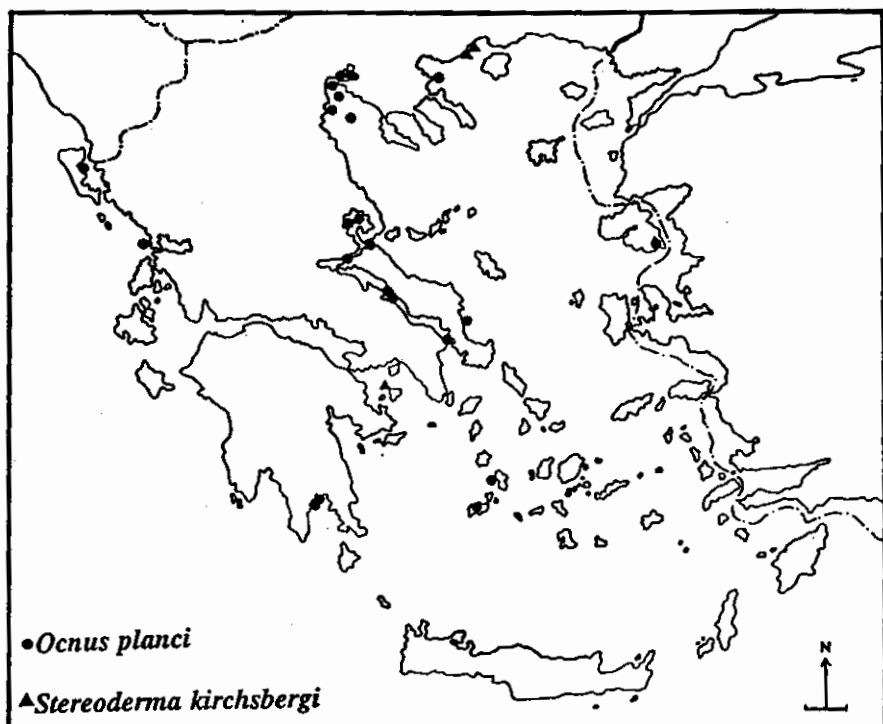


Map 13

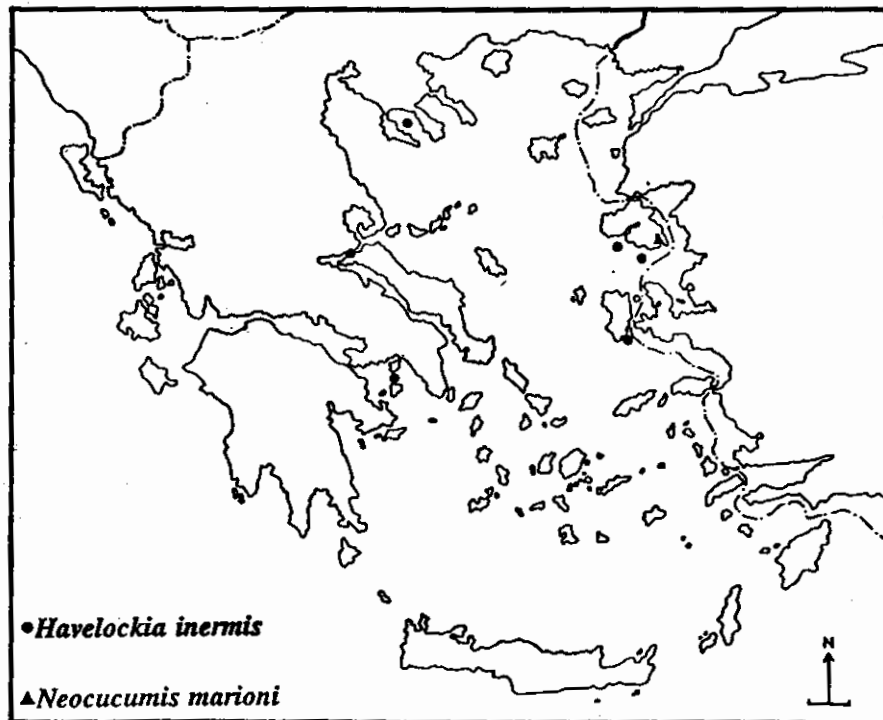


Map 14



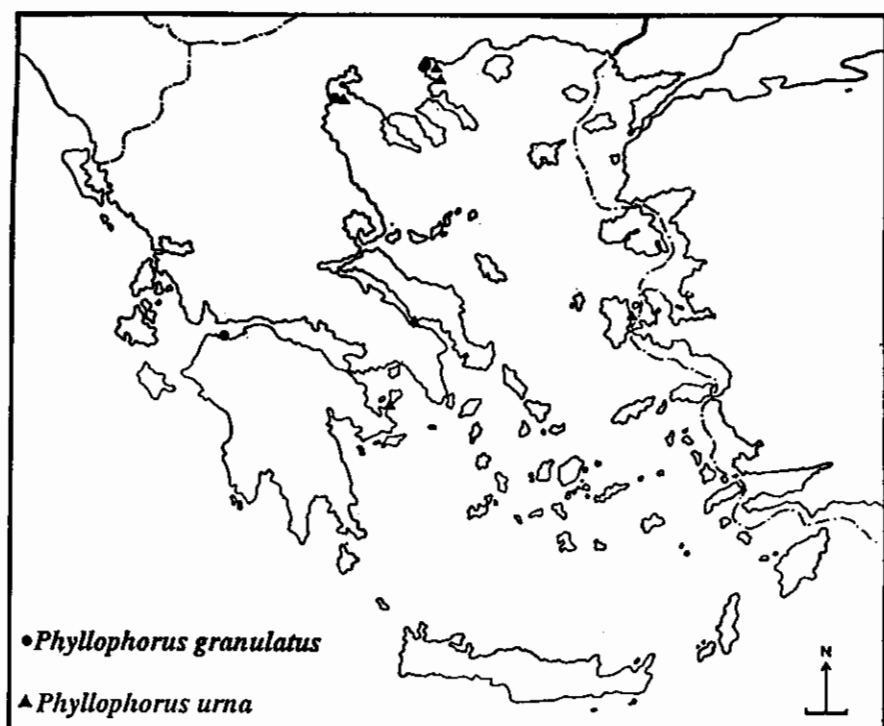


Map 15

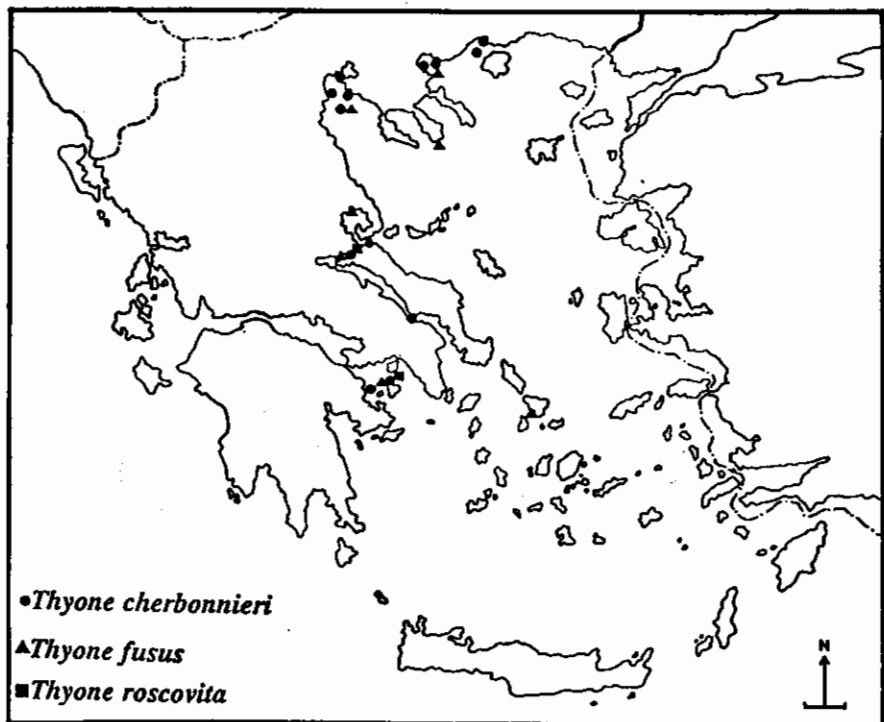


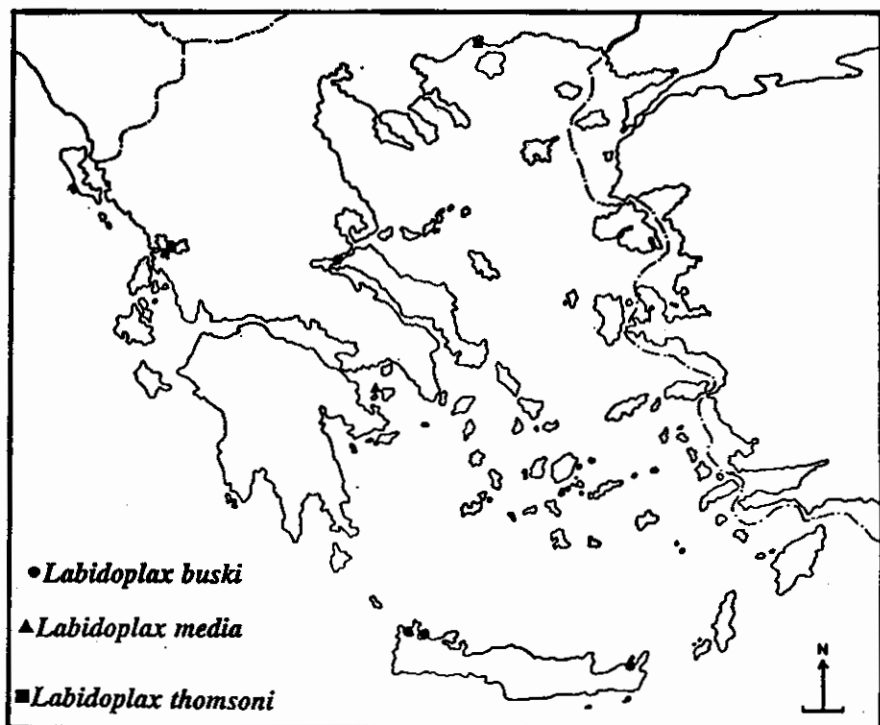
Map 16

Map 17

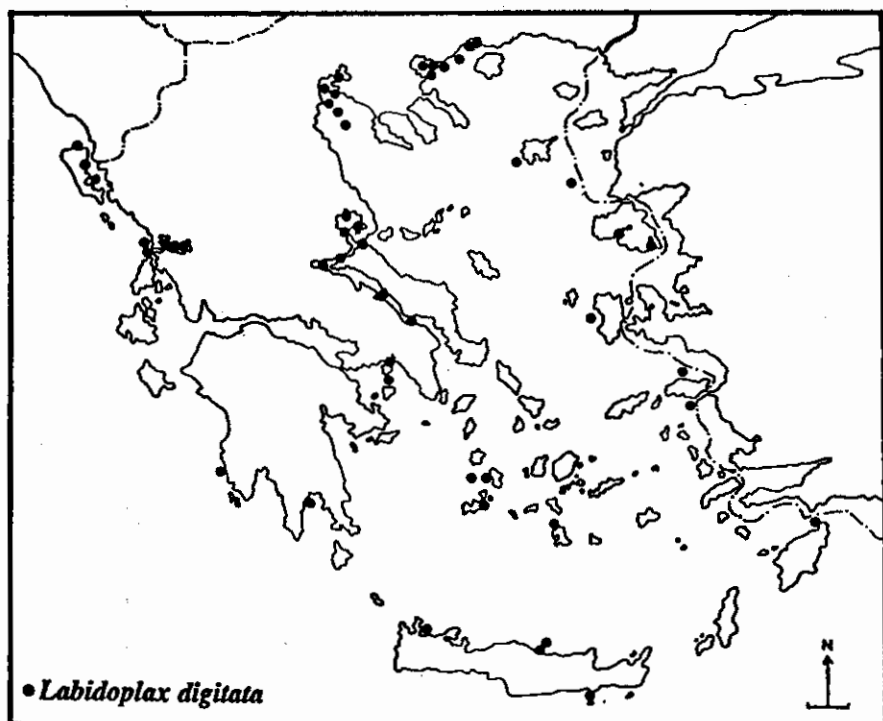


Map 18



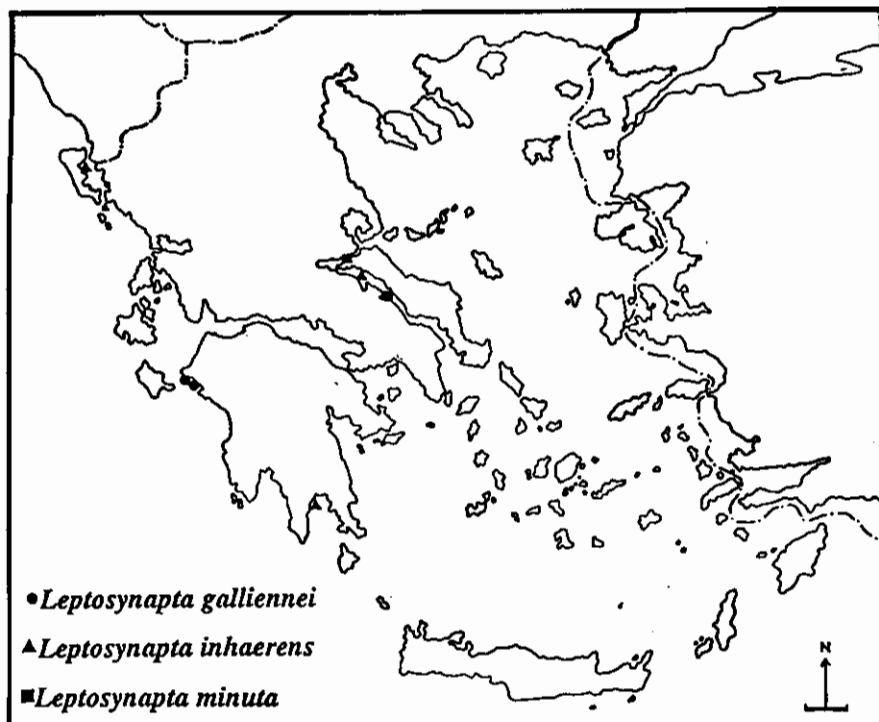


Map 19

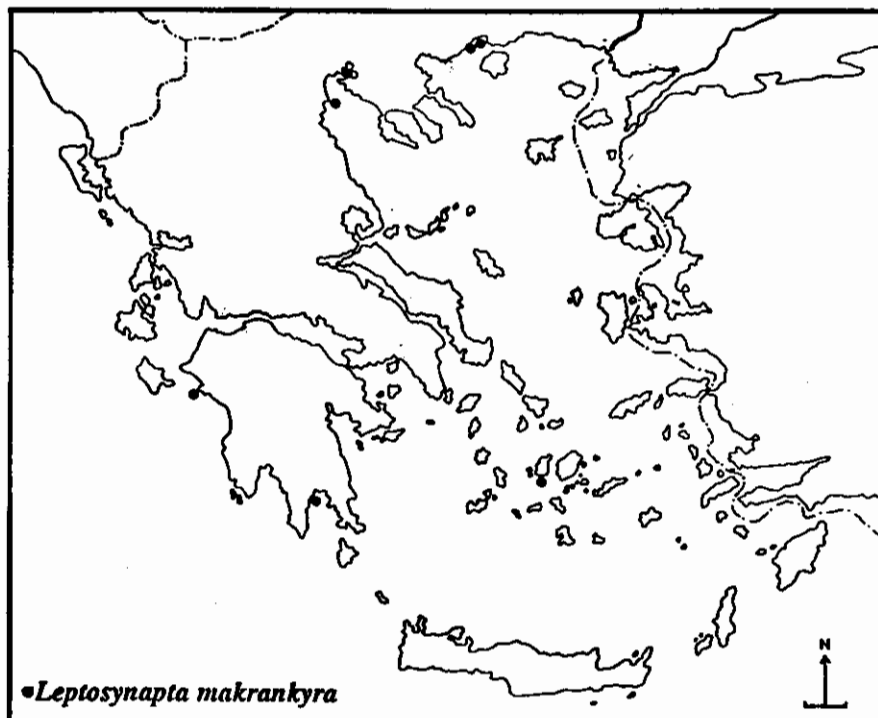


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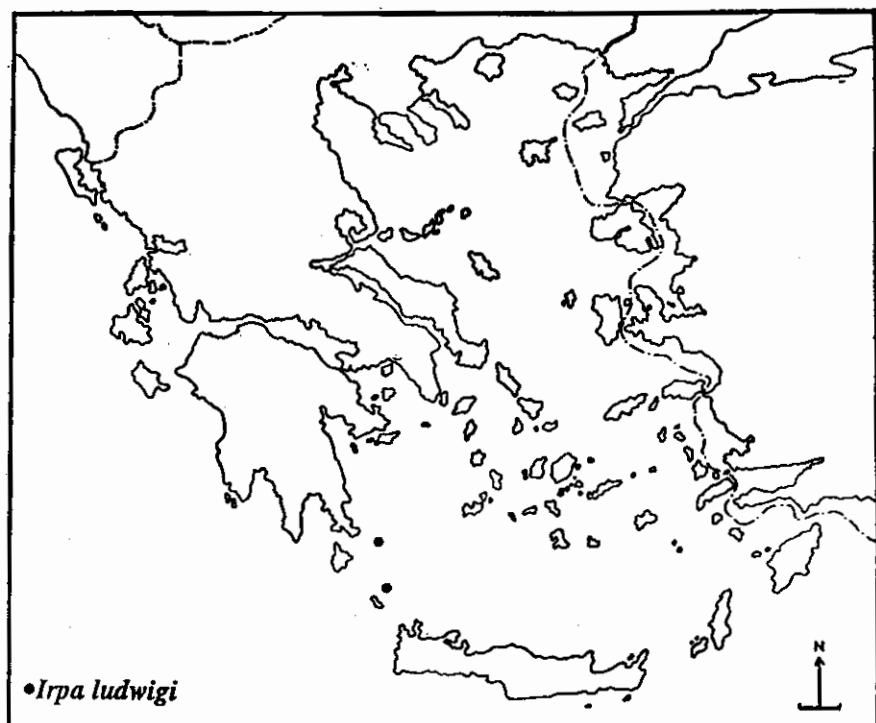
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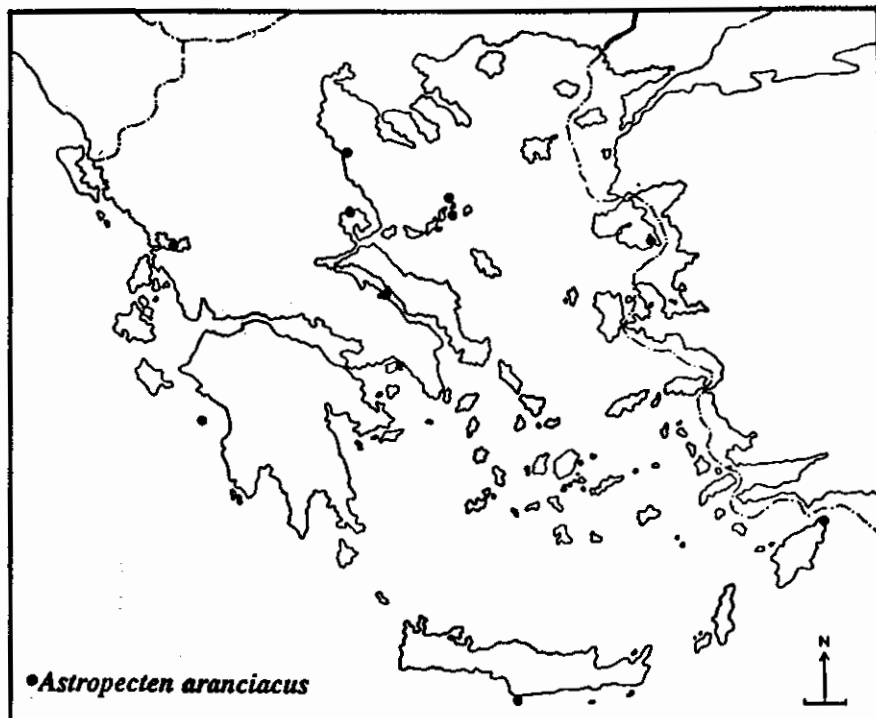
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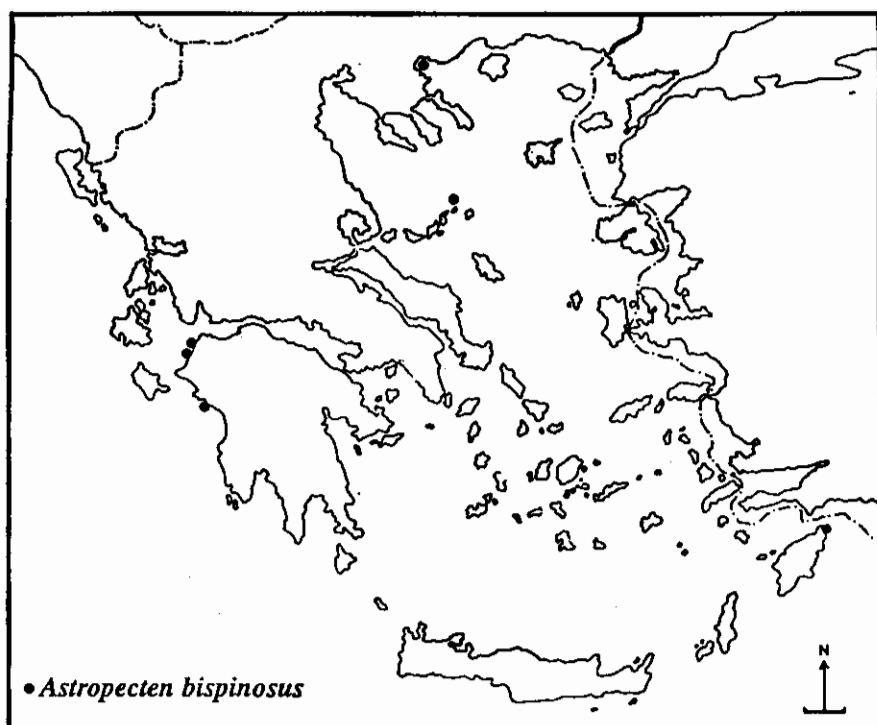
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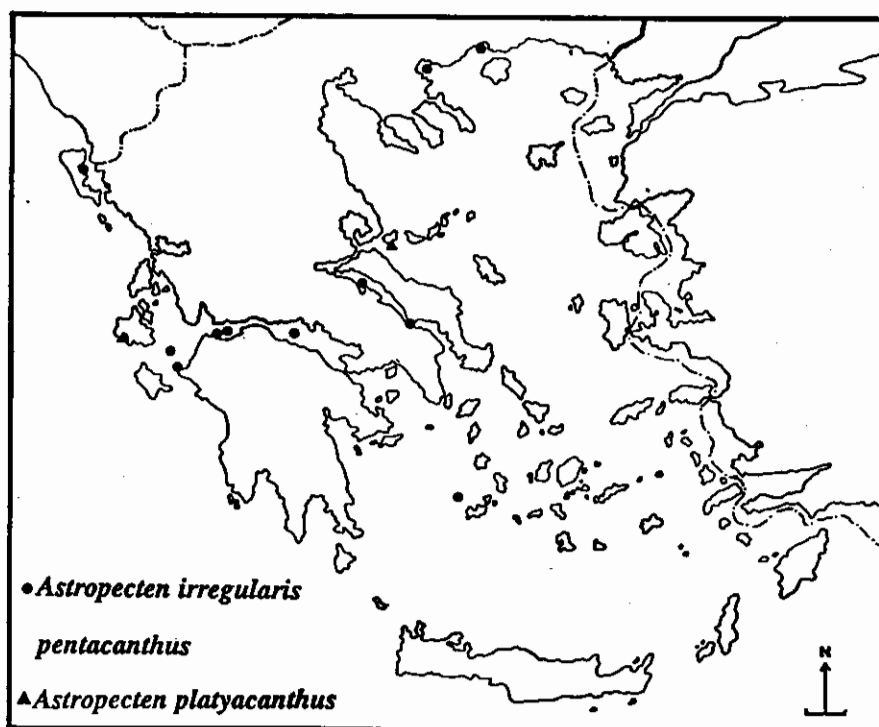
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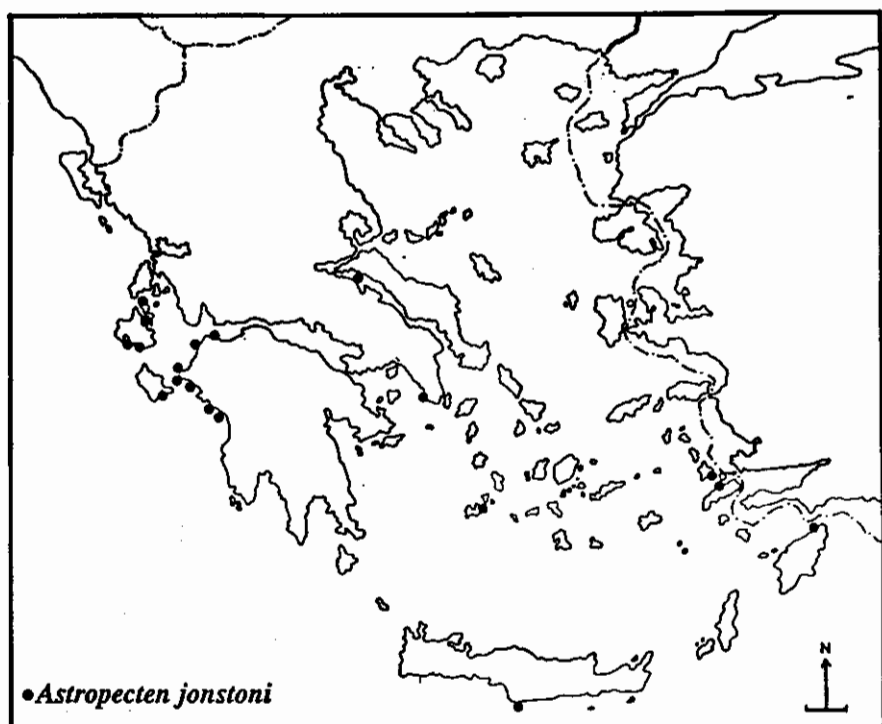
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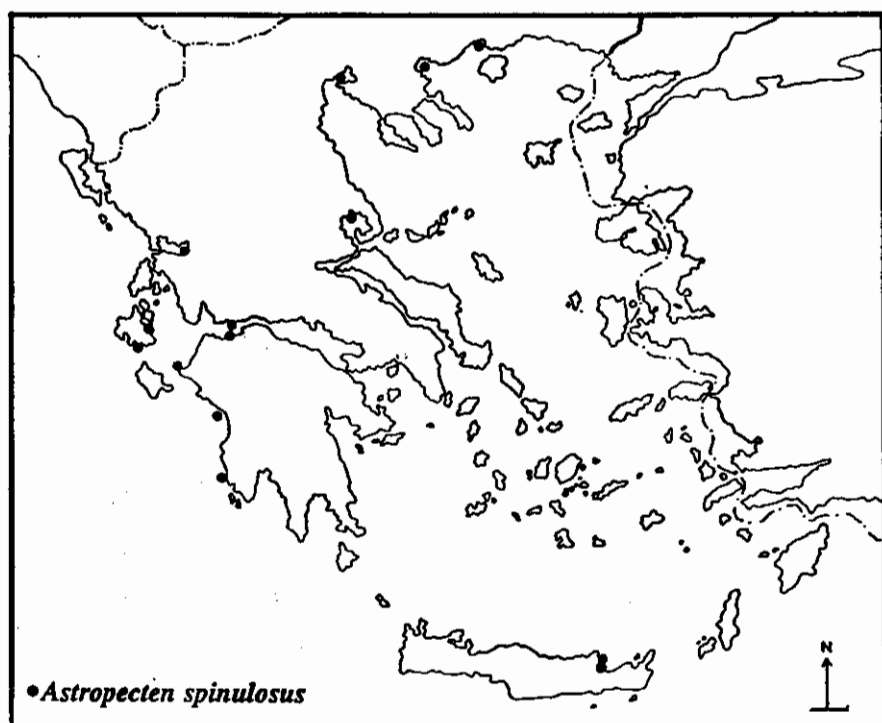
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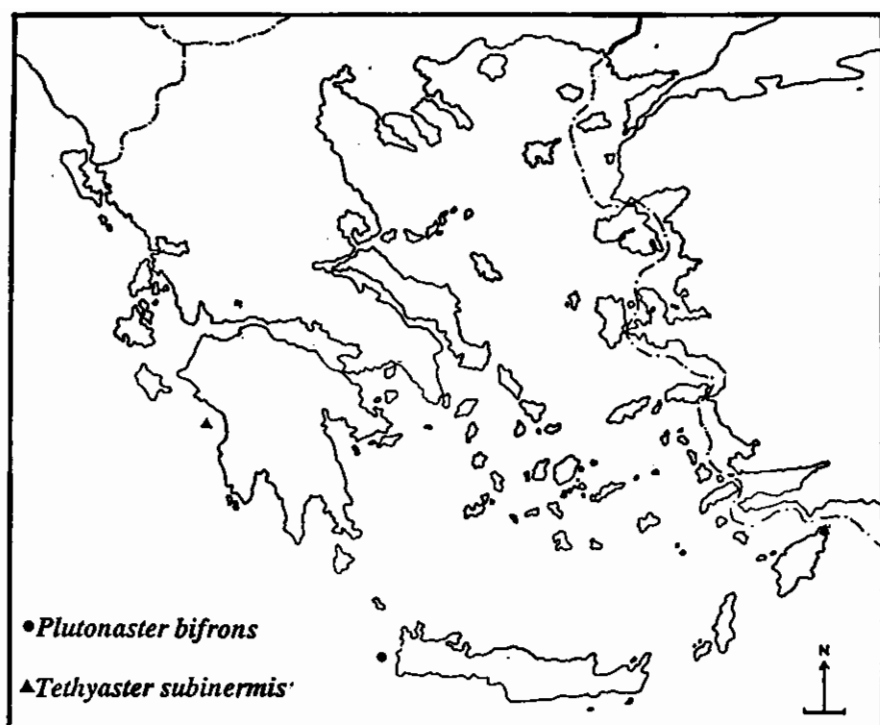
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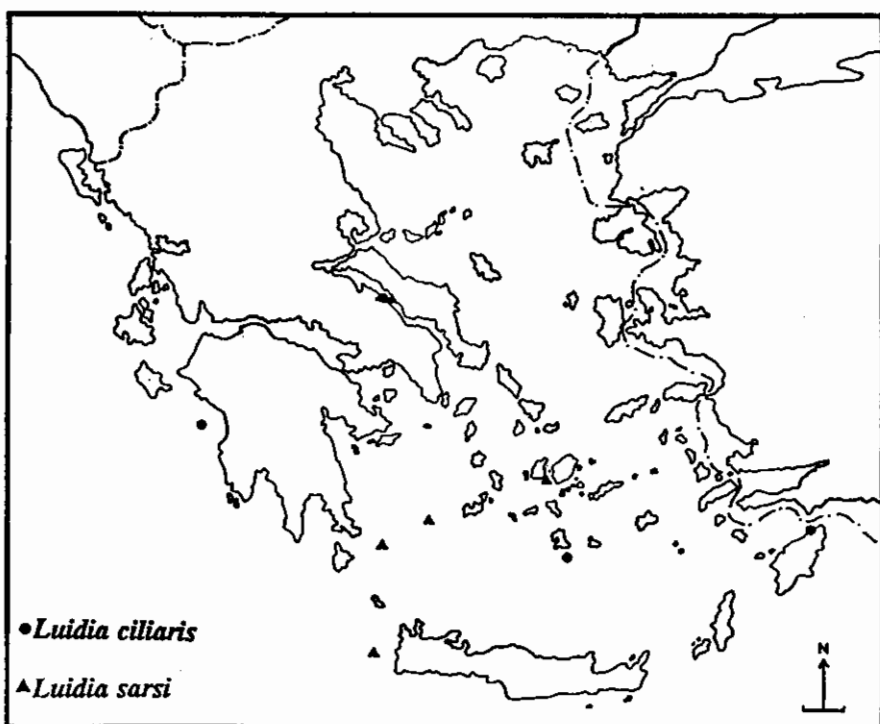
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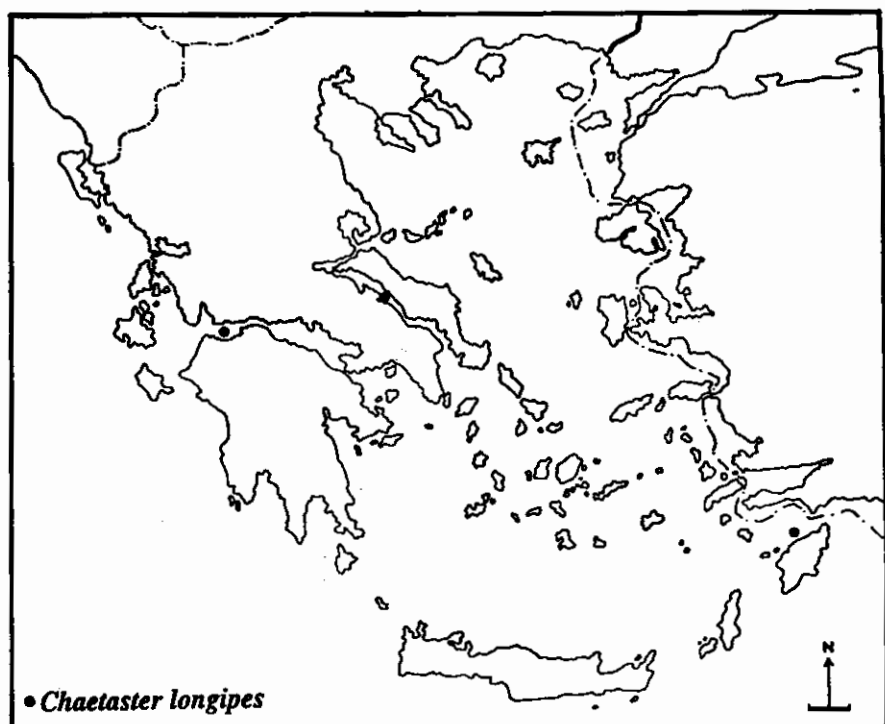


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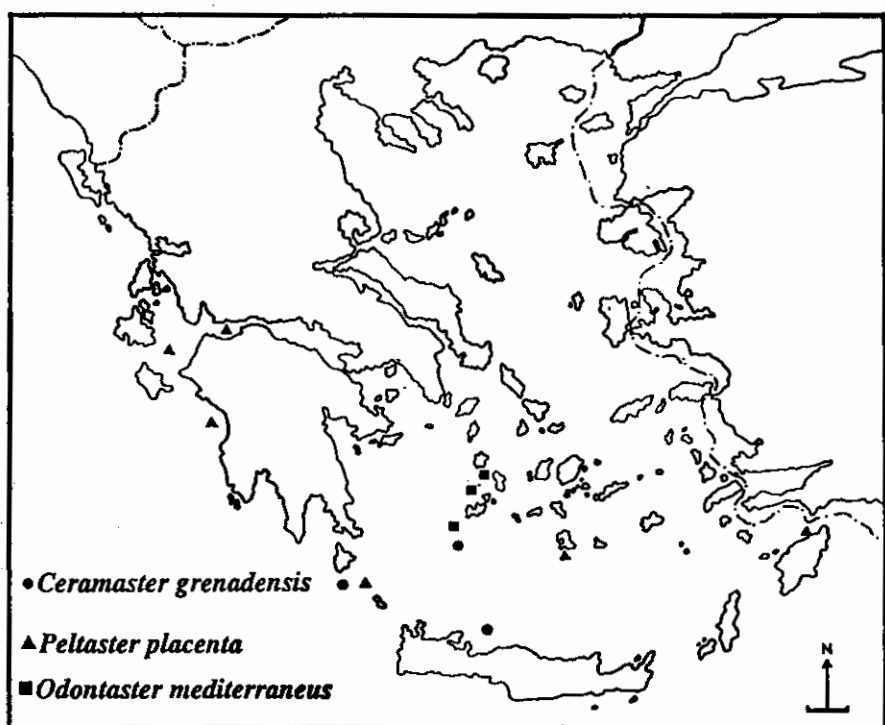


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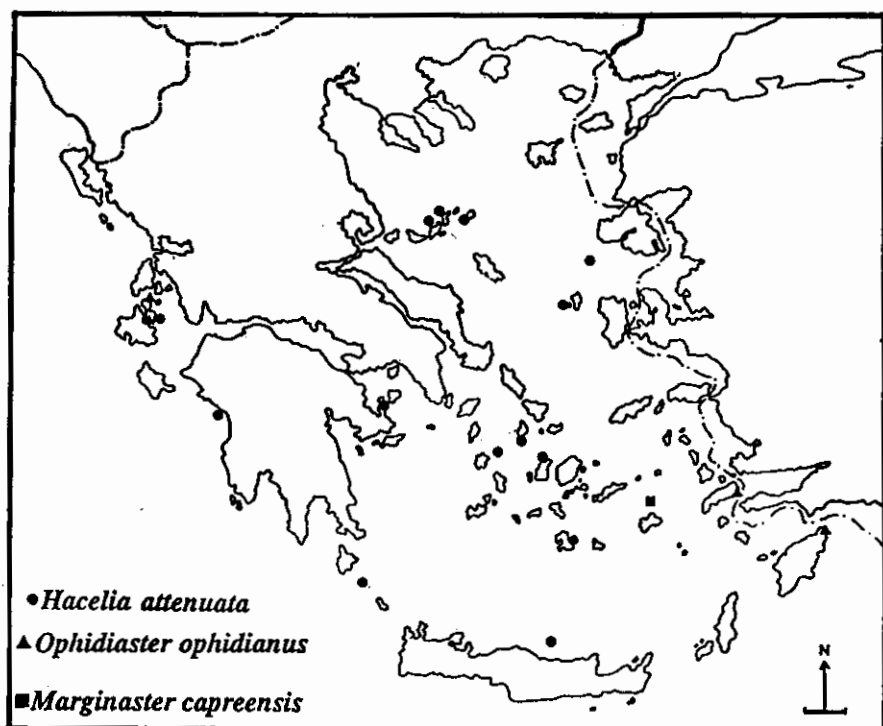




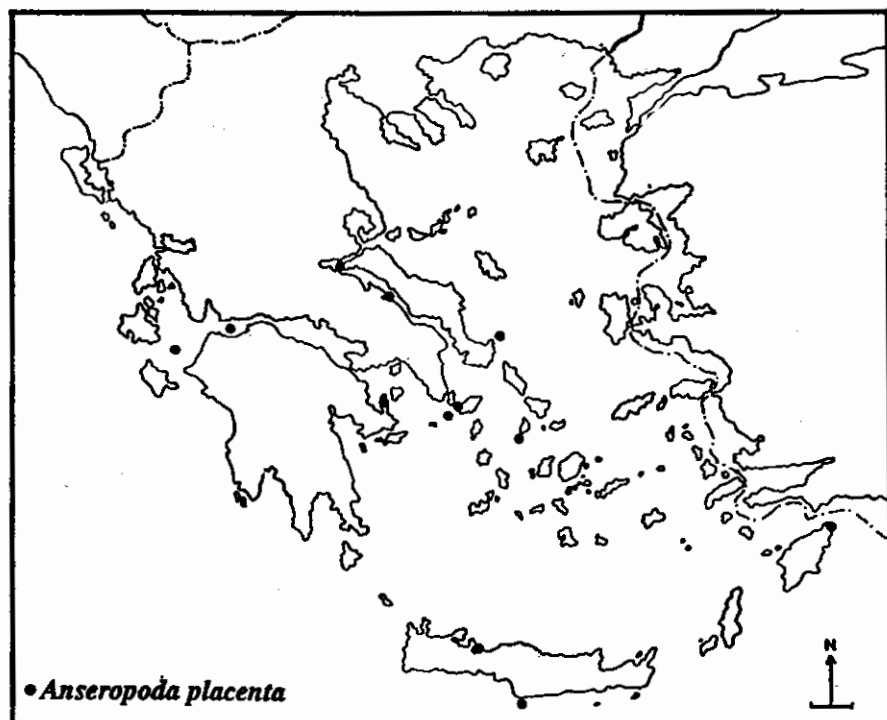
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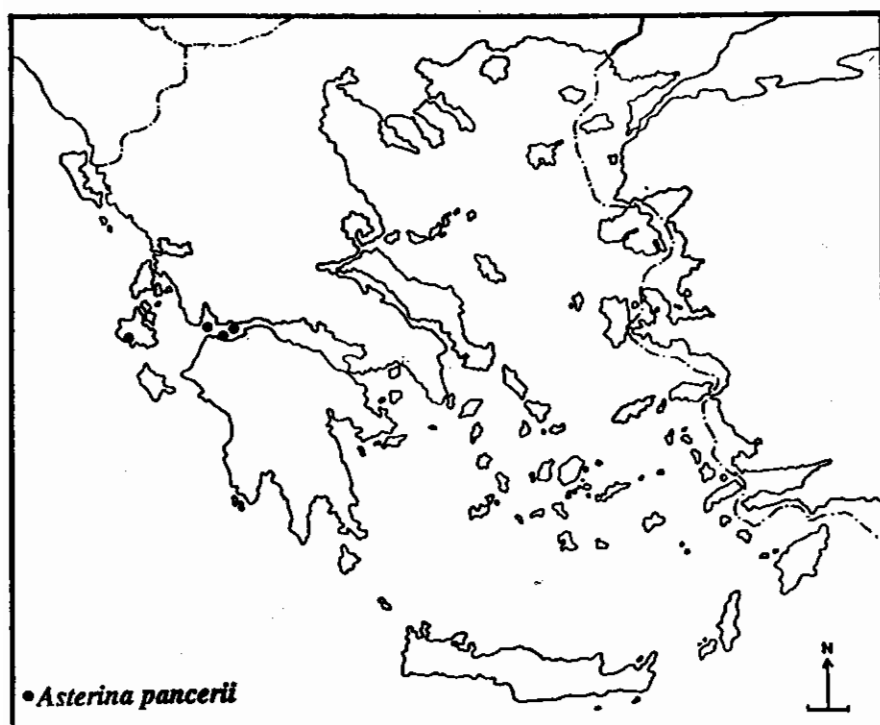
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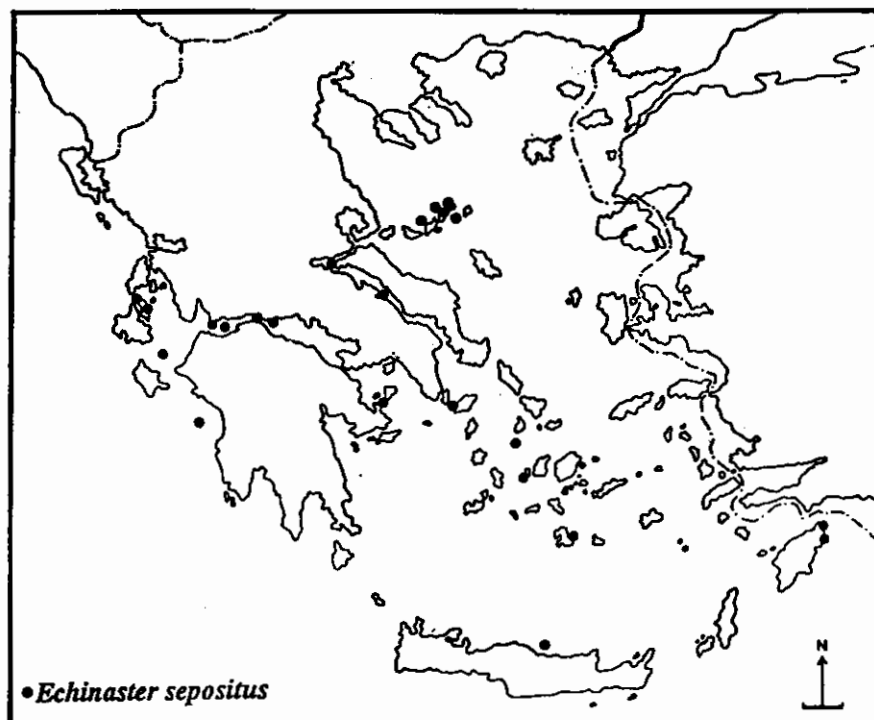


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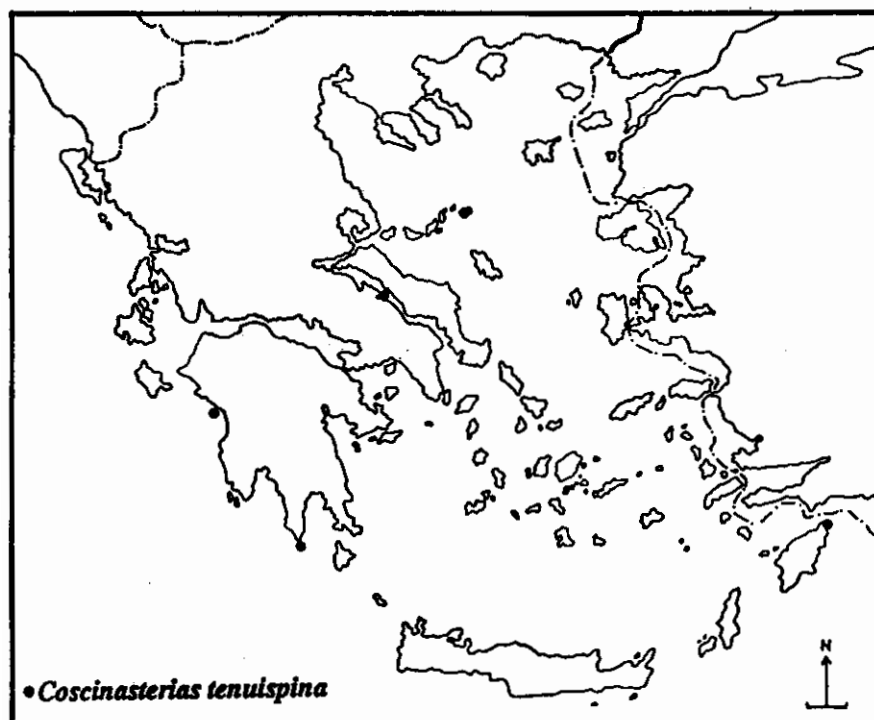


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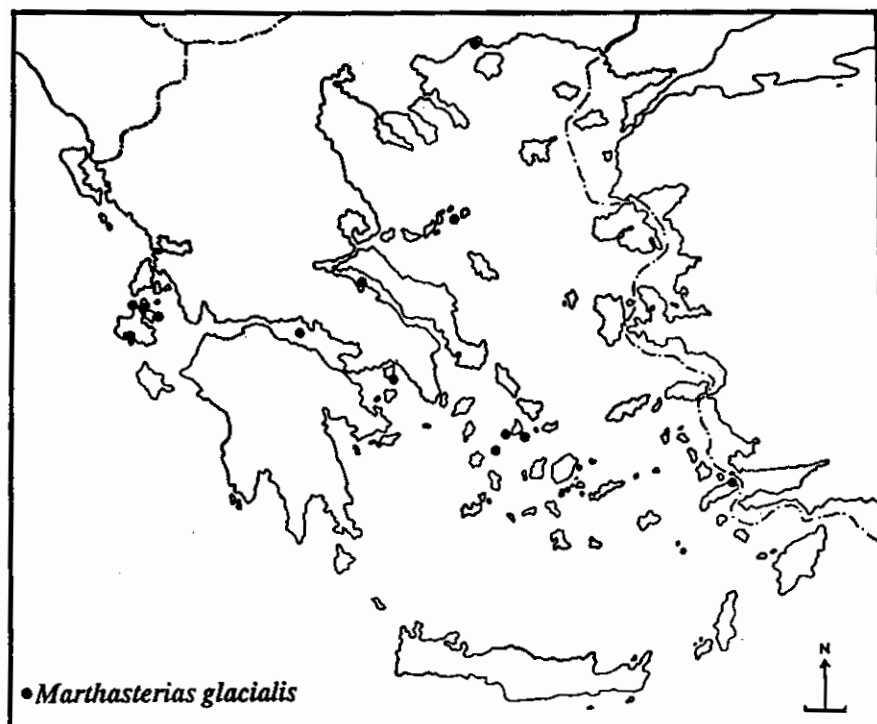
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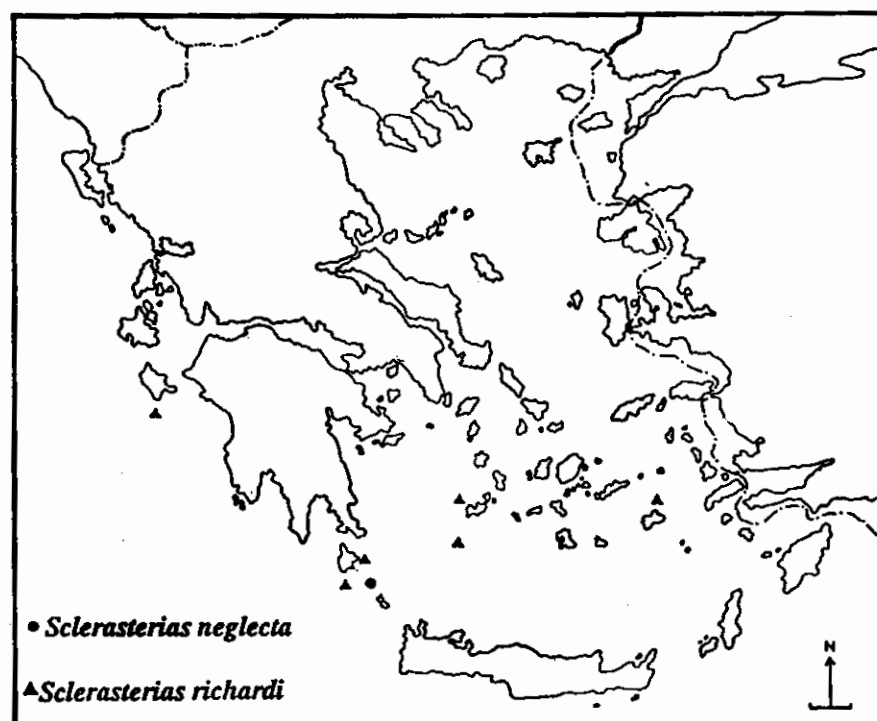
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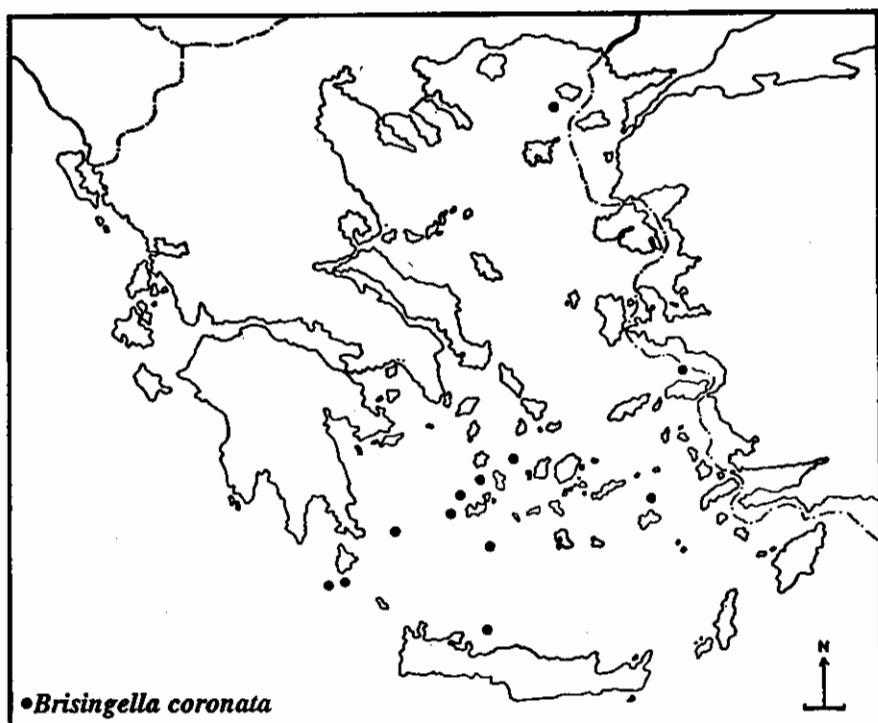
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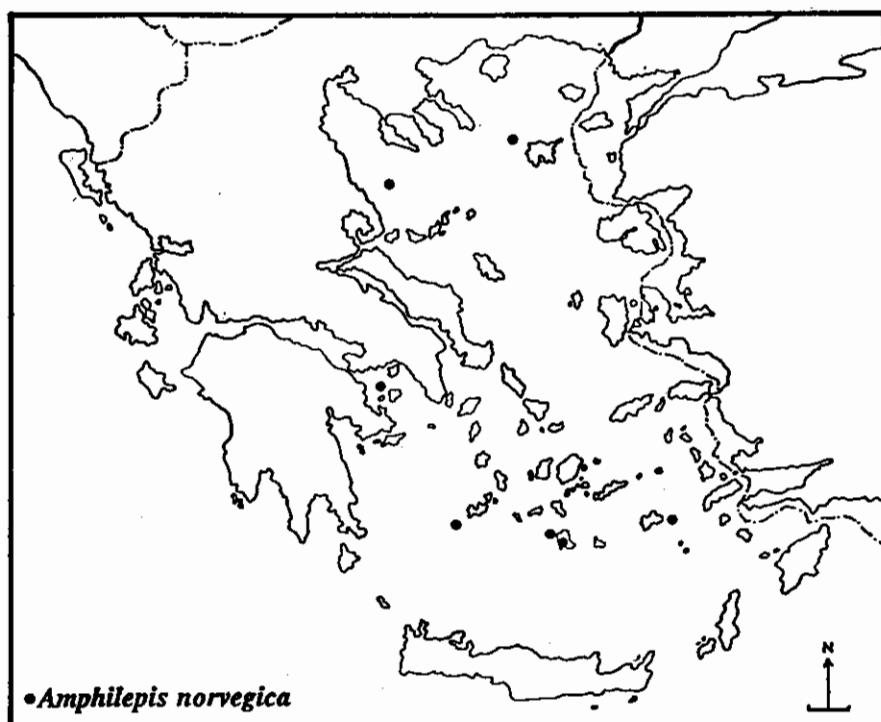
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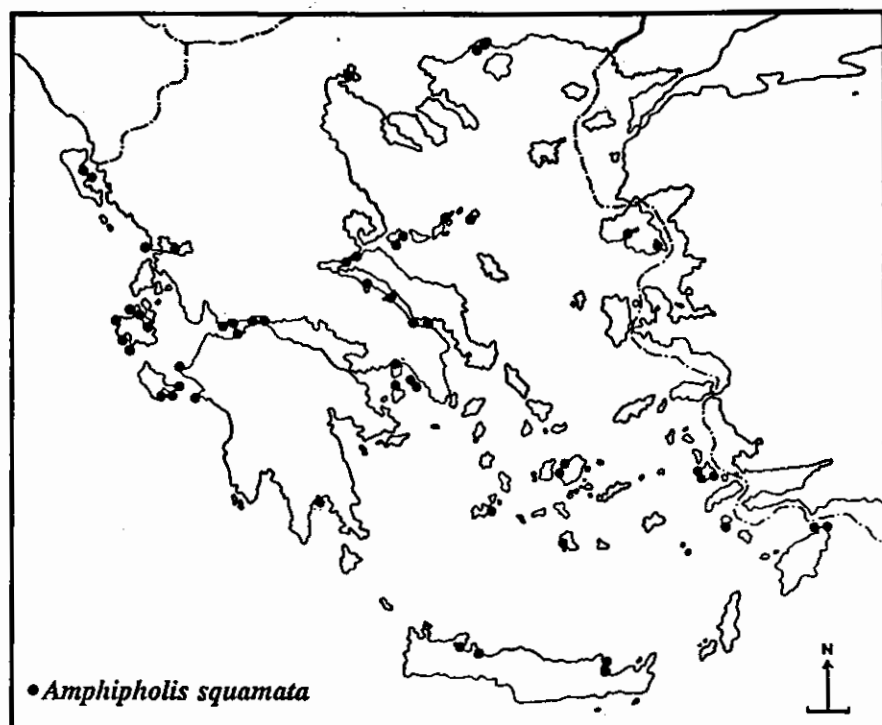
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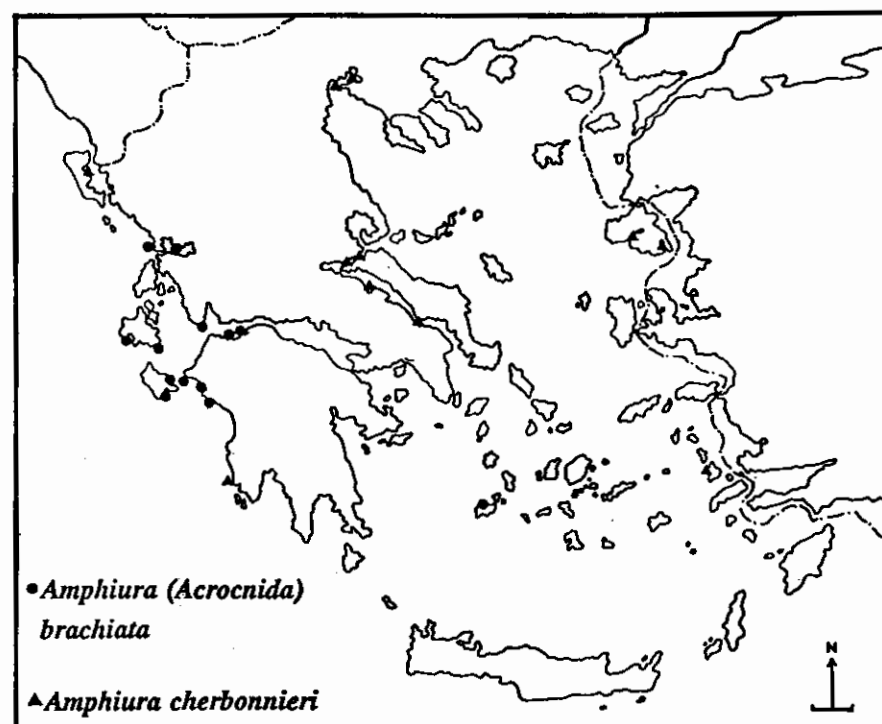
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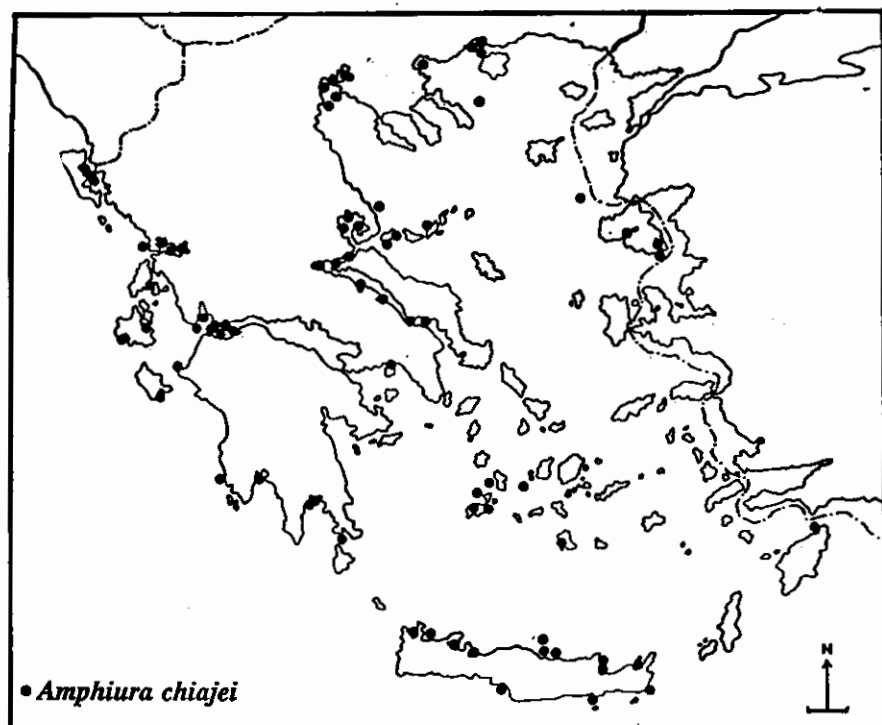
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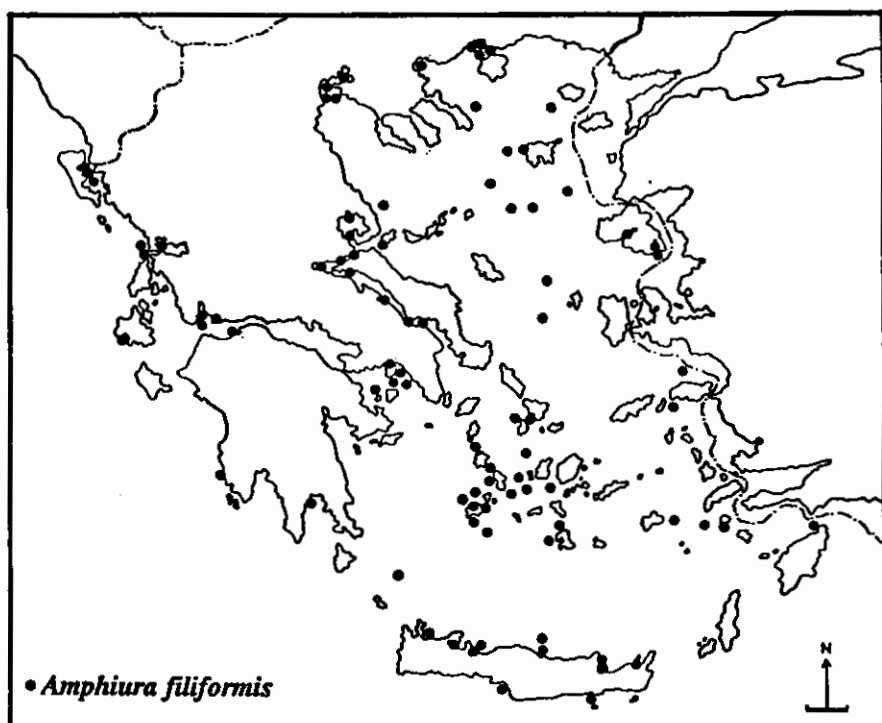
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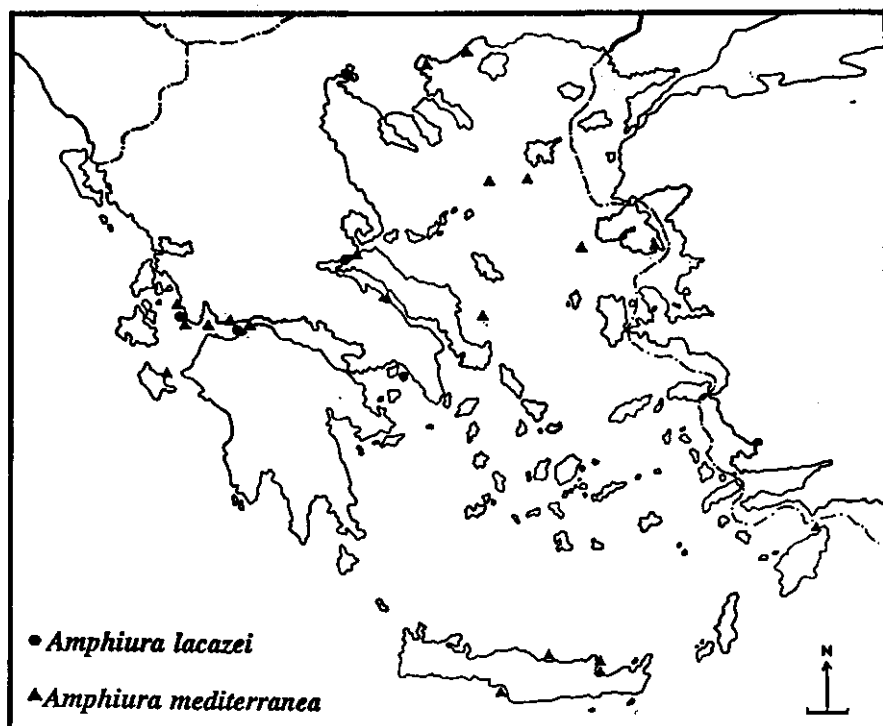


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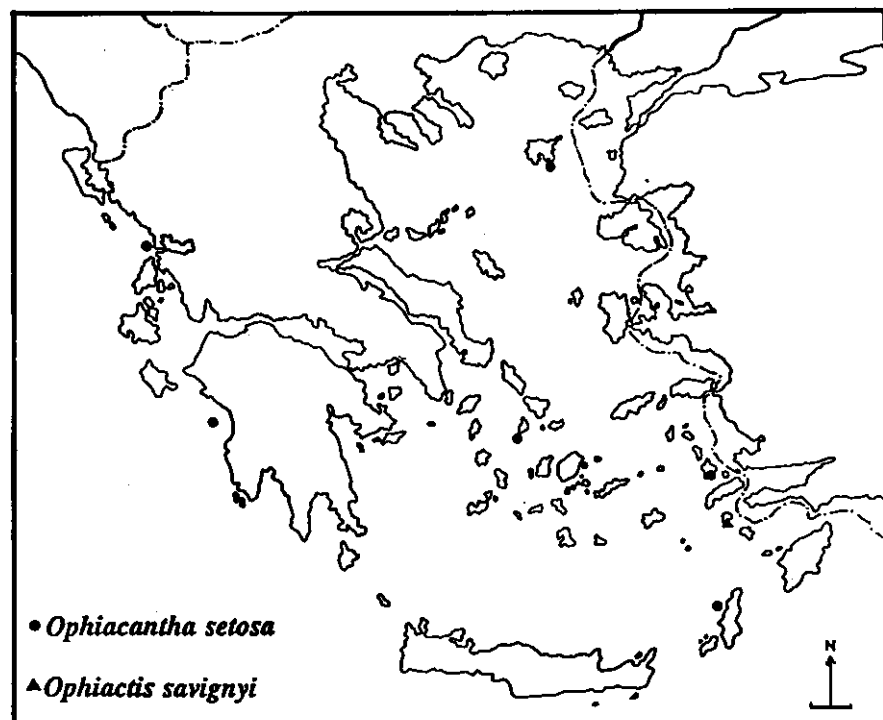


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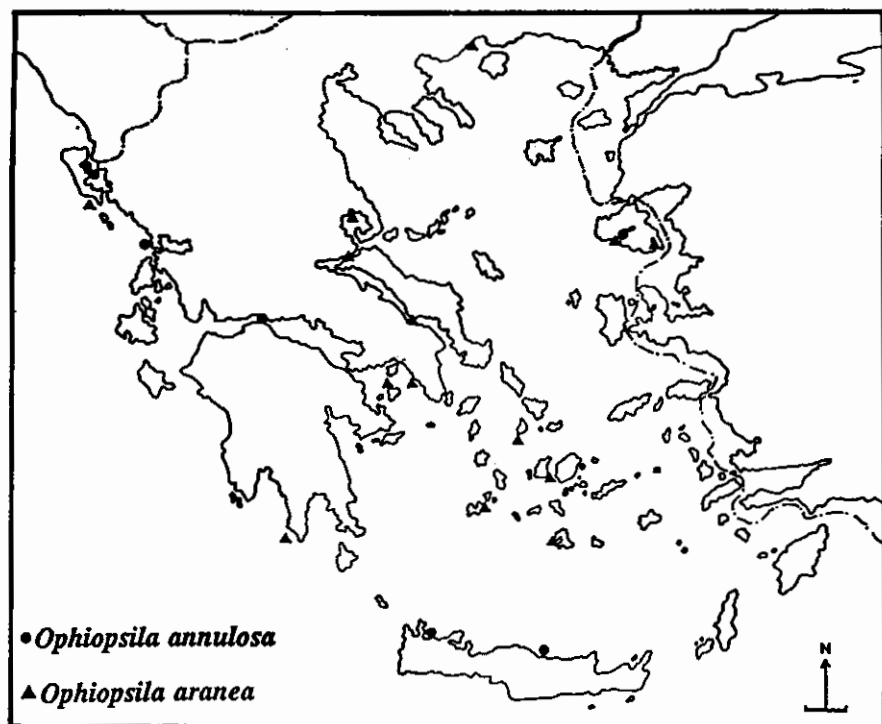


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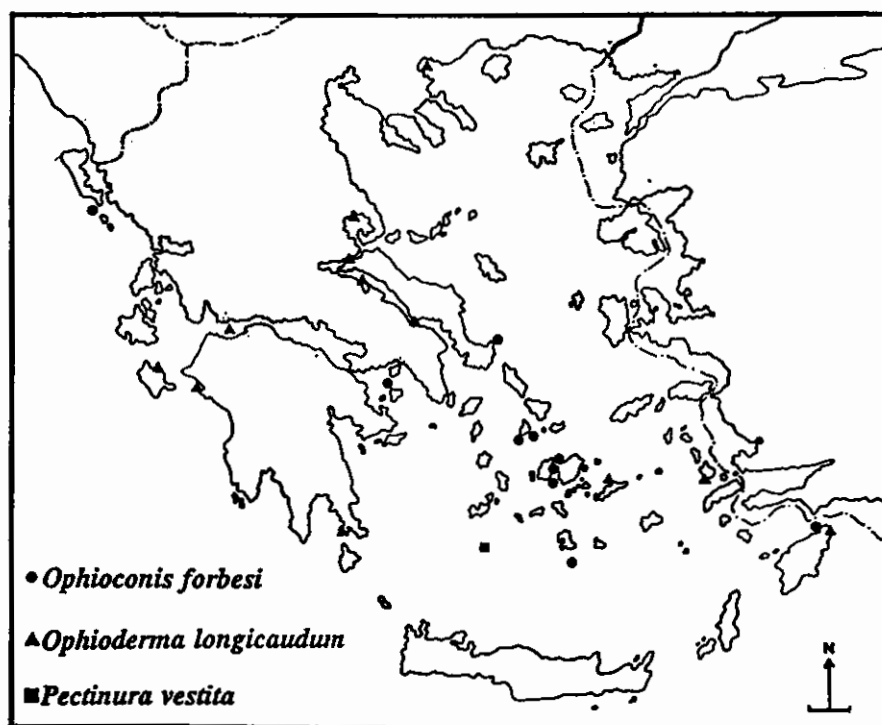


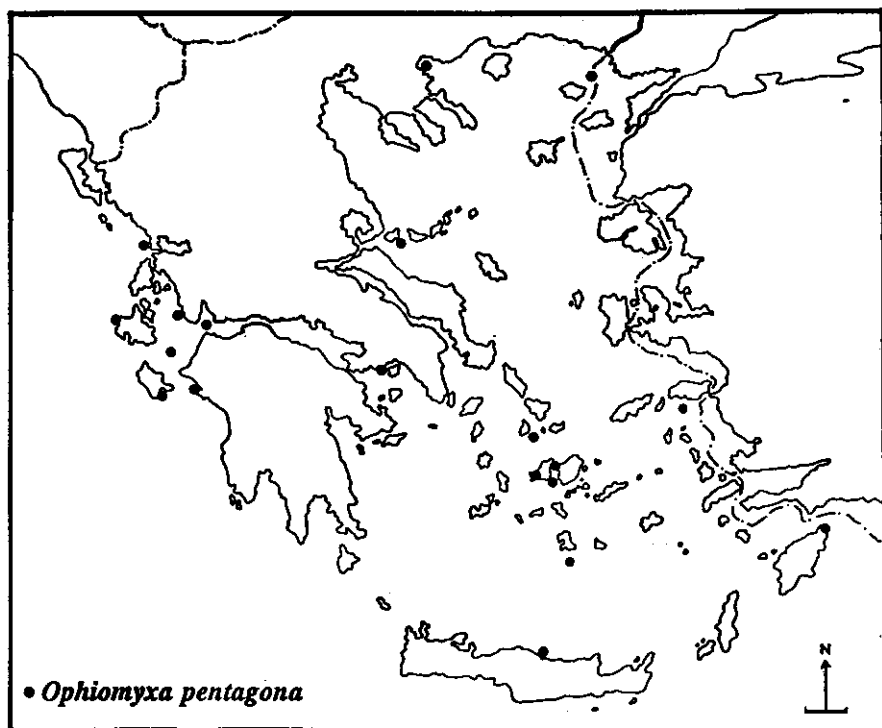
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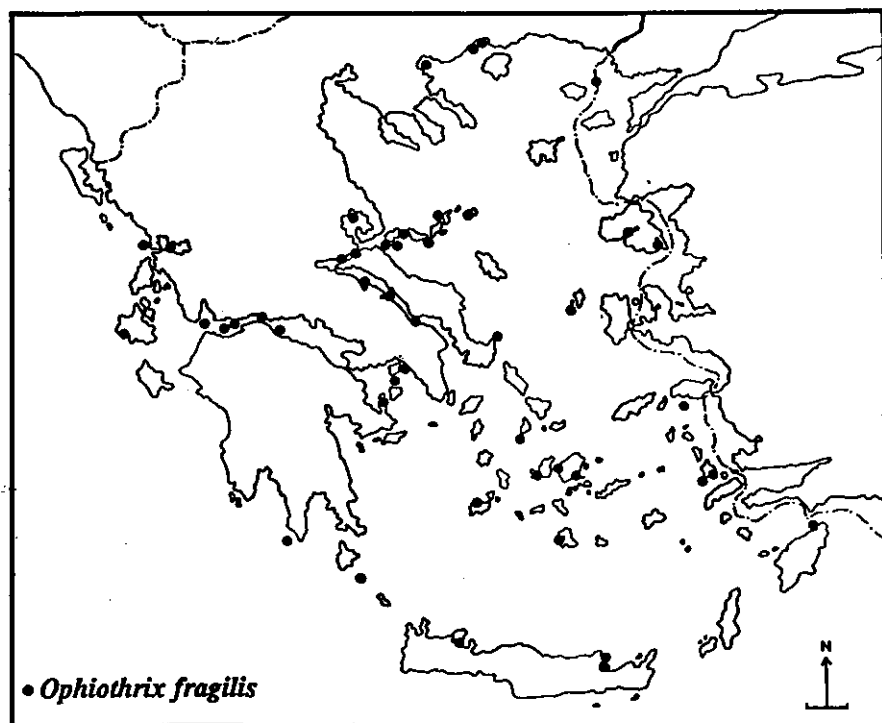


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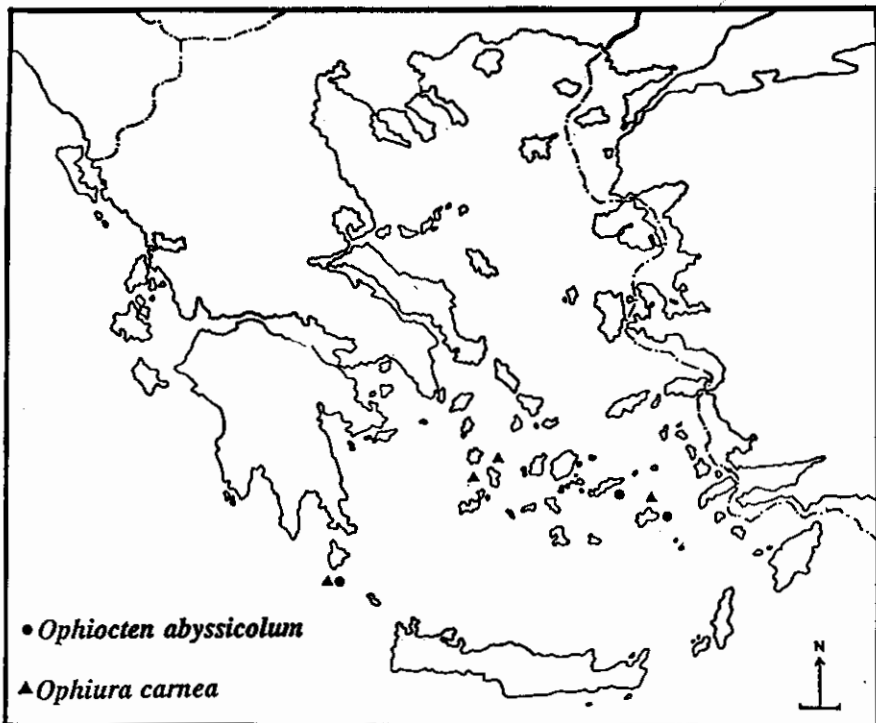




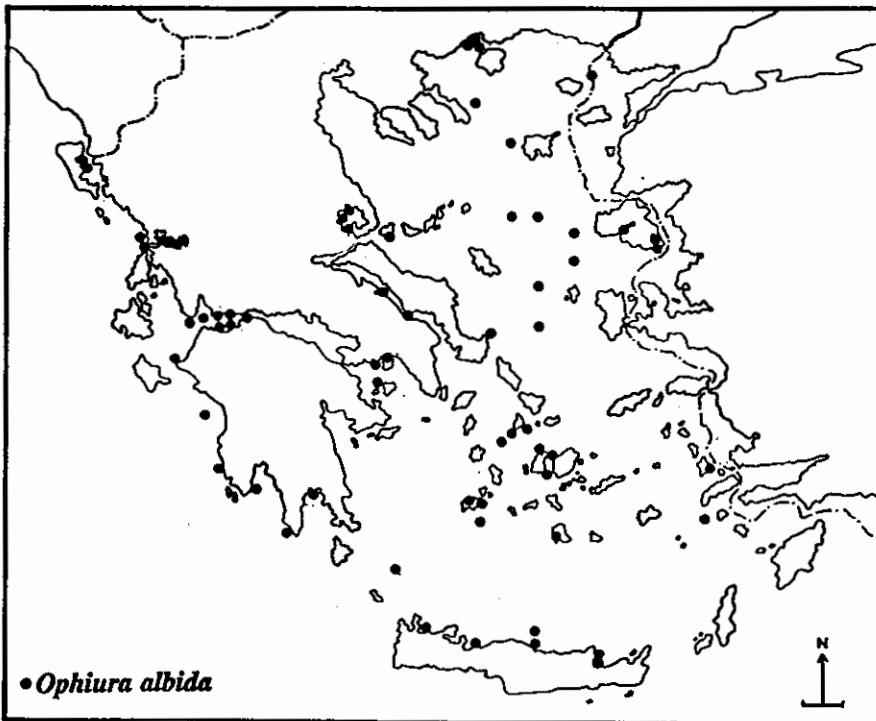
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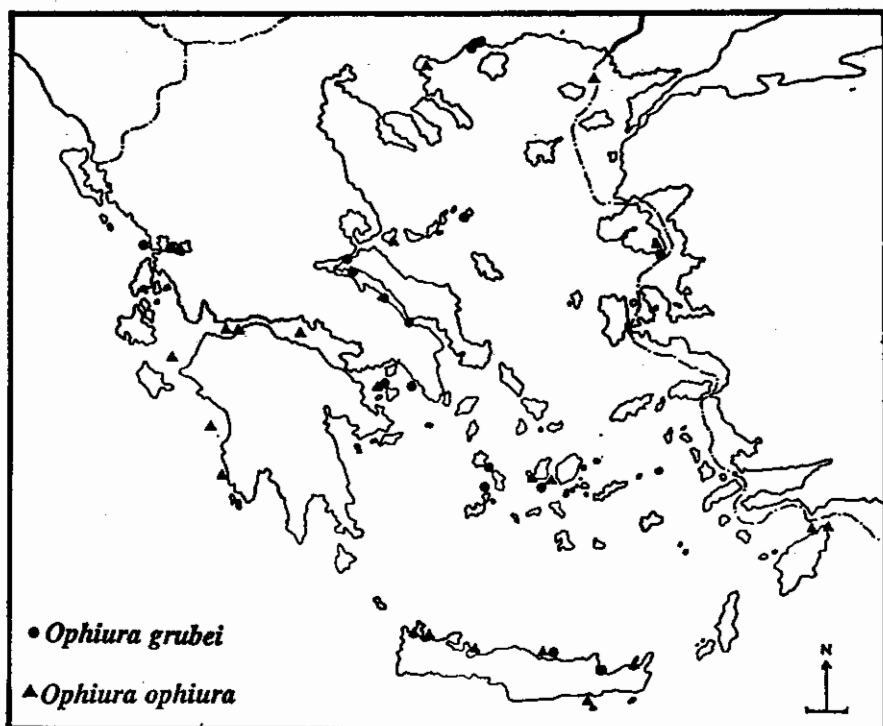
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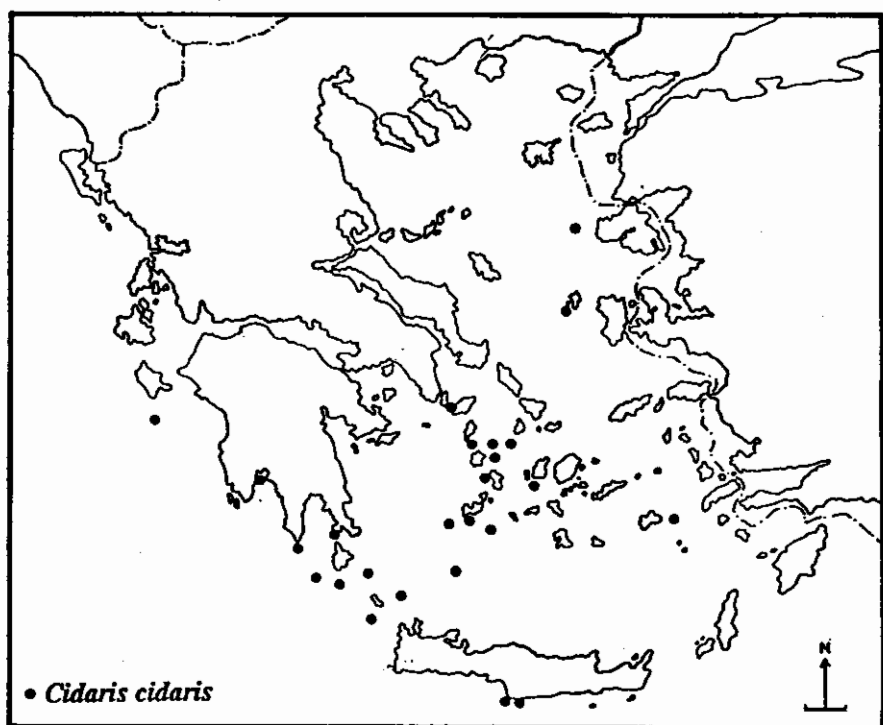
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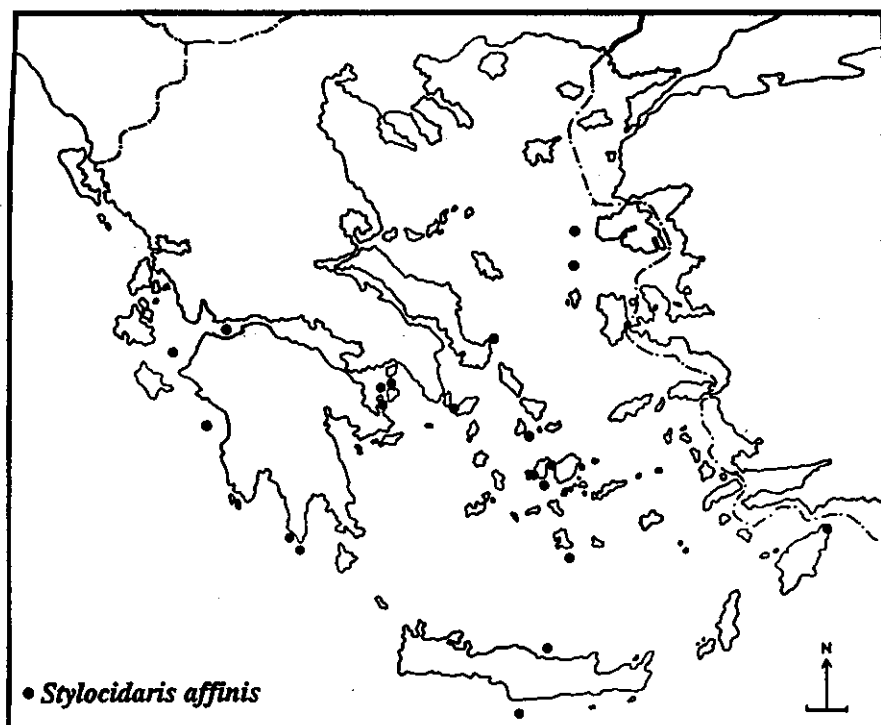


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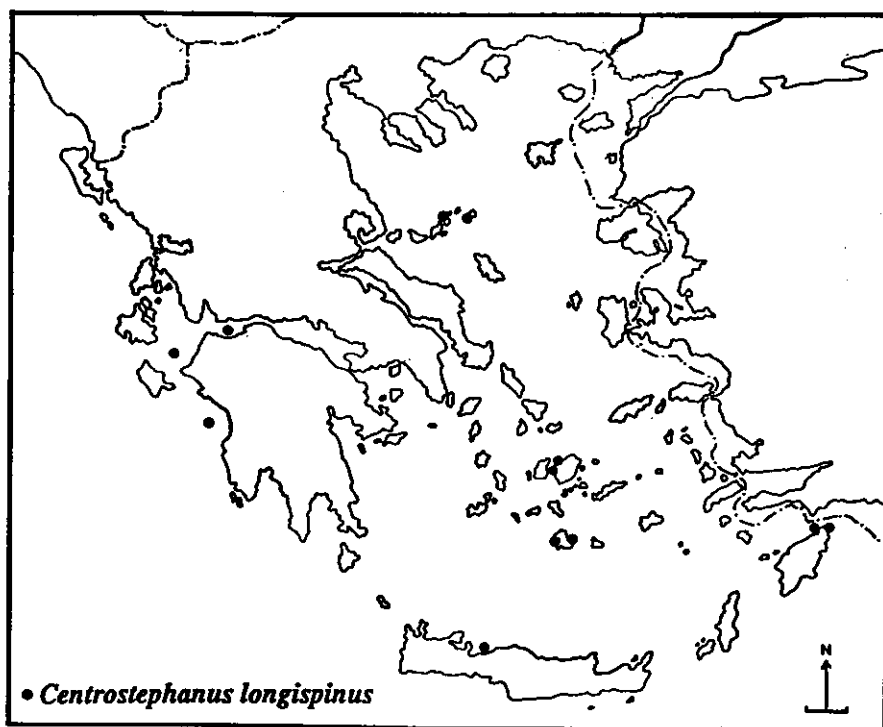


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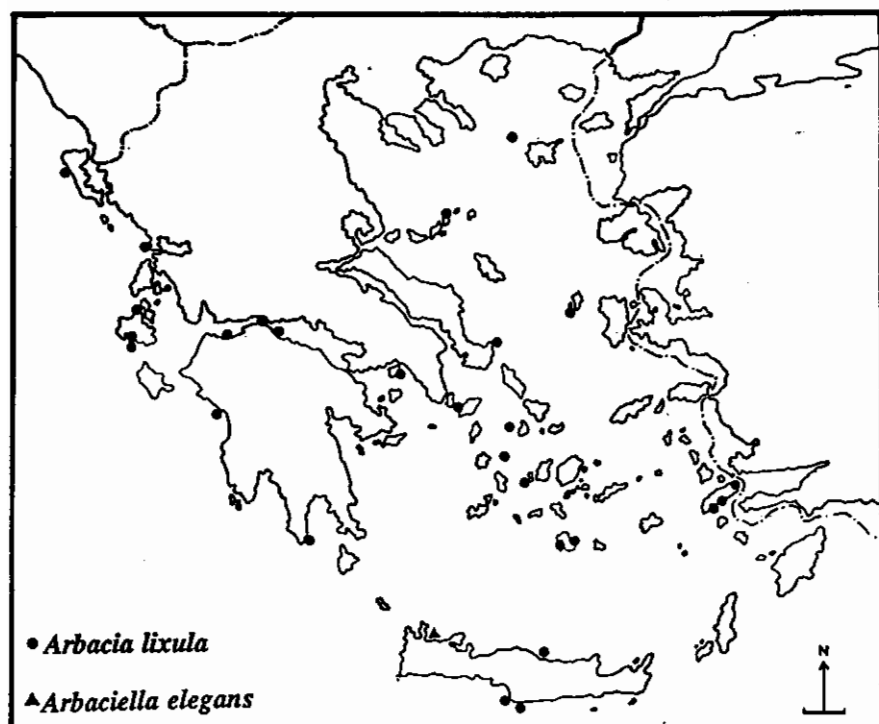
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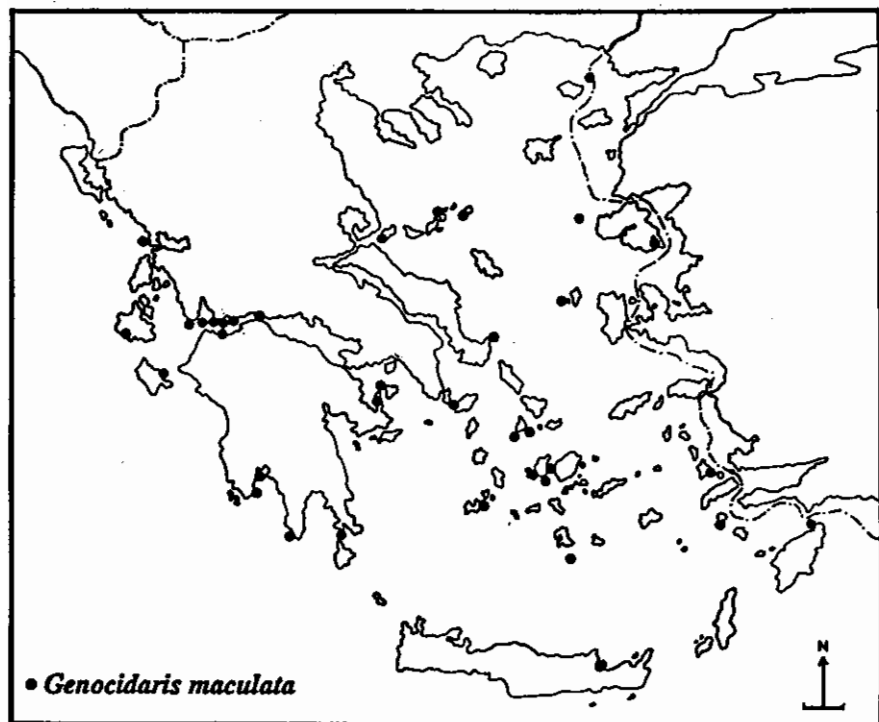
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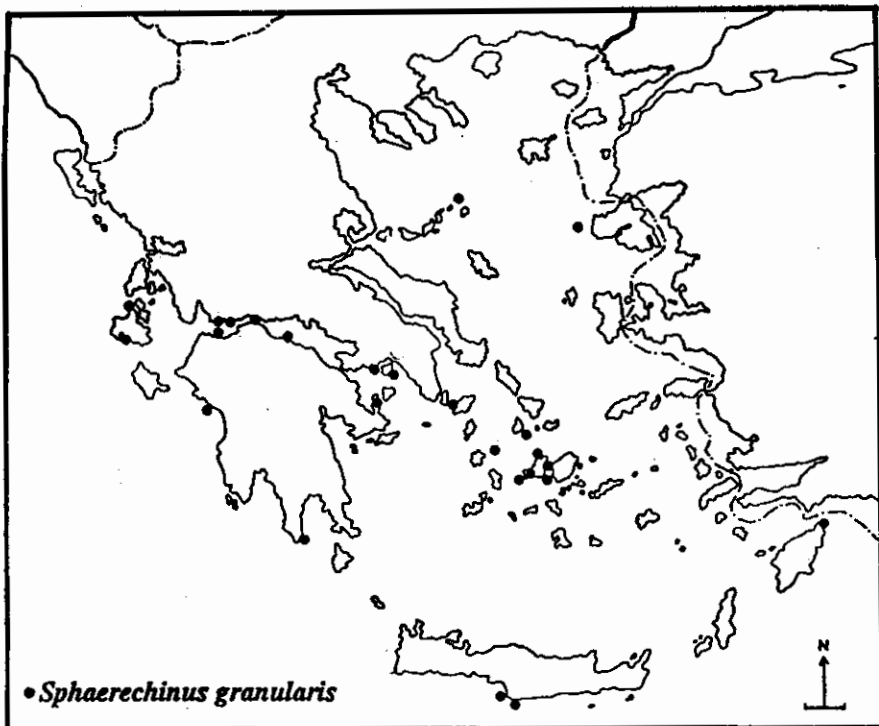


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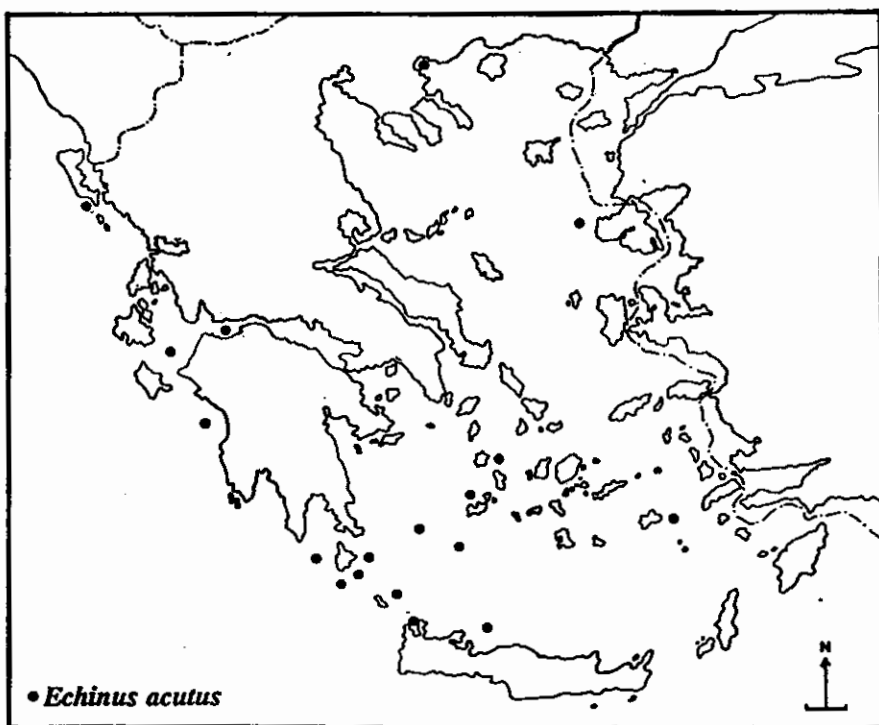


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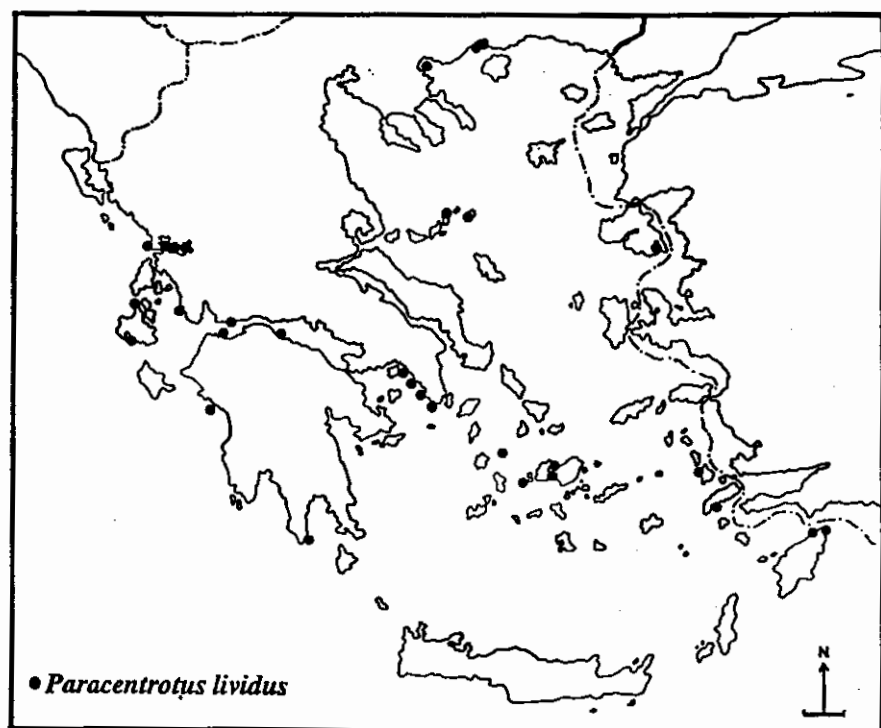




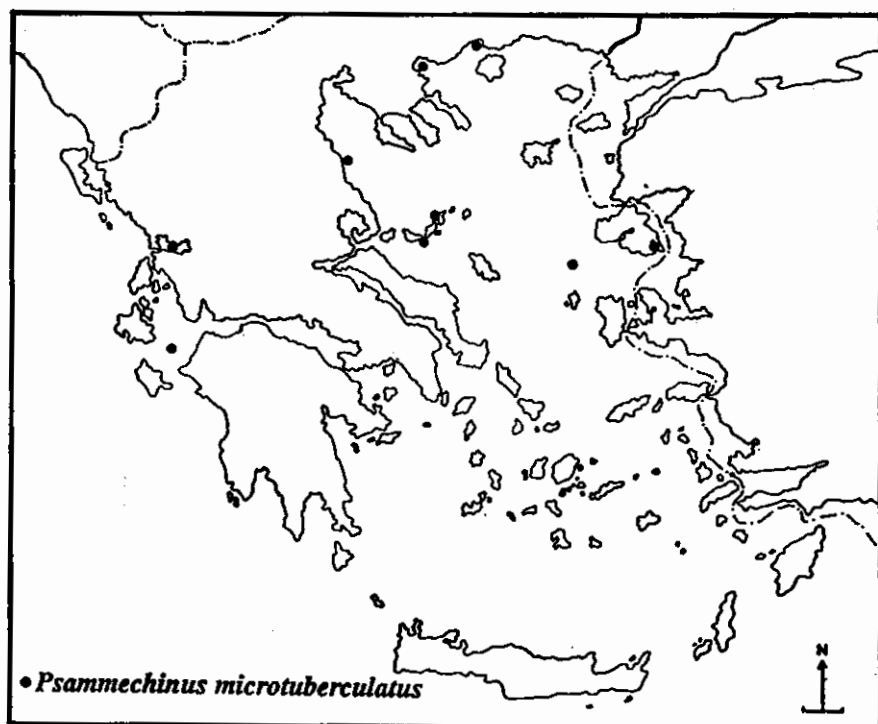
Map 61



Map 62

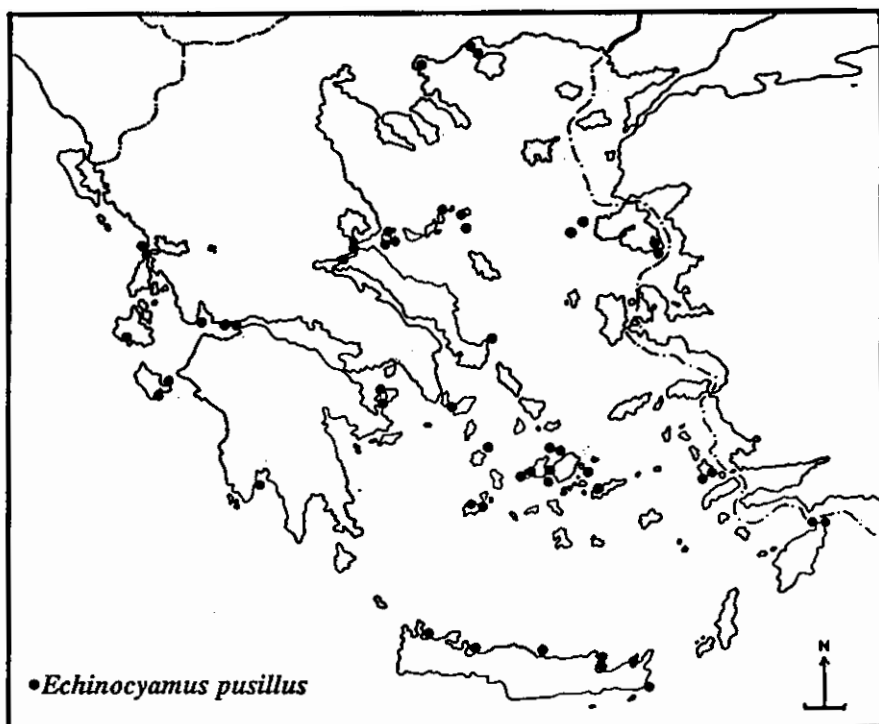


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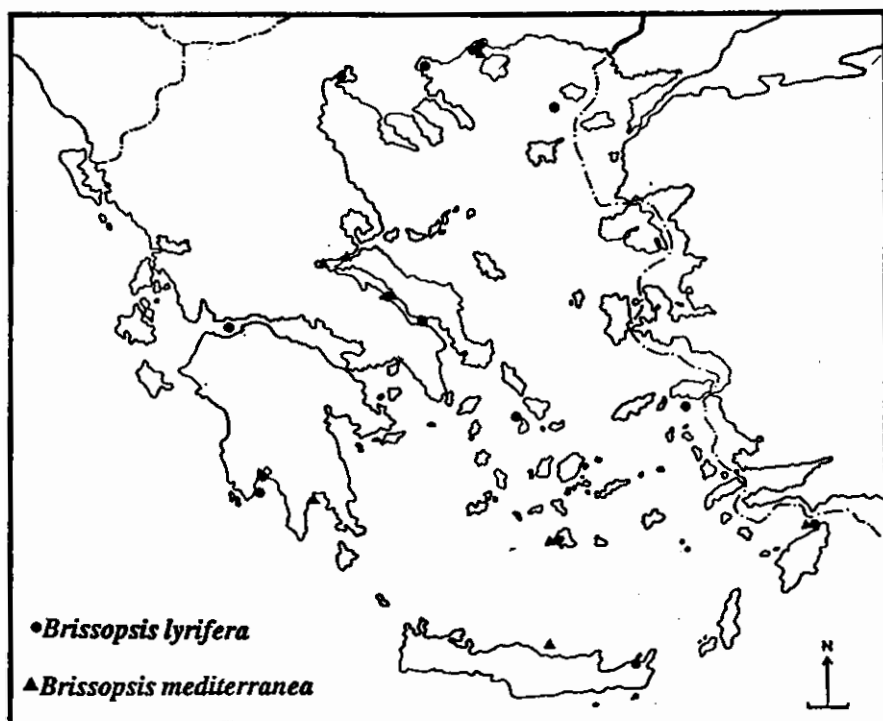


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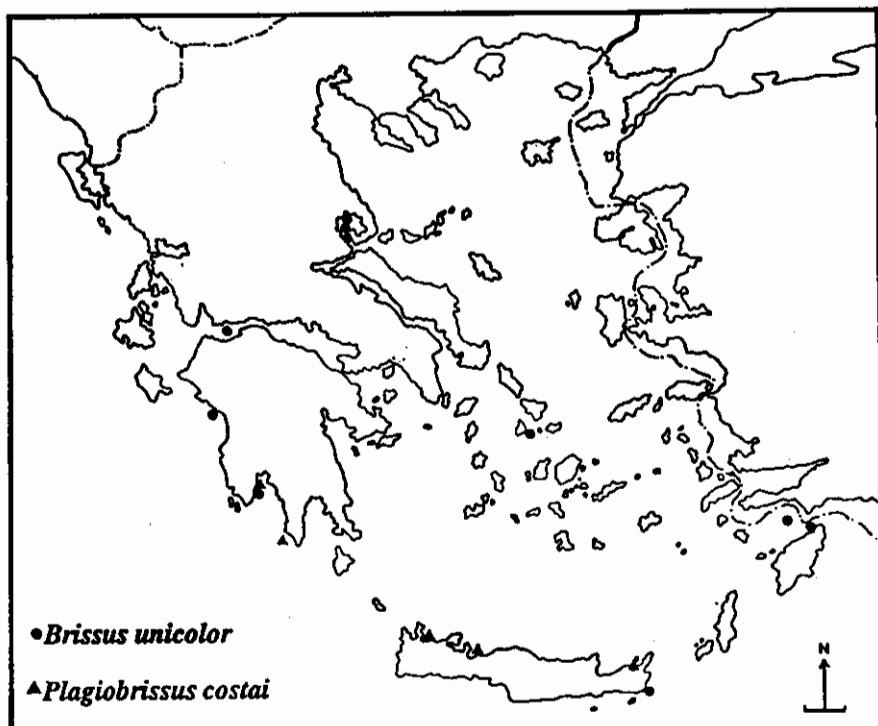
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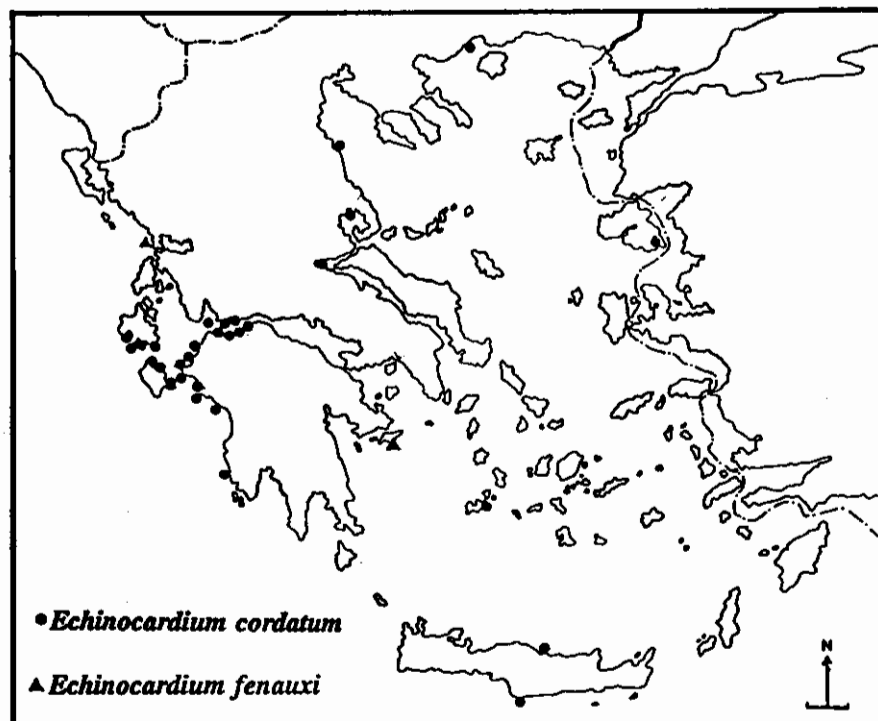
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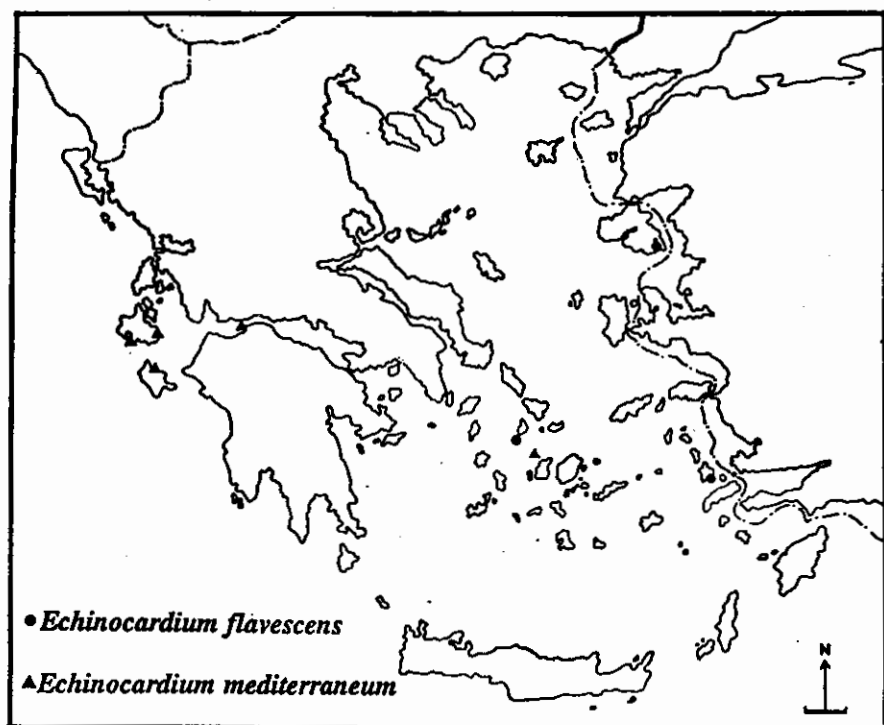
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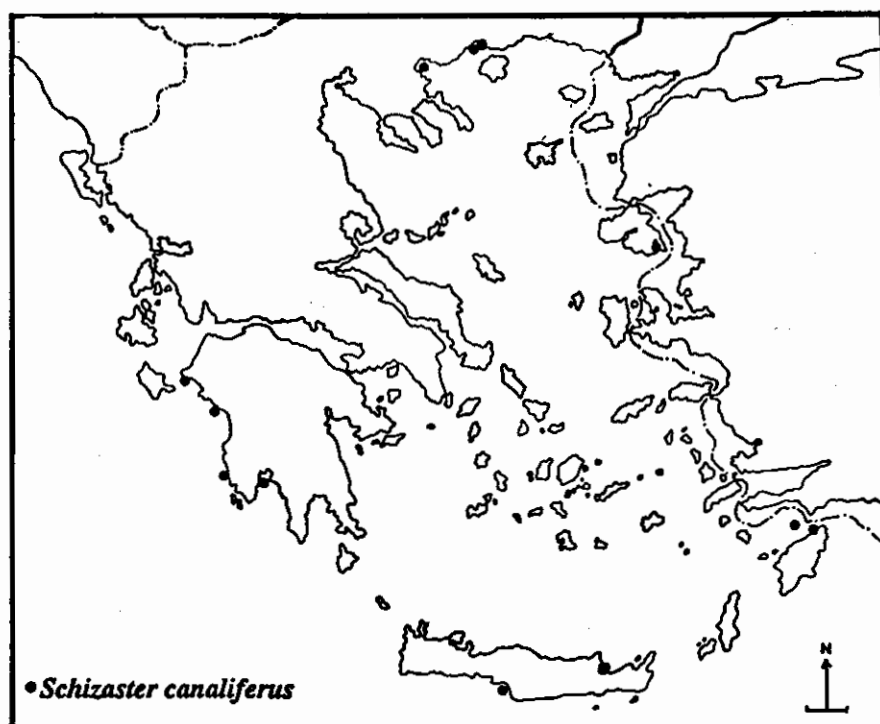
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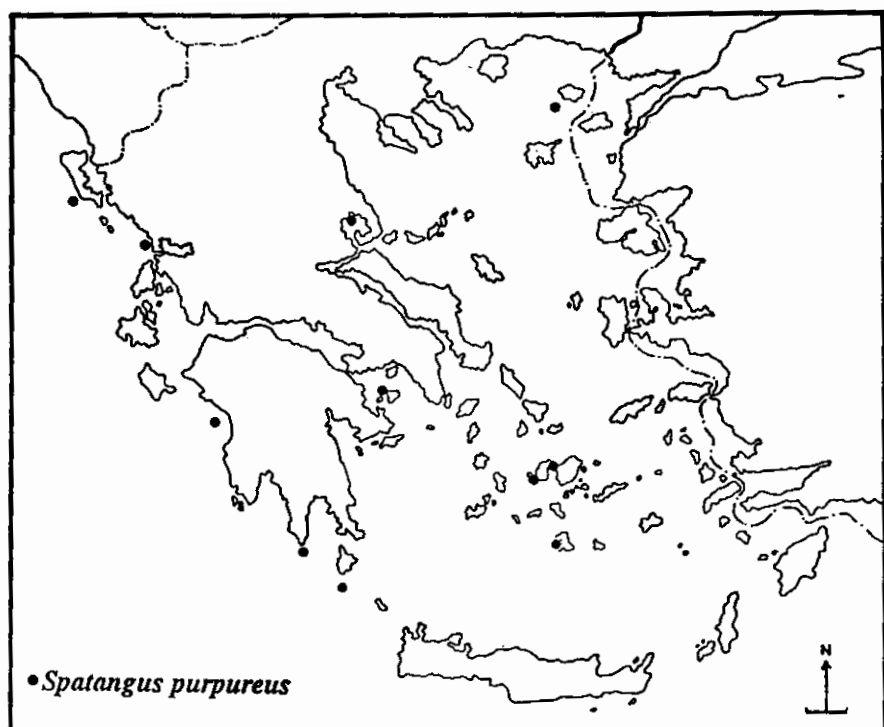
Map 69



Map 70



Map 71



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