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**CONTRIBUTION TO THE KNOWLEDGE OF OPISTHOBRANCHIA OF  
CYPRUS**

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## CONTRIBUTION TO THE KNOWLEDGE OF OPISTHOBRANCHIA OF CYPRUS(\*\*)

### Abstract

Some Opisthobranchia (35) are listed in the publications on malacology of Cyprus. The number of Opisthobranch species increased (25) through the activities of the expeditions organized by the Hebrew University-Smithsonian Project.

Most Opisthobranchia were collected at the eastern side of the island, especially at Famagusta.

Molluscan immigrants from the Indo-Pacific into the Mediterranean were found mainly on the Levant coast along Sinai, Israel and Lebanon. Only a few molluscan species of Indo-Pacific origin were collected at islands as in Cyprus: *Trochus erythraeus* (BROCCHI, 1823), *Rhinoclavis kochi* (PHILIPPI, 1848), *Aspella anceps* (LAMARCK, 1822), *Brachidontes variabilis* (KRAUSS, 1848), *Malleus regulus* (FORSKAL, 1775), *Pinctada radiata* (LEACH, 1814) and only one species of Opisthobranchia, *Berthellina engeli* GARDINER, 1936 = *Berthellina citrina* (RUPPEL and LEUCKART, 1828).

### Riassunto

Un certo numero di Opisthobranchia (35) è riportato nella letteratura malacologica di Cipro. Il numero di specie si è accresciuto (altre 25) per merito delle spedizioni organizzate dalla Hebrew University-Smithsonian Project. La maggior parte di specie è stata raccolta nella parte orientale dell'isola, soprattutto a Famagosta.

La immigrazione di molluschi dall'Indopacifico in Mediterraneo riguarda essenzialmente le coste del Sinai, Israele e Libano, mentre solo poche specie indopacifiche sono state segnalate per Cipro, cioè: *Trochus erythraeus* (BROCCHI, 1823), *Rhinoclavis kochi* (PHILIPPI, 1848), *Aspella anceps* (LAMARCK, 1822), *Brachidontes variabilis* (KRAUSS, 1848), *Malleus regulus* (FORSKAL, 1775), *Pinctada radiata* (LEACH, 1814) ed un'unica specie di Opisthobranchia, *Berthellina engeli* GARDINER, 1936.

The Mollusca of Cyprus have not, up to date, been fully studied. A considerable number of Prosobranchia have been recorded in the following publications: MONTEROSATO (1899) — 22 species; FODERA (1961) — 33 species; DEMETROPOULOS (1969, 1971) and DEMETROPOULOS, together with HADJICHRISTOPHOROU (1976) — 115 species, TORNARITIS (1987) — 195 species.

However, there are relatively few Opisthobranchia listed in these publications — only 36 species (see Table 1).

While the shell-bearing species of Opisthobranchia have attracted attention, those with internal shells or the shell-less, have been neglected because of the difficulty of identifying them. The list of the Opisthobranchia in the publications on the malacology of Cyprus contains mainly shell-bearing species — 24, as against 11 species devoid of external shell.

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Table 1

Opisthobranchia in the publications on malacology of Cyprus (1899-1987)

WITH EXTERNAL SHELL

*Chrysalida dohiolum* (PHILIPPI, 1844)  
*Chrysalida excavata* (PHILIPPI, 1836)  
*Odostomia michaelis* BRUGNONE, 1873  
*Odostomia conoidea* (BROCCHI, 1814)  
*Phasianema clathratum* (PHILIPPI, 1844)  
*Kleinella bulinea* (LOWE, 1840)  
*Turbonilla lactea* (LINNAEUS, 1758)  
*Turbonilla rufa* (PHILIPPI, 1836)  
*Actaeon tornatilis* (LINNAEUS, 1758)  
*Ringicula conformis* MONTEROSATO, 1875  
*Ringicula auriculata* (MENARD, 1811)  
*Philine aperta* (LINNAEUS, 1767)  
*Bulla striata* BRUGUIERE, 1789  
*Haminaea hydatis* (LINNAEUS, 1758)  
*Haminaea navicula* (DA COSTA, 1788)  
*Retusa truncatula* (BRUGUIÈRE, 1792)  
*Retusa umbilicata* (MONTAGU, 1803)  
*Rhizorus acuminatus* (BRUGUIÈRE, 1792)  
*Akera bullata* O.F. (MÜLLERE, 1776)  
*Clio pyramidata* (LINNAEUS, 1767)  
*Clio cuspidata* (BOSC, 1802)  
*Carolinia tridentata* (FORSKAL, 1775)  
*Oxynoe olivacea* RAFINESQUE, 1819  
*Umbraculum mediterraneum* (LAMARCK, 1819)

LACKING EXTERNAL SHELL

*Aplysia fasciata* POIRET, 1789  
*Aplysia depilans* L., 1767  
*Thuridilla hopei* (VERANY, 1853)  
*Oscanius membranaceus* (MONTAGU, 1815)  
*Pleurobranchea meckeli* LEDE, 1813  
*Hypselodoris elegans* (CANTRAINED, 1835)  
*Glossodoris gracilis* (RAPP, 1827)  
*Peltodoris atromaculata* BERGH, 1880  
*Dendrodoris grandiflora* (RAPP, 1827)  
*Janolus cristatus* (DELLE CHIAJE, 1841)  
*Flabellina affinis* (GMELIN, 1791)

A stimulus for further exploration of the malacofauna of Cyprus was provided by the Hebrew University — Smithsonian Institution Program.

The prime objective of this project was to assess the role of the Suez Canal as a passageway for dispersion of biota between the Indo-Pacific and the Mediterranean region. In order to achieve this objective, collecting expeditions were undertaken. These extended from the Gulf of Suez and Aqaba, along the Suez Canal to the Mediterranean and including Rhodes and Cyprus.

The marine fauna of Cyprus was investigated by the Project, over 23 days during 1967-1970:

Hebrew University, Jerusalem (HUJ) - 22-X-1968 to 19-X-1969 - 10 days

Sea Fisheries Research Station, Haifa (SFRS) - 23-VI-1967 to 26-VI-1967; - 2-XI-1967 to 16-VI-1968 - 7 days.

Tel Aviv University (TAU) - 21-VIII-1970 to 27-VIII-1970 - 6 days.

The activities of the expeditions organized by the Hebrew University - Smithsonian Project yielded a large amount of molluscan species, including species collected from Cyprus.

The malacofauna of Cyprus was enriched by 73 species of Prosobranchia new to the Island, but the most impressive increase was in the number of Opisthobranchia. 24 Opisthobranchia species, new to Cyprus, were collected and the total number of species belonging to this group amounted to 60 (see Table 2).

The composition of the Opisthobranchia recorded from Cyprus is, as today, as seen in Table 2 we know.

**Table 2:**  
The Composition of Opisthobranchia in Cyprus

	Recorded previously (1899-1987)	Known at present
Pyramidellomorpha	8 species	14 species
Bullomorpha	11 species	17 species
Aplysiomorpha	2 species	5 species
Thecosomata	3 species	4 species
Sacoglossa	2 species	4 species
Pleurbranchomorpha	3 species	6 species
Nudibranchia	6 species	10 species
	35 species	60 species

Note the increased number of species known at present *lacking* external shell amounts to 24, against the 11 species recorded previously in the literature

Most Opisthobranchia species were collected on the eastern side of the Island, in the area of Famagusta, Koma tou Yialou, Boghaz and Cape Andreas.

Famagusta was especially rich in species — 35 species. All the other areas (Table 3) contributed no more than 5 species each.

**Table 3**  
Collecting localities of Opisthobranchia in Cyprus

Famagusta .....	35 species	Cape Kiti .....	2 species
Akrotiri .....	5 species	Cape Andreas .....	1 species
Ayios Yeoryios .....	5 species	Koma tou Yialou .....	1 species
Kyrenia .....	3 species	Dekhelia .....	1 species
Boghas .....	2 species	Petunda Point .....	1 species
Yialousa .....	2 species	Cape Pyla .....	1 species

35 of Opisthobranchia had been previously recorded from Cyprus, mainly by DEMETROPOULOS and HADJICHRISTOPHOROU (1969-1976) and TORNARITIS (1987). Most of the other species (25 not yet recorded) were identified by the known specialists on Opisthobranchia: Dr. van J. AARTSEN (Holland), Dr. N. EALES (England), Dr. H. GANTES (France) and the late Dr. H. LEMCHE (Denmark). The authors are much obliged and very grateful to them for their kind assistance.

The coastline of Cyprus stretches for 750 Km and is much indented, containing many areas that promise successful collecting of Mollusca.

Nevertheless, the number of Opisthobranchia collected is considerably less, for example, than in Israel, where the Mediterranean coasts extends for only ca. 200 km and where relatively few places are indented. The number of Opisthobranchia species known today from Israel is 148, almost three-fold the number known at present from Cyprus and still apparently far from complete.

The vast majority of the Opisthobranchia species listed in this paper belong, by their distribution, to the Atlanto-Mediterranean region. The range of the great majority of them (45) extend beyond the Mediterranean to the Eastern Atlantic, a few (5) are known also from the Western Atlantic. Some species are also recorded from other geographical regions, in addition to the Atlanto-Mediterranean, namely the Indo-Pacific, East Pacific and Australia, but their occurrence there appears to be rare.

The Hebrew University — Smithsonian Project intended to determine to what extent the marine fauna of the islands, such as Cyprus and Rhodes, is influenced by the phenomenon of migration through the Suez Canal.

The hydrological conditions of Cyprus are similar to those of the South-Eastern Mediterranean, which seem to be most compatible for the species after their passage through the Suez Canal.

The surface temperature of the sea around Cyprus ranges from 16°-17°C in winter and 27°-29°C in summer (ENGEL, 1966). The salinity is ca 39‰, as in the South-Eastern Mediterranean (OREN, 1966). These temperatures and salinity do not differ from those of Israel, Syria and Lebanon.

Most molluscan immigrants (over 90 species) from the Indo-Pacific into the Mediterranean (BARASH and DANIN, 1986), were found on the Levant coast of these countries, but only a few molluscan species of Indo-Pacific origin were found in Cyprus, i.e. *Trochus erythraeus* BROCCHI, 1823 *Rhinoclavis kochi* (PHILIPPI, 1848), *Aspella anceps* (LAMARCK, 1822), *Brachidontes variabilis* (KRAUSS, 1848), *Malleus regulus* (FORSKAL, 1775), *Pinctada radiata* (LEACH, 1814) and only one species of the Indo-Pacific Opisthobranchia appeared in the waters of Cyprus, namely *Berthellina citrina*. (RUPPELL and LEUCKART, 1828) = *Berthellina engeli* (GARDINER, 1936) that this species has a world-wide distribution. Out of the Indo-Pacific region, it is prevalent in the Atlantic and Mediterranean coasts of France and is a rare visitor in Southern England. It is reported from various exotic localities, as far away as Australia (THOMPSON, 1976: 167).

One of the factors presumably causing the absence or extreme rarity of Indo-Pacific Mollusca in Cyprus might be the direction of currents in the Mediterranean. The prevailing surface currents in the Mediterranean appear to drive the pelagic larvae of molluscs in the direction of the continent. Migration towards the islands across the open area is possibly extremely difficult for the larval stage of the migrants.

## Annotated list of Opisthobranchia from Cyprus

Subclass: OPISTHOBRANCHIA  
Order: PYRAMIDELLOMORPHA

### Family Pyramidellidae

#### *Chrysallida indistincta* (MONTAGU, 1808)

Det: GANTES.

Ref: GROSSU, 1956:169, fig. 4.

Famagusta, 20-XI-1969, 64 m depth, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, England to Gibraltar.

#### *Chrysallida interstincta* (MONTAGU, 1803)

= *Chrysallida obtusa* (BROWN, 1844).

Det: van AARTSEN.

Ref: NORDSIECK and TALAVERA, 1979:183, plate 45, fig. 3.

Akrotiri 9-XI-1969, 73-82 m depth, 1 shell.

Black Sea, Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to Morocco, Canary Is. Madeira.

Ch. dolichum, Ch. excavate

#### *Chrysallida doliolum* (PHILIPPI, 1844).

Det: TORNARITIS 1987:111 Ayia Napa - Cyprus Record.

Ref: NORDSIECK, 1972:89.

Eastern and Western Mediterranean, Eastern Atlantic: Lusitanian Sea, Azores, Madeira.

#### *Chrysallida excavata* (PHILIPPI, 1836).

Det: TORNARITIS 1987:111 Ayia Napa - Cyprus Record.

Ref: NORDSIECK, 1972:89.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: British Is., Morocco.

#### *Odostomia plicata* (MONTAGU, 1803)

Det: GANTES.

Ref: GROSSU, 1956:172, FIG. 86; NORDSIECK and TALAVERA, 1979:188, plate 45, fig. 24.

Famagusta, 5-III-1969, 18 m depth, 1 shell.

Black Sea, Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: British Is. to Morocco, Canary Is.

#### *Odostomia michaelis* (BRUGNONE, 1873).

Det: TORNARITIS 1987:111; Xylophagou - Cyprus Record.

Ref: NORDSIECK, 1972:114.

Mediterranean: Sicily. Remark? recent (NORDSIECK, 1972: 114).

#### *Odostomia conoidea* (BROCCHI, 1814).

Det: TORNARITIS 1987:111 - Ayia Napa - Cyprus Record.

Ref: NORDSIECK, 1972:108.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to France, Spain, Portugal, Morocco, Canary Is., Madeira.

*Phasianema clathratum* (PHILIPPI, 1844).  
= *Phasianema costatum* (BROCCHI, 1814).

Det: TORNARITIS 1987:111 - Ayia Napa - Cyprus Record.  
Ref: NORDSIECK, 1972:100.

Western Mediterranean, Eastern Atlantic: British Is. to Portugal, Madeira, Canary Is.

*Kleinella bulinea* (LOWE, 1840)

Det: TORNARITIS, 1987:111 - Cyprus Record.

Ref: PARENZAN, 1970:130, plate 24, fig. 477; NORDSIECK and TALAVERA, 1979:185, plate 45, fig. 10.

Ayios Yeoryios, 23-VIII-1970, 0-50 cm, shallow rocky lagoon, 1 shell; Xylophagou  
Eastern and Western Mediterranean, Eastern Atlantic: Madeira, Canary Is.

*Turbonilla gracilis* (PHILIPPI, 1844).

= *Turbonilla delicata* (MONTEROSATO, 1874).

Det: van AARTSEN.

Ref: PARENZAN, 1970:136, plate 26, fig. 522; NORDSIECK, 1972, plate P. VII, fig. 10.

Famagusta, 6-II-1969, 64 m depth, 1 shell.

Black Sea, Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: British Is., France.

*Turbonilla pusilla* (PHILIPPI, 1844).

Det: van AARTSEN.

Ref: PARENZAN, 1970:137, plate 26, fig. 528; NORDSIECK and TALAVERA, 1979, page 191, plate 46, fig. 39.

Famagusta, 7-II-1979, 37-46 m, 2 shells.

Eastern and Western Mediterranean, Eastern Atlantic: British Is. to Morocco, Madeira.

*Turbonilla lactea* (LINNAEUS, 1758).

Det: DEMETROPOULUS, 1969:7; TORNARITIS, 1987:111 Cyprus Record.

Ref: PARENZAN, 1970:136, plate 26, fig. 523; NORDSIECK, 1972:122, plate P. V, fig. 11.

Famagusta Bay, beach collection, 2 shells.

Eastern and Western Mediterranean, Eastern Atlantic: British Is., France to Morocco, Azores, Madeira, Canary Is.

*Turbonilla striatula* (LINNAEUS, 1758). Figure 1.

Ref: PARENZAN, 1970:137, plate 26, fig. 529; NORDSIECK, 1972:132, plate P. VI, fig. 15.

Famagusta, 7-III-1969: 37-46 m, 2 shells; 20-XI-1969, 64 m depth, one specimen.

Eastern and Western Mediterranean, - Endemic in the Mediterranean.

*Turbonilla rufa* (PHILIPPI, 1836).

Det: TORNARITIS 1987:111; Xylophagou, Ayia Napa - Cyprus Record.

Ref: NORDSIECK, 1972:129.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: France, Spain, Portugal, Morocco, Madeira, Canary Is.

Order: BULLOMORPHA

Family **Acteonidae**

*Acteon tornatilis* (LINNAEUS, 1758)

Det: DEMETROPOULOS, 1969:13; TORNARITIS, 1987:111 Cyprus Record.

Ref: NORDSIECK, 1972, page 7, plate OVI, fig. 1; THOMPSON, 1976:106, fig. 49.

Ayia Irini, 1 specimen, very rare (DEMETROPOULOS, 1969:13); Larnaka Bay (TORNARITIS, 1987): 112

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Iceland, Norway to Congo, Madeira.

Family **Ringiculidae**

*Ringicula conformis* MONTEROSATO, 1875

Det: DEMETROPOULOS and HADJICHRISTOPHOROU 1976:78 - TORNARITIS, 1987:112 Cyprus Record.

Ref: PARENZAN, 1970:217, plate 46, fig. 88; NORDSIECK and TALAVERA, 1979, page 170, plate 43, fig. 7.

Famagusta, shallow sandy ground, 1 specimen; Cape Greco, Ayia Napa.

Eastern and Western Mediterranean, Eastern Atlantic: France to Angola, Canary Is.

*Ringicula auriculata* (MENARD, 1811).

Det: TORNARITIS 1987:112; Cape Greco, Ayia Napa - Cyprus Record.

Ref: NORDSIECK, 1972:11.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: France, Spain, Portugal, Morocco, Madeira, Canary Is.

Family **Philineidae**

*Philine aperta* (LINNAEUS, 1767) Figure 2.

= *Philine quadripartita* (ASCANIUS, 1772).

Det: DEMETROPOULOS, 1969:13 - TORNARITIS, 1987: 114 Cyprus Record; Det: GANTES.

Ref: PARENZAN, 1970:222, plate 47, fig. 916; NORDSIECK AND TALAVERA, 1979:171, plate 43, fig. 14.

Famagusta, 15-II-1968, 37 m, 1 specimen; 16-II-1968, 73-82 m, 1 specimen; 5-III-1969, 4.5 m, 1 specimens; 6-III-1969, 64 m, 1 specimen; 20-V-1969, 13 m, 2 specimens; 21-V-1969, 7-18 m, 1 specimen.

Akrotiri, 9-XI-1969, 18-22 m, 1 specimen; Ayios Yeoryios, 30-X-1968, 46 m, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to South Africa, Madeira, Canary Is; Indo-Pacific: Red Sea, Mauritius, Ceylon, Philippines.

*Philine catena* (MONTAGU, 1803).

Det: GANTES.

Ref: NORDSIECK, 1972:19, plate III, fig. 3; THOMPSON, 1976:135.

Famagusta, 20-V-1969, 25 m, 1 specimen; Akrotiri, 9-XI-1969, 18-22 m depth, 1 specimen.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic, British Is. to France, Spain, Canary Is.

*Philine punctata* (CLARK, 1837)

Det: GANTES.

Ref: PARENZAN, 1970:222, plate 47, fig. 913.

Famagusta, 20-X-1969, 13 m depth, 1 specimen.

Mediterranean, Eastern Atlantic: Norway, England.



## Family Aglajidae

*Aglaja depicta* (RENIER, 1807) Figure 3a, 3b

= *Doridium carnosum* (CUVIER) DELLE CHIAJE, 1828.

Ref: PRUVOT-FOL, 1954:52, fig. 9.

Famagusta, 20-V-1969, 55 m, 1 specimen; 21-V-1969, 55 m, 1 specimen.

Eastern and Western Mediterranean. Endemic in the Mediterranean.

## Family Bullidae

*Bulla striata* BRUGUIÈRE, 1789

= *Bullaria striata* (Bruguière)

Det: DEMETROPOULUS, 1969:13 - TORNARITIS, 1987:113 - Cyprus Record.

Det: GANTES.

Ref: PARENZAN, 1970:218, plate 47, fig. 892; NORDSIECK AND TALAVERA, 1979:173, plate 43, fig. 25.

Famagusta, 2-IX-1967, 27 m, 1 shell; 16-II-1968, 73-82 m depth, 1 specimen; Boghaz, 23-X-1968, 91-109 m depth, 1 specimen; Limassol, Ayia Napa.

Eastern and Western Mediterranean, Eastern Atlantic: France to Morocco, Azores, Cape Verde, Western Atlantic: Florida, West Indies to Brazil.

## Family Scaphandridae

*Cylichna crossei* (BUCQUOY, DAUTZENBERG and DOLLFUS, 1886)

Det: GANTES.

Ref: PARENZAN, 1970:221, plate 47, fig. 907; NORDSIECK, 1972:17, plate 0II, fig. 20.

Famagusta, 6-III-1969, 64 m, 1 shell; 6-IV-1969, 91 m, 1 shell; 7-III-1969, 73 m, 1 specimen.

Eastern and Western Mediterranean. Endemic in the Mediterranean.

*Cylichna cylindracea* (PENNANT, 1777).

Det: GANTES.

Ref: PARENZAN, 1970:221, plate 47, fig. 908; NORDSIECK and TALAVERA, 1979, plate 43, fig. 8.

Akrotiri, 9-XI-1969, 18-22 m, 3 specimens.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Iceland, Norway, British Is. to Senegal, Canary Is.

*Roxania utriculus* (BROCCHI, 1814). Figures 4a, 4b.

Ref: NORDSIECK and TALAVERA, 1979:170, plate 43, fig. 11; THOMPSON, 1976:124, fig. 62.

Famagusta Bay, 28-VI-1967, 37 m, 1 shell; 20-XI-1969, 64 m, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to South Africa, Canary Is., Madeira.

## Family Atyidae

### *Haminea hydatis* (LINNAEUS, 1758).

Det: DEMETROPOULOS, 1969:13, ROBINSON, 1982:454 TORNARITIS, 1987: 113 - Cyprus Records.

Ref: PRUVOT FOL, 1954:81, fig. 19d; NORDSIECK and TALAVERA, 1979:176, plate 44, fig. 35.

Famagusta, 16-II-1968, 73-82 m, 1 shell and 1 specimen; 6-III-1969, 64 m, 1 shell; 6-II-1969, 1 shell, 109 m, Akrotiri, 9-XI-1969, 55-64 m, 2 specimens.

Black Sea, Eastern and Western Mediterranean, Eastern Atlantic: British Is. to Morocco, Madeira, Canary Is.

### *Haminea navicula* (DA COSTA, 1778).

Det: GANTES, TORNARITIS, 1987:113

Ref: PRUVOT FOL 1954:80, figs. 18b, c; PARENZAN, 1970:219, plate 47, fig. 893.

Akrotiri Bay, 23-VI-1967, 22 m, 1 specimen; 13-II-1968, 55 m, 1 specimen; 16-II-1968, 37 m, 1 specimen.

Mediterranean, Eastern Atlantic: British Is. to Spain.

## Family Retusidae

### *Retusa truncatula* (BRUGUIÈRE, 1792). Figure 5.

Det: DEMETROPOULOS, 1971:17; TORNARITIS, 1987:113 - Cyprus Record.

Det: GANTES.

Ref: PARENZAN, 1970:219, plate 47, fig. 897; NORDSIECK and TALAVERA, 1979:176, plate 44, fig. 38.

Famagusta, V-1972, Boghaz, on the beach, sandy ground shells.

Black Sea, Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to Senegal, Azores, Madeira, Canary Is.

### *Retusa umbilicata* (MONTAGU, 1803).

Det: DEMETROPOULOS, 1969:13 - Cyprus Record.

Det: GANTES.

Ref: PARENZAN, 1970:220, plate 47, fig. 903; THOMPSON, 1976:115, fig. 56.

Famagusta, 20-XI-1969, 46 m, 1 specimen.

Black Sea, Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to Cape of Good Hope, Madeira.

• Rhizorus

### *Rhizorus acuminatus* (BRUGUIÈRE, 1792).

Det: TORNARITIS 1987:113 - Xylophagou - Cyprus Record.

Ref: NORDSIECK, 1972:37.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to France, Spain, Portugal, Morocco, Senegal, Guinea, Angola, Canary Is.

## Family Akeridae

### *Akera bullata* (O F. MÜLLER, 1776)

Ref: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:78 - Cyprus Record.

Ref: PARENZAN, 1970:219, plate 47, fig. 895; NORDSIECK and TALAVERA, 1979:179, plate 44, fig. 51.

Famagusta, 15-II-1968, 55 m depth, 1 specimen; 73-82 m, 1 specimen; Yialousa, 23-X-1968, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to Spain, Canary Is.

## Order APLYSIOMORPHA

### Family Aplysiidae

#### *Aplysia fasciata* POIRET, 1789.

Det: DEMETROPOULUS and HADJICHRISTOPHOROU, 1976:78 - Cyprus Record.

Det: EALES.

Ref: PARENZAN, 1970:224, plate 48, fig. 927; NORDSIECK and TALAVERA, 1979:179, plate 44, fig. 50.

Ayios Yeoryios, 1-XI-1968, 0.50 cm, shallow lagoon.

Eastern and Western Mediterranean, Eastern Atlantic: England to Angola, Canary Is., Indo-Pacific: Gulf of Aqaba, Red Sea.

#### *Aplysia parvula* GUILDING in MOERCH, 1863

Det: EALES and GANTES.

Ref: KEEN, 1971:808, coloured plate 19, fig. 3; BEBBINGTON, 1977:94, fig. 2.

Famagusta, 16-II-1968, 55 m, 2 specimens; 5-III-1969, 18 m, 1 specimen; Cape Andreas, 22-V-1969, 38 m, 1 specimen.

Eastern and Western Mediterranean, Eastern and Western Atlantic, Indo-West Pacific, South Australian region. «This aplysiid is known to have a circumtropical distribution and occurs in warm shallow waters in all three ocean basins»: (Thompson, 1977:112).

#### *Aplysia punctata* (CUVIER, 1803)

Det: LEMCHE.

Ref: THOMPSON, 1976:157, fig. 87; NORDSIECK and TALAVERA, 1979:178, plate 44, fig. 48.

Famagusta, 16-II-1968, 55 m depth, 1 specimen; Ayios Yeoryios, 1-XI-1968; intertidal, 1 specimen.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to Morocco, Madeira, Canary Is.

#### *Aplysia depilans* LINNAEUS, 1767.

Det: DEMETROPOULOS, 1969:13 - Cyprus Record.

Ref: NORDSIECK, 1972:42.

Occasional specimens from diving, from 60-100 fathoms.

#### *Notarchus punctatus* PHILIPPI, 1836.

Ref: NORDSIECK, 1972:43, plate OVII, fig. 22.

Famagusta, 16-II-1968, 37 m, 1 specimen, 55 m, 1 specimen, Cape Andreas, 22-V-1969, 118 m depth, 2 specimens.

Eastern and Western Mediterranean, Western Atlantic: Florida, Jamaica, Indo-West Pacific: Japan.

## Order THECOSOMATA

### Family Cavoliniidae

#### *Clio pyramidata* LINNAEUS, 1767.

= *Euclio pyramidata* (LINNAEUS, 1767).

Det: TORNARITIS 1987:114 - Cyprus Record

Ref: DI GERONIMO, 1970:111, plate 5, fig. 3; NORDSIECK and TALAVERA, 1979:181, plate 44, fig. 65.

Famagusta, 7-III-1969, 73 m, 1 shell, cast ashore after storms around the island

Eastern and Western Mediterranean, Eastern and Western Atlantic, Indo-West Pacific, East Pacific, Arctic Ocean: Greenland.

The most distributed species of the Thecosomata occurring in warm, temperate and even cold waters of all oceans and seas.

*Clio cuspidata* (Bosc, 1802).

Det: TORNARITIS 1987:114 - Cyprus Record, cast ashore after storms around the island.  
Ref: DI GERONIMO, 1970:74, plate 5, fig. 1; NORDSIECK, 1972:46.  
Aegean Sea, Western Mediterranean, common in the Atlantic and Pacific.

*Cavolinia tridentata* (FORSKAL, 1775).

Det: TORNARITIS 1987:114 - Cyprus Record, cast ashore after storms around the island.  
Ref: DI GERONIMO, 1970:86, plate 3, fig. 1; NORDSIECK, 1972:47.  
World wide distribution, mainly in warm seas, in all latitudes except the polar zones.

*Styliola subula* (QUOY and GAYMARD, 1827).

Ref: DI GERONIMO, 1970:111, plate 5, fig. 2; NORDSIECK AND TALAVERA, 1979:182, plate 45, fig. 7.  
Koma tou Yalou, 22-X-1968, 18 m.  
Eastern and Western Mediterranean, Eastern and Western Atlantic, Indo-West Pacific, East Pacific.  
World-wide distribution in warm seas, subtropical and tropical.

Order SACOGLOSSA

Family Oxynoidae

*Oxynoe olivacea* RAFINESQUE, 1819. Figure 6

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:78 TORNARITIS, 1987:16 - Cyprus Record.  
Ref: PRUVOT FOL, 1954:172, fig. 66; NORDSIECK, 1972:38, plate OV, fig. 43.  
Famagusta, 5-III-1969, 18 m, 7 specimens; 8-III-1969, 136-154 m, 6 specimens; 20-V-1969, 26 m, 1 specimen; 21-V-1969, 13 m, 3 specimens; 27 m, 5 specimens; Akrotiri, 13-II-1968, 18 m, 2 specimens; 55 m, 1 specimen; 9-XI-1969, 37 M, 31 specimens; 55-64 m, 1 specimen.  
Eastern and Western Mediterranean. Endemic in the Mediterranean.

*Lobiger serradifalci* (CALCARA, 1840).

Ref: PARENZAN 1970:224, plate 48, fig. 925; NORDSIECK, 1972:222, color plate, fig. 3.  
Famagusta, 15-VI-1968, 37 m, 2 specimens; 55 m, 1 specimen; 82 m, 2 specimens; 16-II-1968, 37 m, 3 specimens; 55 m, 3 specimens; 73-82 m, 1 specimen; 20-V-1969, 26 m, 1 specimen; 20-XI-1969, 18-27 m, 1 specimen; 91 m, 2 specimens.  
Eastern and Western Mediterranean. Endemic in the Mediterranean.

Family Elysiidae

*Elysia timida* (RISSE, 1818).

Ref: PRUVOT FOL, 1954:202, fig. 77; NORDSIECK, 1972:41, plate 08, fig. 26.  
Kyrenia, 26-VIII-1970, 4-6 m depth, 1 specimen.  
Eastern and Western Mediterranean, Eastern Atlantic: France.

*Thuridilla hopei* (VERANY, 1853).

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:78. Cyprus Record.  
Det: GANTES.  
Ref: NORDSIECK, 1972:222, color plate, fig. 6, SCHMEKEL, 1982:282, plate 17, fig. 1.  
West of Kyrenia, 26-VIII-1970, littoral.  
Eastern and Western Mediterranean. Endemic in the Mediterranean.

Order PLEUROBRANCHOMORPHA

Family **Umbraculidae**

*Umbraculum mediterraneum* (LAMARCK, 1819). Figure 7.

Det: TORNARITIS 1987:116.

Ref: PARENZAN, 1970:225, plate 48, fig. 933; NORDSIECK and TALAVERA, 1979:189, plate 44, fig. 56.

Yialousa, 23-X-1968, 1 specimen in littoral.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Spain, Canary Is., Cape Verde Is.

Family **Pleurobranchidae**

*Oscanius testudinarius* (CANTRAINED, 1840) =

= *Susania testudinaria* (CANTRAINED, 1840).

Det: GANTES.

Ref: NORDSIECK, 1972:45, plate OVI, fig. 17.

Famagusta, 28-III-1967, 18 m, 1 specimen; 28-VI-1967, 1 specimen; 6-III-1969, 91 m, 1 specimen.

Eastern and Western Mediterranean, Western Atlantic: Brazil.

*Oscanius membranaceus* (MONTAGU, 1815)

= *Pleurobranchus membranaceus* (MONTAGU, 1815)

= *Oscanius tuberculatus* (MECKEL, 1808).

Det: GANTES.

Ref: NORDSIECK, 1972:45, plate OVI, fig. 16.

Famagusta, 16-II-1968, 55 m, 1 specimen.

Mediterranean, Eastern Atlantic: England to Spain, Western Atlantic: Delaware Bay.

*Berthella ocellata* (DELLE CHIAIE, 1828).

Det: GANTES.

Ref: NORDSIECK, 1972:45, plate OVI, fig. 15.

Cape Kiti, 27-VIII-1970, 1 specimen, littoral.

Eastern and Western Mediterranean. Endemic in the Mediterranean.

*Berthellina engeli* GARDINER, 1936

= *Berthellina cirina* (RUPPEL, and LEUCKART, 1828); THOMPSON, 1976:167).

Det: LEMCHE and GANTES.

Ref: THOMPSON, 1976:167, fig. 95.

Cape Kiti, 25-XI-1869, 1 specimen; Kyrenia, 28-X-1969, 4 specimens; Ayios Yearyios, 1-XI-1968, rocky shore.

Mediterranean, Atlantic, Southern coast of Britain, France, Indo-Pacific: Central West Pacific - Palau Is., New Caledonia, Japan, Ceylon, Red Sea and Gulf of Aden, False Bay in South Africa, Mauritius, Australia - near Sydney.

*Pleurobranchaea meckeli* LEUE, 1813.

Det: GANTES. DEMETROPOULOS 1969:13 - Cyprus record

Ref: NORDSIECK, 1972:45, plate OVII, fig. 26.

Famagusta Bay, 16-II-1968, 55 m, 14 specimens; 73-82 m, 2 specimens; 6-III-1969, 91 m, 2 specimens; 136 m, 2 specimens. Akrotiri, 9-XI-1969, 109-128 m, 1 specimen.

Sea of Marmara, Eastern and Western Mediterranean, Eastern Atlantic: Canary Is., Indo-Pacific, Red Sea.

Order NUDIBRANCHIA

Family **Chromodorididae**

*Hypselodoris elegans* (CANTRAINED, 1835)

= *Hypselodoris valenciennesi* (CANTRAINED, 1841)

= *Glossodoris valenciennesi* (CANTRAINED, 1841).

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:79 - Cyprus Record.

North coast, 15-50 m, rocky areas, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: France, Canary Is.

*Glossodoris gracilis* (RAPP, 1827)

= *Hypselodoris villafranca* (RISSO, 1818).

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:78 - Cyprus Record.

Ref: SCHMEKEL and PORTMANN 1982:68, colored plate 1, fig. 4.

North coast, littoral, rocky area.

Mediterranean, Eastern Atlantic: from Bay of Biscay to Cape Verde Is.

Family **Dorididae**

Subfamily Discodoridinae

*Peltdoris atromaculata* BERGH, 1880. Figure 8.

Det: DEMETROPOULOS, 1969:14 - Cyprus Record.

Det: GANTES.

Ref: NORDSIECK, 1972:222, colored plate, fig. 10; SCHMEKEL and PORTMANN, 1982:86, colored plate 3, fig. 1.

Akrotiri Bay, 13-II-1968, 18 m, 1 specimen; Cape Pyla, 27-X-1979, 1 specimen, littoral; Dekhe-  
lia, 24-VIII-1970, 5-6 m depth, 2 specimens.

Eastern and Western Mediterranean. Endemic in the Mediterranean.

Family **Aegiretidae**

*Aegires punctilucens* (D'ORBIGNY, 1837).

Det: GANTES.

Ref: NORDSIECK, 1972:55, colored plate in page 222, fig. 11; SCHMEKEL and PORTMANN,  
1982:99, color plate 5, fig. 1.

Famagusta, 5-III-1969, 18 m, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, British Is. to France. West  
Pacific: Japan.

Family **Triophidae**

*Kaloplacamus ramosus* (CANTRAINED, 1835).

Det: LEMCHE.

Ref: PRUVOT-FOL, 1954:323, fig. 127; NORDSIECK, 1972:55, plate OX, fig. 15.

Famagusta, 16-II-1968, 73-82 m, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: South Africa. West Pacific: Japan - warm  
regions.

## Family **Dendrodorididae**

*Dendrodoris areolata* BERGH, 1880 Figure 9

= *Doriopsilla areolata* BERGH, 1880.

Det: LEMCHE and GANTES.

Ref: NORDSIECK, 1972:64, plate OXII, fig. 1.

Opposite Petunda Point, 24-X-1968, 1 specimen; Vasilikos, 24-X-1968, 109 m 1 specimen.  
Eastern and Western Mediterranean, Eastern Atlantic: France to Senegal, Cape Verde Is. Western Atlantic: Virgin Is.

*Dendrodoris grandiflora* (RAPP, 1827).

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:79 - Cyprus Record.

Det: GANTES.

Ref: NORDSIECK, 1972:65, colored plate, fig. 21; SCHMEKEL and PORTMANN, 1982:136, colored plate 4, fig. 4.

Ayios Yeoryios (North coast) 23-VIII-1970, 1 m, under rocks; Boghaz, 25-VIII-1970, under stones, 0-1 m.

Eastern and Western Mediterranean, Eastern Atlantic: Spain, Portugal.

## Family **Tethyidae**

*Tethys fimbria* LINNAEUS, 1767.

Det: EALES.

Ref: NORDSIECK, 1972, colored plate, fig. 26; SCHMEKEL and PORTMANN, 1982:156, fig. 7, 107.

Famagusta, 16-II-968, 55 m depth, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Portugal, Morocco, Canary Is.

## Family **Janolidae**

*Janolus cristatus* (DELLE CHIAJE, 1841)

= *Antiopella cristata* (DELLE CHIAJE, 1841).

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1976:79 - Cyprus Record.

Det: LEMCHE.

Ref: PRUVOT-FOL, 1954:375, fig. 147; SCHMEKEL and PORTMANN, 1982:177, color plate 8.

Kytenia, 40 m, on rocks; Famagusta, 55 m. 16-II-1968, 1 specimen.

Eastern and Western Mediterranean, Eastern Atlantic: Norway, England to France.

## Family **Flabellinidae**

*Flabellina affinis* (GMELIN, 1791).

Det: DEMETROPOULOS and HADJICHRISTOPHOROU, 1971:79 - Cyprus Record.

Ref: PRUVOT-FOL, 1954:413, fig. 161; SCHMEKEL and PORTMANN, 1982:190, color plate 9, fig. 3.

North coast, rocky areas, 20-50 m, common, on Hydroidea.

Eastern and Western Mediterranean, Eastern Atlantic: Ghana.

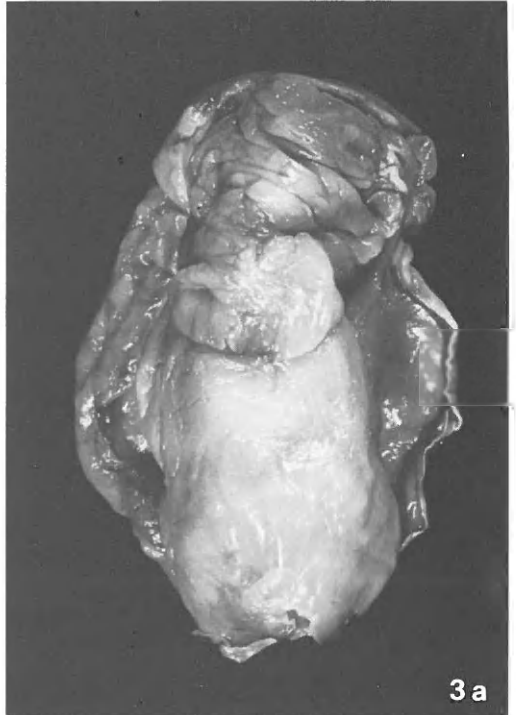
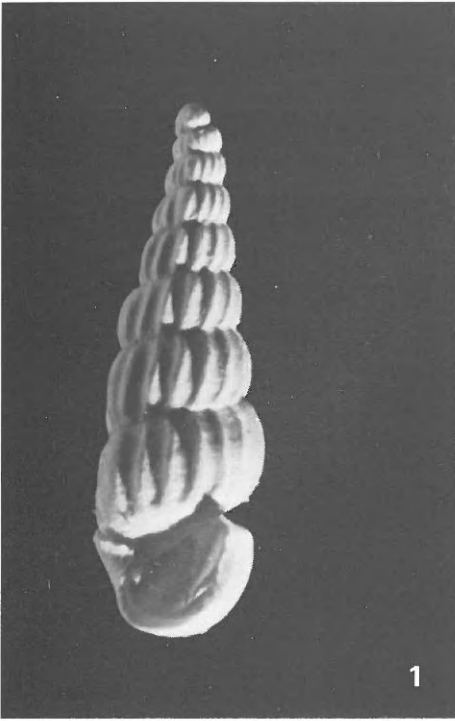
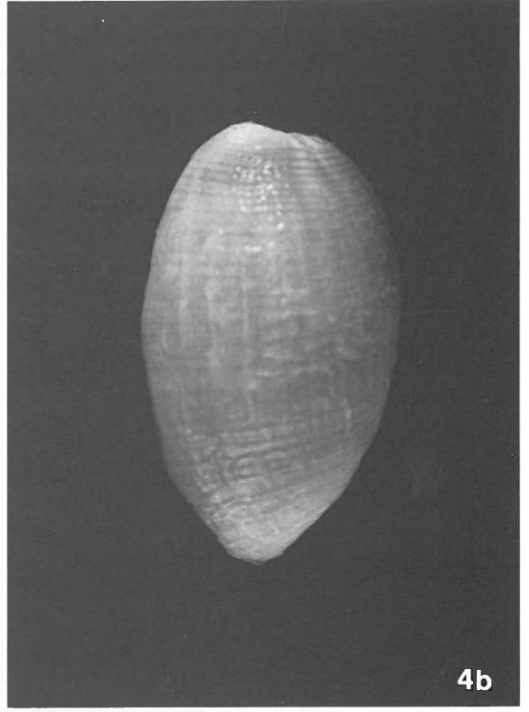


Fig. 1 *Turbonilla striatula* (L.)  
Fig. 2 *Philine aperta* (L.)  
Fig. 3a, 3b *Aglaja depicta* (RENIER)





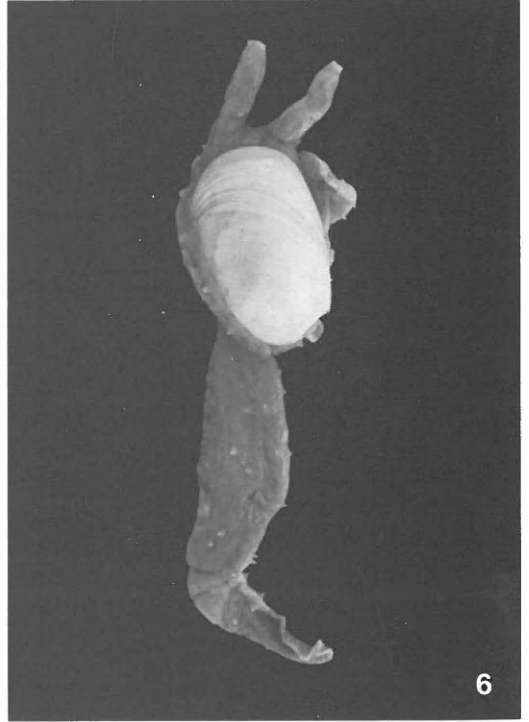
4a



4b



5



6

Fig. 4a, 4b *Roxania utriculus* (BROCCHI)  
Fig. 5 *Retusa truncatula* (BRUGUIERE)  
Fig. 6 *Oxynoe olivacea* RAFINESQUE

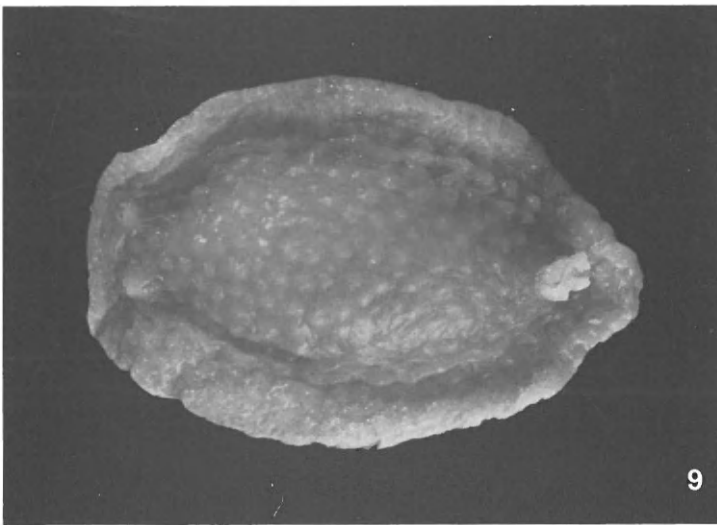
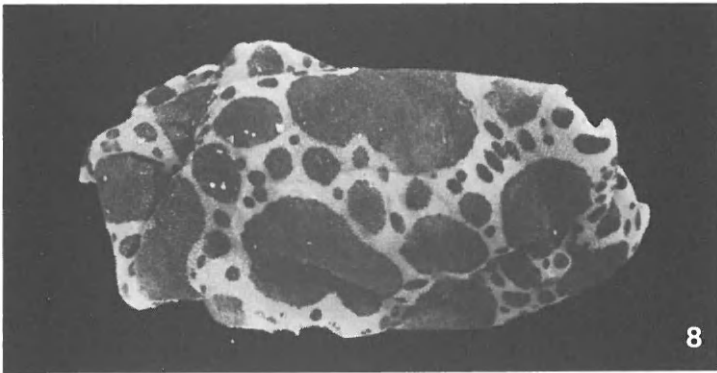
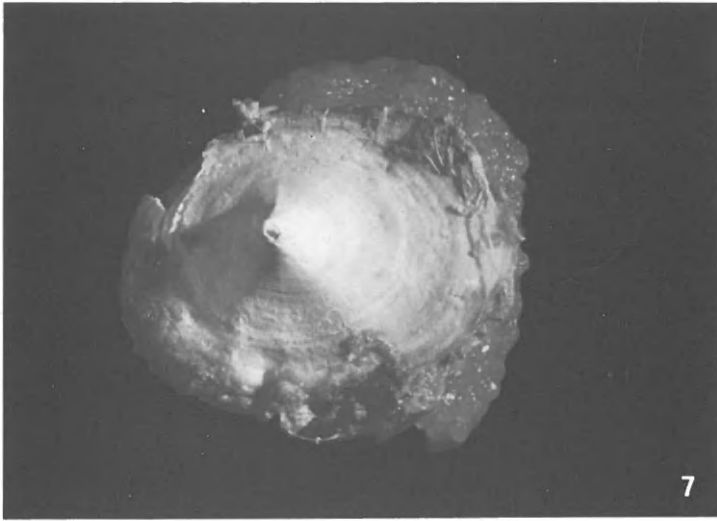


Fig. 7 *Umbraculum mediterraneum* (LAMARCK)  
Fig. 8 *Peltodoris atromaculata* BERGH  
Fig. 9 *Dendrodoris areolata* BERGH

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