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BENTHIC FAUNA OF THE EVVOIA COAST AND EVVOIA GULF

II. POLYPLACOPHORA (MOLLUSCA)

By

MARIOS KATTOULAS, ATH. KOUKOURAS and PAN. ECONOMIDIS

(Laboratory of Zoology, University of Thessaloniki, Greece)

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Summary: *The present paper deals with the species of Polyplacophora Mollusca found in the benthic fauna of the Evvoia coast and Evvoia gulf, during the research which has been initiated by the Zoology Laboratory of the University of Thessaloniki since 1970. The above mentioned areas have never been the object of any research up to date. There have been examined 82 stations in 42 of them specimen of Polyplacophora Mollusca were found.*

The following has been identified: Lepidopleurus cajetanus, Ischnochiton rissoi, Chiton olivaceus, Acanthochilona fasciculatis, Acanthoehitona cummunis and Caltochiton achatinus euboecus.

The first five specimen were found by a number of foreign reasearchers in our country. The last one Callochiton achatinus euboecus, is a new subspecies for the science. It is different from the typical species, Callochiton achatinus, in the form of the sutural plates and in the absence of black spots throughout the whole lateral area of the valves.

INTRODUCTION

Since 1970 the Zoology Laboratory of the University of Thessaloniki has initiated a research program concerned with the benthic fauna of the Evvoia coast and Evvoia gulf. The present paper deals with the species of Polyplacophora Mollusca found in the above mentioned areas. The knowledge of the Polyplacophora fauna has been very poor in our country up to the present time. An incidental examination of the benthos of Greek waters by a number of foreign researchers gave 9 species found in Peloponnesus, Attica, and various islands of the Aegean Sea. The Evvoia coast has never been the object of any research up to date. We have found the following: *Lepidopleurus cajetanus*, *Ischnochiton rissoi*, *Chiton olivaceus*, *Acanthochitona fasciculatis*, *Acanthochitona communis*, and *Callochiton achatinus euboecus*, a new subspecies of the species *Callochiton achatinus*.

MATERIAL AND METHODS

There have been examined 82 stations. A total of 154 specimen of polyplacophora were taken from 48 stations. Samples were obtained simply by diving with or without equipment for submersion. Samples thus obtained were placed within collecting vials containing alcohol 80%. This material was later identified in the Laboratory. The three specimen, on which the description of the new subspecies is based, were collected from station No. E. 30 (Almyropotamos). Station numbers appear on the attached map (Fig. 8)

Acanthochitona fascicularis (LINNAEUS, 1766)

Fig. 1. Acanthochitona fascicularis

Acanthochiton fascicularis CARUS, 1893, Prod. Fauna Med. Vol. II, p. 182 (Aegaean, Peloponnesus). LELOUP & VOLZ, 1938, Thalassia, Vol. II (10), p. 30,56 (Attica, Peloponnesus).

Chiton fascicularis BELLOC, 1948, Inventory of the Fishery Resources of Greek warets, Appendix B, p. 71 (Aegaean).

Acanthochitona fascicularis MALATESTA, 1962, Geol. Rom. Vol. I, p. 164 (Mediterranean).

Shell oblong, moderately convex, carinated. Keel with longitudinal lines. Median valves broadly subtriangular with projecting beak. Sutural plates of the median valves have one slit on either side. Distance of the sutural plates is slightly greater than the breadth of the keel at the base, and their ends extend almost parallel to it. Anterior valve has 5 slits and the posterior one has two on each side. Valve surface covered with drop-shaped scale like granules, relatively scattered in rows. Girdle covered with short thin calcareous spicules. The spicules on the edge of the girdle verge on medium size. On the girdle and bet-

ween the valves on either side there are seven tufts of long spicules, on the anterior section are no more than 4 of them.

5 specimen were collected from stations E.15,27. V.66,68 from the eulittoral and the sublittoral zones (at a depth of 1,5-2m) on a hard substratum (under gravels etc.). Maximum length 21 mm.

According to CARUS (1893) this species has been found by Forbes in Naxos and Crete coast and by Deshayes in Peloponnesus coast. According to LELOUP & VOLZ (1938) it has been found in Attica coast. BELLOC (1948) mentions that this species occurs all over Greece, and MALATESTA (1962) reports that its distribution extends throughout the Mediterranean.

Acanthochitona communis (RISSO, 1826)

Fig. 2. Acanthochitona communis

Acanthochiton communis LELOUP & VOLZ, 1938, Thalassia Vol. 11 (10), p. 26,56. MALATESTA, 1962, Geol. Rom. Vol. I, p. 166 (Mediterranean). VAMVAKAS, 1972, Hellen. Oceanol. Limnol. Vol. X, p. 130 (W. Saronic).

Shell oblong, carinated. Keel with longitudinal lines. Valves beaked posteriorly. Sutural plates of the median valves with a slit on either side their distance at the base is the same as the breadth of the keel and their ends decline. Anterior and posterior valves differently shaped. Anterior valve with five slits, posterior one with two slits on either side. The surface of the valves covered with scale-like roundish granules arranged in curved radiating series. Girdle covered with short spicules. The number of tufts of calcareous spicules on either side and anteriorly is the same as in *Acanthochitona fascicularis* but with shorter spicules.

8 specimen were found at stations E. 9,13,20,23,33,45,53 and F. 63. These specimen were collected from the eulittoral and sublittoral zones

(at a depth of 0.5-2m) on a hard substratum. Maximum length 37 mm.

According to VAMVAKAS (1972) this species has been found in W. Saronic.

Chiton olivaceus SPENGLER, 1797

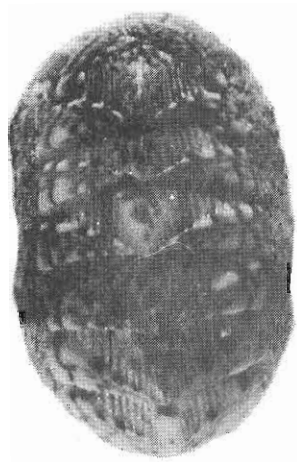


Fig. 3. Chiton olivaceus

Chiton olivaceus CARUS, 1893, Prod. Faun. Med. Vol. II, p. 179 (Peloponnesus, Aegaean). LELOUP & VOLZ, 1938, Thalassia Vol. II (10), p. 22,54 (Paros, Antiparos, Rhodes). MALATESTA, 1962, Geol. Rom. Vol. I, p. 161 (Aegaean).

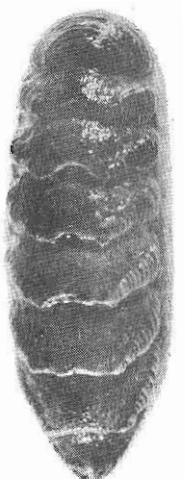
Shell oblong, oval, high, with a well defined longitudinal keel. Girdle covered with oval scales. Anterior and posterior valves roughly identical with slightly raised, radially arranged streaks. Lateral areas of median valves, well defined from the central, have 4-6 radial streaks in the shape of a fan with interposed grooves. Central valve area also streaked.

131 specimen have been collected from the eulittoral and the sublittoral zones (at a depth of 0.5-2m) at stations E.1,2,3,4,5,8,10,11,12, 14,15,16,18,20,22,24,27,30,33,35,37,38,42,43,45,47,50,54,55. M. 57. F. 59,62,64,65. V.67,68,69,71. A. 72,73,76. These specimen were taken from the hard substratum (under gravels) and a large number of them from areas of reduced salinity. Maximum lenght 33 mm.

According to CARUS (1893) this species has been found by Deshayes in Peloponnesus coast and by Forbes in the Aegaean sea. According to LELOUP & VOLZ (1938) it has been mentioned to occur in Paros, Anti-

paros and Rhodes coast. MALATESTA (1962) reports that this species is distributed throughout the Mediterranean.

Lepidopleurus cajetanus (POLI, 1791)



Fig, 4. Lepidopleurus cajetanus

Lepidopleurus cajetanus CARUS, 1893, Prod. Faun. Med. Vol. II, p. 180 (Naxos). LELOUP & VOLZ, 1938, Thalassia Vol. II (10), p. 8,47 (Aegaean). MALATESTA, 1962, Geol. Rom. Vol. I, p. 146, 147 (Aegaean).

Shell convex. Girdle thin and smooth. Valves arched. Lateral areas of median valves quite well defined and coarsely sculptured with thick concentric and closely arranged ridges. Middle areas of valves sculptured with longitudinal lirae. Lateral areas of median valves raised and sculptured like the head valve. Sutural plates triangular and far from each other.

4 specimen having a maximum length 17 mm, were collected from the eulittoral and sublittoral zones at the stations E.27 and 54.

According to MALATESTA (1962) and LELOUP & VOLZ (1938) this species is distributed throughout the Mediterranean. In Greece it has been found by Forbes in Naxos coast (CARUS, 1893).

Ischnochiton rissoi (PAYRAUDEAU, 1826)

Fig. 5. Ischnochiton rissoi

Chiton rissoi CARUS, 1893, Prod. Faun. Med. Vol. II, p. 181 (Crete).
Ischnochiton rissoi LELOUP & VOLZ, 1938, Thalassia. Vol. II. (10), p. 18, 51, (Aegaean). MALATESTA, 1962, Geol. Rom. Vol. I, p. 160, 161 (Aegaean).

Shell oblong, oval, convex with declining keel. Girdle with fine scales. Anterior valve having about 13 slits, posterior one about 10. Central area of valves decorated with longitudinal streaks. Lateral areas of valves not well defined but covered with concentric, wavy, granular lines. Sutural plates almost triangular very far from each other.

3 specimen, having a maximum length of 23 mm., were found in the eulittoral and sublittoral zones at the stations E. 20,23 and V. 68.

According to MALATESTA (1962) and LELOUP & VOLZ (1938) it is encountered in the Mediterranean. CARUS (1893) reports that it has been found by Forbes in Crete coast.

Callochiton achatinus euboecus nov. spp.

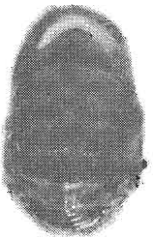
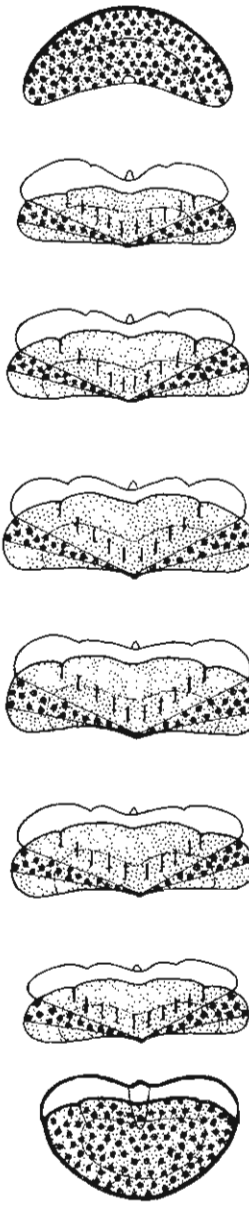


Fig. 6. Callochiton achatinus euboecus

It is different from the typical species in the form of the sutural

plates and in the absence of black spots troughout the whole lateral area of the valves.



Fig, 7. Form of the sutural plates of the new subspecies Callochiton achatinus euboeeus

Cappellini named *Chiton doriae* a kind of the typical species *Callochiton achatinus* that is found in the Mediterranean sea and which according to Thiele and Bergerhayn is considered a distinguished species (Leloup & Volz, 1938).*Chiton doriae* is characterized by oblong scars arranged in rows, lying on the middle part of the valves of the shell and absent from *Callochiton achatinus*. Leloup & Volz (1938) report that this feature is neither stable nor exclusive and that these two species are the same one.

DESCRIPTION OF THE NEW SUBSPECIES

Shell oblong, oval. Obtuse keel with thin longitutinal grooves on it. The whole area of the shell is covered with very small granules. Lateral areas of the median valves rather elevated (especially the second and the third valve), having properly arranged small black spots which do not cover the whole area of the valves. Undermost edge of the lateral valves of the new subspecies is without black spots in contrast to the lateral valves of the typical species, where these spots cover completely the area of them. Lateral areas of the valves also have thin radial grooves. First and eighth valve have fourteen slits each one of them. Median valves have two slits on either side. Middle areas of the median valves have 5-6 oblong scars on either side. Girdle of the shell wide, covered with acute scales and having oblong spicules on some areas of it.

Sutural plates are connected together and so constitute a continuance where a deep concave area lies, on the depth of which a small needle-like prolongation is found. On either side of the main concave area the sutural plates form two other concave but not deep areas. The same form of sutural plates is appeared on all the valves. On the posterior valves the concave area is a little more obtuse but still distinctive. Sutural plates of the typical species do not form this concave area.
Colour red. A specimen was also found with deep olive-green colour. The maximum length is 16mm.

3 specimen were collected from the sublittoral zone (2m) at the station E.30 on gravels rich in flora.

According to Carus (1893) the typical species is found by Forbes and Capellini in Naxos, Creta and Peloponnesus. It is also found in nearly areas to Greece as Adriatic sea and Alexandria (Leloup & Volz, 1938).

Fig. 8. Map showing the sampling stations of the Evvoia coast and Evvoia gulf

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ΠΕΡΙΛΗΨΙΣ

ΒΕΝΘΙΚΗ ΠΑΝΙΣ ΤΩΝ ΑΚΤΩΝ ΤΗΣ ΕΥΒΟΙΑΣ ΚΑΙ ΤΟΥ ΕΥΒΟΪΚΟΥ ΚΟΛΠΟΥ

II. ΠΟΛΥΠΛΑΚΟΦΟΡΑ (ΜΑΛΑΚΙΑ)

Ὑπὸ

Μ. ΚΑΤΤΟΥΛΑ, ΑΘ. ΚΟΥΚΟΥΡΑ καὶ ΠΑΝ. ΟΙΚΟΝΟΜΙΔΗ

(Ἐργαστήριον Ζωολογίας Πανεπιστημίου Θεσσαλονίκης)

Εἰς τὴν παροῦσαν ἐργασίαν ἐξετάζονται τὰ Πολυπλακοφόρα Μαλάκια, τὰ ὁποῖα διεπιστώθησαν ἐξ ἐρεύνης, τὴν ὁποίαν διενεργεῖ τὸ Ἐργαστήριον Ζωολογίας ἀπὸ τοῦ ἔτους 1970 ἐπὶ τῆς βενθικῆς πανίδος τῶν ἀκτῶν τῆς Εὐβοίας καὶ τοῦ Εὐβοϊκοῦ κόλπου. Οὐδεμία ἔρευνα ἐπ' αὐτῶν εἶχε πραγματοποιηθῆ μέχρι τοῦδε εἰς τὰς ἐν λόγῳ περιοχάς. Διηρευνήθησαν ἐν συνόλῳ 82 σταθμοὶ καὶ εἰς 42 εὑρέθησαν ἄτομα Πολυπλακοφόρων Μαλακίων.

Προσδιωρίσθησαν τὰ κάτωθι : *Lepidopleurus cajetanus, Ischnochiton rissoi, Chiton olivaccus, Acanthochitona fascicularis, Acanthochitona communis* καὶ *Callochiton achatinus cuboecus.*

Τὰ πέντε πρῶτα εὑρέθησαν καὶ ὑπὸ ἄλλων ξένων ἐρευνητῶν εἰς τὴν χώραν μας. Τὸ τελευταῖον *Callochiton achatinus euboecus* εἶναι νέον ὑποείδος διὰ τὴν ἐπιστήμην. Τοῦτο διακρίνεται τοῦ τυπικοῦ εἴδους *Callochiton achatinus* ἐκ τῆς μορφῆς τῶν συνδετικῶν ἐλασμάτων καὶ ἐκ τῆς μὴ ὑπάρξεως μελανῶν ὀφθαλμοειδῶν στιγμάτων καθ' ὅλην τὴν ἔκτασιν τῶν πλευρικῶν πεδίων τῶν θυρίδων.