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CARIBBEAN LAND MOLLUSCS:
SUBULINIDAE AND OLEACINIDAE

by

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(Chicago Natural History Museum)

This publication represents a continuation of a previous article on the Caribbean Vertiginidae (this series, Vol. X, 1960, No. 41), and it will follow the same arrangement as the former. This will not only add to the uniformity of the series, it will, furthermore, make it simpler to compile individual faunal lists from any locality situated within the region treated here. Yet another continuation will follow this article, in which some smaller families with their representatives in the Caribbean region will be listed.

The photographs (Plates X E and XI I excepted) were again taken by Dr. P. WAGENAAR HUMMELINCK, with the technical assistance of Mr. H. VAN KOOTEN, at the Zoological Laboratory of the State University, Utrecht.

The greater part of the material has been presented to the Rijksmuseum van Natuurlijke Historie, Leiden, and the Zoölogisch Museum at Amsterdam.

SUBULINIDAE

Subulina octona (Bruguière)

Plate VIII

PILSBRY, 1906, p. 72-74, pl. 12 figs. 8-9. BAKER, 1927, p. 2. HUMMELINCK, 1940, p. 97 (Margarita, Testigos, mainland); 1940a, p. 116; 1940b, p. 353-354. RICHARDS & HUMMELINCK, 1940, p. 10 (Margarita).

NEW PROVIDENCE (Bahamas): Pine Barrens, sta. 492, 22.VIII.1949. Near Hunt's Cave, 493, 22.VIII.1949.

ST. THOMAS (Virgin Islands): Magens Bay, sta. 623, 20.VI.1955.

ST. JOHN: Chocolate Hole, sta. 618A, 19.VI.1955; Catherineberg, 619, 19.VI.1955; Catherineberg, 620, 19.VI.1955.

ST. CROIX: Upper Bethlehem, hill, sta. 612, 14.VI.1955; Agric. Exp. Sta., 613.

13.VI.1955; Fredensborg hill, 615, 11.VI.1955; Canaan, valley, 616, 10.VI.1955; Canaan, garden, gut, 617, 22.VI.1955; western part of St. Croix, 20.X.1955 (G. A. Seaman coll.).

ST. MARTIN: Colombier Valley, sta. 466, 20.V.1949; Cul de Sac, Agr. Exp. Sta., St. Peter, 467, 24.V.1949; 467a, 29.VI.1955; St. Peter, 468a, 29.VI.1955; Cul de Sac bridge, 469, 24.V.1949; Meschrine Hill, base, 473, 27.V.1949; Devils Hole cave, sinkhole, 474A, 26.VII.1955; SE shore of Great Saltpond, 19.V.1949. ST. BARTHÉLEMY: Gustavia town yard, sta. 449, 5.VI.1949; S of Public, 451, 4. VI.1949.

SABA: Road to Bottom, sta. 298A, 19.VII.1949; Kate's Hill, 441, 25.VII.1949; Booby Hill, 442, 25.VII.1949; Great Hill, 444, 19.VII.1949.

ST. EUSTATIUS: Toby Gut, sta. 423, 14.VII.1949; Big Gut, 424, 6.VII.1949; Quill above White Wall, 426, 6.VII.1949; in Quill, 427, 12.VII.1949; Quill, De Kant, 429, 12.VII.1949; Quill above Glass Bottle, 430, 12.VII.1949.

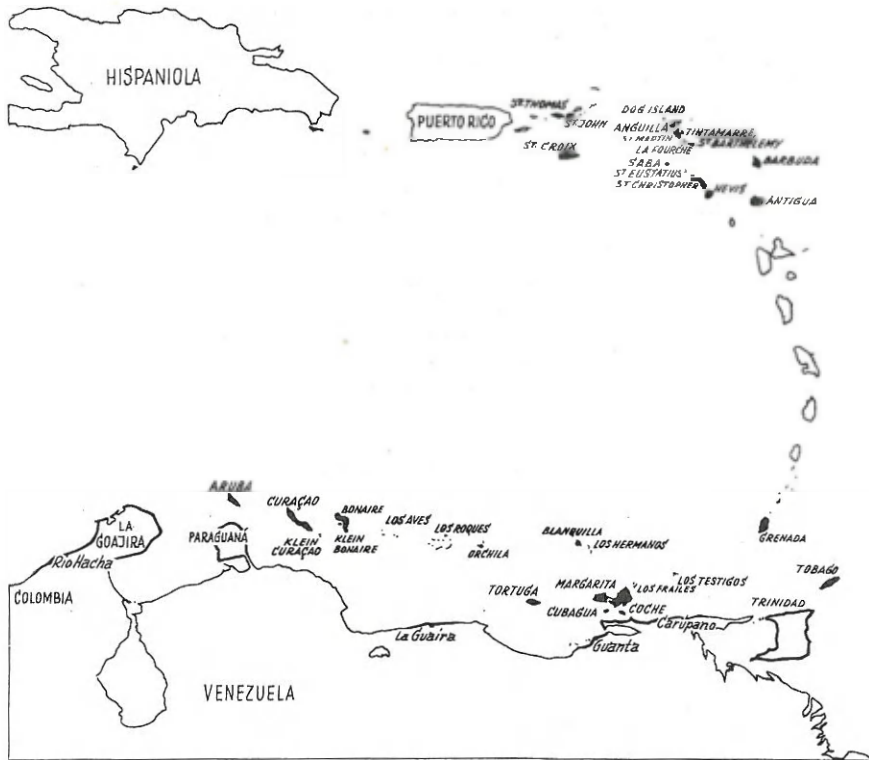


Fig. 53. The localities of the LESSER ANTILLES and the adjacent mainland coast where material of *Subulinidae* and *Oleacinidae* — dealt with in the present paper — has been collected.

ST. CHRISTOPHER (St. Kitts): Wingfield River, sta. 420, 30.VI.1949; Brimstone Hill, top, 421, 30.VI.1949; Brimstone Hill, base, 422, 30.VI.1949; Timothy Hill at Frigate Bay, 604, 20.VII.1955.

NEVIS: Jessops Village, sta. 414, 28.VI.1949; Nelson's Spring, 28.VI.1949; Jones' River, 416, 28.VI.1949.

ANTIGUA: Near cave, E of Nelson's Dockyard, sta. 591, 13.VII.1955; Parham Hill, 593, 14.VII.1955; Friars Hill, 594, 16.VII.1955; Yepton Mill, 595, 595A, 17.VII.1955.

TOBAGO: Store Bay, sta. 581, 17.I.1955; S of Airport, 582A, 17.I.1955; Scarborough, yard, 18.I.1955.

TRINIDAD: St. Augustine, sta. 366, 8.VIII.1948; Port-of-Spain, compost, 28.I.1955 (V. Quesnel coll.); *Gasparo Grande*, chimney of cave, 576, 11.I.1955; SW shore, 576A, 11.I.1955; *Monos*, 578, 10.I.1955; *Chacachacare*, 580, 11.I.1955. LOS TESTIGOS: *Tamarindo*, sta. 162, 16.VI.1936.

MARGARITA: La Fuente, near Cerro Guayamuri, sta. 136, 11.V.1936; El Cerrito, E of La Asunción, 138, 27.V.1936; Cerro de Marmoleta, 139, 13.V.1936; El Piache, base, 140, 10.VII.1936; Toma del Valle, 143, 4.VII.1936; hill SW of La Asunción, 145, 3.VII.1936. — Atamo, XII.1943; Cerritos, XII.1948; Cerros de Copey, I.1949 (all G. Marcuzzi coll.).

BLANQUILLA: North of Valuchu, sta. 171, 21.VII.1936.

VENEZUELA, MAINLAND: Cabo Blanco, sta. 121A, 10.VIII.1948; near La Guaira, quebrada Los Angelitos, 301, 10.VIII.1948.

SURINAME (Dutch Guiana): Republiek, decaying wood, sta. 563, 3.IX.1955; Kabel, railroad, 564, 31.VIII.1955.

Also mentioned by HUMMELINCK (1940) from several other localities on Margarita and the adjacent Venezuelan mainland.

As was to be expected, this species, which is of worldwide distribution in warm countries, lives on practically all the West Indian islands, and it will doubtless also be found in favorable localities on Curaçao, Aruba, Bonaire, Barbuda, and other islands.

***Subulina striatella* (Rang)**

PILSBRY, 1906, p. 75-78, pl. 11 figs. 89-92. HUMMELINCK, 1940, p. 97 (Margarita); 1940a, p. 116. RICHARDS & HUMMELINCK, 1940, p. 10 (Margarita).

While PILSBRY knows this African species only from the islands in the Gulf of Guinea, HUMMELINCK and RICHARDS & HUMMELINCK list it from Margarita Island from three different localities. HUMMELINCK (1940, p. 97) writes "The specimens perfectly agree with the description and figures of *S. striatella* from Middle West Africa; they are probably closely related or, possibly, identical with *Subulina parana* PILSBRY, 1906, p. 225, which has been described from young specimens from Brasil." I was unable, however, to find it in my material from Margarita Island or from the neighbouring islands and the mainland.

***Leptinaria (Leptinaria) lamellata* (Potiez & Michaud) Plate VII**

PILSBRY, 1907, p. 288-291, pl. 42 figs. 39-40, pl. 43 fig. 50. HUMMELINCK, 1940, p. 97 (Margarita); 1940a, p. 116. RICHARDS & HUMMELINCK, 1940, p. 10 (Margarita).

ST. CROIX (Virgin Islands): Canaan, gut, sta. 617, 22.V.1955. Virgin Is., 1950 (G. A. Seaman coll.).

ANTIGUA: Parham Hill, sta. 593, 14.VII.1955.

TOBAGO: South of Airport, sta. 582A, 17.I.1955; Scarborough, yard, 17.I.1955; *Little Tobago*, 584, 18.I.1955.

TRINIDAD: St. Augustine, I.C.T.A., sta. 575, 575A, 31.I.1955; *Gasparo Grande*, chimney of cave, 576, 11.I.1955; *Monos*, cocos decay, 577, 10.I.1955; *Monos*, underbrush, 578, 10.I.1955.

VENEZUELA, MAINLAND: Caracas, garden, sta. 550, 19.III.1955; San Juan de los Morros (Sergio Arias coll.).

***Leptinaria (Leptinaria) lamellata* var. *concentrica* (Reeve)** Plate VII

PILSBRY, 1907, p. 290-291, pl. 46 figs. 1-4.

TRINIDAD: Aripo cave, 800 m, sta. 573, 30.I.1955; St. Augustine, I.C.T.A., 575, 31.I.1955.

It remains to be decided whether this race or variety of the widespread *L. lamellata* should not be considered as a good species on its own. The specimens figured by PILSBRY seem to suggest intermediate forms between the rather obese nominate form and the slender 'variety'; my specimens, however, are all equally slender.

***Leptinaria (Leptinaria) pallida* (C. B. Adams)**

PILSBRY, 1907, p. 294-295, pl. 43 figs. 44-47.

NEW PROVIDENCE (Bahamas): Near Hunt's Cave, Pine Barrens, sta. 493, 22.VIII.1949.

This species is only known from Jamaica and from Haiti, according to PILSBRY. The two not quite perfect specimens before me from New Providence seem to be identical with it, though complete assurance as to the correctness of this classification cannot be given. In any case, the record from the Bahamas cannot be considered a case of endemism, but of importation by some means or other.

***Leptinaria (Luntia) insignis* (E. A. Smith)** Plate XI

Luntia insignis E. A. SMITH, 1898, p. 28, fig. 1 (Trinidad); PILSBRY, 1906, p. 218-219, pl. 40 fig. 7; HUMMELINCK, 1940, p. 98 (Aruba); 1940a, p. 115-116.

SABA: Road to Bottom, sta. 298A, 19.VII.1949.

Described from Trinidad by SMITH, and mentioned from Aruba by HUMMELINCK. Saba is the third known locality of this species. It was only figured once, and badly at that; PILSBRY's figure being a copy of the one originally given by E. A. SMITH.

In a general way, *Luntia*, which I consider with THIELE as a subgenus of *Leptinaria*, resembles the genus *Ravenia* Crosse in many respects, except in the shape of the columella, which is entire in *Ravenia* and obliquely truncate in *Luntia*.

Leptinaria (Neosubulina) gloynii (Gibbons) Plate IX

PILSBRY, 1907, p. 322-323, pl. 47 figs. 18-19. — *Neosubulina gloynii*, BAKER, 1924, p. 88; HUMMELINCK, 1940, p. 97 (Curaçao, Aruba, Bonaire; Curaçao material only!); 1940a, p. 116 (same).

ST. MARTIN: Rambeau Valley (French Saint-Martin), 20.V.1949.

CURAÇAO: St. Jorisbaai, on beach, sta. 558, 20.II.1955; Tafelberg, Santa Barbara, 205a, 13.IV.1949; 206, 4.IX.1936; 327, 14.VIII.1948; 328, 10.IV.1949; 329, 29.X.1948; 330, 8.XII.1948; Seroe Christoffel, 234c, 11.II.1949; 235A, 23.XII.1948; Seroe Gracia, 349, 17.VIII.1948; Seroe Batata, 349A, 23.XII.1949; Rooi Beroe, 357, 23.XII.1948; Seroe Baha Sô, 353, 16.II.1949; Spaanse Put near Playa Frankie, 560, 27.II.1955; Martha Koosje, Midden Curaçao, 345, 24.VIII.1948; Kleine Berg, 343, 24.VIII.1949; W of Tanki Monpos, Hato, 28.XI.1948; St. Thomas College, 1949 (Fr. M. Arnoldo Broeders coll.).

HUMMELINCK (1940) mentions this species from 23 Curaçao localities, from 6 localities on Aruba and 5 on Bonaire. The latter two islands are not represented among the material of this species studied by me. I can record it, however, from St. Martin, where it had not been known to occur before.

It seems impossible to me to separate the var. *minuscula* Pilsbry from typical *gloynii*.

HUMMELINCK writes (p. 97): "*N. harterti* must be considered identical with *N. gloynii*; also *N. scopulorum*, from Aruba, is probably not specifically separable." Since he considers the species *harterti* (E. A. Smith) and *scopulorum* H. B. Baker as synonyms of *gloynii*, the records of the last-named species from the islands of Bonaire and Aruba refer to the two before-mentioned species, treated here as separate though closely related species, and not to *Leptinaria (Neosubulina) gloynii* (Gibbons).

Leptinaria (Neosubulina) harterti (E. A. Smith) Plate IX

PILSBRY, 1907, p. 323-324, pl. 47, fig. 17. — *Neosubulina harterti*, BAKER, 1924, p. 86-87. *Neosubulina gloynii*, HUMMELINCK, 1940, p. 97 (Bonaire material only!); 1940a, p. 116 (same).

BONAIRE: S of Fontein, sta. 190B, 11.IX.1948; Hofje Fontein, 193A, 11.IX.1948; E Boca Onima, 312, 19.IX.1948; Pos Dominica, S of Rincón, 313, 5.IX.1948; SW shore of Goto, 315, 22.II.1949; E shore of Goto, at Riscado, 2.IX.1949. KLEIN BONAIRE: SE part, sta. 319, 1.IX.1949.

CURAÇAO: St. Jorisbaai, NW beach, east ashore, 20.II.1955.

The species has not previously been mentioned from Klein Bonaire, or from Curaçao. Nevertheless, it seems to be restricted to Bonaire and Klein Bonaire.

Leptinaria (Neosubulina) scopulorum (H. B. Baker) Plate IX

Neosubulina scopulorum H. B. BAKER, 1924, p. 89-90, pl. 16 fig. 63. *Neosubulina gloynii*, HUMMELINCK, 1940, p. 97 (Aruba material only!); 1940a, p. 116 (same).

ARUBA: Hooiberg, sta. 268B, 5.XII.1936; Rooi Prins, 246a, 26.VIII.1949.

This species seems to be restricted to the island of Aruba.

Cryptelasmus canteroianus cienfuegoensis Pilsbry Plate XI

Cryptelasmus canteroiana (Pfeiffer) var. *cienfuegoensis* PILSBRY, 1907, p. 332-333, pl. 48 figs. 3, 6, 8-9.

SABA: Great Hill, near Paris, sta. 444, 19.VII.1949.

CURACAO: Bullen Baai, sta. 341, 22.X.1948.

These are the first records of this subspecies and, in fact, of any representative of the genus *Cryptelasmus* outside of Cuba.

Opeas pumilum (Pfeiffer) Plate XI

Opeas goodalli PILSBRY, 1906, p. 200-203, pl. 28 figs. 72-74.

ST. MARTIN: Near pond of Point Blanche, sta. 459, 17.V.1949; Old Battery, E of Philipsburg, 461, 18.V.1949; Colombier Valley, French Saint-Martin, 466, 20.V.1949.

ST. EUSTATIUS: In The Quill, sta. 427, 12.VII.1949.

CURACAO: Hato, Hofje, sta. 216, 13.X.1936; Santa Barbara, Hofje, 327, 14.VIII.1948; near Bron San Pedro, 22.X.1936.

This is a species widely distributed over the Greater and Lesser Antilles alike; it occurs also on the neighbouring mainland of South America, spreading as far south as Argentina. Often introduced into foreign countries with hothouse plants.

Opeas octogyrum plicatellum (Guppy) Plate XI

Opeas octogyrum (Pfeiffer) var. *plicatellum* (Guppy), PILSBRY, 1906, p. 207, pl. 29 fig. 75.

ST. CROIX: Fredensborg, N of Airport, sta. 615, 11.VI.1955; Canaan, garden, 617, 22.V.1955.

SABA: Great Hill, near Paris, sta. 444, 19.VII.1949.

ST. CHRISTOPHER: Brimstone Hill, SE cliff, sta. 605, 21.VII.1955.

BARBUDA: N of Codrington Village, sta. 602, 11.VII.1955.

ANTIGUA: Near Vernon's Pond, 14.VII.1955.

TOBAGO: S of Airport, sta. 282, 17.I.1955; *Little Tobago*, 584, 18.I.1955.

TRINIDAD: St. Augustine, I.C.T.A. cocoa plot, sta. 575A, 31.I.1955; *Gasparo Grande*, cave entrance, 576, 11.I.1955; *Monos*, 578, 15.I.1955.

Hitherto, this variety or local race had been reported only from Trinidad Id., which was GUPPY's typical locality, and from the islands of Grenada, St. Vincent, and Sta. Lucia.

Diaopeas beckianum (Pfeiffer) Plate X

Opeas beckianum, PILSBRY, 1906, p. 189-192, pl. 27 figs. 42-46, 54-55. — *Synopeas beckianum*, HUMMELINCK, 1940, p. 97 (Margarita, Testigos, Blanquilla, mainland); 1940a, p. 116-117; 1940b, p. 353-354; RICHARDS & HUMMELINCK, 1940, p. 9-10 (Margarita).

This species is the type of the genus *Synopeas* Jousseaume, 1889. As BEQUARRT (1957, p. 216) has recently shown, this name is preoccupied by *Synopeas* Forster, 1856 (Hymenoptera), so that a new name had to be bestowed upon *beckianum* and allies. I recommend here that the genus in question be henceforth called *Diaopeas*, nov. nomen.

SABA: Road to Bottom, sta. 298A, 19.VII.1949; Booby Hill, 442, 25.VII.1949.
 St. CHRISTOPHER: La Guérite, sta. 419, 2.VII.1949.
 NEVIS: Near Jessops Village, sta. 414, 28.VI.1949.
 ANTIGUA: Parham Hill, sta. 593, 14.VII.1955; Yepton Mill, 595, 17.VII.1955.
 TRINIDAD: St. Augustine, I.C.T.A., sta. 365, 8.VIII.1948; Tamana quarry, 568, 9.I.1955; chimney of Tamana bat cave, 569A, 9.I.1955; I.C.T.A., banana exp. plot, 575, 31.I.1955; Gasparo Grande, cave, 576, 11.I.1955; Monos, 577, 578, 10.I.1955; Chacachacare, 579, 11.I.1955.
 MARGARITA: Near El Cerrito, E of La Asunción, sta. 138, 27.V.1936; El Piache, base, SE of El Valle, 140, 10.VII.1936; El Piache, Cueva Honda, 141, 10.VII.1936; Atamo, XII.1948 (G. Marcuzzi coll.).
 VENEZUELA, MAINLAND: Cabo Blanco, sta. 121A, 10.VIII.1948; Quebrada Los Angelitos, near La Guaira, 301, 301A, 10.VIII.1948; Caracas, garden at El Paraíso, 550, 19.III.1955; Caracas, V.1950 (G. Marcuzzi coll.); Chazuararnos, on Agave, 3.VIII.1950 (G. Marcuzzi coll.); San Juan de los Morros, II.1952 (Ottolina coll., Sergio Arias coll.); El Indio, N of Barquisimeto, I.1950 (J. Racenis leg.).
 SURINAME: Republiek, sta. 563, 3.IX.1955.

Mentioned by HUMMELINCK from Margarita (10 localities), Los Testigos, Blanquilla, and from the mainland of Venezuela (near Guanta, Carúpano, on the Paraguaná peninsula) and of Colombia (La Goajira). This species is widely distributed over Central America, a few of the Antilles, and great parts of South America; some of the Antillean localities listed above are new to science.

Lamellaxis (Allopeas) gracilis (Hutton)

Plate X

Opeas gracile, PILSBRY, 1906, p. 198–200, pl. 28 fig. 70. — *Lamellaxis gracilis*, HUMMELINCK, 1940, p. 96; 1940a, p. 115–116 (Aruba, Curaçao, Bonaire, Margarita); RICHARDS & HUMMELINCK, 1940, p. 9 (Margarita).

St. THOMAS: Magens Bay, sta. 623, 20.VI.1955.
 ANGUILLA: Near Forest Point, sta. 482, 18.VI.1949; near Long Bay, 483, 18.VI.1949; Sandy Ground, 484, 485, 16.VI.1949.
 NEW PROVIDENCE (Bahamas): Hunt's Cave, Pine Barrens, sta. 493, 22.VIII.1949. St. MARTIN: St. Peter, Agr. Exp. Sta., sta. 468a, 29.VI.1955; Cul de Sac bridge, 469, 24.V.1949; Lay Bay, 471, 27.V.1949; top of Meschrine Hill, 472, 27.V.1949; base of Meschrine Hill, 473, 27.V.1949; Devils Hole Cave, 474a, 27.VII.1955; SE shore of Great Saltpond, 19.V.1949; Little Key, 478, 2.VIII.1949.
 LA FOURCHE: Fourche Bay, sta. 453, 2.VI.1949.
 St. BARTHÉLEMY: Gustavia, yard, sta. 449, 5.VI.1949.
 St. EUSTATIUS: Toby Gut, sta. 423, 14.VI.1949.
 St. CHRISTOPHER: Brimstone Hill, top, sta. 421, 30.VI.1949; Brimstone Hill, cliff at base, 422, 30.VI.1949.
 NEVIS: Jessops Village, sta. 414, 28.VI.1949.

BARBUDA: Near Codrington Village, sta. 603, 5.VII.1955; sinkhole of Darby's Cave, 600, 10.VII.1955; Pycrust Well, Highlands, 6.VII.1955.

ANTIGUA: Near Bats Cave, Nelson's Dockyard, sta. 591, 13.VII.1955; Parham Hill, 593, 14.VII.1955; Friars Hill, 594, 16.VII.1955; Yepton Mill, 595, 16.VII.1955.

TOBAGO: Near Store Bay, sta. 581, 17.I.1955; S of Airport, 582A, 17.I.1955.

TRINIDAD: St. Augustine, I.C.T.A., sta. 366, 8.VIII.1948; Port-of-Spain, waterfront, 367, 8.VIII.1948; Tamana Hill, quarry, 568, 9.I.1955; Aripo Cave, 573, 30.I.1955; I.C.T.A., exp. plots, 575, 575A, 31.I.1955; Port-of-Spain, compost, 28.I.1955.

BONAIRE: Hofje Fontein, sta. 193A, 11.IX.1948; Salinja Martinus, flotsam, 27.II.1949.

KLEIN CURAÇAO: East shore, among flotsam, sta. 321, 1.X.1948.

CURAÇAO: Hato, Hofje, sta. 216, 13.X.1936; Hofje Groot St. Joris, 323, 9.IV.1949; Santa Barbara, Hofje, 327, 14.VIII.1948; Hofje Groot Piscadera, 339A, 27.I.1949; San Pedro, 1.XII.1948.

ARUBA: Hofje Fontein, sta. 359, 30.XII.1948.

VENEZUELA, MAINLAND: Quebrada Los Angelitos, near La Guaira, sta. 301, 10.VIII.1948; San Juan de los Morros (Sergio Arias coll.).

A wide-spread species, obviously often artificially introduced; common throughout the West Indies, Central and South America.

Lamellaxis (Allopeas) micron (Orbigny)

Plate VII

Opeas micra, PILSBRY, 1906, p. 193-198, pl. 27 figs. 49, 56-57; BAKER, 1924, p. 108. — *Lamellaxis micra*, HUMMELINCK, 1940, p. 97 (Los Testigos, Margarita, Blanquilla, Curaçao, Aruba, and mainland localities); 1940a, p. 115-116; 1940b, p. 153-154; RICHARDS & HUMMELINCK, 1940, p. 9 (Margarita).

NEW PROVIDENCE (Bahamas): Hunt's Cave, Pine Barrens, sta. 493, 22.VIII.1949.

St. CROIX (Virgin Islands): Upper Bethlehem, sta. 612, 14.VI.1955; Fredensborg, 615, 11.VI.1955; Canaan, gut, 617, 22.V.1955.

ANGUILLA: Forest Point Saltwell, sta. 482, 18.VI.1949; Bedney's Spring, near Long Bay, 483, 18.VI.1949; Sandy Ground, 484, 485, 16.VI.1949.

St. MARTIN: Saltpond of Point Blanche, sta. 459, 17.V.1949; Old Battery, near Philipsburg, 461, 18.V.1949; Experiment, 465, 25.V.1949; Colombier Valley, French Saint-Martin, 466, 20.V.1949; Cul de Sac bridge, 469, 24.V.1949; Cole Bay Hill, 470, 8.VIII.1949; Meschrine Hill, top, 472, 27.V.1949; Devils Hole, 474A, 26.VII.1955; SE shore of Great Saltpond, 19.V.1949; Atwell's Pond, near Philipsburg, 17.V.1949; Little Key, Simson Bay, 478, 2.VII.1949; Great Key, 479, 2.VIII.1949.

St. BARTHÉLEMY: Gustavia, yard, sta. 449, 5.VI.1949; Gustavia, harbour, 450, 1.VI.1949; Public, 451, 4.VI.1949.

SABA: Road to Bottom, sta. 298A, 19.VII.1949; Spring Bay, 434, 28.VII.1949; Booby Hill, 442, 27.VII.1949.

St. EUSTATIUS: E of Oranjestad, sta. 297a, 16.VII.1949; Toby Gut, 423, 14.VII.1949; Big Gut, 424, 6.VII.1949; near top of White Wall, 425, 6.VII.1949; Glass Bottle, 430, 12.VII.1949; Billy Gut, near Oranjestad, 432, 11.VII.1949.

ST. CHRISTOPHER: Morne Hills, sta. 477A, 2.VII.1949; Brimstone Hill, top, 30.VI.1949.

BARBUDA: N of Codrington Village, sta. 602, 11.VII.1955.

ANTIGUA: Near Bats Cave, E of Nelson's Dockyard, sta. 591, 13.VII.1955; Parham Hill, 593, 14.VII.1955; Friars Hill, 594, 16.VII.1955; Yepton Mill, 595, 16.VII.1955.

TOBAGO: Near Store Bay, sta. 581, 17.I.1955; S of Airport, 582A, 17.I.1955.

TRINIDAD: *Monos*, sta. 577, 10.I.1955; *Chacachacare*, 580, 15.I.1955.

BONAIRE: Hofje Fontein, sta. 193A, 11.IX.1948; 26.II.1949.

CURAÇAO: Hofje Groot St. Joris, sta. 323, 9.IV.1949; Hofje Groot Piscadera, 337, 27.I.1949; Hofje Groot St. Martha, 356, 4.XII.1948; Noordkant, 21.VIII.1948; San Pedro, 13.II.1949.

ARUBA: Hofje Fontein, sta. 359, 30.XII.1948.

VENEZUELA, MAINLAND: La Guaira, Quebrada Los Angelitos, sta. 301, 10.VIII.1948.

SURINAME: Republiek, sta. 563, 3.IX.1955.

Recorded also from Los Testigos Islands, Margarita and a few localities on the adjacent Venezuelan and Colombian mainland, by HUMMELINCK. A species with a very great range of distribution in South America and the Antilles; imported into many other parts of the world.

OLEACINIDAE

Oleacina (Laevoleacina) solidula (Pfeiffer)

Plate X

PILSBRY, 1907, p. 140-141, pl. 33 fig. 3-4.

NEW PROVIDENCE (Bahamas): Pine Barrens near Hunt's Cave, sta. 493, 22.VII.1949.

SOUTH BIMINI: At northern lagoon, sta. 497, 20.VIII.1949; Fountain of Youth, 498, 20.VIII.1949.

Pichardiella gracillima gracillima (Pfeiffer)

Plate XI

PILSBRY, 1907, p. 55-57, pl. 14 fig. 26, 29-30.

NEW PROVIDENCE: Pine Barrens, N of Carmichael Road, sta. 492, 22.VIII.1949; Pine Barrens near Hunt's Cave, 493, 22.VIII.1949.

Pichardiella gracillima sanctithomensis (Pilsbry)

Plate XI

PILSBRY, 1907, p. 57, pl. 14 fig. 32.

ANGUILLA: Bedney's Spring, near Long Bay, sta. 483, 18.VI.1949 (3 spec.); N of Sandy Ground, 485, 16.VI.1949 (3 spec.).

ST. MARTIN: W. shore of Great Bay, among decaying Halodule, sta. 462, 24.VI. 1949 (4 spec.).

SABA: Road to Bottom, sta. 298B, 19.VII.1949 (1 spec.).

These are the first records of this subspecies outside of St. Thomas Island.

'*Ravenia blandi* Crosse'

Plate X

Ravenia blandi CROSSE, 1874, p. 66-70, pl. 2 fig. 4. — *Spiraxis* (*Ravenia*) *blandi*, PILSBRY, 1907, p. 19-20. — *Spiraxis blandi*, HUMMELINCK, 1940, p. 98; 1940a, p. 116-117; 1940b, p. 354.

This species was found on an island of the Los Roques Group and was described by CROSSE, from a single specimen, in 1874. Since then it has never been reported again, either from the original locality or from any additional one.

It was PILSBRY who, in 1907, tentatively classified this insufficiently known species in the genus *Spiraxis*, stressing the fact that, if this arrangement was correct, the species *blandi* would be the only South American representative of the genus *Spiraxis*.

Strongly aware of the unlikeliness that *blandi* is a *Spiraxis*, as suggested by PILSBRY, HUMMELINCK tried to arrange the species in question with truly South American genera: "A curious record; this locality looks like a most unsuitable habitat for *Spiraxis*. A strong similarity to *Pseudosubulina decussata* H. B. Baker from the state of Táchira should be noted." Thus he hinted that *blandi* might represent an adult specimen of *Pseudosubulina* (*Rectaxis*) *decussata* H. B. Baker, 1926. If this were correct, it would mean that the unarmed and sharp-lipped aperture of *decussata* as described and figured by H. B. BAKER, would possess in adult specimens a reflexed, tooth-bearing outer margin; a feature unknown in any *Pseudosubulina*!

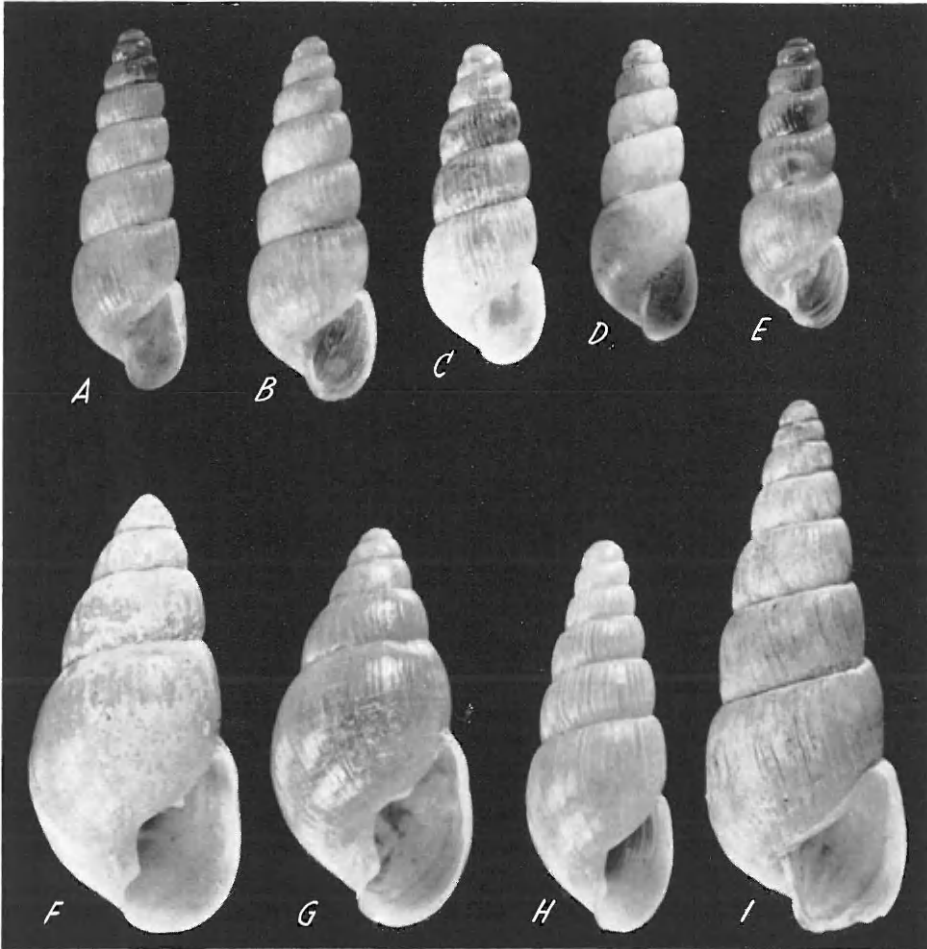
However, there are additional points that make HUMMELINCK's suggestion rather improbable. The type specimen of *Ravenia blandi* is kept at the National Museum of Natural History at Paris, and Dr. A. FRANC, the subdirector of said museum, with the helpfulness familiar to everybody who has the good fortune to deal with him, has sent me a camera-lucida drawing of it. This sketch shows that *blandi* is considerably narrower than the original figure of 1874 suggests and that its whorls are noticeably flatter than shown there. *Pseudosubulina decussata*, however, is broader and has rounder whorls than *blandi*; it also shows fewer riblets on the ultimate whorl than *blandi*, which has 40 of them.

Under these circumstances I believe it wisest to retain the species in question in its original genus *Ravenia* and to classify this, tentatively, with the Oleacinidae.

The identity of *Ravenia* with *Luntia* (genus listed among the Subulinidae), which I had suspected, does not exist since *Ravenia* lacks the oblique truncation of the columella found in *Luntia*.

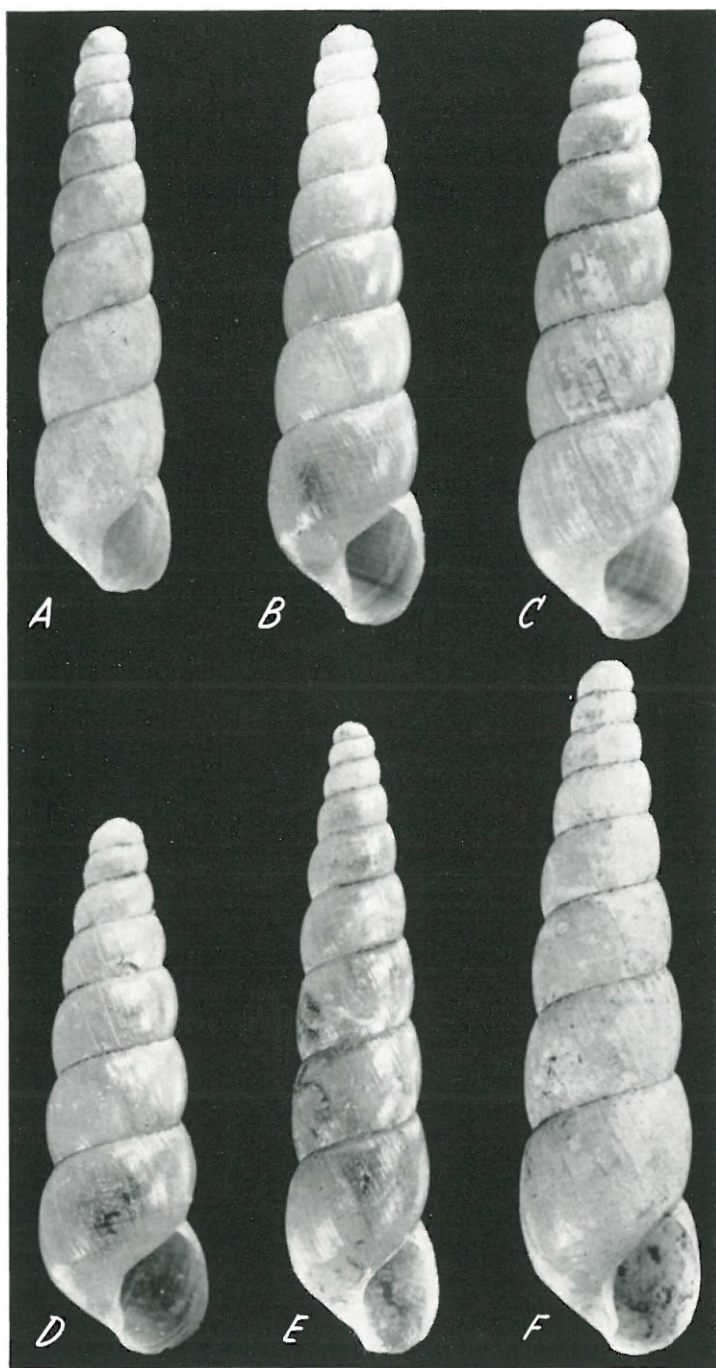
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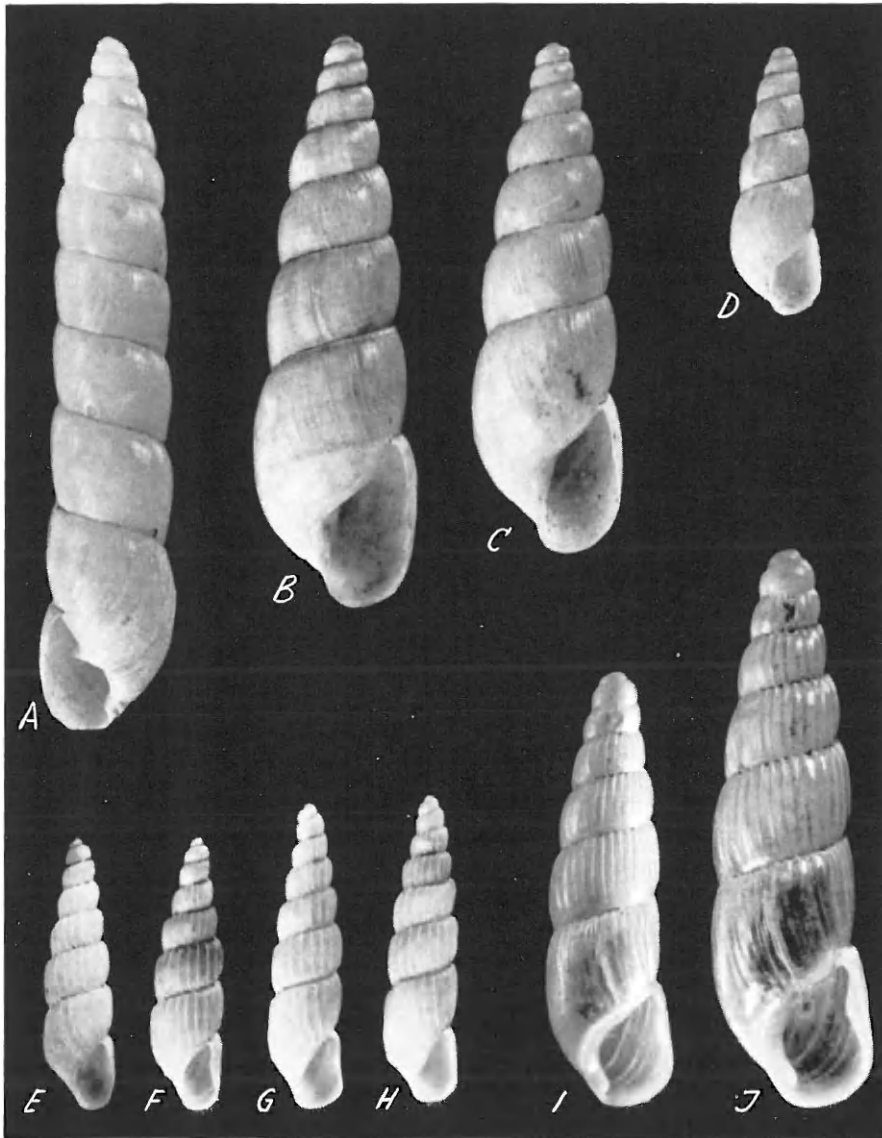


Lamellaxis micron ($\times 6\frac{1}{3}$) — *A*, ANGUILLA, sta. 484. *B*, ST. MARTIN, Great Saltpond.
C, SABA, sta. 298A. *D*, ST. EUSTATIUS, sta. 423. *E*, BONAIRE, sta. 193A.
Leptinaria lamellata ($\times 5$) — *F-G*, TRINIDAD, sta. 575.
Leptinaria lamellata var. *concentrica* ($\times 5$) — *H-I*, TRINIDAD, sta. 573.

PLATE VIII



Subulina octona (A, E-F $\times 4$; B-D $\times 5$) — A, NEW PROVIDENCE, sta. 493. B, ST. JOHN, sta. 619. C, ST. MARTIN, sta. 469. D, SABA, sta. 442. E, TOBAGO, sta. 552A. F, TRINIDAD, Gasparo Grande, sta. 576.



Cryptelasmus canteroianus cienfueguensis ($\times 6$) — A, CURAÇAO, sta. 341.
Opeas octogyrum plicatellum ($\times 6\frac{1}{2}$) — B, ST. CROIX, sta. 615. C, BARBUDA, sta. 602.
Opeas pumilum ($\times 6\frac{1}{2}$) — D, ST. MARTIN, sta. 461.
Pichardiella gracillima gracillima ($\times 6\frac{1}{2}$) — E, NEW PROVIDENCE, sta. 493.
Pichardiella gracillima sanctithomensis ($\times 6\frac{1}{2}$) — F-H, ANGUILLA, sta. 483.
Leptinaria insignis (I $\times 11$; J $\times 12\frac{1}{2}$) — I-J, SABA, sta. 298A (same specimen).

