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38.

CORALLIMORPHARIA AND ACTINIARIA WITH DESCRIPTION OF A NEW GENUS AND SPECIES FROM PERU

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Preface

Professor Oskar Carlgren died only a few days after the manuscript of the present paper had been finished. Consequently the minor editorial changes which had to be made could never be checked by the author.

The MS title of the paper also included the Zoantharia, but as they were not dealt with in the taxonomic part the title was changed accordingly and some alterations also had to be made in the introduction. On the other hand the list of references has been left as it was and will therefore probably include some papers dealing exclusively with Zoantharia.

It was the intention of Professor Carlgren to add to the manuscript a list of all Corallimorpharia and Actiniaria recorded from Chile. No such list could be found among his papers, and all references to it made in the introduction were omitted.

The list of stations was written by one of us (Brattström) who also checked the labels against the collection. This led to the discovery of some discrepancies in the station numbers recorded in the original MS and also in the number of specimens recorded.

Mag. Scient. F. Jensenius Madsen, Zoological Museum, Copenhagen kindly read the final MS, made some minor corrections and filled in part of the references. The English was revised by Mrs. Agnete Volsøe, Copenhagen.

The drawings were not delivered to us together with the MS and some time elapsed before they were found. With the aid of the author's notes on the drawings and in the MS Mr. Jensenius Madsen compiled the text to the figures. Unfortunately no note had been made concerning the scale of the figures and the slides made from specimens of the present collection could not be found in Professor Carlgren's laboratory. The MS has been kept waiting for several years in the hope that the slides and the notes on the Zoantharia should be found.

Professor Carlgren had indicated no type specimens and consequently types were selected by one of us (Brattström). The collection is kept in the State Museum of Natural History (Naturhistoriska Riksmuseum), Stockholm.

Hans Brattström *Erik Dahl*

Introduction

Many species of "Actinians" are described from the waters of Chile. McMURICH (1904) in his description of the Actiniae of the Plate collection gave a short review of the expeditions having contributed to our knowledge of this group in Chile, but also mentioned some papers treating species taken in Patagonia and Peru. After publication of McMURRICH's work the author of this paper in 1922 described some species from Juan Fernandez collected during SKOTTSBERG's visit to these islands, and in 1927 some forms from the Swedish Antarctic expedition. Finally, in 1931, I proposed a new species of *Peachia*.

As to the number of species the present collection is of about the same size as that described by McMURRICH, but the number of individuals is here considerably greater. Several of the species are present in both collections, others not. It is to be regretted that most of the specimens were preserved without anaesthesation in alcohol instead of formalin. Therefore, especially the smaller specimens are very contracted and often not well preserved and troublesome and difficult to determine. Unfortunately, there are rather few or incomplete notes on the colour of the animals.[1]

[1] The author has overlooked that the colour was really noted for a great many samples. In fact he has used some of these notes but not the others. Additional notes have been made in his text where necessary. *H. B.*

List of stations with the names of the species collected at each station

(Cf. BRATTSTRÖM and DAHL: Chile Report No. 1. (1951) 1952.)

M 1. 41°28′35″ S, 72°57′15″ W, Seno Reloncaví, Puerto Montt. Intertidal. Clayey sand and stones. Nov. 1948. — *Bunodactis hermafroditica.*

M 3. 41°29′15″ S, 72°57′50″ W, Seno Reloncaví, Isla Tenglo, northern shore opposite the harbour of Puerto Montt. Intertidal. Sand and gravel with mud and small stones. 10 and 29 Nov. 1948. — *Bunodactis hermafroditica.*

M 6. 41°51′35″ S, 73°49′20″ W, Bahía de Ancud, Playa Brava, between Punta San Antonio and Punta Colorada. Intertidal. Rocks and boulders. 16 Nov. 1948. — *Bunodactis hermafroditica.*

M 7. 41°50′40″ S, 73° 57′10″ W, Golfo de Quetalmahué, outside the station for culture of oysters. 2—5 m. Frames of wood for culture of oysters. 17 Nov. 1948. — *Phymactis clematis, Bunodactis hermafroditica.*

M 8. 41°50′12″ S, 73°56′57″ W, Golfo de Quetalmahué, Isla Pullinque, N of Punta Rangui. Intertidal. Grey mud with a little sand. — 17 Nov. 1948. — *Bunodactis hermafroditica.*

M 9. 41°49′54″ S, 73°51′46″ W, Bahía de Ancud, Punta Ahui. Intertidal. Rocks, boulders and stones. 17 Nov. 1948. — *Bunodactis hermafroditica, Parantheopsis cruentata, Anthothoë chilensis.*

M 10. 41°52′42″ S, 73°50′46″ W, Bahía de Ancud, Punta el Morro. Intertidal. Exposed rocky coast with stones and rock-pools. 18 Nov. 1948 and 2 March 1949. — *Phymactis clematis, Bunodactis hermafroditica, Antholoba achates, Anthothoë chilensis, Aiptasiomorpha elongata.*

M 11. 41°53′03″ S, 73°51′18″ W, Bahía de Ancud, Lechagua. Intertidal. Sand beach with small stones. 18 Nov. 1948. — *Bunodactis hermafroditica.*

M 13. 41°29′16″ S, 72°58′10″ W, Seno Reloncaví, Canal Tenglo, between "Quinta Hoffman" and Angelmó (ship yard "Immar"). 0—6 m. Stones, gravel and sand with mud. 30 Nov. 1948. — *Bunodactis hermafroditica.*

M 14. 41°30′05″ S, 72°56′22″ W, Seno Reloncaví, the bay off Puerto Montt. 225 m. Small stones and boulders in fine sand. 1 Dec. 1948. — *Bunodactis hermafroditica, Hormathia pectinata.*

M 16. 41°31′30″ S, 72°48′15″ W, Seno Reloncaví, Piedra Azul, NW of Punta Quillaipe. 30—55 m. Sand and small stones. 4 Dec. 1948 and 1 April 1949. — *Edwardsia intermedia, Antholoba achates.*

M 17. 41°46′30″ S, 73°06′45″ W, Golfo de Ancud, Canal Calbuco, E of the church in Calbuco. 30 m. Grey sand and small stones. 14 Dec. 1948. — *Gonactinia prolifera, Boloceropsis platei, Actinostola intermedia.*

M 19. 41°43′ S, 73°09′40″ W, Golfo de Ancud, innermost part of Estero Huito. 5—6 m. Fine sand, covered with dead algae. 15 Dec. 1948. — *Antholoba achates.*

M 20. 41°43′50″ S, 73°10′15″ W, Golfo de Ancud, Estero Huito, central part. 15 m. Sunk tree trunk. 15 Dec. 1948. — *Antholoba achates.*

M 21. 41°48′50″ S, 73°09′40″ W, Golfo de Ancud, Canal Calbuco, between Punta Meimen and Punta Pinto. 25 m. Small stones. 15 Dec. 1948. — *Antholoba achates, Actinostola intermedia.*

M 22. 41°49′15″ S, 73°10′15″ W, Golfo de Ancud, Isla Quenu, Punta Pinto, western coast. Intertidal. Boulders and stones in sand. 16 Dec. 1948 and 11 May 1949. — *Cactosoma chilensis, Bunodactis hermafroditica, Parantheopsis cruentata, Paranthus niveus.*

M 24. 41°44′25″ S, 72°55′45″ W, Seno Reloncaví, S of Isla Guar and W of Bajo Pucarí. About 70 m. Sandy bottom with shells. 16 Dec. 1948. — *Gonactinia prolifera.*

M 27. 41°49′40″ S, 73°08′ W, Golfo de Ancud, the sound between Isla Quenu and Isla Chidquapi. 45 m. Coarse sand with shells. 3 May 1949. — *Bolocera occidua, Actinostola intermedia.*

M 28. 41°39′40″ S, 72°41′20″ W, Seno Reloncaví, the bay S of Morro Chaica off the mouth of a small river. 30 m. Boulders and shells with a few dead algae. 4 Jan. 1949. — *Gonactinia prolifera.*

M 29. 41°24′30″ S, 72°19′45″ W, Estero Reloncaví, Bahía Ralún, E of Punta Dirección. 35—40 m. Very fine, clay-like sand. 4 Jan. 1949. — *Edwardsia intermedia.*

M 33. 41°51′33″ S, 73°50′14″ W, Bahía de Ancud, Punta San Antonio. Intertidal. Rocks, stones and sand. 3 Jan. 1949. — *Phymactis clematis, Bunodactis hermafroditica.*

M 37. 41°30′06″ S, 72°53′57″ W, Seno Reloncaví, Punta Pilluco. Intertidal. Boulders in sand. Jan.-April 1949. — *Anthopleura hermafroditica, Bunodactis hermafroditica, Cereus ? herpetodes, Aiptasiomorpha elongata.*

M 38. 41°55′ S, 72°58′ W, Golfo de Ancud, SW of Isla Quellín. 300 m. Fine clay with fragments of polychaete tubes. 22 Jan. 1949. — *Edwardsia intermedia.*

M 40. 41°51′ S, 72°55′ W, Seno Reloncaví, N of Isla Quellín. 100 m. Small stones, probably on hard sand. 23 Jan. 1949. — *Gonactinia prolifera, Octineon chilense, Bunodactis hermafroditica, Actinostola intermedia, Hormathia pectinata, Actinauge chilensis.*

M 41. 42°26′40″ S, 72°59′ W, Golfo de Ancud, ESE of Isla Tac. 250—300 m. Sand clay with small stones and shells. 23 Jan. 1949. — *Isotealia antarctica, Hormathia pectinata.*

M 42. 42°20′50″ S, 73°22′ W, Golfo de Ancud, Paso Tenaun, S of Punta Tenaun. About 70 m. Hard bottom. 24 Jan. 1949. — *Gonactinia prolifera.*

M 43. 42°08′20″ S, 73°28′20″ W, Golfo de Ancud, between Quemchi and Isla Caucahué, W of Punta Queler. 30—40 m. Coarse sand, small stones and a few boulders. 24 Jan. 1949. — *Boloceropsis platei.*

M 46. 41°46′15″ S, 73°09′ W, Golfo de Ancud, Canal Caicaen, W of Calbuco. 13 m. Coarse sand, boulders and dead algae. 25 Jan. 1949. — *Antholoba achates.*

M 47. 41°33′45″ S, 73°02′05″ W, Seno Reloncaví, Paso Maillén, between Punta Panitao and Punta Puchegui. About 22 m. Coarse sand with *Chaetopterus* tubes and small stones. 25 Jan. 1949. — *Antholoba achates.*

M 55. 41°51′30″ S, 73°49′40″ W, Bahía de Ancud, between Punta San Antonio and Punta Colorada. Intertidal. Exposed rocks with rock pools. 27 Febr. 1949. — *Phymactis clematis, Anthopleura hermafroditica, Bunodactis hermafroditica, Parantheopsis cruentata, Antholoba achates, Anthothoë chilensis Aiptasiomorpha elongata.*

M 56. 41°47′ S, 73°53′07″ W, Canal Chacao, Península Lacui, Punta Corona, north-eastern point. Intertidal. Exposed flat rocks with rock-pools. 26 and 28 Febr. 1949. — *Phymactis clematis, Anthopleura hermafroditica, Bunodactis hermafroditica, Parantheopsis cruentata, Antholoba achates, Anthothoë chilensis.*

M 57. 41°49′51″ S, 73°51′46″ W, Bahía de Ancud. Península Lacui, Punta Ahui. Intertidal. Exposed rocks with rock pools. 1 March 1949. — *Phymactis clematis, Bunodactis hermafroditica.*

M 59. 41°30′45″ S, 73°00′13″ W, Seno Reloncaví, Isla Tenglo, western point. Intertidal. Boulders and stones in mud. 13-14 March 1949. — *Paranthus niveus.*

M 72. 45°07′40″ S, 73°40′40″ W, Archipiélago de los Chonos, Canal Moraleda, El Morro. Intertidal. Rocks with rock pools. 21 Febr. 1949. — *Bunodactis hermafroditica.*

M 73. 45°39′20″ S, 75°52′ W, Archipiélago de los Chonos, Canal Errázuris, "Islote Elena". 3—5 m. Small stones, sand and gravel. 22 Febr. 1949. — *Bunodactis hermafroditica.*

M 75. 44°24′ S, 73°34′ W, Archipiélago de los Chonos, Canal Moraleda, Peñon Blanco.

Intertidal. Rocks with rock pools. 24 Febr. 1949. — *Phymactis clematis, Bunodactis hermafroditica, Parantheopsis cruentata, Antholoba achates.*

M 79. 42°46′50″ S, 73°12′10″ W, Golfo Corcovado, the light-buoy Bajo Solitario. 0—8 m. Light-buoy. 28 Febr. 1949. — *Antholoba achates.*

M 83. 41°38′05″ S, 72°20′45″ W, Estero Reloncaví, W of Río Puelo. About 170 m. Very fine mud mixed with sand. 31 March 1949. — *Hormathia pectinata.*

M 84. 41°38′34″ S, 72°22′45″ W, Estero Reloncaví, Bahía Sotomó. 50 m. Muddy sand with shell fragments. 31 March 1959. — *Edwardsia intermedia.*

M 86. 41°28′40″ S, 72°19′25″ W, Estero Reloncaví, inner part, W of Relonhué. 100 m. Sand with a little mud and some stones. 31 March 1949. — *Edwardsia intermedia.*

M 90. 41°31′03″ S, 73°00′02″ W, Seno Reloncaví, Isla Tenglo, south- western point. Intertidal. Boulders and stones on sand. 12 April 1949. — *Bunodactis hermafroditica.*

M 91. 41°43′ S, 73°03′15″ W, Seno Reloncaví, Ensenada de Guatral, SW of Punta Guatral. Intertidal. Boulders and stones on sand. 13 April 1949. — *Bunodactis hermafroditica, Antholoba achates, Cereus ? herpetodes.*

M 94. 41°46′30″ S, 73°45′45″ W, Canal Chacao, W of Rocas Amazonas. 40 m. Small stones. 4 May 1949. — *Corynactis chilensis, Antholoba achates.*

M 98. 41°50′10″ S, 73°51′20″ W, Bahía de Ancud, SE of Punta Ahui. 8 m. Small stones with algae. 5 May 1949. — *Antholoba achates.*

M 102. 41°47′12″ S, 73°32′50″ W, Canal Chacao, N of Punta San Gallan. 80—100 m. Stones. 5 May 1949. — *Bunodactis hermafroditica.*

M 103. 41°48′50″ S, 73°31′30″ W, Canal Chacao, N of Punta Soledad. 40 m. Stones and polychaete tubes. 5 May 1949. — *Corynactis chilensis, Fagesia ignota.*

M 104. 41°50′30″ S, 73°28′30″ W, Golfo de Ancud, SE of Punta Tres Cruces, NE of Punta Piedras. 50—60 m. Stones and clinkers. 5 May 1949. — *Corynactis chilensis, Fagesia ignota, Octineon chilense, Epiactis georgiana, Antholoba achates, Actinostola intermedia, Hormathia pectinata.*

M 105. 41°49′24″ S, 73°22′30″ W, Golfo de Ancud, SW of Punta Abtao. 60 m. Stones. 5 May 1949. — *Corynactis chilensis.*

M 106. 41°48′40″ S, 73°21′ W, Golfo de Ancud, between Punta Abtao and Isla Abtao, S of the church. 36 m. Coarse sand and shells. 5 May 1949. — *Antholoba achates.*

M 107. 41°47′18″ S, 73°20′55″ W, Golfo de Ancud, N of Punta Barranco at Isla Abtao. 60 m. Coarse sand with mud and some dead algae. 5 and 6 May, 1949. — *Edwardsia intermedia, Halcampa abtaoensis, (Boloceropsis platei,* cf. p. 26), *Anthothoë chilensis.*

M 109. 41°47′40″ S, 73°15′40″ W, Golfo de Ancud, Canal San Antonio, between Punta San Antonio and Punta Chuyegua. 36 m. Gravel and small stones. 6 May 1949. — *Boloceropsis platei, Aiptasiomorpha elongata.*

M 113. 53°22′ S, 70°57′ W, Estrecho Magallanes. Punta Santa María, not far off Agua Fresca. Intertidal. Sand, gravel and muddy clay, covered with boulders. 2 May 1949. — *Bunodactis octoradiata, Parantheopsis cruentata.*

M 115. 53°11′ S, 70°55′ W, Estrecho Magallanes, S of Punta Arenas near the mouth of the little brook Río los Ciervos. Intertidal. Gravel and clay, mixed with mud and covered with boulders. 3 May 1949. — *Bunodactis octoradiata, Parantheopsis cruentata, Antholoba achates.*

M 120. 36°44′54″ S, 73°11′02″ W, Bahía San Vicente, the Ramuntcho bay, SE of Punta Gualpén. Intertidal. Rocks and boulders and coarse sand. 8 June 1949. — *Gonactinia prolifera, Phymactis clematis, Bunodactis hermafroditica, Parantheopsis cruentata, Antholoba achates.*

M 121. 36°43′36″ S, 73°08′10″ W, Bahía San Vicente, Punta Liles just W of San Vicente. Intertidal. Boulders and rocks with rock pools. 9 June 1949. — *Phymactis clematis, Bunodactis hermafroditica, Antholoba achates, Anthothoë chilensis.*

M 122. 37°06′17″ S, 73°09′15″ W, Golfo de Arauco, Bahía de Lota, small promontories SE of Punta Fuerte Viejo. Intertidal. Rocks and boulders in coarse sand. 10 June 1949. — *Phymactis clematis, Isoulactis chilensis, Parantheopsis cruentata.*

M 123. 32°57′24″ S, 71°33′25″ W, Montemar, "Estación de biología marina". Intertidal. Rocks with rock pools. Sept. 1948. — June 1949. — *Phymactis clematis, Anthopleura hermafroditica, Antholoba achates, Anthothoë chilensis.*

M 124. 29°57′55″ S, 71°22′17″ W, Bahía Herradura de Guayacán, northern part, SW of the factory "Melon", W of Guayacán. Intertidal. Rocks. 21 June 1949. — *Phymactis clematis.*

M 125. 29°58′51″ S, 71°22′56″ W, Bahía Herradura de Guayacán, southwestern part, NW of Herradura. Intertidal. Boulders, stones and sand. 22 June 1949. — *Phymactis clematis, Anthothoë chilensis.*

M 127. 29°55′56″ S, 71°21′08″ W, Península Coquimbo, S of Roca Pelícanos, N of Coquimbo. Intertidal. Rocks. 22 and 24 June 1949. — *Phymactis clematis, Anthopleura hermafroditica.*

M 131. 20°13′10″ S, 70°10′19″ W, Iquique, southern part of the town. Intertidal. Rocks with rock pools. 1, 4 and 6 July 1949. — *Phymactis clematis, Phymanthea pluvia, Isoulactis chilensis.*

M 133. 20°12′30″ S, 70°10′19″ W, Iquique, the harbour. Intertidal. Rocks and boulders. 27 July 1949. — *Phymactis clematis, Phymanthea pluvia, Aiptasiomorpha elongata.*

M 135. 20°14′07″ S, 70°10′05″ W, Cavancha, south of Iquique. Intertidal. Rocks with rock pools. 5 July 1949. — *Phymactis clematis, Phymanthea pluvia.*

M 141. 41°36′15″ S, 72°48′45″ W, Seno Reloncaví, W of Punta Metri. 260 m. Clay with fragments of polychaete tubes. — *Edwardsia intermedia.*

M 144. 41°41′ S, 72°47′ W, Seno Reloncaví, E of Isla Guar. About 250 m. Coarse sand with clay and fragments of polychaete tubes. 15 June 1949. — *Edwardsia intermedia.*

M 145. 41°32′ S, 73°01′30″ W, Seno Reloncaví, Bahía Chincui. 70—80 m. Sand with small stones. 16 July 1949. — *Hormathia pectinata.*

M 147. 41°35′40″ S, 72°58′15″ W, Seno Reloncaví, S of Punta San Pedro at Isla Maillén. 40—45 m. Coarse sand. 16 July 1949. — *Antholoba achates.*

M 149. 41°35′35″ S, 72°53′ W, Seno Reloncaví, E of Isla Maillén. About 278 m. Small stones and gravel. 16 July 1949. — *Actinostola intermedia, Hormathia pectinata.*

M 150. 41°30′09″ S, 72°54′03″ W, Seno Reloncaví, W of Punta Pilluco. About 5 m. Coarse sand. 16 July 1949. — *Bunodactis hermafroditica.*

M 158. 22°05′ S, 70°13′ W, Tocopilla, at the rubbish dumps. Intertidal. Rocks and boulders. 5 and 8 Jan. 1949. — *Phymactis clematis.*

M 161. 33°34′ S, 71°37′ W, San Antonio. Intertidal. Rocks and boulders. 29 Dec. 1948. — *Phymactis clematis.*

Without number. 43°17′ S, 73°34′ W, Punta Laitac (Chiloé). Littoral. 28 Febr. 1949. — *Phymactis clematis.*

Moreover, there are many very small specimens taken at different stations. They are difficult or impossible to determine and are omitted in this paper.

List of species

Corallimorpharia
- *Corynactis chilensis* CARLGR.

Actinaria
- *Gonactinia prolifera* (M. SARS)
- *Edwardsia intermedia* MCMURR.
- ***Fagesia ignota*** n. sp.
- ***Halcampa abtaoensis*** n. sp.
- *Cactosoma chilensis* (MCMURR.)
- ***Octineon chilense*** n. sp.
- *Phymactis clematis* (DRAYTON)
- *Phymanthea pluvia* (DRAYTON)
- ***Isoulactis chilensis*** n. sp.
- *Anthopleura hermafroditica* (CARLGR.)
- *Bunodactis octoradiata* (CARLGR.)
- *Bunodactis hermafroditica* (MCMURR.)
- *Parantheopsis cruentata* (DRAYTON)

Isotealia antarctica CARLGR.
Epiactis georgiana CARLGR.
Boloceropsis platei MCMURR.
Bolocera occidua MCMURR.
Paranthus niveus (LESSON)
Antholoba achates (COUTONY)
Actinostola intermedia CARLGR.
Hormathia pectinata (R. HERTW.)
Actinauge chilensis n. sp.
Cereus ? herpetodes (MCMURR.)
Anthothoë chilensis (LESSON)
Aiptasiomorpha elongata CARLGR.
Cnidanthea maculata n. sp. From Peru.

Corallimorpharia

Corynactis chilensis CARLGR.

Corynactis carnea MCMURRICH 1904 p. 291 (non STUDER 1878).
Corynactis chilensis CARLGREN 1941 p. 2.

MCMURRICH has referred this species to STUDER'S *carnea* and given a description of its general appearance. I, however, think that it is another species (see CARLGREN 1941).

Occurrence: *M 94* (very common[1]), *M 103* (several samples), *M 104* (2), *M 105*(1).

Further distribution: Chile; Calbuco, Guaitecas Isl.

Colour: Light grey red with a shining yellowish green ring around the margin ("mouth" in the field notes). According to MCMURRICH: Colour rustbrown with blackish tinge around the margin ("mouth"), tentacles rusty brown with pale tips.

Actiniaria

Gonactinia prolifera (M. SARS)

Literature see CARLGREN 1921 p. 4; 1940 p. 17 and STEPHENSON 1935 p. 25.

Several specimens are in transverse fission. I have examined the nematocysts of the tentacles and filaments. The nematocysts of the tentacles were partly 25.4—49.3 (53.6) ×4.2—5 μ, very common, partly 10—13 ×2.8—4 μ, both microbasic amastigophors, partly 26.8—33.8 ×3—3.5 μ, partly 11.3—24 ×2.2—2.5 μ, both atrichs; those of the filaments partly 21—28,2 ×about 5 μ, microbasic amastigophors, partly 7—8,5 (11.3—12.7) ×2.8—3.5, microbasic *p*-mastigophors, partly 9.2—11.3 ×2 μ basitrichs, thus in good agreement with the size of the nematocysts which I examined in 1940 in samples from Sweden.

Occurrence: *M 17* (9), *M 24* (11), *M 28* (10), *M 40* (1), *M 42* (1), *M 120* (2).

Further distribution: Murman coast to northern part of the Kattegat, the North Sea, England, to the Mediterranean.

Colour: Pink.

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[1] The figures in brackets indicate the number of specimens.

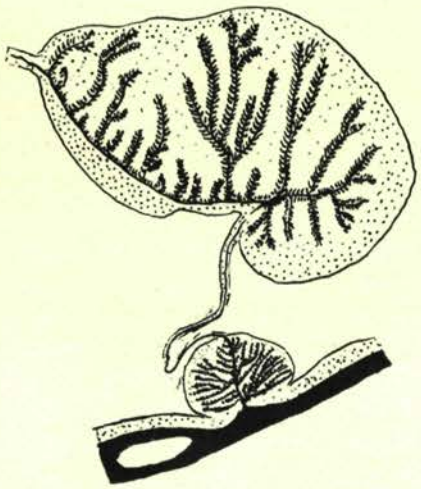


Fig. 1. Retractor and parietal muscle of *Edwardsia intermedia*.

Edwardsia intermedia McMurr.

Edwardsia intermedia McMurrich 1893 p. 136 Pl. XIX figs 1—4; Carlgren 1899 p. 6, figs 4, 5; 1927 p. 4, figs 2—5; 1949 p. 23.

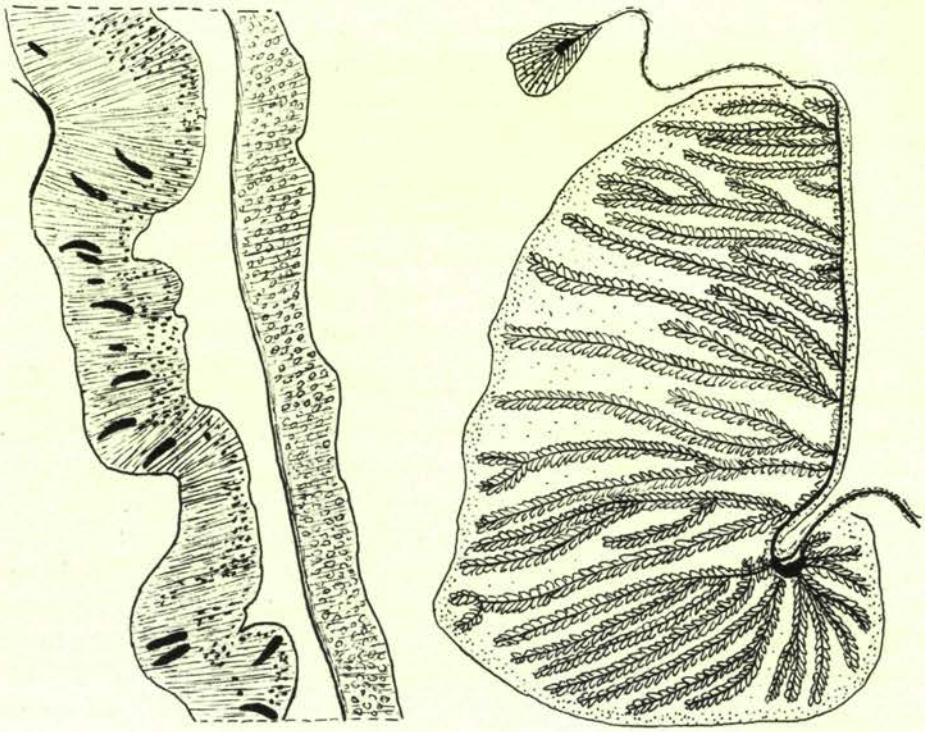
Unfortunately, the individuals are introverted and not well preserved in the region of the tentacles. The nemathybomes are scattered, but show a tendency to be arranged in the midline between the mesenteries. The tentacles seem to be up to 20 in number, but are sometimes fewer. It was, however, very difficult to count them. The appearance of the retractors agree rather well with those in *intermedia*. I give here a section of a retractor and a parietal muscle of the best preserved specimen, from station *M 141* (Fig. 1). The nematocysts of the nemathybomes are in a small specimen from station *M 107* 29.6—36 ×3.5—4 μ, in the other examined individual 41—63.4 ×3—4 μ, those of the tentacles 15—28 (36) ×2.5—3 μ, basitrichs, those of the actinopharynx 31—52 ×4.2—5.6 μ, basitrichs; those of the filaments partly 24—35 ×5.6—6.3 μ, microbasic *p*-mastigophors, partly 31—49 ×4.2—5.6 μ, partly 21—24 ×2.8 μ, both basitrichs. The nematocysts of the nemathybomes were measured in 9 individuals, the other nematocysts in 2 only.

Occurrence: *M 16* (2), *M 29* (10), *M 38* (2), *M 84* (1), *M 86* (1), *M 107* (2), *M 141* (1), *M 144* (1).

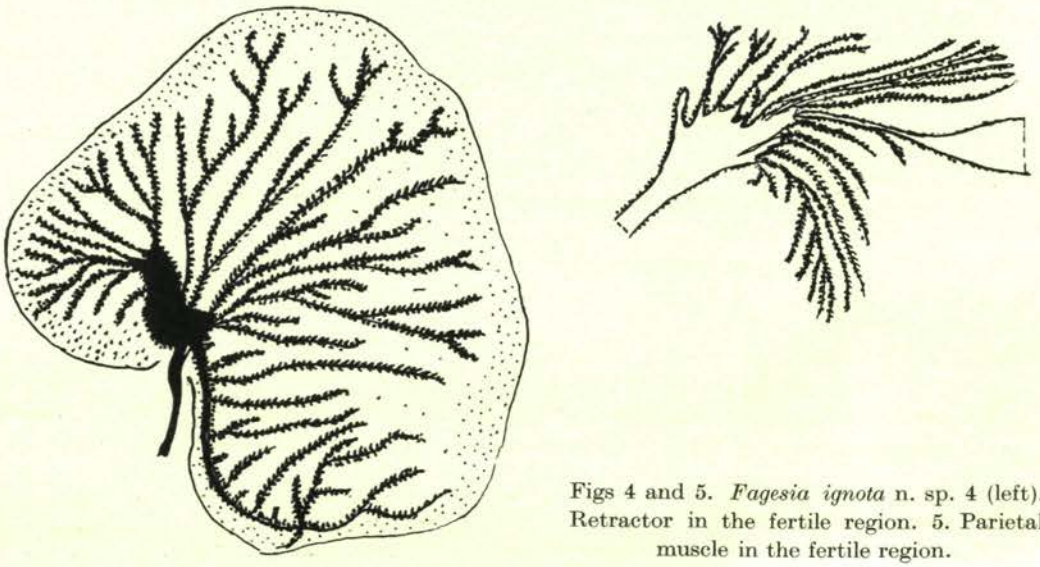
Further distribution: South Chile, Tierra del Fuego, South Georgia, Graham Land.

Size of the largest specimen in very expanded condition 3.5 cm long and 0.3 cm broad, of the smallest 0.8—1 cm long and 0.1 cm broad.

Remarks: The identification of the individuals here mentioned is rather uncertain as the single type specimen is imperfectly described. According to McMurrich's description there are few tentacles, certainly not more than 16, probably fewer



Figs 2 and 3. *Fagesia ignota* n. sp. 2 (left). Transverse section of scapus, showing the distribution of the nematocysts (black) in the ectoderm. The cuticle has almost fallen off. 3. Retractor of a perfect mesentery.



Figs 4 and 5. *Fagesia ignota* n. sp. 4 (left). Retractor in the fertile region. 5. Parietal muscle in the fertile region.

and the nemathybomes are scattered. His figure 3 gives us also an impression of the appearence of retractors and parietal muscle. I identified (1927) some individuals from Tierra del Fuego, South Georgia and Graham Land with *intermedia*. They may not to be referable to this species because the nematocysts of the nemathybomes are shorter than in our specimens, but the number of tentacles is greater.

Fagesia ignota n. sp.

The proximal end of the body is round and may serve as a physa since there are sand-grains attached to it, probably by suckers. The scapus is provided with a thin easily deciduous cuticle, and no nemathybomes are present, its ectoderm is higher than that of *Edwardsia*, and the nematocysts seem to be arranged in groups, at least they are more collected in certain places than in others (Fig. 2). The scapulus is strongly polygonal. The tentacles are about 20 in number, possibly 24, the inner tentacles are the larger. The retractors of the 8 perfect mesenteries are strongly concentrated to circumscribed with numerous more or less branched folds (Figs 3, 4). The parietal muscles are fan-like (Fig. 5). The nematocysts of the physa are partly 21—32 ×6—10 μ, often curved, partly 12.7—19.7 ×5.5 μ, those of the scapus partly (22.6) 26.8—36.7 ×5.6—8.5 μ, often curved, partly 17—19.7 ×4.2—5.6 μ; those of the scapulus partly 21—36.7 ×5.6 μ, partly 14—21.5 ×3.5—4.2 μ, those of the tentacles partly 17—24 × 4.2—5.6 μ, often curved, partly 17—19.7 ×3—3.5 μ, those of the actinopharynx partly 21—24 × 4.2 μ, microbasic *p*-mastigophors, partly 15.5—19.7 ×2.8 μ, basitrichs; those of the filaments partly 18.3—24 ×3,5—5.6 μ, *p*-mastigophors, partly 22.6—25.4 × 3.5—5 μ, partly 15.5—19.7 ×2.5 μ, both basitrichs. The larger nematocysts of column and tentacles are microbasic *b*-mastigophors, the smaller probably of the same type (the nematocysts are measured in the larger specimen, from *St. M 104*, those of the scapus and tentacles also in the smaller specimen).

Type locality: *St. M 104*. Type in Nat. Hist. Mus. Stockholm.

Occurrence: *M 103* (1), *M 104* (1).

Size in introverted state of the larger specimen: Length 1.1 cm, largest breadth 0.35 cm. Size of the smaller specimen: Length 0.7 cm, breadth 0.2 cm.

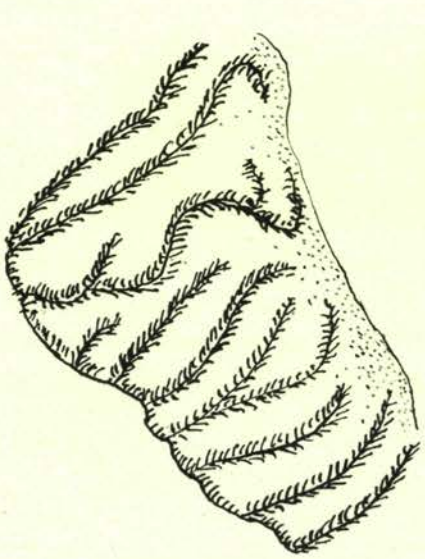
Colour in preserved condition: scapus yellowish brown, in the smaller specimen darker.

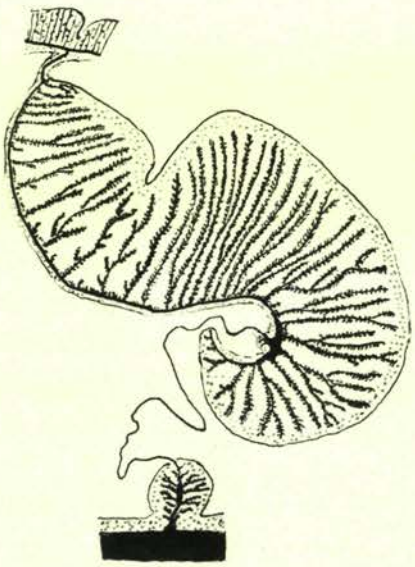
Remarks: A specimen probably of the same species was dredged off Patagonia by R. R. S. William Scoresby.

Halcampa abtaoensis n. sp.[1]

The scapus is apparently without distinct tenaculi but its mesogloea forms here and there papillae and it is probable that tenaculi may be developed here. The ten-

[1] In his manuscript CARLGREN had given this new species the name *Halcampa chilensis*. This evidently was due to a *lapsus calami*. CARLGREN first thought this species to belong to *Parahalcampa*, for in the list of the collection, in which he entered all determinations, he wrote





Figs 6 and 7. 6 (left). Part of retractor of *Halcampa abtaoensis* n. sp. 7. Retractor and parietal muscle in the fertile region of *Cactosoma chilensis*.

tacles are 8—10 in number. One sectioned specimen had 8 perfect mesenteries and 6 imperfect ones. Four of this latter form pairs with the lateral perfect mesenteries and 2 pairs are situated in the dorsolateral exocoel. Another specimen had 10 perfect mesenteries. Owing to the poor preservation I cannot decide how many imperfect mesenteries are present. In fig. 6 I have drawn a section of a retractor. The parietobasilar muscles and the imperfect mesenteries show few folds. The nematocysts of the column are 12—14 ×2.2—2.8 μ, often curved, basitrichs; those of the tentacles 10—12.7 ×1.5—2.2 μ, basitrichs; those of the actinopharynx partly 12.7—14.8 ×about 2.5 μ, basitrichs, partly (18.3) 24—29.6 ×3.5—4.2 μ, numerous, partly 11.3 ×3.5 μ, rare, both microbasic *p*-mastigophors; those of the filaments partly 7.7—10 ×3.5—4.2 μ, partly 21—26.8 ×4 μ, both *p*-mastigophors (it is questionable whether the small *p*-mastigophors belong to the animal).

Type locality: *St. M 107*. Type in Nat. Hist. Mus. Stockholm.

Occurrence: *M 107* (5).

Size: The largest specimen: Length 0.9 cm, breadth 0.25 cm.

Colour: Not noted.

Parahalcampa chilensis. When he later found that it was a *Halcampa* he apparantly forgot to change the specific name *chilensis*. As, however, *Halcampa chilensis* has been used earlier as a synonyme of *Cactosoma chilensis* (cf. p. 15) the new species can not be given this name. As CARLGREN intended to give his new species a geographic species name I have changed the name to *Halcampa abtaoensis* on the suggestion of mag. scient. F. JENSENIUS MADSEN. *H. B.*

Cactosoma chilensis (McMurr.)

Halianthus chilensis McMurrich 1904 p. 223 pl. 14 figs 1—5.
Halcampa chilensis Stephenson 1922 p. 252.
Cactosoma chilensis Carlgren 1949 p. 34.

There is no doubt that the single specimen described by McMurrich in 1904 as a *Halianthus* is a *Cactosoma*. The introverted animal is divisible into physa, scapus and capitulum. The tenaculi are not distinct in the sections, but it is evident that the scapus is provided with such since many papillae agreeing with those in *Halcampa* can be seen when the cuticle is removed. A small mesogloeal sphincter is present close to the tentacles, of which there are 24. The mesenteries agree in number and appearance with those described by McMurrich (1904). The nematocysts of the physa and scapus are 10—11.3 $\times$1.5 μ, basitrichs; those of the tentacles 12.5—15.5 $\times$2.2—2.5 μ, basitrichs; those of the actinopharynx partly 21—26 $\times$4.2 μ, microbasic *p*-mastigophores, partly about 17 $\times$2.2 μ, basitrichs; those of the filaments partly 18.3—23.8 $\times$4.2 μ, microbasic *p*-mastigophors, partly 24—33.8 $\times$ 2.5 μ, partly 18.3—19.7 $\times$1.5 μ, both basitrichs (moreover some rounded opaque capsules 10 $\times$2.5 μ, possibly not a component). In fig. 7 I have drawn a section of the body in the region of the actinopharynx.

Occurrence: *M 22* (1).

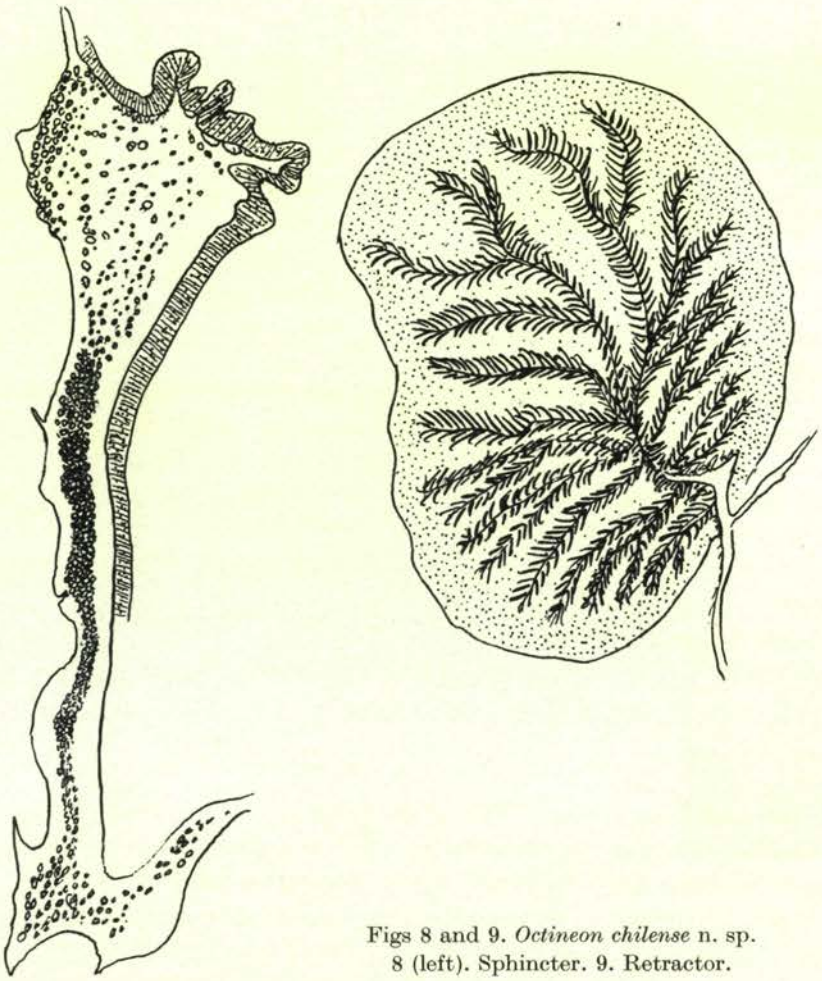
Further distribution: Chile; Calbuco.

Size: Length 1.7 cm, largest diameter 0.7 cm in introverted state.

Colour (in alcohol): Tentacles with several red-brown cross-bands; when the animal is alive the column is whitish.

Octineon chilense n. sp.

The numerous specimens are of very different size, attached to stones and extraordinarily close aggregated. Often a later attached specimen covers more or less an older animal, sometimes a younger individual is wholly fastened to the column of an older. The form of the wide pedal disc varies and sometimes runs out in stolon-like projections. The appearance of the body agrees with that of other species of *Octineon*. The scapulus is provided with a rather thick cuticle, the scapulus longitudinally furrowed in the best preserved individuals. The short tentacles number up to 24. The structure of the species agrees well with that of *Octineon suecicum* (Carlgren in 1942 p. 65), so that it is not necessary to describe the species in detail, the more so since the preservation of the specimens is not very good. Chitinized ectoderm-cells occur seemingly in connection with the cuticle, forming sparse tenaculi. The sphincter (Fig. 8) is alveolar and much stronger than that of *suecicum*. Also the retractors of the mesenteries are stronger (Fig. 9). I have not seen any fold on the exocoel side of the perfect mesenteries (compare Carlgren 1942 fig. 79a). The retractors of the mesenteries forming pairs with the perfect mesenteries are of about the same appearance as in *suecicum* (Carlgren in 1942 fig. 81). The nematocysts



Figs 8 and 9. *Octineon chilense* n. sp.
8 (left). Sphincter. 9. Retractor.

of the tentacles are 22.6—25.4 ×about 3 μ, basitrichs; those of the actinopharynx partly 25.4—29.6 ×3.5 μ, basitrichs, partly 17—26.8 ×4.2—5 μ, microbasic *p*-mastigophors; those of the filaments partly 8.5—10 ×1.5 μ, basitrichs, partly 17—28.2 ×3.5—5 μ, microbasic *p*-mastigophors; those of the acontia (48) 62—70.5 (77) ×5.6 μ, basitrichs.

Type locality: *St. M 104.* Type in Nat. Hist. Mus. Stockholm.

Occurrence: *M 40* (numerous specimens), *M 104* (numerous specimens).

Size of larger, very contracted specimens: Pedal disc up to about 1.7 ×1.2 cm, height of the scapus up to 1.1 cm.

Colour (in alcohol): scapulus and tentacles colourless, actinopharynx sometimes red-brown. In life the colour was yellowish brown or greenish yellow-brown.

Phymactis clematis (Drayton)

Literature and synonyms see Carlgren 1899 p. 17, further Carlgren 1924 p. 12 figs 6 i, j, k; 1949 p. 51; 1951 p. 419; McMurrich 1904 p. 259; Stephenson 1922 p. 285.

The species was described by Carlgren (1899, 1924) and McMurrich (1904). I have nothing to add apart from the fact that the atrichs of the marginal spherules are sometimes more numerous than usually, but there are always long basitrichs intermingled with them.

Occurrence: *M 7* (1), *M 10* (12), *M 33* (5), *M 55* (16), *M 56* (many specimens) *M 57* (28), *M 75* (4), *M 120* (27), *M 121* (3), *M 122* (4), *M 123* (12), *M 124* (2), *M 125* (13), *M 127* (7, moreover several specimens on the root of a large brown alga), *M 131* (8), *M 133* (3), *M 135* (24), *M 158* (5), *M 161* (5), Punta Laitac, Chiloé, Febr. 28, 1949 (4).

Further distribution: See Carlgren (1949 p. 51). The reports from Central America are, however, uncertain, but it is possible that the distribution of the species is continuous from Chile to the Bay of California, where 2 specimens were taken (see Carlgren 1951).

Size of the largest specimen in contracted condition: Length and breadth about 7 cm. The smallest individuals are only a few mm.

Colour see Verrill 1869 p. 476.

Remarks: By a slip of the pen I wrote in 1949 that at least the two oldest cycles of mesenteries are fertile, instead of sterile.

Phymanthea nov. gen.

Actiniidae with a broad pedal disc. The column closely covered throughout with vesicles arranged in longitudinal rows, in the lower part of the body smaller and more numerous than in the upper. Fosse distinct. Sphincter distinctly diffuse, strong. Marginal spherules present with numerous atrichs only. Tentacles very numerous, conical short, their longitudinal muscles ectodermal: 2 distinct siphonoglyphs and 2 pairs of directives. Numerous perfect mesenteries. Probably more mesenteries proximally than distally. Mostly only the second last cycle of mesenteries are fertile. Cnidom spirocysts atrichs, basitrichs, microbasic *p*-mastigophors.

The genus is distinguished from *Phymactis* by the nematocysts of the marginal spherules. While *Phymactis* usually has relatively few atrichs but very long rodlike basitrichs in the marginal spherules (I have examined *P. clematis*, *papillosa* and *sanctae helenae*), *Phymanthea* has here only atrichs, but very numerous. *Phymactis* and *Phymanthea* are, however, nearly related to each other and *Phymantea* may just as well be regarded as a subgenus.

Phymanthea pluvia (Drayton)

Actinia pluvia Drayton in Dana 1846 p. 144 pl. 4 fig 30.
Cereus pluvius Milne Edwards 1857 p. 267.
Bunodes pluvius Verrill 1869 p. 468; Andres 1883 p. 447.
?*Phymactis clematis* McMurrich 1904 p. 259.

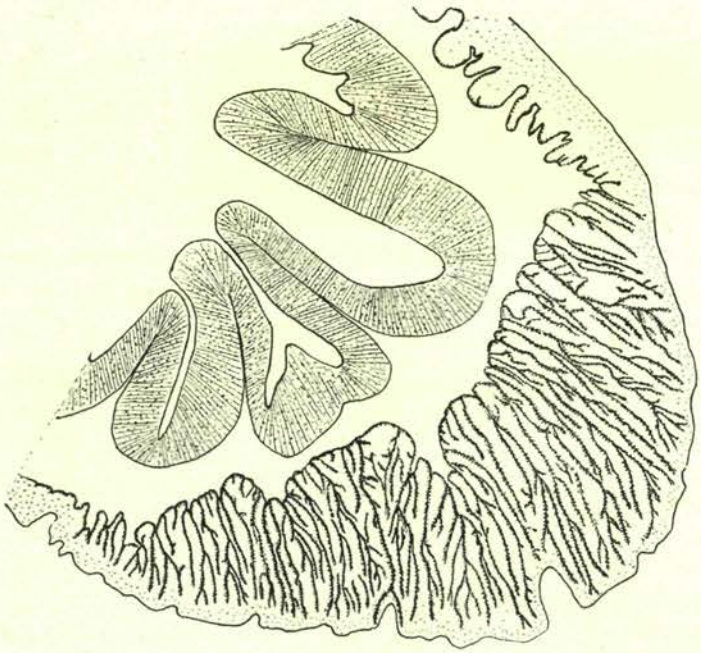
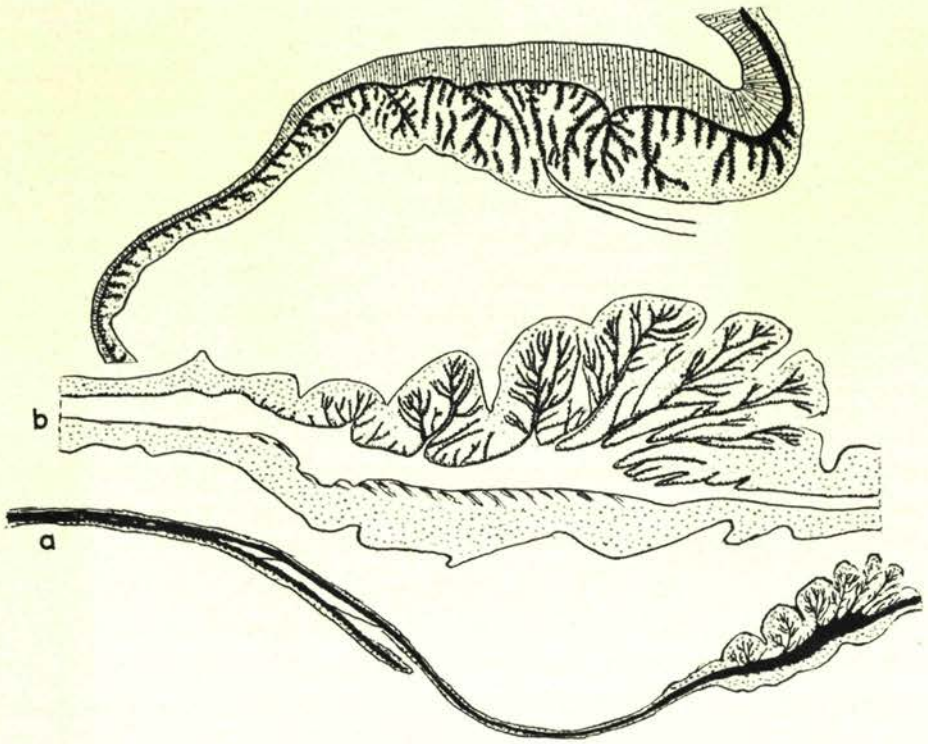


Fig. 10. *Phymanthea pluvia*. Sphincter of the largest specimen present (*St. M 135*).

The pedal disc is broad. The whole column is provided with vesicles close by set and arranged in longitudinal rows. The upper vesicles are larger than the lower, the uppermost somewhat compound. The rows of vesicles are more numerous proximally than distally. The fosse is distinct, the sphincter strong. distinctly diffuse, now more concentrated (Fig. 10) now more elongate (Fig. 11), its folds are numerous. The tentacles are up to about 290 in number in the largest specimen, conical, in contraction longitudinally furrowed, their longitudinal muscles are ectodermal. There are 2 well developed siphonoglyphs aborally prolonged and 2 pairs of directives symmetrically situated. In the largest specimen about 72 pairs of mesenteries are perfect. The mesenteries of the second last cycle, rarely of the last cycle, are fertile in the largest specimen. As there are rows of vesicles intercalated between the rows present in the lower part of the body, the mesenteries may be more numerous proximally than distally. The longitudinal muscles of the mesenteries are weak and form a small retractor in their inner part (Fig. 12a, b). The parietobasilar muscles form a distinct deep fold on the mesenteries (Fig. 12a). The nematocysts of the lowest part of the column are 18.3—32.4 $\times$2.8—3.5 μ, basitrichs; those of the marginal spherules 41.5—63.5 $\times$5.6—7 μ; (all samples apart from 2 very small examined); those of the tentacles 25.4—26.8 $\times$about 2.8 μ, basitritrichs; those of the actinopharynx 21—32.4 $\times$3—3.5 μ, basitrichs, those of the filaments partly 31—36.7 $\times$5.6 μ, partly 19.7—25.4 $\times$3 μ, both basitrichs, partly 19.7—22.6 $\times$4.2—



Figs 11 and 12. *Phymanthea pluvia*. 11 (above). Sphincter of a small specimen (*St. M 133*) 12a. Section of a directive mesentery. 12b. Retractor of same, enlarged.

5 μ, microbasic *p*-mastigophors (the examination of the nematocysts was made on the largest specimen).

Occurrence: *M 131* (5), *M 133* (2), *M 135* (7).

Further distribution: San Lorenzo Isl., Peru.

Size of the somewhat deformed largest specimen: Height about 3.5 cm, oral disc 9.5 cm. Size of one of the smaller specimens: Height 1 cm, oral disc 2 cm.

Colour (in life): Tentacles and vesicles orange coloured (a specimen from *St. M 133*), 3 specimens in alcohol are black-brown, the others almost colourless.

Remarks: I have identified the species described above with *Actinia pluvia* DRAYTON. The colour and the arrangement of the vesicles agree well with DRAYTON's description of this species. He has, however, not noted the presence of marginal spherules but they were probably overlooked by him as MCMURRICH (1904 p. 203) suggests. In fact, they are not easily seen since they are often covered by the uppermost vesicles. There is, however, in the collection an individual whose structure seems to agree with that of *pluvia*, but there are seemingly no marginal spherules. At least I could not find any though the specimen was well preserved. I give here a short description of this individual. The arrangement of the vesicles agrees with

that in *pluvia*. The uppermost vesicles seem to be simple. The sphincter (Fig. 11) is weaker and more elongate here. The number of tentacles is about 180, the pairs of perfect mesenteries are about 32, the number of mesenteries at the base about 210 (about 130 on the half). Besides, it agrees with *pluvia* in structure.

The single specimen is seemingly sterile. The nematocysts of the lowermost part of the column are (14) 17—21 ×(2.5) 3—3.5 μ, basitrichs, common, those of the tentacles 22—24 ×2.5—3.5 μ, basitrichs, those of the actinopharynx 19.7—28.2 × 3—3.5 μ, basitrichs, those of the filaments partly 17—19.7 ×2.8—3 μ, partly 25.4—29.6 ×4.2—5 μ, both basitrichs, partly 19.7—22.6 ×4.5 μ, microbasic *p*-mastigophors. It was taken at *St. M 133*. The size is: Height 1.5 cm, oral disc 3 by 3.5 cm and the colour in live was orange. The specimen agrees better with *pluvia* than with the Peruvian *papillosa* LESSON. There are no marginal spherules, but I think that they are abortive as it sometimes happens in species normally possessing them. Thus, I refer the specimen with a query to *pluvia*.

Genus *Isoulactis* n. gen.

Actiniidae, almost the whole column of which is provided with longitudinal rows of strong verrucae, simple but in the uppermost part compound and set on lobes. No marked fosse and no marginal spherules. A very weak diffuse sphincter. Tentacles and mesenteries numerous, the former small especially in comparison with the size of the animals. Many perfect pairs of mesenteries fertile from those of the first cycle. Numerous atrichs in the lowermost part of the column. Cnidom: spirocysts, atrichs, microbasic *p*-mastigophors, basitrichs.

I have hesitated as to whether I should erect a new genus for the species described below or refer it to the genus *Isocradactis* proposed by me in 1924 for STUCKEY's species *Cradactis magna* imperfectly described by him in 1909. Undoubtedly, both genera are nearly related I do not know, however, whether my identification of the species is correct, since, according to PARRY (1951 p. 118—119), shperules (with holotrichs?) are present in *magna*. If PARRY's account is correct STUCKEY's *magna* is undoubtedly an *Oulactis*, not an *Anthopleura* as the species has a distinct diffuse sphincter. There are certainly no marginal spherules and no atrichs at the base of the body in my *Isocradactis magna*. Are the atrichs lost here? It may be possible, but this can hardly be the case in the species described below since all 4 specimens lack marginal spherules though they have atrichs at the base of the column. Thus, there is some uncertainty as to the position of STUCKEY's *magna*. Under such circumstances I think that at present it is most reasonable to erect a new genus for the present species, though it may be possible that it can be referred to *Isocradactis* if my *magna* is another species than that of STUCKEY.

Isoulactis chilensis n. sp.

The pedal disc is drawn in or torn off. The whole column, apart from a small rim at the limbus, is provided with verrucae to which fragments of shells are attached.

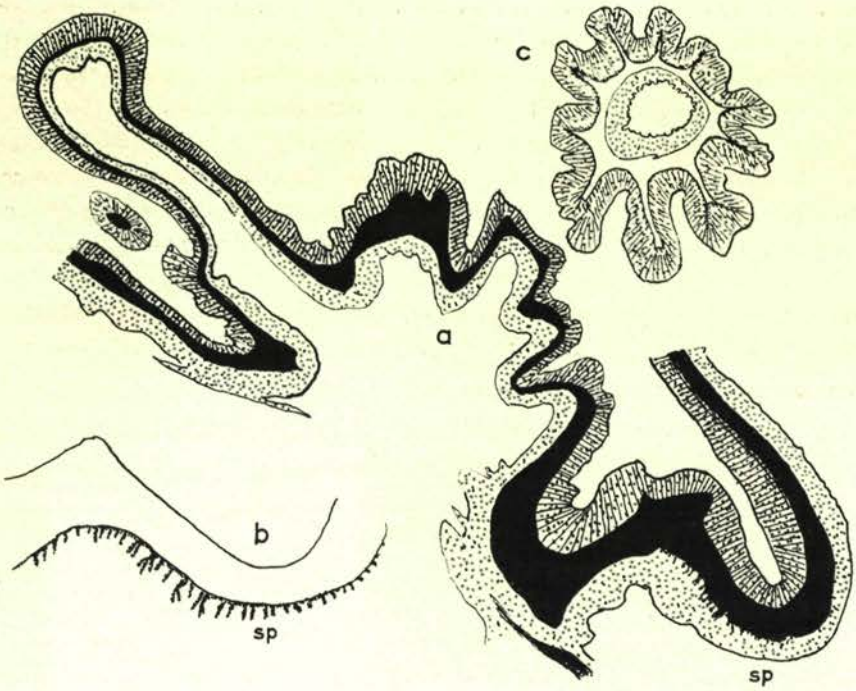


Fig. 13. *Isoulactis chilensis* n. g., n. sp. a. Section of the column, showing the sphincter (sp). b. The sphincter enlarged. c. Tentacle.

The verrucae are arranged in longitudinal rows, each row is continued in a group of smaller and numerous warts set on lobes as in *Oulactis*. There are no marked fosse and no marginal spherules, nor pseudospherules. A very weak diffuse sphincter is apparently present (Fig. 13a, b), but it is not stronger than the other endodermal muscles of the column below the lobes having as usually, when compound verrucae are present, very weak muscles. The tentacles are small, especially in comparison with the size of the specimens in number up to about 280—290. They are conical and in contracted condition longitudinally furrowed (Fig. 13c). Their longitudinal muscles are not strong and endodermal. The oral disc is somewhat lobed, but this probably is due to the strong contraction. There are two broad siphonoglyphs and two pairs of directives. Most of the mesenteries are perfect, and the gonads occur already on the directives. The retractors are band-like and rather weak, the parieto-basilar muscles broad forming a distinct fold on the mesenteries. The nematocyts of the lowest part of the column are partly 14—21 $\times$2.5 μ, very common, basitrichs, partly 22.6—28.2 $\times$about 5.5 μ, common, atrichs; those of the tentacles 21—25.4 $\times$ 2.8—3.5 μ, basitrichs; those of the actinopharynx partly 17—22.6 $\times$2.8—3.5 μ, basitrichs, partly 19.7 $\times$4.5 μ, (only 1 found), microbasic *p*-mastigophors; those of the filaments partly 18.3—21 $\times$4.5 μ, microbasic *p*-mastigophors, partly (45) 49.3—58.5 $\times$7—11.3 μ, partly 14—17 $\times$2—2.5 μ, both basitrichs.

Type locality: *St. M 131.* Type in Nat. Hist. Mus. Stockholm.

Occurrence: *M 122* (1), *M 131* (4), burrowed in rock pools.

Size in strongly contracted and very deformed state, of the largest specimen: Diameter 6.5 ×5.5 cm, length of tentacles up to 0.8 cm, diameter at the base 0.2 cm, usually smaller.

Colour (in alcohol): The middle part of the verrucae greyish, the verrucae of the lobes alternately dark greenish grey and colourless, though in the coloured lobes some verrucae are not pigmented. In life the colour was whitish.

Anthopleura hermafroditica (CARLGR.)

Bunodes hermafroditicus CARLGREN 1899 p. 23.
Anthopleura hermafroditica CARLGREN 1921 p. 148; 1927 p. 32.

The species was described by CARLGREN 1899 p. 23. It is, as far as I can see, not identical with MCMURRICH's *Bunodactis hermafroditica* of 1904, though both species in their organization are very similar and both are viviparous. The present species is apparently less frequent than the very common *Bunodactis hermafroditica.*

The nematocysts of the column in 2 specimens are partly 19.7—31 ×4.2—6.3 μ, (14—15.5 ×3.5 μ), atrichs, partly 17—24 ×2.8—3.5 μ, (14—15.5 ×2.8 μ) basitrichs; those of the marginal spherules 39.5—51 ×5—5.6 (7) μ (28.2—35.2 ×5 μ) atrichs; those of the tentacles 21—24 ×2.8—3 μ (15.5—18.3 ×2.5—2.8 μ) basitrichs; those of the actinopharynx partly 22.6—28.2 ×4—5 μ (...), basitrichs, partly 21—24 × 4.2—5 μ (...), microbasic *p*-mastigophors; those of the filaments partly 19.7—25.4 (28) ×4.2—7 μ (18.3—21 ×4.2 μ) *p*-mastigophors, partly 24—35.2 ×4.2—5.6 μ (24—29.6 ×4.2—5 μ), basitrichs.

Occurrence: *M 37* (several specimens), *M 55* (1), *M 56* (8), *M 123* (2), *M 127* (2). Biotope: Usually on the underside of stones, also on stones in sand.

Size of the largest specimen in very contracted condition: Height 1.5 cm, breadth 2 cm.

Colour (in life): Green brown, oral side of the tentacles blue-green, aboral side olive brown, verrucae white.

Bunodactis octoradiata (CARLGR.)

Bunodes octoradiatus CARLGREN 1899 p. 20; 1927 p. 30.
Cribrina octoradiata CLUBB 1908 p. 7.

The species was described by CARLGREN and CLUBB. A sectioned sphincter is very strong with a short main lamella. The nematocysts of the column are partly 21—32.4 ×5—8.5 μ, partly 13.4—18 μ, both basitrichs (3 specimens examined); those of the tentacles partly 21—26 ×5—6.3 μ, partly 14—17 ×3.5 μ, both basitrichs; those of the actinopharynx partly 18.3—21.8 ×3.5—4.2 μ, microbasic *p*-mastigophors, partly 24—31 ×4.2—7 μ, basitrichs; those of the filaments partly 22.6—

25.4 ×4.2 μ, *p*-mastigophors, partly 21—27.5 ×4.2—6.5 μ, partly 17—19.7 ×2.8—3 μ, both basitrichs.

Occurrence: *M 113* (7), *115* (3).

Further distribution: See CARLGREN 1927 p. 31.

Bunodactis hermafroditica (McMURR.)

Cribrina hermafroditica McMURRICH 1904 p. 287 (not *Bunodes hermafroditica* CARLGREN 1899).

In 1904 McMURRICH identified several specimens with *Anthopleura* (*Bunodactis*) *hermafroditica* CARLGR. though there were some differences as to the number of perfect and fertile mesenteries probably "due to the fact that CARLGREN's specimens were apparently about twice as large as those I examined". McMURRICH mentions only pseudospherules in his specimens. In the present collection there are numerous specimens referable to McMURRICH's species. None is provided with marginal spherules and therefore McMURRICH's and my species belong to different genera though they are very similar and both are viviparous. Already specimens of 0.4—0.5 cm height have embryos in the coelenteric cavity so that they may be fully grown.

I have examined the nematocysts of four specimens. They agree rather well.

The nematocysts of the column were (8.5) 11.3—19.7 ×(1.5) 2.2—3.5 μ, (part of them opaque), basitrichs; those of the tentacles 15.5—19.7 (24) ×2.5—3 μ, basitrichs; those of the actinopharynx partly 18.3—21 (23.7) ×3.5—5.6 μ, microbasic *p*-mastigophors, partly 18.3—32 ×3—5 μ, basitrichs; those of the filaments partly 17—25 ×3.5—5 μ, *p*-mastigophors, partly 15.5—31 (36.7) ×3.5—5.6 μ, partly 12.7—18 ×2.5—2.8 μ, both basitrichs.

Occurrence: *M 1* (6), *M 3* (17), *M 6* (4), *M 7* (1), *M 8* (several), *M 9* (1), *M 10* (8), *M 11* (2), *M 13* (4), *M 14* (2), *M 22* (2), *M 33* (1), *M 37* (many), *M 40* (2), *M 55* (several), *M 56* (several), *M 57* (1), *M 72* (4), *M 73* (5), *M 75* (8), *M 90* (1), *M 91* (3), *M 102* (2), *M 120* (3), *M 121* (many), *M 150* (many).

Colour: Very variable.

Parantheopsis cruentata (DRAYTON)

Literature and synonyms see CARLGREN 1899 and 1949 p. 62.

The species was described by McMURRICH (1893 and 1904) and CARLGREN (1899), and therefore I have only to add some notes about the nematocysts. I examined three specimens from different localities and all three show good agreement. The nematocysts of the column were 15.5—18.3 ×2.5—2.8 μ, basitrichs; those of the tentacles 17—24 ×(2.5)—3 μ, basitrichs, those of the actinopharynx 25.4—35 × 3.5—4.2 (5) μ, basitrichs; those of the filaments partly 18.3—22.6 ×4.2—5 μ, microbasic *p*-mastigophors, partly 25.4—35.2 ×3.5—5.6 μ, partly 17—18.3 ×2.2—2.8 μ, both basitrichs.

Occurrence: *M 9* (1), *M 22* (28), *M 55* (1), *M 56* (2), *M 75* (1), *M 113* (12), *M 115* (3), *M 120* (4), *M 122* (5).

Further distribution: See CARLGREN 1949 p. 62.

Remarks: There are two species of *Parantheopsis* described from Chile. I have referred all specimens to *cruentata* as the samples never had more than 48 tentacles, and the other species *ocellata* had 96 tentacles. The size of the nematocysts of the two species does not differ much (the breadth of the nematocysts of *ocellata* is, however, noted too small in my paper of 1927).

Colour: Whitish or grey-green.

Isotealia antarctica CARLGR.

Isotealia antarctica CARLGREN 1899 p. 25 figs 8, 9; 1927 p. 37 figs 28, 29; 1949 p. 56; STEPHENSON 1918 p. 27; 1922 p. 275.

?*Leiotealia badia* MCMURRICH 1893 p. 194, pl. XXII, fig. 104, pl. XXXIII fig. 106.

I have, with some hesitation, identified 2 individuals from *St. M 41* with *Isotealia antarctica*. The specimens are considerably smaller than the type and are seemingly sterile which makes the determination uncertain, but as the appearance and the anatomy inclusive of the size of the nematocysts agree well with those of *Isotealia* I think that the specimens may be referred to this species. The column is at the margin provided with a ring of vesicles seemingly perforated as pseudospherules, the appearance of the sphincter (Fig. 14) is the same as in the type. There is, however, a difference as to the relation of the number of mesenteries proximally and distally between our individuals and the type. The largest specimen has about 100 tentacles but about 150 mesenteries at the base. As to the type I wrote in 1927: "As to the relations between the number of tentacles and mesenteries it is possible that the latter are more numerous than the former." but I add that there may be little difference in the number between them. Besides it is not excluded that with the growth of the individuals this difference may be accorded. The nematocysts of the column in the larger specimens are 18.3—21 by 2.5—3 μ, basitrichs, those of the tentacles 20.5—22.6 by about 2.5 μ, basitrichs; those of the actinopharynx partly 25.4—33.8 by 3μ, basitrichs, partly 21—22.6 ×4.2 μ, microbasic *p*-mastigophors; those of the filaments partly 19.7—25.4 ×4.2 μ, *p*-mastigophors, partly 25.4 × 2.5—2.8 μ, basitrichs.

Occurence: *M 41* (2).

Further distribution: East Patagonia 40°32′ S, 61°25′ W,? 53°06′ S, 70° 40′30″ W (*Leiotealia*).

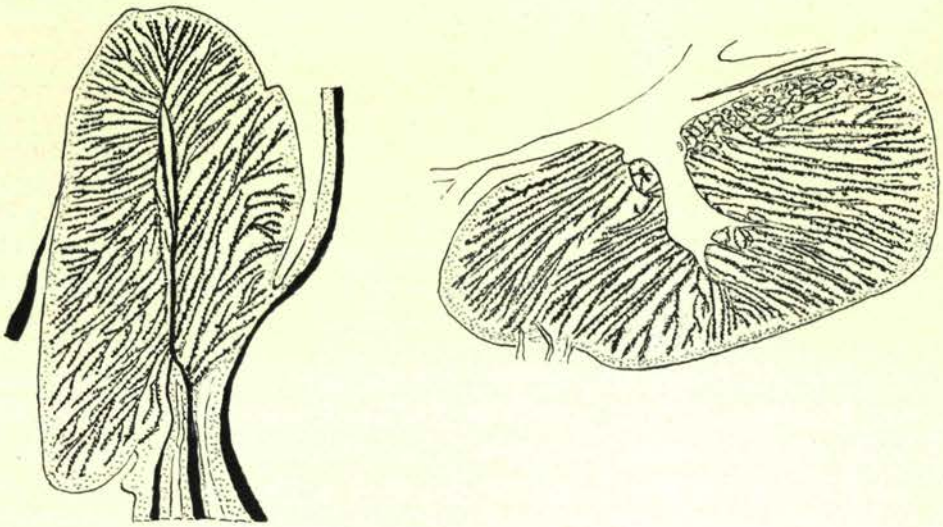
Size of the largest specimen in contracted state: Length and breadth 1.5 cm.

Colour (in life): Salmon coloured.

Epiactis georgiana CARLGR.

Epiactis georgiana CARLGREN 1927 p. 40 fig 31; 1949 p. 58.

The single specimen is very contracted and flattened, the pedal disc extremely wide. The column is smooth, in its uppermost part somewhat wrinkled. A fosse is present. The sphincter is circumscribed, its folds running out from a thick mesogloeal



Figs 14 and 15. 14 (left). Sphincter of *Isotealia antarctica* 15. Sphincter of *Epiactis georgiana*.

lamella (Fig. 15). The tentacles probably number about 96 as there are about 48 in about the half of the animal, their longitudinal muscles are ectodermal and arranged palissade-like. There are 2 siphonoglyphs and 2 pairs of directives symmetrically set. 36 pairs of mesenteries are probably perfect since I counted 36 mesenteries in about the half of the animal. The reproductive organs occur already on the first cycle incl. the directives. The retractors are band-like on all stronger mesenteries. The parietobasilar muscles are well developed, broad and form a distinct fold on the mesenteries. The mesenteries are considerably more numerous proximally than distally. I counted about 190 mesenteries at the base. The nematocysts of the column are 18.3—21 ×2.8 μ, basitrichs; those of the tentacles 29.6—36.7 ×3 μ, basitrichs; those of the actinopharynx 33.8—39.5 ×3.5 μ, basitrichs; those of the filaments partly 21.8—24 ×4 μ, microbasic *p*-mastigophors, partly 23.2—29.6 ×4 μ, partly 15.5—17 ×1.5—2.2 μ, both basitrichs.

Occurrence: *M 104* (1).

Further distribution: South Georgia.

Size: Diameter of pedal disc 4 cm, length of the column 2.5 cm.

Colour (in alcohol): Column yellowish brown. The tentacles may have been red-brown as there are traces of such pigment in their endoderm.

Remarks: I identified the species with *E. georgiana* CARLGR. as the size of the nematocysts agrees well with that of this species, as also the sphincter, the thick main lamella is, however, here more of equal breadth while that of the type was strongly thickened only in its distal part.

Boloceropsis platei McMurr.

Boloceropsis platei McMurrich 1904 p. 255 pl. 16 figs 34; 35; Stephenson 1922 p. 276; Carlgren 1927, p. 22; 1945 p. 12; 1949 p. 57.

The species was described in detail by McMurrich in 1904 and Carlgren completed the description in 1927 and 1945. I have examined the nematocysts of the largest specimen. They were generally somewhat smaller than those which I examined in 1945. Preserved in formalin the tentacles have a tendency to fall off. When one pulls off a tentacle it gets loose at its base showing that the base of the tentacle is weaker than other parts of it, which agrees with its anatomical structure.

Occurrence: *M 17* (2), *M 43* (1), *M 109* (8).

Further distribution: Chile; Calbuco, Renike fiord.

Size of one of the largest samples in contracted state: Height of column 1—1.5 cm, breadth of pedal disc 4.5 cm.

Colour in life: Dark rose-red, red.

Remarks: At *St. M 107* a small specimen was dredged. The body is low, only 3 cm, the pedal disc 0.3 cm. The column is smooth and the margin tentaculate. There is no sphincter, and the endodermal muscles of the column are weak. The tentacles, in number about 38, are mostly long and rather thick, in the apex somewhat knobbed. They are probably hexamerously arranged. There are 2 siphonoglyphs and 2 pairs of directives. The retractors are weak, diffuse, the parietobasilar muscles very weak. The mesenteries at the base seem to be 48, those of the last cycles are small and lack filaments and are perhaps not present in some compartments. The specimen is probably sterile, but there are some rounded bodies in some of the larger specimens, it is, however, questionable, whether these bodies are ova. Their preservation is not good. The nematocysts of the tentacles are 31—43.7 ×3—4.2 μ, basitrichs, those of the actinopharynx partly 28.2—39.5 ×4.2 μ, basitrichs, partly 19—22.6 ×4.2 μ, microbasic *p*-mastigophors, those of the filaments partly 26.8—49 ×4.2—4.5 μ, partly 16.2—21.8 ×3 μ, both basitrichs, rodlike partly 21—26.8 × about 4 μ, microbasic *p*-mastigophors. I think that this specimen is a young *Boloceropsis* as the nematocysts, especially the rodlike basitrichs of the filaments, recall those in this species though they are considerably smaller here. The swelling of the apex of the tentacles was probably caused by the preservation and the absence of the sphincter is probably due to the young age of the specimen. It cannot be the young of a *Bolocera* as the larvae of this genus already have a distinct tentacular sphincter.

Bolocera occidua McMurr.

Bolocera occidua McMurrich 1893 p. 154 pl. XXII figs 24—27.

I identified with some hesitation the single specimen of *Bolocera* taken by the expedition with McMurrich's *occidua*. The animal is larger than those described by this author. The sphincter is of the same type, but the folds are shorter (Fig. 16). The number of tentacles is about 140, they are conical, in contraction longitudinally

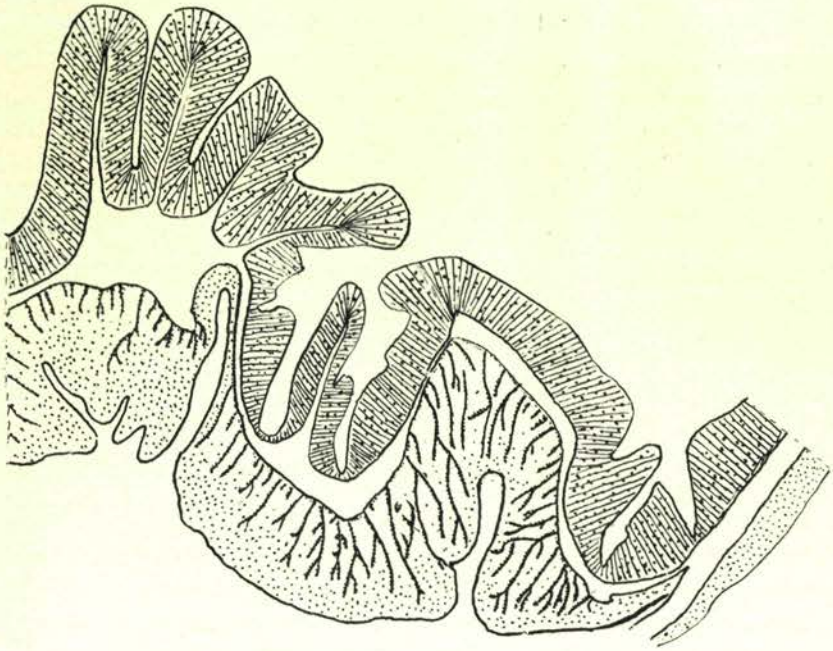


Fig. 16. Sphincter of *Bolocera occidua*.

furrowed. There are 2 siphonoglyphs symmetrically set and 2 pairs of directives. The number of mesenteries at the base seems to be somewhat greater than that of the tentacles. I counted about 160 mesenteries at the base. Many mesenteries are perfect, the gonads occur already on the first pairs of mesenteries, the directives are, however, seemingly sterile. The retractors and parietobasilar muscles are weak as in other species of this genus. The nematocysts of the body-wall are 29.6—66.3 × about 4.2 μ, basitrichs; those of the tentacles 55—72 ×3.5—4.2 μ, those of the actinopharynx partly 43.7—53.6 ×4.2 μ, basitrichs; partly 25.4—29.6 ×5—5.6 μ, microbasic *p*-mastigophors; those of the filaments partly 32.4—56.4 ×4.2 μ, partly 21—24 ×2.5—3 μ, both basitrichs, partly 31—33.2 ×4.2—5.6 μ, microbasic *p*-mastigophors.

Occurrence: *M 27* (1).

Colour of the single specimen preserved in formalin: Oral disc, tentacles and the largest part of the column almost black; in life the specimen was black red.

Further distribution: 51°02′30″ S, 74°08′ W; 53°06′ S, 70°30′30″ W; 51°34′ S, 63° W.

Paranthus niveus (Less.)

Paractis niveus (Less.) McMurrich 1904, p. 239 pl. 15 figs 16—19 (here literature); Pax 1912 p. D. 24.

Paranthus niveus Carlgren 1949 p. 83.

McMurrich described this species in detail and therefore I have not much to add. He notes that only six pairs of mesenteries seem to be perfect. Probably, he

did not examine the uppermost part of the body. In reality, there are six second pairs, perfect in the upper part of the actinopharynx. The nematocysts of the column are partly 14—21 ×3.5—5 μ, common, often curved, probably microbasic *p*-mastigophors, partly 10—14.8 × about 2.5 μ, basitrichs; those of the tentacles partly 14—24 ×2.5—5 μ, common, often curved, probably *p*-mastigophors, partly (15.5) 17—21 ×2.5—3 μ, basitrichs: those of the actinopharynx partly 17—24 ×4.2—4.5 μ, microbasic amastigophors or *p*-mastigophors, partly (19.7) 22.6—32.4 ×3 μ, basitrichs, those of the filaments partly 10—18.2 ×4.2—7 (8.5), eggshaped, very common, partly 21—24 ×4.2—5.6 μ, elongate, both microbasic *p*-mastigophors, partly 11.3—25.4 ×2.5—2.8 μ, few, basitrichs, 2 specimens examined. (In the one specimen there are also some nematocysts of about the same size as the *p*-mastigophors but whether they are basitrichs or *p*-mastigophors I cannot decide).

Occurrence: *M 22* (2), *M 59* (1).

Further distribution: Chile, Coquimbo, Peru, Callao, Paita.

Size of the largest, well preserved specimens: Length 3.5 cm, largest diameter 1.3 cm.

Colour (in alcohol): Upper part of the column bluish, a specimen from *M 59* was in life rose-coloured. See also McMurrich (p. 239).

Antholoba achates (Coutony)

Antholoba reticulata McMurrich 1893 p. 164.
Actinia fuegiensis Coutony in Dana 1846 p. 145 pl. 3 fig. 32a,b, 1849 p. 10.
Discosoma fuegiensis Milne Edwards 1857; Kölliker 1865 p. 112; McMurrich 1893 p. 200, p.p. (see Carlgren 1934 p. 6).
Sagartia fuegiensis Gosse 1860 p. 38.
Cereus fuegiensis Verrill 1869 p. 480.
For further literature and synonyms see Carlgren 1927 p. 5; 1945 p. 16; 1949 p. 85.

The species was described by R. Hertwig (1882 p. 33), Carlgren (1899 p. 29 and 1927 p. 56) and McMurrich (1904 p. 250). The numerous specimens collected by the expedition are of very different size. As it is interesting to know the development of the sphincter I examined it in a very small individual. It shows another appearance than that figured by R. Hertwig 1882 in as much as it is reticular with large meshes (Fig. 17) and it is shorter here.

Occurrence: *M 10* (11), *M 16* (5), *M 19* (6), *M 20* (3), *M 21* (3), *M 46* (2), *M 47* (1), *M 55* (3), *M 56* (14), *M 75* (1), *M 79* (1), *M 91* (1), *M 94* (1), *M 98* (2), *M 104* (3), *M 106* (1), *M 115* (9), *M 120* (6), *M 121* (2), *M 123* (1), *M 147* (1).

Further distribution: Galápagos Is., Coast of Peru to Tierra del Fuego, East Patagonia.

Size of one of the largest specimens: Height 4 cm, breadth 9 ×6 cm, size of one of the smallest specimens: pedal disc 0.15 cm, height of the body 0.2 cm, breadth of the oral disc 0.3 cm.

Colour very variable, see Dana (1846) Verrill (1869) and McMurrich (1904). In many specimens a dark band around the uppermost part of the body is visible.

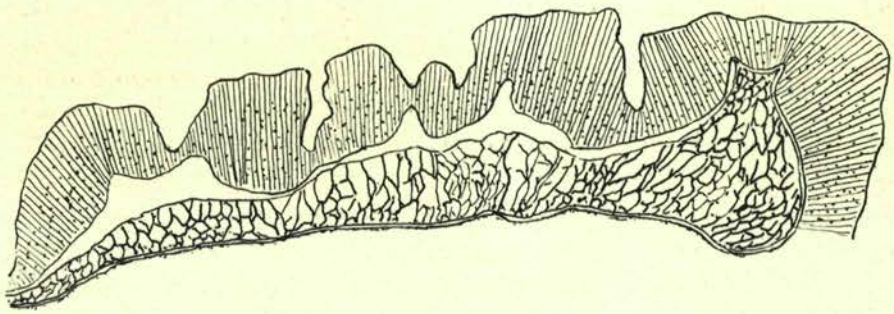


Fig. 17. Sphincter of a juvenile *Antholoba achates*.

According to sketches of two specimens the colour was: 1) column light red, at the base darker, with transverse parallell streaks of dark brown, below the tentacles a broad black band, tentacles light red, oral disc red-brown, a dark band around the mouth, 2) column light yellowish, at the base darker, transverse streaks brownish, the band below the tentacles brownish intermingled with black, tentacles light yellowish.

Remarks: There is no doubt that *Actinia fuegiensis* is identical with *Antholoba achates*.

Actinostola intermedia CARLGR.

Actinostola intermedia CARLGREN 1899 p. 31; 1927 p. 58 fig. 39; 1949 p. 78.
Catadiomene intermedia STEPHENSON 1920 p. 558.
Actinostola chilensis MCMURRICH 1904 p. 247 pl. 15 figs 30, 31, pl. 16 figs 32, 33; STEPHENSON 1920 p. 557.

The species was described by CARLGREN in 1899 and 1927 and by MCMURRICH in 1904 as *A. chilensis*. I have sectioned the sphincter of a large individual, and it agrees well with that I figured in 1927, showing a tendency to stratification. In the present individuals as well as in that of MCMURRICH's specimens which I have examined the large nematocysts of the tentacles are very rare, they are considerably shorter than those I previously found. The smaller individuals and those of middle size are smooth, the largest somewhat tuberculated in their uppermost part.

The nematocysts of the column are 18.3—21 ×2.8 μ, basitrichs; those of the tentacles partly 42.3—45 ×7—8 μ, *b*-mastigophors, very rare (2 specimens examined), partly 21—28 ×2.5 ×3 μ, basitrichs, those of the actinopharynx 24—28 ×3 μ, basitrichs, those of the filaments 21—25.4 ×4.2—5 μ, microbasic *p*-mastigophors. The larger nematocysts of the tentacles were 29.6—45 ×5.6—9 μ, in a very small individual.

Occurrence: *M 17* (1), *M 21* (1), *M 27* (1), *M 40* (1), *M 104* (15), *M 149* (1).

Colour: Pink, salmon coloured, light orange-red.

Hormathia pectinata (R. HERTW.)

Phellia pectinata R. HERTWIG 1882 p. 81 (72) pl. 5, fig. 7, pl. VI fig. 5, pl. VIII figs 1, 2.
Hormathia HADDON 1889 p. 309; STEPHENSON 1920 p. 535; CARLGREN 1949 p. 93.
Chitonanthus pectinatus MCMURRICH 1893 p. 190 pl. XXXII figs 98—102.
Phellia spinifera (at least pro parte) R. HERTWIG 1888 p. 24, pl II fig. 89.

The numerous specimens in the collection are of different size. The lower part of the column is provided with tubercles now few, now more numerous, the upper part has usually distinct and larger tubercles, often the 12 coronial tubercles can be distinguished. The smallest specimens are provided with small tubercles only. The sphincter is strong and shows a distinct tendency to transverse stratification, in a sectioned specimen it is stronger in the middle, in another hand-sectioned specimen it has about the same appearance as in figure 5 pl. VI drawn by HERTWIG. I have measured the nematocyts in 2 specimens, those of the acontia in 5. They show good agreement. The nematocysts of the tentacles are 24—29.6 ×3—3.5 μ, basitrichs; those of the actinopharynx partly basitrichs, 26.8—32.4 ×2.8—4 μ, partly microbasic *p*-mastigophors, 17—22.6 ×3—4.2 μ; those of the filaments *p*-mastigophors, 17—22.6 ×3—4.2 μ; those of the acontia 25.5—33.8 ×3—4.2 μ, (some smaller basitrichs in the actinopharynx not measured).

Occurrence: *M 14* (9), *M 40* (20), *M 41* (2), *M 83* (4), *M 104* (2), *M 145* (10), *M 149* (1).

Further distribution: South Chile, East coast of Argentina?

Size in preserved condition: Up to about 2 cm height, pedal disc 2.5 ×2 cm.

Colour (in preserved condition): Cuticle of the scapus often rust-coloured. Tentacles, oral disc and actinopharynx red-brown. In life the specimens were grey or whitish grey-brown.

Remarks: I think that *Phellia spinifera*, at least the specimens dredged at the south coast of Chile, is identical with *H. pectinata*. MCMURRICH and STEPHENSON are of the same opinion.

Actinauge chilensis n. sp.

The single specimen is very contracted and introverted. The pedal disc is extremely wide. The lower part of the scapus lacks tubercles, in the upper part they are present and apparently arranged in longitudinal rows probably 24 in number. Distinct coronial tubercles are lacking. The scapulus is strongly ridged, the ridges are not tuberculated.

Most of the tentacles are provided with mesogloeal thickenings on their outer side (Fig. 18). The number of tentacles is about 96. There are 48 pairs of mesenteries, 6 of which are perfect.

The anatomy of the species seems to agree with that of other species of *Actinauge*.

The nematocysts of the tentacles are 19.7—22.6 ×2.8, basitrichs, those of the actinopharynx partly 26.8—32.4 ×3.5—4 μ, basitrichs, partly 26.8—28.2 ×5 μ,

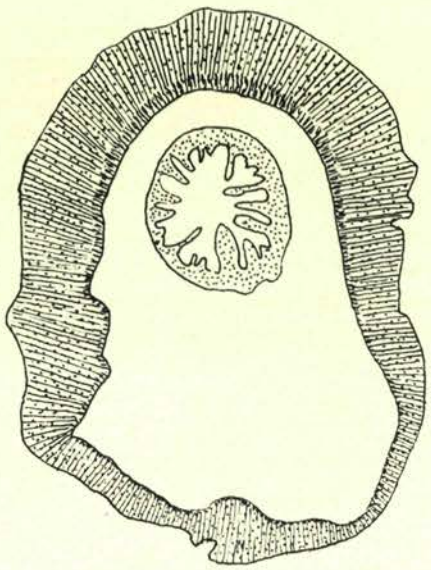


Fig. 18. Transverse section of tentacle of *Actinauge chilensis* n. sp.

microbasic *p*-mastigophors, those of the filaments partly (24) 28.2—33.8 ×4.2—5 μ, *p*-mastigophors, partly 11.3—14 ×1.5 μ, basitrichs; those of the acontia 26.8—32.4 ×4.2—4.5 basitrichs.

Type locality: *St. M 40*. Type in Nat. Hist. Mus. Stockholm.

Occurrence: *M 40* (1).

Size in contracted introverted condition: Diameter of pedal disc 4.5 cm, height of the column up to about 2.3 cm.

Colour (in alcohol): Tentacles, oral disc and actinopharynx light orange red.

Remarks: I think that the species is not identical with *Actinauge Verrilli*. I have examined many specimens of this latter species from the north Atlantic (see CARLGREN 1942).

Cereus? herpetodes (McMURR.)

Sagartia herpetodes McMURRICH 1904 p. 268 textfig I a pl. 17, figs 53—58; CARLGREN 1949 p. 101.

The species was described in detail by McMURRICH (1904), and therefore I have not much to add. Almost all specimens have many stones and shells strongly attached to the column, so that the suckers are often destroyed when one tries to detach them. The suckers show an impression and have, as to their exterior, an appearance of true verrucae, but there are no evaginations from the endoderm. As far as I can see the ectoderm of the suckers is structured as that which v. HEIDER (1877) described in *Cereus* and I myself (1942) in *Sagartia troglodytes*. Most specimens are

in imperfect division, the largest specimen had three actinopharynges. Usually the pedal disc of the specimen is torn off. In a small specimen not being in division I counted the tentacles and mesenteries at the base. There are about 160 tentacles but only about 130 mesenteries at the base, but as the specimen is not well preserved the estimation is somewhat uncertain. Thus, it seems that there are more mesenteries distally than proximally as in *Cereus*. I have examined the nematocysts in some specimens. The nematocysts of the column are partly (8.5) 11.3—12.7 ×2.8 μ, basitrichs, partly 12.7 ×4.2 μ, *p*-mastigophors or amastigophors; those of the tentacles partly 18.3—24 ×2.8 μ, basitrichs, partly 15.5—24 ×3.5—5 μ, *p*-mastigophors or amastigophors; those of the actinopharynx, partly 22—29 ×2.8—3.5 μ, basitrichs, partly 11.3—17 ×3.5—4.2 μ, *p*-mastigophors; those of the filaments partly 29—33.8 ×3 μ, basitrichs, partly 11.3—15.5 ×3.5—4.5 μ, *p*-mastigophors; those of the acontia partly 29.6—38 ×4.2—5 μ, microbasic amastigophors, partly 28.2—35.2 ×3—3.5 μ, basitrichs (the shaft of the exploded amastigophors is somewhat longer than the capsule; in the tentacles of the specimens from station 91 there are also opaque nematocysts? 24—35.2 ×6.3—7 μ, possibly a developmental stage).

Occurrence: *M 37* (13), *M 91* (2).

Further distribution: Chile; Talcahuano, Puerto Montt.

Size: The largest specimens are about 1 cm high and 3.5 ×1 cm broad in preserved, very contracted condition.

Colour: White, tentacles light brownish, oral disc sometimes brown, brim of the mouth white (McMurrich).

Remarks: I am inclined to refer the species to the genus *Cereus* as it seems to agree better with *C. pedunculatus* than with *Sagartia elegans* and *troglodytes*. The column of *pedunculatus* according to Stephenson (1935) is sometimes low though perhaps not so low as in *herpetodes*. The form of tentacles seem to agree, and the nematocysts of the acontia in *herpetodes* show much likeness with those in *Cereus* in as much as the amastigophors and basitrichs are of almost the same size. If it proves that the tentacles are more numerous than the mesenteries at the base there is no doubt that *herpetodes* is a *Cereus*.

Anthothoë chilensis (Lesson)

Sagartia chilensis McMurrich 1904 p. 265 Pl 17 figs 48—52.
Thoë chilensis Carlgren 1927 p. 75 (here literature).
?*Actinothoë chilensis* Carlgren 1949 p. 103.

The anatomy of this species was described by McMurrich in 1914, and therefore I have not much to add. The sphincter agrees very well with that figured by him as also the retractors which are decidedly diffuse but sometimes somewhat stronger than drawn in his figure 52. McMurrich gives no information about the siphonoglyphs and the directives. Two sectioned specimens had apparently only one siphonoglyph and one pair of directives. These specimens have reproductive

organs developed on the weaker mesenteries. The perfect pairs of mesenteries are fewer here than those noted by McMurrich but other individuals have apparently three cycles of perfect mesenteries.

The nematocysts of the column are 12.7—21 ×3.5—9.5 μ, probably microbasic *p*-mastigophors; those of the tentacles partly 15—26.8 ×4.2 μ, probably *p*-mastigophors, partly 14—22.6 ×2.8—3.5 μ, basitrichs; those of the actinopharynx partly 15.5—26.4 ×4.2—5.6 μ, probably microbasic amastigophors, partly 24—28.2 × 3—3.5 μ, basitrichs; those of the filaments partly 8—15.5 (22.8) ×4.2—5.6 μ, microbasic *p*-mastigophors, partly 10—19.7 ×2.2—2.8 μ, basitrichs; those of the acontia partly (35) 43.7—78.3 ×5.6—8.2 (10) μ, microbasic amastigophors, partly 21—33.8 ×2.5—3 μ (The nematocysts of the acontia were measured in 12 individuals, those of the column and the tentacles in 5, those of the actinopharynx in 2, and those of the filaments in 4 specimens).

Occurrence: *M 9* (1), *M 10* (8), *M 55* (2), *M 56* (6), *M 107* (2), *M 121* (1), *M 123* (1), *M 125* (1).

Further distribution: Chile; Talcuhuano, Coquimbo, Calbuco, Quinquine Isl.

Size of the largest specimen in contracted condition: Height of the column about 0.8 cm, breadth of pedal disc about 1 cm.

Colour (in life): Light bluish green with red longitudinal stripes, tentacles white (*M 123*); grey with brown stripes, tentacles yellowish white (*M 10*).

Remarks: There is no doubt that the species is the same as McMurrich has described since the older mesenteries seem to be sterile the species may be referred to *Anthothoë*.

Aiptasiomorpha elongata Carlgr.

Aiptasiomorpha elongata Carlgren 1951 p. 426.

It is with some hesitation that I refer several specimens to this species because they seem to agree rather well with its organisation but all the present specimens are considerably smaller than the type and have fewer tentacles. Unfortunately, there are no notes about the colour of the type. Cinclides are apparently present, as an acontium runs out on the body-wall of a specimen. I have examined the nematocysts of one of the largest individuals and those of the acontia in several others. The nematocysts of the column were 14—19 ×5—5.5 μ, probably *p*-mastigophors; those of the tentacles partly (17) 21.5—28 ×4.2—5 μ, *p*-mastigophors, partly 18.3—22.6 ×2.8 ×3.5 μ, basitrichs; those of the actinopharynx partly about 22 ×4.2 μ, microbasic amastigophors or *p*-mastigophors, partly 22.6—27.5 ×2.8—3.5 μ, basitrichs; those of the filaments partly 10—19.7 ×4.2—5.6 μ, *p*-mastigophors, partly 31—41 ×5.6—6.3 μ, basitrichs; those of the acontia partly 14—15.5 ×2.5—2.8 μ, basitrichs, partly 59.2—74.7 ×7—8 μ, *p*-mastigophors, as we see a rather good agreement with the nematocysts of the type. The nematocysts of the acontia in 6 other small individuals varied between 11.3 to 16.2 (20) ×2.2—3, basitrichs, the *p*-mastigophors between 32.4 and 73 ×5—8 (10).

Occurrence: *M 10* (1), *M 37* (several specimens), *M 55* (1), *M 109* (1), *M 133* (8).
Further distribution: Gulf of California.
Size of the contracted largest specimen: Breadth 1.2 cm, length 1.5 cm.
Colour (in life): Salmon red striped. In alcohol introverted tentacles of 2 specimens green.

Summary

The Chilean coastal fauna is, as to the groups treated here, on the whole antiboreal. The most common species are *Phymactis clematis*, *Antholoba achates* and *Bunodactis hermafroditica*. The first species is distributed from Tierra del Fuego up to the Gulf of California, the second from Patagonia and Falkland Islands to the Galápagos Islands, the third is apparently endemic. Very interesting is the discovery of the European *Gonactinia prolifera*. It may have been transported with ships from Europe. More difficult is it to clear up the occurrence of an *Octineon* in Chile. Hitherto only two species are known, the genotype *lindahli* from deep water at the southwest coast of Spain and *suecicum* from a depth of 60—70 m in a single locality of the Skagerrak. Some new species and genera are erected.

Resumen

La fauna de la costa chilena, por los grupos aquí tratados, es principalmente antiboreal. Las especies más comunes son *Phymactis clematis*, *Antholoba achates* y *Bunodactis hermafroditica*. La primera de estas especies se encuentra desde Tierra del Fuego hasta el Golfo de California; la segunda desde Patagonia e Islas Falkland hasta las Islas Galápagos; la tercera, es aparentemente endémica.

Muy interesante resulta el hallazgo de la especie europea *Gonactinia prolifera*, que pudo haber sido transportada desde Europa, por los bacos. Más difícil de explicarr es la presencia de un *Octineon* en Chile. Anteriormente habian solo dos especies conocidas: el genotipo *lindahli* de las aguas profundas, en la costa sudoeste de España, y *suecicum* de una sola localidad en Skagerrak, entre 60 y 70 metros de profundidad.

Se proponen algunos nuevos géneros y especies.

Appendix

Genus *Cnidanthea* nov. gen.

Pedal disc rather small. Column provided with numerous low papillae, forming nematocyst-batteries. Sphincter strong, mesogloeal. Tentacles few, short, their longitudinal muscles ectodermal. Two weak siphonoglyphs and two pairs of directtives. Six pairs of mesenteries perfect. First and second cycles of mesenteries fertile. Retractors of these mesenteries weak and also the parietobasilar muscles. The

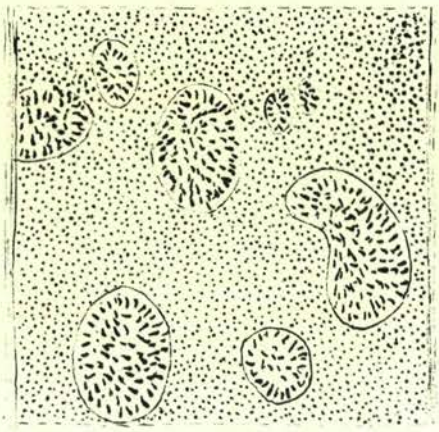


Fig. 19. *Cnidanthea maculata* n. g., n. sp. Arrangement of nematocystbatteries between two mesenteries.

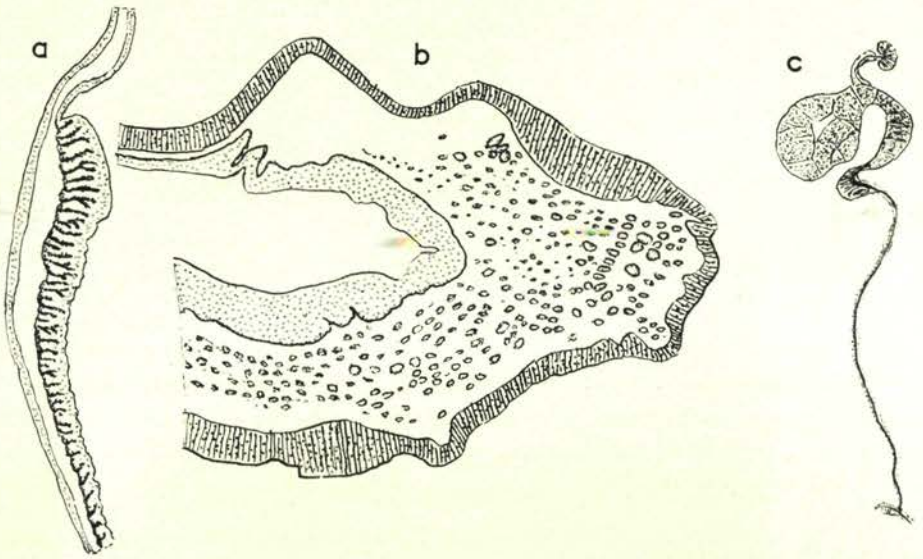


Fig. 20. *Cnidanthea maculata* n. f., n. sp. a. Retractor of perfect mesentery in the region of actinopharynx. b. Sphincter. c. Retractor of perfect mesentery in the fertile region.

mesenteries of the third cycle without retractors. The same number of mesenteries proximally and distally. Cnidom: spirocysts, basitrichs, microbasic *p*-mastigophors and possibly amastigophors.

This genus is probably related to *Paranthus* but there are several differences as the presence of nematocyst-batteries and the weak retractors in our genus. Also the ratio between the number of distal and proximal mesenteries is different. Possibly

the genus should be referred to the Isanthidae, but it shows several differences from the representatives of this family.

Cnidanthea maculata n. sp.

A small species. The pedal disc is raher small. The ectoderm of the column is provided with nematocyst-batteries giving it a granulous appearance. The batteries are rounded or more irregular and close-set (Fig. 19). They are thickenings of the ectoderm and contain very numerous microbasic *p*-mastigophors. Rarely the mesogloea takes part in the forming of the papillae. The sphincter is mesogloeal and very strong, alveolar (Fig. 20b), in its upper part occupying almost the whole mesogloea. The tentacles number about 48, their longitudinal muscles are ectodermal. The actinopharynx is strongly furrowed in its upper part, in other parts smooth, its ectoderm is here very thin. Two weak siphonoglyphs symmetrically set and two pairs of directives are present. The pairs of mesenteries are 24 in number and the first six pairs are perfect. There are the same number of mesenteries proximally and distally. The two first cycles of mesenteries are fertile inclusive of the directives. Their retractors are weak, diffuse in their upper part (Fig. 20a), concentrated in the fertile region (Fig. 20c) but here very weak. The mesenteries of the third cycle are very weak and lack retractors. The nematocysts of the column are partly 11.3—17 ×2.8—3 μ, microbasic *p*-mastigophors; partly 15.5—17.5 μ, basitrichs; those of the tentacles partly 17—21 ×3—3.5 μ, *p*-mastigophors, partly 14—19.7 ×2.8 μ, basitrichs; those of the actinopharynx partly 17—19 ×3—3.5 μ, *p*-mastigophors, partly 18.3—24 ×2.5—2.8 μ, basitrichs; those of the filaments 8.5—18.3 ×4.2—6.3 μ, microbasic *p*-mastigophors.

Type locality: Pisco, Peru, Type in Nat. Hist. Mus. Stockholm.

Occurrence: Peru; Pisco, soft bottom. 6 fms, 2 specimens.

Size of the largest specimen: Length 0.9 cm, diameter 0.7 cm, the other specimen is of almost the same size.

Colour: Not noted.

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