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BENTHIC FAUNA OF THE EVVOIA COAST AND EVVOIA GULF V. ANOMURA (CRUSTACEA, DECAPODA)

by

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Abstract : *This is a study of ANOMURA (Crustacea, Decapoda) of the benthic fauna of Evvoia Coast and Evvoia Gulf. The total of 82 stations have yielded 16 species of Anomura, 2 of which: Munida iris rutllanti Zariquiey Alvarez and Pisidia blutcli (Risso), are reported for the first time as belonging to the fauna of Greece. As far as we know the first one has never been found and reported in East Mediterranean. A record is also given of all the areas from whieh these 16 species have been collected, within the limits of Greece.*

INTRODUCTION

In our effort for a better knowledge of the almost unknown benthic fauna of Greece, the Laboratory of Zoology of the Aristotelian University of Thessaloniki initiated in 1970 a research programme of the coast and gulf of Evvoia. The area under investigation is almost totally unexplored and is of particular interest because of its position and morphology.

The present paper refers to the ANOMURA collected from 82 stations of the investigated area, which were found to represent a total of 16 species. Two of these species are recorded for the first time as belonging to the Greek fauna, while one of these two, *Munida iris rutllanti* Zariquiey Alvarez is not known to have been recorded in any part of East Mediterranean (Beyond 20° E.). The presentation of each of the above mentioned species is accompanied by a detailed accound of all existing information concerning its distribution in Greek waters and other information of mainly ecological nature.

MATERIAL AND METHODS

The 16 species found were among the 331 individuals collected from all the 82 stations of the aforementioned area. Samples were mostly

kept in 75° alcohol with small amounts of glycerine and have been deposited in the museum of the Laboratory of Zoology of the University of Thessaloniki. The collection was effected by means of skin diving and the use of fishing boats, fishing nets (hand or landing nets) and mechanically operated drag-nets.

ANOMURA

DIOGENIDAE

Diogenes pugilator (Roux, 1829)

Diogenes pugilator, Pesta, 1918, p. 218, fig. 67. — Bouvier, 1940, p. 123, fig. 81. — Forest & Guinot, 1956, p. 32, fig. 1 - 3. — Lewinsohn, 1969, p. 41, fig. 5.

Material: $E._{10}$,4 ♂ 5 ♀; $E._{24}$,1 ♂ 6 ♀; $E._{35}$,1 ♂; $E._{46}$,4 ♀; $E._{55}$,6 ♀; $F._{58}$,1 ♂ 2 ♀; $A._{74}$,1 ♀. Lm of carapace ♂, 13 mm. Lm of carapace ♀, 14 mm. Four of the females specimens collected were bearing eggs, with a maximum of about 2,000 eggs. Collected from the Infralittoral zone, at a depth of 0.5 - 5 m, from a pebbly, fine gravels and sandy bottom. In some of the stations salinity was redused.

Greece: Island of Sapientza; Cape Taenaro (GUERIN 1832). Kalo-Limniones, by Cape Littinos in South Crete, "Calypso" st. 774 (PERES & PICARD 1858). Porto Lagos, Thraki (HOLTHUIS 1961). Gulf of Evvoia (KOUKOURAS 1972). Thermaikos Gulf (GEORGIADIS & GEORGIADIS 1974).

Paguristes oculatus (Fabricius, 1775)

Paguristes oculatus, Pesta, 1918, p. 209, fig. 64. — Santucci, 1927 - 30, pl. fig. 1. — Bouvier, 1940, p. 119, fig. 77, 78. — Zariquiey Alvarez, 1968, p. 238, fig. 14a, 15c, 90j, 91b,d.

Material: $E._{11}$,4 ♂ 6 ♀; $E._{22}$,2 ♂ 2 ♀; $E._{39}$,6 ♂ 3 ♀; $E._{41}$,1 ♂ 1 ♀; $E._{49}$, 3 ♂ 2 ♀; $F._{64}$,2 ♂ 1 ♀; $V._{68}$,8 ♂ 1 ♀; $A._{73}$,4 ♀. Lm of carapace ♂, 24.2 mm. Lm of carapace ♀ 16 mm. Seven of the females, ovigerous, with a maximum of 500 eggs. Collected from the Infralittoral zone, at a depth of 5 - 20 m, from a bottom consisting of small gravels, pebbles, sand and a little mud.

Greece: Phaleron, Saronikos Gulf (ATHANASSOPOULOS 1917). Rhodes and Cos Islands (SANTUCCI 1928). Charokopio, Messiniakos Gulf, "Calypso" st. 733; at 37° 55′ 50″ N 23° 09′ 30″ E, Saronikos Gulf, "Calypso"

st. 783; at two areas between Naxos and Paros Islands, one of which was at 27° 05′ N 25° 18′ 30″ E, "Calypso" st. 829 and 833 (PERES & PICARD 1958). Porto Lagos, Thraki (HOLTHUIS 1961). Messiniakos Gulf, "Calypso" st. 725; NE of the island of Samos (JACQUOTTE, 1962). West Saronikos Gulf (VAMVAKAS 1971). Gulf of Evvoia; Aghia Paraskevi, Cassandra (KOUKOURAS 1972).

Clibanarius erythropus (Latreille, 1818)

Clibanarius misanthropus, Heller, 1863, p. 177, pl. 5 fig. 16 - 18. — Pesta, 1918, p. 222, fig. 68. — Riedl, 1963, p. 279, Pl. 95.

Clibanarius erythropus, Zariquiey Alvarez, 1968, p. 239, fig. 12f, 89a, 90l, 91c,i,l,m.

Material: $E._{8}$,4 ♂; $E._{13}$,3 ♂; $E._{19}$,1 ♂ 1 ♀; $E._{23}$,1 ♂ 1 ♀; $E._{28}$,1 ♂; $E._{34}$,2 ♂ 1 ♀; $E._{43}$,2 ♂; $E._{52}$,2 ♂ 1 ♀; $E._{56}$,1 ♂ 1 ♀; $V._{66}$,3 ♂ 6 ♀; $A._{76}$,13 ♂ 1 ♀. Lm of carapace ♂, 17 mm. Lm of carapace ♀, 12 mm. Two among the females, ovigerous, with a maximum of about 500 eggs. Collected from the Infralittoral zone, at a depth of 0.5 - 1.5 m, from a bottom consisting of small gravels, pebbles, sand and a little mud. Some specimens collected from the pools of the Mediolittoral zone.

Greece: Coast of Naxos (GUERIN 1832). Cos and Rhodes Islands (SANTUCCI 1928). Rhodes (TORTONESE 1947). SW coast of Syros, "Calypso" st. 821 (PERES & PICARD 1958). Aghia Barbara, Kavala; Aghia Paraskevi, Kassandra; gulf of Evvoia (KOUKOURAS 1972).

Dardanus callidus (Risso, 1827)

Pagurus calidus, Pesta, 1918, p. 216, fig. 66. — Santucci, 1927 - 30, pl. fig. 1. — Bouvier 1940, p. 125, fig. 83. — Riedl, 1963, p. 279, pl. 95.

Dardanus callidus, Zariquiey Alvarez, 1968, p. 242, fig. 89b. — Geldiay & Kocatas, 1970, p. 13, fig. 4, pl. 1 fig. 6.

Material: Station $A._{76}$,1 ♂, within *Dolium* sp. L of carapace 60.1 mm. Collected from the Infralittoral zone, at a depth of 20 m.

Greece: The south coast of Santorine Island, 36° 19′ 05″ N 25° 25′ 53″ E, "Calypso" st. 761; port of Pissa in Kea Island, 35° 36′ N 24° 16′ 25″ E, "Calypso" st. 789 (PERES & PICARD 1958). North, North-East and West coast of the island of Lesvos (KISELEVA 1961).

PAGURIDAE

Pagurus cuanensis Bell, 1846

Eupagurus lucasi, Heller, 1863, p. 163, pl. 5 fig. 10.
Eupagurus cuanensis, Pesta, 1918, p. 232, fig. 70. — Bouvier, 1940, p. 132, fig. 88.
Pagurus cuanensis, Zariquiey Alvarez, 1968, p. 247, fig. 89d, 90a,n, 91h. — Geldiay & Kocatas, 1970, p. 14, fig. 5, pl. 1 fig. 4.

Material: $E._{23}$,1 ♀; $E._{30}$,1 ♀; $E._{42}$,1 ♂; $F._{63}$,1 ♂. Lm of carapace ♂, 13 mm. Lm of carapace ♀, 13.2 mm. Collected from the Infralittoral zone, at a depth of 8 - 10 m, from a bottom consisting of sand mixed with mud.

Greece: The species in question has only been recorded in the West Saronikos Gulf (VAMVAKAS 1971). Thermaikos Gulf (GEORGIADIS & GEORGIADIS 1974).

Pagurus alatus Fabricius, 1775

Eupagurus excavatus, Pesta, 1918, p. 234, fig. 71. — Bouvier, 1940, p. 133, fig. 89, 90. — Riedl, 1963, p. 281, pl. 95.
Pagurus alatus, Zariquiey Alvarez, 1968, p. 247, fig. 89e, 90b,o, 91e.

Material: $N.E._{81}$,2 ♀. Lm of carapace, 35.8 mm. Collected from the Infralittoral zone, at a depth of 35 m, from a bottom consisting mainly of mud.

Greece: Navarino, Messinia; Astros, Argolikos Gulf (GUERIN 1832). Khania, Crete (LUCAS 1853, RAULIN 1870). East of Peloponnesus, 36° 58′ N 24° 18′ E & 36° 40′ N 23° 52′ E & 36° 25′ N 24° 2′ E (ADENSAMER 1898). Thermaikos Gulf (KOUKOURAS 1972).

Pagurus anachoretus Risso, 1827

Pagurus pictus, Athanassopoulos, 1917, p. 82.
Eupagurus anachoretus, Heller, 1863, p. 167, pl. 5 fig. 12. — Pesta, 1918, p. 229, fig. 69. — Bouvier, 1940, p. 138, fig. 94.
Pagurus anachoretus, Zariquiey Alvarez, 1968, p. 249, fig. 12e, 89i, 90g, k, 91g.

Material: $E._{36}$,2 ♀; $E._{52}$,2 ♂ 3 ♀; $F._{59}$,1 ♂; $V._{69}$,2 ♀; $A._{75}$,1 ♀. Lm of carapace ♂, 9 mm. Lm of carapace ♀, 10.6 mm. Collected from the Infralittoral zone, at a depth of 2 - 5 m, from a bottom consisting of fine

gravels, mud and a little sand. Salinity of stations $E._{52}$ and $V._{69}$ was reduced.

Greece: Phaleron, Saronikos Gulf (ATHANASSOPOULOS 1917). Gulf of Evvoia (KOUKOURAS 1972).

Pagurus prideauxi Leach, 1815

Eupagurus prideauxii, Heller, 1863, p. 161, pl. 5 fig. 1 - 8.
Eupagurus prideauxi, Pesta, 1918, p. 239, fig. 73. - Bouvier, 1940, p. 137, fig. 93.
Pagurus prideauxi, Zariquiey Alvarez, 1968, p. 250, fig. 89h, 90e,p, 91f,n.

Material: $S.E._{78}$,1 ♂. L of carapace, 9 mm. Collected from the Circalittoral zone, at a depth of 60 m, from a bottom consisting of maërl.

Greece: NW of Crete, 35° 48′ N 23° 34′ E (ADENSAMER 1898). SW of the island of Syros, 37° 17′ 20″ N 24° 52′ 10″ E, "Calypso" st. 814 (PERES & PICARD 1958). West Saronikos Gulf (VAMVAKAS 1971).

Remarks: According to HOLTHUIS & GOTTLIEB (1958), it is possible that the record of *Pagupus bernhardus* (Linnaeus) mendioned by GUERIN (1832) in the coast of Peloponnesus, is based on specimens of *Pagurus prideauxi* Leach. It is possible that BELLOC's mention (1948) of *P. bernhardus* (as *Eupagurus bernhardus*), in Greek waters, is the same case, as above.

Catapaguroides timidus (Roux, 1830)

Eupagurus timidus, Heller, 1863, p. 165, fig. 11.
Catapaguroides timidus, Pesta, 1918, p. 248, fig. 76. — Bouvier, 1940, p 143, pl. 4 fig. 12, 13. — Riedl, 1963, p. 281, pl. 95.
Cestopagurus timidus, Vamvakas, 1971, p. 203.

Material: $S.E._{77}$,9 ♂ 1 ♀; $N.E._{80}$,4 ♂ 1 ♀. Lm of carapace ♂, 4 mm. Lm of carapace ♀, 6.1 mm. Caught from the Infralittoral zone, at a depth of 30 - 40 m, from a bottom consisting of mud and sand.

Greece: The Aegean (MAKKAVIEVA 1963). West Saronikos Gulf (VAMVAKAS 1971).

Remarks: SAINT LAURENT (1967) through a new combination has classified *Catapaguroides timidus* in the genus *Cestopagurus.*

GALATHEIDAE

Galathea squamifera Leach, 1814

Galathea squamifera, Carus, 1885, p. 448. — Pesta, 1918, p. 254, fig. 77.— Bouvier, 1940, p. 186, fig. 128. — Nunes Ruivo, 1961, p. 4. — Zariquiey Alvarez, 1968, p. 274, fig. 97c,d, 98a,b.

Material: S.E.$_{77}$,1 ♂; S.E.$_{78}$,3 ♂. Lm of carapace ♂, 14.6 mm. Collected from the Infralittoral and Circalittoral zones, at a depth of 30 - 60 m, from a bottom consisting chiefly of mud with Maërl in places.

Greece: Cape Bone, Rhodes; Porto Plagios, of the island of Episcopi (SANTUCCI 1928). The Aegean Sea (BELLOC 1948). SE of the island of Antiparos, 36° 54′ 50″ N 25° 06′ 10″ E, "Calypso" st. 836 (PEREZ & PICARD 1958).

Galathea dispersa Bate, 1859

Galathea nexa, Heller, 1863, p. 191, pl. 6 fig. 4. (no Embleton, 1834). *Calathea dispersa,* Zariquiey Alvarez, 1968, p. 278, fig. 98d,e.

Material: S.E.$_{77}$,5 ♂ 7 ♀; S.E.$_{78}$,2 ♂; N.E.$_{79}$,2 ♂ 1 ♀; N.E.$_{80}$,1 ♂; N.E.$_{82}$,2 ♀. Lm of carapace ♂, 19 mm. Lm of carapace ♀, 20 mm. Three of the females, ovigerous, with a maximum of 500 eggs. Collected from the Infralittoral and Circalittoral zones, at a depth of 20-70 m, from a bottom consisting of mud and Maërl in places.

Greece: The only records of the species in question known to us in connection with East Mediterranean are from Bosporus (MARION 1898), the Aegean (MAKKAVIEVA 1963) and the West coast of Turkey (GELDIAY & KOCATAS 1970).

Munida iris ssp. **rutllanti** Zariquiey Alvarez, 1952 (*fig.* 1)

Munida iris ssp. *rutllanti* Zariquiey Alvarez, 1952, p. 157, 217, fig. 8$_{A,B}$. — 1968, p. 283, fig. 101d.

Material: S.E.$_{77}$,2 ♂. Lm of carapace, 24 mm. Collected from the Circalittoral zone, at a depth of 70 m, from a bottom consisting of mud with Maërl in places.

Greece: This is the first time that this species has been recorded in Greece, and we are not aware of any records connected with it from any part of East Mediterranean either. Its area of distribution in the Mediter-

ranean is considered to be the Spain Coast and the North African Coast, as far as Algeria (ZARIQUIEY ALVAREZ 1968).

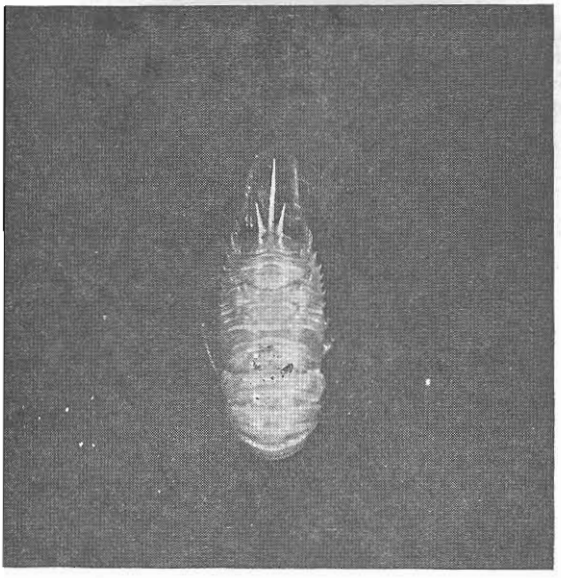


Fig. 1. *Munida iris rutllanti.* A specimen of the st. S.E.$_{77}$ Natural size.

Munida rugosa (Fabricius, 1775)

Munida bamffica, Pesta, 1918, p. 262, fig. 81.

Munida bamffia f. *bamffia,* Bouvier, 1940, p. 171, pl. 5 fig. 3.

Munida rugosa, Heller, 1863, p. 192, pl. 6 fig. 5-6. — Zariquiey Alvarez, 1952, p. 158, fig. 3$_{A,B}$. — 1968, p. 285, fig. 101a.

Material: S.E.$_{77}$,1 ♂ 3 ♀; S.E.$_{78}$,1 ♂ 1♀; N.E.$_{79}$,4 ♂ 8 ♀; N.E.$_{80}$,3 ♂ 8 ♀; N.E.$_{82}$,4 ♂ 4 ♀. Lm of carapace ♂, 40.5 mm. Lm of carapace ♀, 34.2 mm. Caught from the Infralittoral and Circalittoral zones, at a depth of 35-100 m, from a bottom consisting of mud with Maërl in places.

Greece: East of Peloponnesus, 36° 58′ N 24° 18′ E & 36° 59′ N 24° 29′ E (ADENSAMER 1898). Between Evvoia and Andros Islands, 37° 55′ 10″ N 24° 36′ 50″ E, "Calypso" st. 791 (PERES & PICARD 1958, as *M. bamffia*). Evvoia and Thermaikos Gulfs (KOUKOURAS 1972).

PORCELLANIDAE

Porcellana platycheles (Pennant, 1777)

Porcellana platycheles, Heller, 1863, p. 185, pl. 5 fig. 19-21. — Pesta, 1918, p. 270, fig. 84. — Bouvier, 1940, p. 178, fig. 121, pl. 5 fig. 7. — Zariquiey Alvarez, 1968, p. 290, fig. 94c.

Material: $E._{1}$,2 ♀; $E._{8}$,3 ♀; $E._{12}$,4 ♂; $E._{16}$,2 ♂ 1 ♀; $E._{20}$,2 ♂ 1 ♀; $E._{23}$,2 ♂ 2 ♀; $E._{27}$,1 ♂ 1 ♀; $E._{32}$,3 ♂ 1 ♀; $E._{35}$,1 ♂ 2 ♀; $E._{39}$,1 ♂ 1 ♀; $E._{44}$,2 ♂ 2 ♀; $E._{48}$,1 ♂ 2 ♀; $E._{51}$,2 ♀; $E._{54}$,2 ♀; $F._{58}$,2 ♂ 1 ♀; $F._{60}$,3 ♂ 1 ♀; $F._{64}$,1 ♂ 2 ♀; $V._{68}$,3 ♂ 11 ♀; $V._{70}$,1 ♂ 1 ♀; $A._{72}$,2 ♂ 1 ♀. Five of the females, ovigerous, with a maximum of about 500 eggs. Lm of carapace ♂, 13 mm. Lm of carapace ♀, 15 mm. Collected from the Infralittoral zone, at a depth of 0.5-2 m, from a bottom consisting of small gravels and pebbles, mixed with sand or mud. In several stations the salinity was reduced.

Greece: Coasts of Pylos and Methone, Messinia (GUERIN 1832).Aghia Paraskevi, Cassandra; gulf of Evvoia (KOUKOURAS 1972).

Pisidia bluteli (Risso, 1816)

Pisidia bluteli, Holthuis, 1961, p. 37, fig. 12a,d, 13a. — Zariquiey Alvarez, 1968, p. 291, fig. 94e, 103a,e,f.

Material: $E._{25}$,2 ♀; $V._{69}$,4 ♂ 8 ♀. Five of the females, ovigerous, with a maximum of about 500 eggs. Lm of carapace ♂, 6.3 mm. Lm of carapace ♀, 5.1 mm. Collected from the Infralittoral zone, at a depth of 0.5-2 m, from a bottom consisting of small pebbles, sand and mud. In station $E._{25}$ salinity was reduced.

Greece: This is the first time that this species has been recorded in Greece. The only records known to us in connection with East Mediterranean are from the south coast of Turkey (HOLTHUIS 1961) and the west coast of Turkey from the gulf of Smyrna (GELDIAY & KOCATAS 1970, 1972).

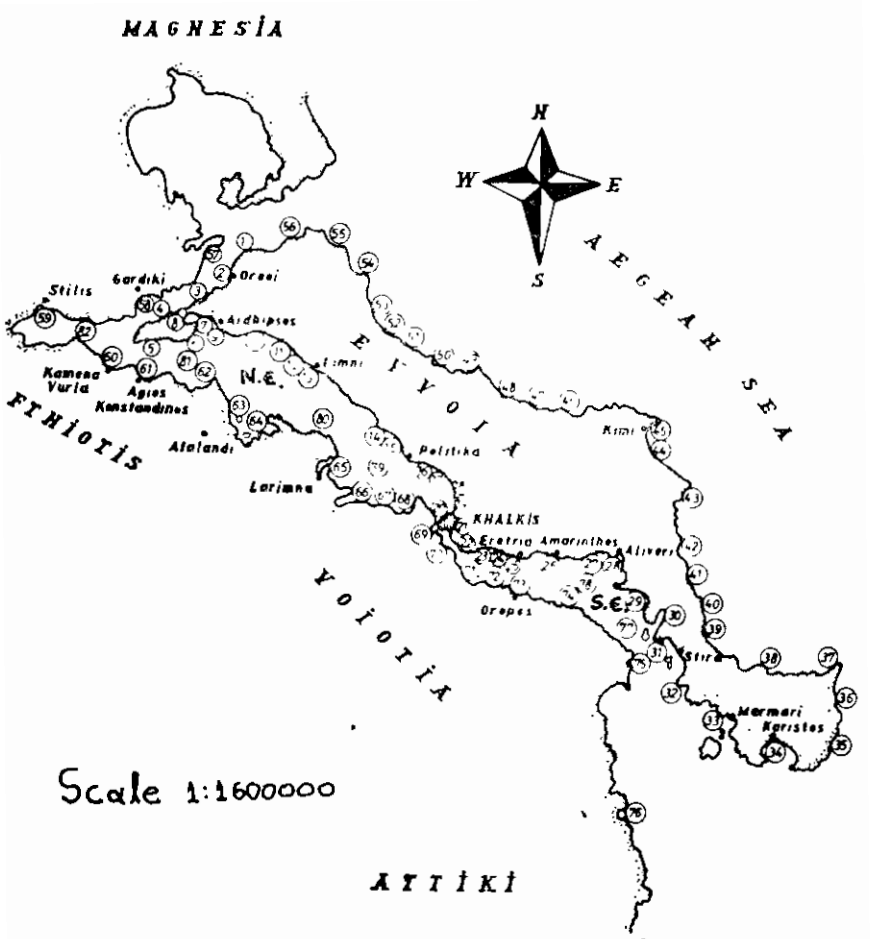
Pisidia longimana (Risso, 1816)

Pisidia longimana, Holthuis, 1961, p. 40, fig. 11b,e, 13b. — Lewinsohn & Holthuis, 1964, p. 55. — Zariquiey Alvarez, 1968, p. 292, fig. 103b.

Material: $E._{13}$,3 ♂ 1 ♀; $E._{20}$,5 ♂ 4 ♀; $V._{66}$,5 ♂ 2 ♀; $A._{74}$,3 ♂. Four of the

females, ovigerous, with a maximum of about 450 eggs. Lm of carapace ♂, 6.1 mm. Lm of carapace ♀, 5.2 mm. Collected from the Infralittoral zone, at a depth of 0.4-1 m, from a bottom consisting of small gravels and pebbles, mixed with sand or mud. In stations $E._{13}$ and $V._{66}$ the salinity was reduced.

Greece: Porto Lagos, Thraki (HOLTHUIS, 1961). Thermaikos Gulf (GEORGIADIS & GEORGIADIS 1974).



Map showing the sampling stations of the Evvoia coast and Evvoia Gulf.

REFERENCES

ADENSAMER, T., 1898. Decapoden. Gesammelt auf S.M. Schiff Pola in den Jahren 1890-1894. Zoologische Ergebnisse. XI. Berichte der Commission für Erforschung des östlichen Mittelmeeres XXII. *Denkschr. Akad. Wiss Wien,* **65**:597-628. 1 *textfigure.*

ATHANASSOPOULOS, G. D., 1917. Quelques éléments de recherches hydrobiologiques en Grèce. *Bull. stat. Hydrobiol. Marine Grèce,* **2** (1):1-40, *pl.* 1-8.

BELLOC, G., 1948. Inventory of fishery resources of Greek waters. *Appendix* B: 71-73 *(Stencilled).*

BOUVIER, E. L., 1940. Décapodes marcheurs. *Faune de France,* **37**:1-404.

CARUS, J.V., 1885. Prodromus Faunae Mediterraneae. *Stuttgart. Vol.* **I**, 524 pp.

FOREST, J. & D. GUINOT, 1956. Sur une collection de Crustacés Décapodes et Stomatopodes des mers tunisiennes. *Bull. Sta. oeéanogr. Salammbô,* (**53**):24-43, *figs* 1-5,1 *chart.*

FROGLIA, C., 1972. Segnalazione di alcuni crostacei nuovi o rari per l'Adriatico. *Quaderni del Laboratorio di Teenologia della Pesea (CNR), Ancona,* **I** (3): 43-52.

GELDIAY, R. & A. KOCATAS, 1970. A report on the Anomura Collected from the Aegean Coast of Turkey (Crustacea Decapoda). (In Turkish). *Sci rep. Fac. Sci. Ege Univ.* **98**:1-31, *pl.* 3.

— 1972. Note préliminaire sur les peuplements benthiques du golfe d'Izmir (Iu Turkish). *Ibid.,* **12**:1-34.

GEORGIADIS, C. & G. GEORGIADIS, 1974. Zur Kenntnis der Crustacea Decapoda des golfes von Thessaloniki. *Crustaceana,* **26** (3):239-248.

GUERIN - MENEVILLE, F. E., 1832. Ire Classe. Crustacés. In: Brullé, A., Des animaux articulés. Expedition scientifique de Morée. *Section de sciences physiques* 3 (1), *(Zool.) sect.* **2**:30-50, *pl.* 27.

HELLER, C., 1863. Die Crustaceen des Südlichen Europa. Crustacea Podophthalmia. *Mit einer Uebersicht uber die horizontale Verbreitung sammtlicher europaischer Arten,* **I-XI:** 1-336, pl. 1-10.

HOLTHUIS, L. B., 1961. Report on a collection of Crustacea Decapoda and Stomatopoda from Turkey and the Balkans. *Zool. Verhand.,* Leiden, **47**:1-67, *fig.* 1-5, *pl. I.*

HOLTHUIS, L.B. & E. GOTTLIEB, 1958. An annotated list of the decapod Crustacea of the Mediterraneau coast of Israel, with an appeudix listing the Decapoda of the eastern Mediterranean. *Bull. Res. Counc. Israel,* **7**(B), (1,2):1-126.

JACQUOTTE, R., 1962. Etude des fonds de maërl de Méditerranée. *Rec. Trav. Sta. mar. Endoume,* **26**(41):141-235.

KINZELBACH, R., 1964. Pachygrapsus transversus (Gibbes 1885) in the Aegäis (Crustacea decapoda). *Bonn. Zool. Beitr.*, **15** (3/4): 266-267.

KISELEVA, M.I., 1961. Répartition qualitative et quantitative du benthos dans la région des Dardanelles en Mer Egée (in russian). *Trudy Sevast. biol. Sta.*, **14**:135-146.

KOUKOURAS, A., 1972. A contribution to the study of decapod Crustacea of Greece (in Greek). *Hellenic Oceanol. limnol.*, **11**:745-770.

LAGARDERE, J., 1973. Distril ution des Décapodes dans le sud du golfe de Gascogne. *Rev. Trav. Inst. Pêches marit.*, **37**(1):77-95.

LEWINSOHN, CH., 1969. Die Anomuren des Roten Meeres (Crustacea Decapoda: Paguridea, Galatheidea, Hippidea) *Zool. Verh. Leiden*, **104**:1-213.

LEWINSOHN, C. & L. B. HOLTHUIS, 1964. New records of Decapod Crustacea from the Mediterranean coast of Israel and the eastern Mediterranean. *Zool. Meded. Leiden*, **40**:45-63.

LUCAS, H., 1853. Crustacea. Essai sur les animaux articulés qui habitent l'île de Crète. *Rev. Mag. Zool., ser.* 2,**5**:461-468, *pl.* 16, *fig.* 1.

MAKKAVIEVA, E. B., 1963. Quelques peuplements des zones sableuses de la Mer Egée (in russian). *Trudy Sevast. biol. Sta.*, **16**:211-214.

MARION, A.F., 1898. Notes sur la faune des Dardanelles et du Bosphore. *Ann. Mus. Hist. Nat. Marseille* **1** *(1)*:163-182.

NUNES-RUIVO, L., 1961. Crustacea Decapoda (I. Galatheidea et Bracgyura). *Resultats scientifiques de la campagne du N.R.P. "Foial"* (1957), **4**:1-36.

PERES, J. M. & J. PICARD, 1958. Recherches sur les peuplements benthiques de la Mediterranée Nord-Orientale. Resultats Scientifiques campagnes "CALYPSO" III. *Ann. Inst. Ocean. Monaco*, **34**:213-291.

PESTA, O., 1918. Die Decapodenfauna der Adria. *Versucheiner Monographie*, **I-X**: 1-500, textfigures 1-150, 1 *map.*

RAULIN, V., 1870. Description physique de île de Crète (Fin). *Actes Soc. Lin. Bordeaux*, **24** (= *ser.* 3,4): 353-770.

RIEDL, R., (Ed.) 1963. Fauna und flora der Adria. *Verl. P. Parey, Hamburg und Berlin*, 640 pp.

SAINT LAURENT, M. DE., 1967. Catapaguroides A. Milne Edwards et Bouvier et Decaphyllus nov. gen. Révision des genres Catapaguroides et Cestopagurus et description de quatre genres nouveaux, I. (Crustacés Decapodes Paguridae). *Bull. Mus. nat. Hist. nat. Paris, ser.* 2, **39**(5): 923-954 & **39**(6):1110-1119.

SANTUCCI, R., 1927-30. Decapoda (diver. sp.) in: Faune et flore de la Méditerranée. *Comm. Inter. Expl. Sci. Mer Medit.*

— 1928. Alcuni Crostacei Decapodi delle isole Egee. Ricerche faunistiche nelle isole Italiane dell'Egeo. *Arch. Zool. Ital.*, **12**:345-354.

TORTONESE, E., 1947. Note intorna alla fauna e flora marine dell'Isola di Rodi (Mar Egeo). *Boll. Pesea Piscicolt. Idrobiol. Roma*, **23**:13-20.

VAMVAKAS, C. N., 1971. Contribution to the study of soft substrata benthic biocoenosis of Greek seas. (Area, W. Saronic Gulf). (In Greek). *Hellenic Oceanol. Limnol.*, **10**(3): 129-272.

ZARIQUIEY ALVAREZ, R., 1952. Estudio de las especies Europes del gen. Munida Leach 1818. *Eos Rev. Espanola Ent.* **28** (1):143-231.

— 1968. Crustaceos Decapodos Ibéricos. *Invest. Pesq.*, **32**:1-510, fig. 1-164.

ΠΕΡΙΛΗΨΙΣ

ΒΕΝΘΙΚΗ ΠΑΝΙΣ ΤΩΝ ΑΚΤΩΝ ΤΗΣ ΕΥΒΟΙΑΣ ΚΑΙ ΤΟΥ ΕΥΒΟΙΚΟΥ ΚΟΛΠΟΥ

V. ANOMURA (CRUSTACEA, DECAPODA)

Ὑπὸ
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Ἐντὸς τῶν πλαισίων τῆς ἀπὸ τὸ 1970 διεξαγομένης ἐρεύνης, ἐπὶ τῆς βενθικῆς πανίδος τῶν ἀκτῶν τῆς Εὐβοίας καὶ τοῦ Εὐβοϊκοῦ κόλπου, ἐξετάζονται τὰ Anomura (Crustacea, Decapoda).

Συνελέγησαν 331 δείγματα, ἐξ ἑνὸς συνόλου 82 θέσεων δειγματοληψίας, τὰ ὁποῖα ἀντιπροσωπεύουν 16 εἴδη Ἀνομούρων. Ἐκ τῶν εἰδῶν τούτων, τὸ ***Munida iris rutllanti*** Zariquiey Alvarez, δὲν ἦτο πρότερον γνωστὸν εἰς τὴν Ἀνατολικὴν Μεσόγειον, ἐνῶ τὸ *Pisidia bluteli* (Risso) ἀναφέρεται πρώτην φορὰν διὰ τὴν πανίδα τῆς Ἑλλάδος.

Δίδονται ἅπασαι αἱ κατὰ καιροὺς περιοχαὶ ἀνευρέσεως, ἐντὸς τῶν Ἑλληνικῶν ὑδάτων, τῶν ἀναφερομένων εἰδῶν.

Τέλος, τὴν παρουσίασιν ἑκάστου εἴδους συνοδεύουν οἰκολογικαί τιναι καὶ βιολογικαὶ πληροφορίαι, ἐκ τῶν ὁποίων συνάγονται νέα στοιχεῖα ὅσον ἀφορᾶ τὴν κατακόρυφον διανομήν, τὸ μέγιστον μῆκος τοῦ σώματός των κλπ.