

ZOOLOGISCHE ERGEBNISSE EINER REISE NACH BONAIRE, CURAÇAO
UND ARUBA IM JAHRE 1930

No. 27

H. Engel

ECHINODERMS FROM ARUBA,
CURAÇAO, BONAIRE AND
NORTHERN VENEZUELA

BY

H. ENGEL (AMSTERDAM)

MIT 1 KARTE



'S-GRAVENHAGE
MARTINUS NIJHOFF
1939



*Copyright 1939 by Martinus Nijhoff, The Hague, Netherlands
All rights reserved, including the right to translate or to
reproduce this book or parts thereof in any form*

Printed in the Netherlands

<i>Ophidiaster guildingii</i> Gray	Curaçao	(H. L. CLARK, 1933 p. 23.) Van der Horst 1927 p. 163; 1924 p. 11.
* <i>Linckia guildingii</i> Gray	Aruba, Curaçao	(H. L. CLARK 1933 p. 24; 1921 p. 64.) VAN DER HORST 1927 p. 163; 1924 p. 11.
* <i>Asterina folium</i> Lütken	Aruba, Curaçao, Bonaire	(H. L. CLARK 1933 p. 26.) VERRILL 1915 p. 58.
Ophiuroidea		
<i>Ophiomyxa flaccida</i> (Say)	Curaçao	(H. L. CLARK 1933 p. 41.) A. H. CLARK 1922 p. 210. KOEHLER 1914 p. 162.
<i>Astrophyton muricatum</i> (Lam.)	Curaçao	(H. L. CLARK 1933 p. 42.) A. H. CLARK 1922 p. 210.
<i>Ophiocamax fasciculata</i> Lyman	near Curaçao (— 380 m)	A. H. CLARK 1922 p. 210. KOEHLER 1914 p. 114.
* <i>Amphiura stimpsonii</i> Lütck.	Curaçao, Bonaire	(H. L. CLARK 1933 p. 45.) A. H. CLARK 1922 p. 210.
** <i>Ophiophragmus pulcher</i> H. L. Clark	Aruba	(H. L. CLARK 1933 p. 48.)
<i>Amphipholis gracillima</i> (Stimps.)	Curaçao	(H. L. CLARK 1933 p. 49.) A. H. CLARK 1922 p. 210.
* <i>Amphipholis squamata</i> (d. Chiaje)	Aruba, Curaçao, Bonaire	(H. L. CLARK 1933 p. 50.) A. H. CLARK 1922 p. 210.
* <i>Ophiostigma isacanthum</i> (Say)	Aruba, Curaçao	(H. L. CLARK 1933 p. 50.) A. H. CLARK 1922 p. 210. KOEHLER 1914 p. 154.
** <i>Ophiocnida scabriuscula</i> (Lütck.)	Carúpano	(H. L. CLARK 1933 p. 55.)
* <i>Ophiactis savignyi</i> (Müll. et Tr.)	Aruba, Curaçao	(H. L. CLARK 1933 p. 59.) A. H. CLARK 1922 p. 211. KOEHLER 1914 p. 154.
* <i>Ophiothrix angulata</i> (Say)	Aruba, Curaçao, Bonaire	(H. L. CLARK 1933 p. 60.) A. H. CLARK 1922 p. 211. KOEHLER 1914 p. 160.
<i>Ophiothrix suensonii</i> Lütck.	Curaçao	(H. L. CLARK 1933 p. 62.) A. H. CLARK 1922 p. 211.
<i>Ophiothrix lineata</i> Lyman	Curaçao	(H. L. CLARK 1933 p. 62.) A. H. CLARK 1922 p. 211.
* <i>Ophiothrix ørstedii</i> Lütck.	Aruba, Curaçao, Bonaire, Tortuga	(H. L. CLARK 1933 p. 63.) A. H. CLARK 1922 p. 211.
<i>Ophionereis olivacea</i> H. L. Clark	Curaçao	(H. L. CLARK 1933 p. 64.) A. H. CLARK 1922 p. 211.

- *Ophionereis reticulata* (Say) Aruba, Curaçao (H. L. CLARK 1933 p. 64.) A. H. CLARK 1922 p. 211. KOEHLER 1914 p. 155.
- *Ophiocoma echinata* (Lam.) Aruba, Curaçao, Bonaire (H. L. CLARK 1933 p. 65.) A. H. CLARK 1922 p. 212. KOEHLER 1914 p. 159.
- Ophiocoma riisei* Lützk. Curaçao (H. L. CLARK 1933 p. 66.) A. H. CLARK 1922 p. 212. KOEHLER 1914 p. 159.
- *Ophiocoma pumila* Lützk. Aruba, Curaçao, Tortuga (H. L. CLARK 1933 p. 67.) A. H. CLARK 1922 p. 212. KOEHLER 1914 p. 160.
- *Ophioderma appressum* (Say) Aruba, Curaçao, Bonaire (H. L. CLARK 1933 p. 68.) A. H. CLARK 1922 p. 213.
- *Ophioderma brevicaudum* Lützk. Aruba, Curaçao, Bonaire, Tortuga (H. L. CLARK 1933 p. 69.) A. H. CLARK 1922 p. 213.
- **Ophioderma brevispinum* (Say) Aruba (H. L. CLARK 1933 p. 70.)
- *Ophioderma cinereum* Müll. et Tr. Aruba, Curaçao (H. L. CLARK 1933 p. 71.) A. H. CLARK 1922 p. 212.
- Ophioderma rubicundum* Lützk. Curaçao (H. L. CLARK 1933 p. 71.) A. H. CLARK 1922 p. 213.
- Ophiozona impressa* (Lützk.) Curaçao (H. L. CLARK 1933 p. 73.) A. H. CLARK 1922 p. 213.
- **Ophiolepis paucispina* (Say) Aruba (H. L. CLARK 1933 p. 74.)
- E c h i n o i d e a
- *Eucidaris tribuloides* (Lam.) Aruba, Curaçao, La Goajira (H. L. CLARK, 1933 p. 76.) ENGEL 1927 p. 163.
- *Centrechinus antillarum* (Phil.) Aruba, Curaçao, Bonaire (H. L. CLARK 1933 p. 78.) HUMMELINCK 1933 p. 306, *Diadema antillarum*. ENGEL 1927 p. 163, *Diadema antillarum*.
- Arbacia punctulata* (Lam.) Curaçao (H. L. CLARK 1933 p. 79.) ENGEL 1927 p. 163.
- *Lytechinus variegatus* (Leske) Curaçao, Klein Bonaire, Margarita, La Goajira (H. L. CLARK 1933 p. 80.) ENGEL 1927 p. 163.
- *Triploneustes esculentus* (Leske) Aruba, Curaçao, Bonaire, Klein Bonaire (H. L. CLARK 1933 p. 81.) ENGEL 1927 p. 163.
- *Echinometra lucunter* (Linn.) Aruba, Curaçao, Bonaire, Klein Bonaire (H. L. CLARK 1933 p. 83) ENGEL 1927 p. 163.

* <i>Echinometra viridis</i> A. Agass.	Curaçao, Bonaire, Tortuga	(H. L. CLARK 1933 p. 84) ENGEL 1927 p. 163.
<i>Clypeaster rosaceus</i> (Linn.)	Curaçao	(H. L. CLARK 1933 p. 85.) ENGEL 1927 p. 164.
<i>Encope emarginata</i> (Leske)	Cartagena (Colombia)	(H. L. CLARK 1933 p. 86.) id. 1925 p. 172.
** <i>Mellita quinquiesperforata</i> (Leske)	Margarita	(H. L. CLARK 1933 p. 87.)
** <i>Echinoneus cyclostomus</i> Leske	Aruba, Bonaire	(H. L. CLARK 1933 p. 89.)
<i>Brissus brissus</i> (Leske)	Curaçao	(H. L. CLARK 1933 p. 91.) ENGEL 1927 p. 164.

H o l o t h u r i o i d e a

<i>Holothuria cubana</i> Ludw.	Curaçao	(H. L. CLARK 1933 p. 100. DEICHMANN 1930 p. 54.) TEN BROEKE 1927 p. 164.
** <i>Holothuria impatiens</i> (Forskål)	Curaçao, Bonaire	(H. L. CLARK 1933 p. 102. DEICHMANN 1930 p. 64.)
** <i>Holothuria arenicola</i> Semper	Curaçao	(H. L. CLARK 1933 p. 102. DEICHMANN 1930 p. 66.)
* <i>Holothuria glaberrima</i> Sel.	Aruba, Curaçao	(H. L. CLARK 1933 p. 104. DEICHMANN 1930 p. 69.) TEN BROEKE 1927 p. 164. VAN DER HORST 1924 p. 8.
** <i>Holothuria surinamensis</i> Ludw.	Aruba, Curaçao	(H. L. CLARK 1933 p. 105. DEICHMANN 1930 p. 63.)
<i>Holothuria grisea</i> Sel.	Curaçao, Colombia	H. L. CLARK 1933 p. 105. DEICHMANN 1930 p. 76.
** <i>Holothuria floridana</i> Pourt.	Aruba	(H. L. CLARK 1933 p. 107. DEICHMANN 1930 p. 72.)
** <i>Holothuria mexicana</i> Ludw.	Curaçao, Bonaire	(H. L. CLARK 1933 p. 107. DEICHMANN 1930 p. 74.) HUMMELINCK 1933 p. 304, <i>Holothuria atra</i> .

N.B. *H. atra*, TEN BROEKE 1927, p. 164 proved to be *H. mexicana*.

H. languens, TEN BROEKE 1927 p. 164 proved to be *H. surinamensis*.

H. vagabunda, TEN BROEKE 1927 p. 164 proved to be *H. arenicola*.

* <i>Stichopus badiotus</i> Sel.	Curaçao, Bonaire	(H. L. CLARK 1933 p. 109. DEICHMANN 1930 p. 80.) TEN BROEKE 1927 p. 164.
** <i>Thyone surinamensis</i> Semper	La Goajira	(H. L. CLARK 1933 p. 116. DEICHMANN 1930 p. 173.)

** <i>Pentacta pygmaea</i> (Théel)	Margarita	(H. L. CLARK 1933 p. 116. DEICHMANN 1930 p. 180.)
<i>Euapta lappa</i> (Müll.)	Curaçao	(H. L. CLARK 1933 p. 118. DEICHMANN 1930 p. 205.) TEN BROEKE 1927 p. 164.
** <i>Chiridota rotifera</i> (Pourt.)	Curaçao, Bonaire	(H. L. CLARK 1933 p. 122. DEICHMANN 1930 p. 212.)

A description of the principal localities may be found in the narratives of VAN DER HORST (1924) and HUMMELINCK (1933).

Enumeration of the material.

Asteroida

Astropecten antillensis Lütken

CURAÇAO, St. Kruis Baai, 22.XI.1936, on sandy beach, depth 2-3 m (1 specimen; R 29 mm).

Astropecten marginatus Gray

PARAGUANÁ (Venez. continent), Bahía de las Piedras, 24.II.1937, washed ashore (many spec.).

Luidia senegalensis (Lam.)

COCHE (Venez. island), 25.VI.1936 (1 spec.; R 95 mm).

Oreaster reticulatus Linn.

ARUBA, Paardenbaai, 1930 (1 spec.; R 12 cm). BONAIRE, Lac, 25.XI.1930, near the entrance, depth 1 m (2 spec.; R 16 and 17 cm).

Linckia guildingii Gray

ARUBA, Punta Braboe, near Oranjestad, 18.VI.1930, between debris of coral, depth 0.5 m (5 spec.; R max. 38 mm, 1 arm regenerating; R 31, 2 regen.; R 24, 4 reg.; R 24, 1 reg.; R 29, 4 reg.; R 20, 4 reg.)
Reef of Boekoeti, near Oranjestad, 25.VI.1930, between debris of coral and branches of *Porites*, tidal zone (8 spec.; R 42 mm, 3 reg.; R 33, 1 reg.; R 27, 2 reg.; R 23, 2 reg.; R 27, 4 reg.; R 27, 4 reg.; R 21, 4 arms failing, reg.; R 25, 4 arms failing, reg.; black with brown and violet in life).

Asterina folium Lütken

ARUBA, Reef of Boekoeti, 25.VI.1930, between debris of coral, tidal zone (1 spec.; R 6 mm, r 4-3 mm).
BONAIRE, de Hoop, South of Kralendijk, 31.X.1930, between sandy debris, 1 m (1 spec.; R 4.5 mm, r 3 mm; white, in life).

Ophiuroidea

Amphiura stimpsonii (Lütken)

BONAIRE, de Hoop, 6.XI.1930, 1 m (1 spec.).

Ophiophragmus pulcher H. L. Clark

ARUBA, Punta Braboe, 18.VI.1930, between debris of *Porites*, tidal zone (1 spec.). The marginal spines of the disk are numerous and they are found nearly along the whole margin. The colour in spirit is bluish gray, the arms whitish with bluish gray bands (3 scales white, 2 scales blue-gray). Along the dorsal midline of the arms there is a narrow bluish gray line.

Amphipholis squamata (delle Chiaje)

ARUBA, Punta Braboe, 17.VI.1930, between debris of coral, 1 m (2 spec. juv.). CURAÇAO, St. Kruis Baai, 23.IV.1930, in rock pools (7 spec.). BONAIRE, Lac, 12.X.1930, lagoon with *Thalassia*, 1 m (1 spec.); the same, 18.XI.1930 (1 spec.).

Ophiostigma isacanthum (Say)

ARUBA, Punta Braboe, 17.VI.1930, between debris of coral, 0-1 m (2 spec.); the same 18.XII.1936, between algae, 1-2 m (5 spec.: 1 spec. has lost the dorsal skin of the disk). Lagoon of Boekoeti, 18.VI.1930, between stones with *Halimeda*, 1 m (1 spec.); the same, 20.XII.1936 (1 spec.).

Ophiocnida scabriuscula (Lütken)

East of CARÚPANO (Venezuela), Puerto Santo, 12.VI.1936, from sandy debris, 2 m (1 spec.).

Ophiactis savignyi (Müller et Troschel)

ARUBA, Punta Braboe, 18.XII.1936, between algae, 1-2 m (1 spec.). Reef of Boekoeti, 25.VI.1930, between *Porites* and debris of coral, pools in tidal zone (2 spec.). CURAÇAO, St. Kruis Baai, 24.IV.1930, from rock pools (6 spec.).

Ophiothrix angulata (Say) (var. *violacea* Müll. et Tr.)

ARUBA, Punta Braboe, 17.VI.1930, between debris of coral, pools in tidal zone (8 spec.; disk dark violet, in 6 spec. the arms were in life dorsally orange-brown, in 2 spec. there was a clear orange mediodorsal line); the same, 18.XII.1936, between algae, 1-2 m (4 spec.). Lagoon of Boekoeti, 18.VI.1930, between *Halimeda* and other algae, 0.5-1.5 m (24 spec.); the same, 20.XII.1936 (2 spec.). CURAÇAO, Boca Grandi, Savonet, 2.V.1930 (1 spec.). BONAIRE, Lac, 5.X.1930, sandy debris of coral near the entrance, 1.5 m (1 spec.).

Ophiothrix ørstedii Lütken

ARUBA, Punta Braboe, 17.VI.1930, between debris of coral, pool in tidal zone (1 spec. ? juv.). BONAIRE, Kralendijk, 17.V.1930, tidal zone (1 spec.). De Hoop, 30.X.1930, between sandy debris, 1 m (1 spec.); the same, 11.XI.1930 (2 spec.). TORTUGA, Southwest coast, 1.VIII.1936, between sandy debris, 0.5 m (1 spec.).

Ophionereis reticulata (Say)

ARUBA, Reef of Boekoeti, 25.VI.1930, between dead coral, tidal zone, 1 m (3 spec.). CURAÇAO, Boca Porto Marie, 17.IV.1930, between dead coral (1 spec.). ST. MARTIN, East of Philipsburg, 17.III.1937, between stones, 0.5 m (6 spec.).

Ophiocoma echinata (Lam.)

ARUBA, Punta Braboe and Lagoon of Boekoeti, 18.VI.1930, tidal zone, 1 m (22 spec.; also common on the Reef of Boekoeti). CURAÇAO, St. Kruis Baai, 24.IV.1930, in rock pools (4 spec.). Boca Grandi,

Savonet, 2.V.1930 (2 spec. juv.), BONAIRE, Kralendijk, 11.V.1930, between stones with algae, 0-1 m (10 spec.; design of disk and arms variable, often grey on dark ground in life; the animals show autotomy); the same, 14.V.1930, in rock pools (2 spec.). Lac, 26.X.1930, near the entrance, 3 m (1 spec.). TORTUGA, Southwest coast, 1.VIII.1936, sandy lagoon, 0,5 m (4 spec.). ST. MARTIN, East of Philipsburg, 17.III.1937, in rock pool (1 spec.). ST. KITTS, East of Basseterre, under stones, 19.III.1937, 0,5 m (1 spec.).

Ophiocoma pumila Lütken

ARUBA, Punta Braboe, 17.VI.1930, between *Porites*, 0,5 m (1 spec.; disk green with yellow and grey, arms in life mediodorsally bright green, laterally yellow, banded with dark brown). TORTUGA, Southwest coast, 1.VIII.1936, sandy debris near *Rhizophora*, 0,5 m (1 spec.).

Ophioderma appressum (Say)

ARUBA, Reef of Boekoeti, 25.VI.1930, between coral, tidal zone (6 spec.; with 7-10 armspines). BONAIRE, Kralendijk, 6.XI.1930, between debris, 0,5 m (1 spec.; banded greenish grey in life).

Ophioderma brevicaudum Lütken

ARUBA, Punta Braboe, 18.XII.1936, between sandy debris with algae, 1-2 m (4 spec.). Reef of Boekoeti, 25.VI.1930, between dead coral and *Porites*, tidal zone (5 spec.). CURAÇAO, St. Kruis Baai, 24.IV.1930, from rock pool (1 spec.; many dorsal armplates divided into pieces). BONAIRE, Kralendijk, 13.V.1930, under stone in rock pool (1 spec.; disk dark green with 3 red spots, arms orange-green, brownish banded, — in life). De Hoop, 6.XI.1930, between Zoantharia, 1 m (1 spec.). TORTUGA, Southwest coast, 1.VIII.1936, in sandy lagoon, 0,5 m (1 spec.).

Ophioderma brevispinum (Say)

ARUBA, Punta Braboe, 18.VI.1930, between *Porites*, 0-1 m (10 spec.). Lagoon of Boekoeti, 18.VI.1930, under stones with *Halimeda*, 1 m (2 spec.).

Ophioderma cinereum Müller et Troschel

ARUBA, Reef of Boekoeti, 25.VI.1930, between *Porites* and other corals, pool in tidal zone (1 spec.; diam. of disk 28 mm, length of arms less than 4 times as much, radial shields naked, up to 10 armspines).

Ophiolepis paucispina (Say)

ARUBA, Punta Braboe, 17.VI.1930, between dead coral, 0,5 m (1 spec.).

Echinoida

Eucidaris tribuloides (Lam.)

ARUBA, Punta Braboe, 25.VI.1930, near low cliff of limestone, 1 m (3 spec.). LA GOAJIRA (Colombia), Northeast of Rio Hacha, 20.I.1937 (1 spec.).

Centrechinus antillarum (Philippi)

ARUBA, Punta Braboe, 25.VI.1930, 1 m (1 spec.). CURAÇAO, Boca Grandi, Savonet, 28.IV.1930 (1 spec.). BONAIRE, Lac, 5.X.1930, near the reef, 1 m (1 spec.).

Lytechinus variegatus (Leske)

KLEIN BONAIRE, East coast, 8.XI.1930, between coral, 1 m (1 spec.). MARGARITA, Punta Mosquito, Porlamar, 4.VI.1936, rocky shore, 1 m (1 spec.). LA GOAJIRA, Río Hacha, 20.I.1937 (4 spec.). JAMAICA, Kingston Harbour, 23.III.1926 (1 spec.).

Tripneustes esculentus (Leske)

ARUBA, Reef of Boekoeti, 25.VI.1930, between dead coral, 0,5 m (1 spec.). CURAÇAO, Boca Grandi, Savonet, 28.IV.1930, in rock pool (3 spec.). BONAIRE, Kralendijk, 3.IX.1930, between algae on coral rock, 1 m, Pasanggrahan (1 spec.). Lac, 9.X.1930, on sandy bottom behind the reef, 1,5 m (1 spec.; diam. 14 cm). Boca Washikemba, 16.V.1930 (1 spec.). Lagoen, 28.X.1930 (3 spec.). KLEIN BONAIRE, East coast, 10.IX.1930, on sandy debris of coral, 0,5 m (1 spec.).

Echinometra lucunter (Linn.)

ARUBA, Punta Braboe, 25.VI.1930, near low cliff of limestone, 1 m (6 spec.). Lagoen of Boekoeti, 18.VI.1930 (2 spec.). BONAIRE, Kralendijk, 20.X.1930, between coral rock, Pasanggrahan, 0-1 m (6 spec.). Boca Washikemba, 16.V.1930 (2 spec.). Plaja Grandi, North coast, 23.X.1930 (1 spec.). KLEIN BONAIRE, South coast, 8.VI.1930, on debris, 1 m. CUBA, 1933 (3 spec.; H. J. MacGILLAVRY coll.).

Echinometra viridis A. Agass.

CURAÇAO, St. Kruis Baai, 24.IV.1930, in rock pool (2 spec.). Boca Grandi, Savonet, 28.IV.1930, in rock pool (1 spec.). BONAIRE, Kralendijk, 3.IX.1930, 0-1 m, Pasanggrahan (12 spec.); the same, 19.IX.1930 (2 spec.). Kralendijk, 13.V.1930, between coral rock, 0,5 m (1 spec.). TORTUGA, Southwest coast, 1.VIII.1936 (3 spec.). ST. MARTIN, East of Philipsburg, 17.III.1937, between stones in rock pool (2 spec.).

It is not easy to see the difference between *E. lucunter* and *E. viridis*. I have relied on the only character which seems to be rather positive: the number of pore pairs in the arcs, 5 in this species and 6 or 7 in *E. lucunter*.

Mellita quinquiesperforata (Leske)

MARGARITA, Boca del Pozo, Macanao, 20.V.1936, on sandy shore (1 spec.).

Echinoneus cyclostomus Leske

ARUBA, Reef of Boekoeti, 25.VI.1930, pool between dead coral (1 spec.). BONAIRE, de Hoop, 30.X.1930, between debris, 1 m (1 spec.).

Holothurioidea

Holothuria impatiens (Forskål)

CURAÇAO, Boca Grandi, 1.V.1930 (1 spec.; dark violet with whitish spots in life). BONAIRE, Lac, 26.X.1930, 5 m (1 spec.). ST. MARTIN, East of Philipsburg, 17.III.1937, in rock pool (5 spec.).

Holothuria arenicola Semper

CURAÇAO, Caracas Baai, 3.V.1920, under stones (2 spec.; C. J. VAN DER HORST coll.). Spaansche Water, IV.1920, from *Porites furcata* (1 spec.; C. J. VAN DER HORST coll.). These are the animals mentioned as *H. vagabunda* by Miss TEN BROEKE 1927 p. 164.

Holothuria parvula (Selenka)

ST. MARTIN, East of Philipsburg, 17.III.1937, between stones in rock pool (1 spec.).

Holothuria glaberrima Selenka

ARUBA, Punta Braboe, 18.VI.1930, between dead coral, 0,5 m (1 spec.). Boca Prins, 28.VI.1930, in rock pool (1 spec.).

Holothuria surinamensis Ludwig

ARUBA, Punta Braboe, 18.VI.1930, between coral, 0,5 m (2 spec.). CURAÇAO, Spaansche Haven, 20.V.1920 (1 spec.; C. J. VAN DER HORST coll. — This animal was mentioned as *H. languens* by Miss TEN BROEKE 1927 p. 164.).

Holothuria floridana Pourtalès

ARUBA, Punta Braboe, 18.VI.1930, between *Porites* and dead coral, 0-1 m (12 spec.). Lagoon of Boekoeti, 20.XII.1936, 1 m (2 spec.). Reef of Boekoeti, 25.VI.1930, in pool between dead coral (1 spec.).

Holothuria mexicana Ludwig

CURAÇAO, Spaansche water, 3 and 26.IV.1920 (16 spec.; C. J. VAN DER HORST coll. — These specimens were named *H. atra* by Miss TEN BROEKE 1927 p. 164.) BONAIRE, Lac, 26.X.1930, in lagoon with *Thalassia*, 1 m, very common (1 spec.). According to collector also common in lagoon on AVE DE BARLOVENTO (Venez. isl.).

Stichopus badiotus Selenka

CURAÇAO, St. Kruis Baai, 24.IV.1930, in rock pool (1 spec.; brown with dark brown papillae in life; parted with the margins of the foot and with some papillae when captured, throwing out much mucus; 2 spec. juv.). BONAIRE, Kralendijk, 26.X.1930, between algae on coral rock, 0,5 m (1 spec. juv.).

Thyone surinamensis Semper

LA GOAJIRA (Colombia), Northeast of Rio Hacha, 20.I.1937, on sandy shore (1 spec.).

Pentacta pygmaea (Théel)

MARGARITA, Punta Mosquito, 4.VI.1936, on rocky shore, 1,5 m (1 spec.).

Chiridota rotifera (Pourtalès)

CURAÇAO, St. Kruis Baai, 24.IV.1930, in rock pools (31 spec.). BONAIRE, Kralendijk, 5.IX.1930, between algae on coral rock, 0,5 m (1 spec.). De Hoop, 16.V.1930, between dead coral, 1 m (1 spec.). Plaja Flambaai, Zuidpunt, 7.VI.1930, between algae on rocky shore (1 spec.).

LITERATURE

- BROEKE, ADA TEN, 1927. Holothuroidea, Bijdr. Fauna Curaçao. Bijdragen tot de Dierkunde, Amsterdam, XXV p. 164.
- CLARK, A. H., 1922. The Ophiurans of the Island of Curaçao. Bijdr. Dierk., Amsterdam, XXII p. 209.
- CLARK, H. L., 1919. The distribution of the littoral Echinoderms of the West-Indies, Papers Dept. Marine Biol. Carnegie Inst. Washington 13 p. 51.
- 1921. The Echinoderm Fauna of Torres Strait, its Composition and its Origin. Papers Dept. Marine Biol. Carn. Inst. Washington 10.
- 1925. A Catalogue of the recent Sea-Urchins (Echinoidea) in the Collection of the British Museum (Nat. Hist.).
- 1933. A Handbook of the Littoral Echinoderms of Porto Rico and the other West-Indian Islands. N. Y. Acad. Sc., Scient. Survey Porto Rico, etc. XVI 1.
- DEICHMANN, E., 1930. The Holothurians of the Western Part of the Atlantic Ocean; Bull. Mus. Comp. Zool. Harvard LXXI 3.
- DÖDERLEIN, L., 1917. Die Gattung *Astropecten* und ihre Stammesgeschichte. Siboga-Monogr. 46a.
- 1920. Die Gattung *Luidia* und ihre Stammesgeschichte. Siboga-Monogr. 46b.
- 1936. Die Unterfamilie *Oreasterinae*. Siboga-Monogr. 46c.
- ENGEL, H., 1927. Echinoidea, Bijdr. Fauna Curaçao. Bijdr. Dierk., Amsterdam, XXV p. 163.
- HORST, C. J. VAN DER, 1924. Narrative of the Voyage and short Description of Localities. Bijdr. Fauna Curaçao. Bijdr. Dierk., Amsterdam, XXIII p. 1.
- 1927. Asteroidea, Bijdr. Fauna Curaçao. Bijdr. Dierk., Amsterdam, XXV p. 163.
- HUMMELINCK, P. WAGENAAR, 1933. Reisebericht, Zool. Ergebn. Bonaire I. Zool. Jahrb. (Syst.) 64 p. 289.
- KOEHLER, R., 1914. A Contribution to the Study of Ophiurans of the United States National Museum. Smiths. Inst. U.S. Nat. Mus. Bull. 84.
- VERRILL, A. E., 1915. Report on the Starfishes of the West-Indies, Florida and Brazil. Bull. Lab. Nat. Hist. VII 1; Bull. State Univ. Iowa N.S. 92.