STERKIANA

NUMBER 60 DECEMBER, 1975

CONTENTS

PAGE

SUSAN FRAKER CARNES — MOLLUSKS FROM SOUTHERN MICHUPTÉ LAGOON, QUINTANA ROO, MEXICO (Continued from STERKIANA 59 1

SPECIES INDEX TO STERKIANA 41-60 41

AUTHOR INDEX TO STERKIANA 51-60 60

NOTICE TO SUBSCRIBERS

RATE CHANGES

Since publication of the first number of STERKIANA in 1958, the price of a single number has been 50¢ prepaid. In the last 13 years, the price of paper has doubled and postage rates have almost tripled. It has become necessary to increase the price of subscriptions as follows:

Yearly subscriptions, 4 numbers paid in advance	$ 2.20
Invoicing charge when required .	1.00
Single back numbers (except No. 50) mailed individually	0.60
Back numbers, in lots of 10 or more, per number, postpaid . .	0.55
Double number (No. 50) mailed individually	1.10

Reprints of articles in STERKIANA are available at the following rates:

One sheet (1 or 2 pages): $1.00 per hundred copies, plus postage. This price does not include collating or special covers.

Authors should note that illustrations requiring commercial plate making must be charged to the author.

Subscribers should note that normally, the last number paid for has a notice of expiry of subscription on the last page. There is no invoicing charge if this notice is sent with remittance for the next four numbers.

Family MELONGENIDAE Gill, 1867
Genus MELONGENA Schumacher, 1817

Melongena corona bispinosa (Philippi, 1844)

References: Petit, 1852:157-159, pl. 8: 3; Pilsbry and Vanatta, 1934: 120-121, pl. 12: 8; Clench and Turner, 1956b: 180-182, pl. 106: 1, 2; Abbott, 1974: 221, pl. 12: 2435.

Description: The largest shell found is juvenile (ht 19.0 mm, diam. 15.5 mm). The somewhat faded, yellow shell bears a yellow-orange band on the shoulder of the body whorl. The protoconch consists of 1½ smooth whorls. There are 4½ postnuclear whorls which are shouldered and sculptured with axial and spiral threads and axial ribs. There are 10 axial ribs at the shoulder of each whorl and in the early whorls, the ribs are blunt, whereas in the last ½ whorl the ribs terminate in blunt, hollow spines. Also on this last ½ whorl, a row of scale-like spines begins to develop midway between the shoulder and the base of the shell. Scales representing former margins of the siphonal canal are developed at the base and similar small scales representing former margins of the anal canal are developed near the suture. The thin outer lip is crenulate. There is a well developed white callus on the parietal region.

Occurrence: One large juvenile specimen was recovered from Inglés Lagoon sediment (depth 70 cm) and a small juvenile specimen was taken from RL sediment of Core 18 (depth 10 cm).

Total number collected: 2.

Distribution: Yucatan.

Family NASSARIIDAE Iredale, 1916
Genus NASSARIUS Duméril, 1806

Nassarius albus (Say, 1826)

References: Dall and Simpson, 1901: 403; Abbott, 1954: 239, pl. 23:r, text fig. 53:a; Abbott, 1958: 75-76; Rice and Kornicker, 1962: 376, pl. 4: 2; Warmke and Abbott, 1962: 118, pl. 21:o; Gould, 1968: 9, fig. 1; Morris, 1973: 205, pl. 54: 19; Abbott, 1974: 224, no. 2458.

Description: The largest shell found (ht 9.5 mm, diam. 6 mm) is immature and has 6½ whorls. The 1½ nuclear whorls are white and sculptured with strong axial ribs (14 on the body whorl) which are crossed by moderately strong, rounded, spiral cords (12 on the body whorl). Parallel to and between the axial ribs are very fine axial lines. The parietal area is not well developed. The outer lip is thin but with a thickened varix behind and numerous denticles within.

Occurrence: Representatives of this species are found in some OL sediments and to a lesser extent in RL and TD sediments.

Total number collected: 15.

Distribution: Southeastern United States, Bermuda, the West Indies, south to Brazil.

Remarks: Specimens were compared with representatives of *N. albus* and *N. vibex* (Say, 1822) collected from beach drift at Naples, Florida, to aid in identification. *Nassarius ambiguus* (Pulteney, 1799) is a synonym.

Superfamily VOLUTACEA Rafinesque, 1815
Family OLIVIDAE Latreille, 1825
Genus OLIVELLA Swainson, 1831

Olivella dealbata (Reeve, 1850)

References: Olsson, 1956: 185-186, pl. 15: 6; Warmke and Abbott, 1962: 122-123, pl. 23: m; Odé, 1969b: 26; Andrews, 1971: 118-119, fig.; Abbott, 1974: 234, no. 2558.

Description: The largest shell found (ht 5.4 mm, diam. 2.2 mm) is immature and has 5 whorls. The smooth shell is glossy white. The suture is deeply channelled. The parietal region is weakly denticulate and the columella has a single basal fold. The outer lip is thin and smooth within.

Occurrence: Representatives of this species are found in OL and TD sediments and in some RL sediments.

Total number collected: 56.

Distribution: North Carolina, Florida, Texas and the West Indies.

Remarks: Identification of specimens was verified by Moore (1974, personal communication).

Olivella minuta (Link, 1807)

References: Olsson, 1956: 190, pl. 9: 1, 2, 12:2; Warmke and Abbott, 1965:123, pl. 23: u; Odé, 1969b: 25; Andrews, 1971: 119; Morris, 1973: 222, pl. 61: 11; Abbott, 1974: 235, pl. 11: 2560.

Description: The largest shell found (ht 7.5 mm, diam. 3.4 mm) is smooth and has 5 whorls. The shell is white with a light brown band along the open, channelled suture and has a faint, zigzag brown pattern on the body whorl. The parietal area is denticulate. The outer lip is thin and smooth. When compared with specimens of *O. dealbata* from Nichupté Lagoon, representatives of *O. minuta* are larger, more ovate, the apex is more acute and the suture is channelled less deeply.

Occurrence: Representatives of this species are found in TD and OL sediments of Core 18 (depth 280 cm).

Total number collected: 11.

Distribution: Southern Texas and the West Indies, south to Brazil.

Family MARGINELLIDAE Fleming, 1828

Petit (1851: 38-59) presents a list of Marginellidae known at that time and includes author, synonyms and locality information. Coan (1965: 184-194) revised the classification of Pacific species. The classification outlined by Abbott (1974: 249-254) is followed here.

Genus MARGINELLA Lamarck, 1799

Marginella eburneola Conrad, 1834

References: Abbott, 1964: 254 text fig. 56: c; Warmke and Abbott, 1962: 127, pl. 23: a; Houbrick, 1968: 17; Morris, 1973:232, pl. 64:2; Abbott, 1974: 249, no. 2720.

Description: The small shell (ht 6 mm, diam. 3 mm) is yellow-tan and glossy. There are 3 whorls in the spire (ht 1.8 mm). The aperture is elongate with a

well developed posterior U-shaped notch. The outer lip is thickened and has 7 denticles within. There are 4 slanting folds on the columella.

Occurrence: Representatives of this species are found in some RL sediments and to a lesser extent, in some OL and TD sediments.

Total number collected: 39.

Distribution: North Carolina, south to the West Indies.

Remarks: *Marginella denticulata* Conrad, 1830, *non* Link, 1807, is a synonym.

Subgenus PRUNUM Herrmannsen, 1852

Marginella apicina Menke, 1828

References: Dall and Simpson, 1901: 393; Abbott, 1954:257, pl. 11:n, text fig. 56: g; Andrews, 1971: 120; Morris, 1973:232, pl. 64:9; Abbott, 1974: 250, pl. 11: 2730.

Description: The small shell (ht 9.5 mm, diam. 7 mm) has 3 whorls, a low spire (ht 0.4 mm) and a large body whorl. The body whorl is cream-colored with 3 wide orange-yellow bands which extend to the outer lip and terminate as darker orange dots. There is also a small orange dot at the basal lip. The nuclear whorl is also orange. The aperture is narrow and extends the length of the body whorl. The outer lip is thickened and notched at the base. There are 4 strong, slanting folds at the base of the columella.

Occurrence: Representatives of this species are found in RL and Inglés Lagoon sediments and to a much lesser extent in OL sediments (depth 0-190 cm).

Total number collected: 30.

Distribution: North Carolina, south to Florida, the Gulf States and the West Indies.

Marginella labiata Kiener, 1841

References: Abbott, 1954:256, pl. 11: 1; Rice and Kornicker, 1965: 125, pl. 6: 8; Abbott, 1974: 250, pl. 11: 2725.

Description: The large, glossy shell (ht 26.5 mm, diam. 18 mm) has 5 whorls, a low spire (ht 1.5 mm) and a large body whorl. The apex is tan and free of callus. The body whorl is tan with 3 darker, subdued purple-brown spiral bands. There is an orange band tracing the exterior of the outer lip and an orange-tinted callus deposit on the shoulder of the body whorl near the outer lip margin. The interior of the outer lip is white and denticulate. The aperture is elongate and narrow (height 15.5 mm, greatest diam. 3 mm). There are 4 strong, slanting folds on the columella.

Juvenile specimens are comparable with specimens of *M. apicina* except that the spire is higher and color banding is different. In contrast to adult specimens of *M. labiata*, the body whorl is grayish with 4 brown spiral bands. Three of the bands on juvenile shells correspond with those on adult shells. The fourth band extends from the second columellar tooth to the base of the aperture. In adult shells, this region is orange and a continuation of the band along the outer lip.

Occurrence: Representatives of this species are found in very small numbers in OL and TD sediments.

Total number collected: 7.

Distribution: Eastern Mexico, from Yucatan to Central America.

Marginella roosevelti Bartsch and Rehder, 1939

References: Bayer, 1943: 114; Abbott, 1954: 256, pl. 11: o; Abbott, 1974: 250, pl. 11: 2724.

Description: The large shell (ht 19 mm, diam. 10 mm) is elongate and tan. All of the specimens are somewhat bleached; however, 2 faint orange spots are visible on the thickened outer lip. The apex is more than half covered with a callus. On the lower third of the columella are 4 strong, slanting teeth. The aperture is elongate and narrow (ht 18 mm, greatest diam. 1 mm). The outer lip is thickened and finely denticulate within.

Occurrence: Representatives of this species are found in very small numbers in some RL and OL sediments.

Total number collected: 6.

Distribution: The West Indies.

Remarks: *M. roosevelti* may be a color form of *M. carnea* (Storer, 1837)(Abbott, 1954: 254, pl. 11: k; Abbott, 1974: 250: pl. 11: 2723). The two species are separated by the larger size and the spots of color on the outer lip of shells of *M. roosevelti*. A comparison of the ratio of height to diameter may also be useful. Shells of *M. roosevelti* and shells from Nichupté Lagoon appear to be more elongate than those representing *M. carnea*.

Subgenus GIBBERULA Swainson, 1840

Marginella lavalleeana d'Orbigny, 1842

References: Abbott, 1954:257-258, fig. 56:m; *Persicula minuta* (Pfeiffer, 1840); Perry and Schwengel, 1955:173, pl. 53: 357; Abbott, 1958: 87; Warmke and Abbott, 1962: 128, pl. 23: d; Houbrick, 1928: 17; Abbott, 1974: 251, no. 2747.

Description: The minute shell (ht 2 mm, diam. 1.2 mm) is smooth, usually glossy-white and sometimes transparent. The spire is very low and obtuse. The aperture is narrow and extends nearly the length of the body whorl. There are 4 teeth on the base of the columella. In transparent specimens, these teeth may be seen to extend into the very early whorls. The outer lip is thickened and weakly denticulate within.

Occurrence: Representatives of this species are found in some RL, OL and TD sediments.

Total number collected: 103.

Distribution: Bermuda, southern Florida and the West Indies.

Remarks: Identification of specimens was verified by Dr. D. R. Moore (personal communication, 1974).

Genus PERSICULA Schumacher, 1817

Persicula fluctuata (C. B. Adams, 1850)

References: Clench and Turner, 1950: 282, pl. 32: 3, *Marginella fluctuata* C. B. Adams; Abbott, 1958: 87, pl. 2: c; Warmke and Abbott, 1962: 128; Abbott, 1974: 252 no. 2749.

Description: The small shell (ht 3.5 mm, diam. 2.2 mm) is ovuliform, glossy and white with thin wavy longitudinal brown lines. The wavy brown lines are darkest at each crest, directed away from the outer lip, and sometimes irregular. The apex is very low and covered with a callus. The outer lip is sharp and bears about 20 fine serrations within. There are 7 folds on the base of the columella. The 2 most anterior folds are largest, the next 4 are

smaller and about equal in size, and the seventh fold is nearly obsolete.

Occurrence: Four specimens were taken from OL sediments of Cores 17 (depth 140 cm), 18 (depth 190 cm) and 111 (depth 205 cm).

Total number collected: 4.

Distribution: The West Indies.

Genus HYALINA Schumacher, 1817
Subgenus VOLVARINA Hinds, 1844

Hyalina avena (Kiener, 1834)

References: Abbott, 1954: 258, pl. 11: p, text fig. 56: i; Rice and Kornicker, 1962: 375, pl. 4: 8; Abbott, 1974: 252, pl. 11: 2757.

Description: The slender shell is small (ht 11.2 mm, diam. 4.6 mm) and a faded cream-color with 4 faint and narrow orange spiral bands. The acute spire is short (ht 1 mm) but prominent. The aperture is elongate and narrow. The white outer lip is thickened, curved and smooth within. There are 4 strong, slanting teeth on the lower portion of the columella.

Occurrence: Three specimens were taken from OL sediments of Core 24 (depth 125 cm) and TD sediments of Core 32.

Total number collected: 3.

Distribution: Bermuda, North Carolina, south to Brazil.

Remarks: Specimens are distinguished from shells of *H. albolineata* (below) by their larger size, more elongate shape and difference in color bands. Between the bands of color on specimens of *H. albolineata*, there are distinct white bands.

Hyalina albolineata (d'Orbigny, 1842)

References: Dall and Simpson, 1901: 394; Warmke and Abbott, 1962: 129, pl. 23: i; Morris 1973: 234, pl. 64: 15; Abbott, 1974: 253, no. 2761.

Description: The slender shell is small (ht 6 mm, diam. 3 mm) and white with 3 tan spiral bands. The spire is short (ht 0.7 mm) and the aperture extends the length of the body whorl. The outer lip is slightly thickened. There are 4 white, slanting folds on the lower portion of the columella.

Occurrence: Representatives of this species are found in relatively small numbers in some RL and OL sediments.

Total number collected: 15.

Distribution: Bermuda and the West Indies.

Hyalina pallida (Linnaeus, 1758)

References: Dall and Simpson, 1901: 395; Warmke and Abbott, 1962: 129, pl. 23: f, *H. tenuilabra* Tomlin, 1917, synonym; Morris, 1973: 235, pl. 64: 14; Abbott, 1974: 253, no. 2764.

Description: The subcylindrical shell is small (ht 10 mm, diam. 4.5 mm) glossy and cream-colored. The apex is nearly flat and the aperture extends the length of the body whorl. The outer lip is thin and sharp. The columella is curved, with 4 slanting folds on its lower portion.

Occurrence: Representatives of this species are found in relatively small numbers in some OL sediments.

Total number collected: 9.

Distribution: Southeastern Florida and the West Indies.

Genus GRANULINA Jousseaume, 1888

Granulina ovuliformis (d'Orbigny, 1841

References: Dall and Simpson, 1901: 395; Abbott, 1954: 254, text fig. 56: O; Perry and Schwengel, 1955: 174, pl. 36: 246, *Bullata lacrimula* Gould, 1862, synonym; Abbott, 1958: 86; Warmke and Abbott, 1962: 128, pl. 23: e; Morris, 1973: 232, pl. 64: 13; Abbott, 1974: 254, no. 2774.

Description: The minute shell (ht 2 mm, diam. 1.4 mm) is globose, glossy-white and smooth. The shell exhibits involute coiling. The narrow aperture extends the total height of the shell. There are 4 teeth on the lower columella. The outer lip is thickened and finely denticulate within.

Occurrence: Representatives of this species are found in relatively small numbers in some RL sediments and to a lesser extent in OL sediments.

Total number collected: 31.

Distribution: North Carolina, south to Florida and the West Indies.

Remarks: Identification of specimens was verified by Dr. D. R. Moore (personal communication, 1974).

Genus MARGINELLOPSIS Bavay, 1911

Marginellopsis serrei Bavay, 1911

References: Warmke and Almodóvar, 1963: 167; Bock and Moore, 1971: 144; Moore, 1971a: 1, fig. 1; Moore, 1971b: 2, fig. 1; Abbott, 1974: 254, no. 2778.

Description: The sculptured, minute shell (ht 1 mm, diam. 0.8 mm) is marked with radial and spiral cords which intersect randomly to create a pitted surface. The aperture is narrow and elongate. The outer lip is thickened and smooth. There are 2 well developed and 2 weakly developed columellar folds.

Occurrence: Representatives of this species are found in RL, OL and TD sediments.

Total number collected: 117.

Distribution: West Indies, south to Brazil.

Remarks: Specimens were identified by Dr. D. R. Moore (personal communication, 1974).

Family MITRIDAE Swainson, 1831
Genus VEXILLUM Röding, 1798
Subgenus PUSIA Swainson, 1840

Vexillum albocinctum (C. B. Adams, 1845)

References: Clench and Turner, 1950: 253, pl. 36: 10, *Mitra albo-cincta*; Abbott, 1974: 239, no. 2623.

Description: The largest shell found (ht 9.4 mm, diam. 4 mm) is fusiform and has 5 postnuclear whorls. The apical whorl is missing but the second nuclear whorl is brown and smooth. The postnuclear whorls are brown with a narrow, white spiral band. Sculpture consists of 14 short, sharp axial ribs which are nearly bisected by the spiral band. The base of the shell is marked with 4 spiral ridges which extend to the columella, producing 4 strong columellar folds. On the body whorl, between the spiral band and the columellar folds, there is a very fine white spiral thread.

Occurrence: Three specimens were taken from OL sediments of Cores 17 (depth 90 cm) and 24 (depth 185 cm).

Total number collected: 3.

Distribution: Southeastern Florida and the West Indies.

Vexillum hanleyi (Dohrn, 1862)

References: Abbott, 1958: 83; Wwrmke and Abbott, 1962: 125, pl. 22:b; Abbott, 1974: 239, no. 2621.

Description: The largest shell found (ht 6.5 mm, diam. 2.6 mm) is fusiform and has 6½ whorls. The first 1½ whorls are brown and smooth, whereas the remaining whorls are brown with a white spiral band. The postnuclear whorls are marked with short, broad, nodular axial ribs which are nearly covered by the white encircling band. The penultimate whorl bears 16 ribs which become obsolete below the periphery. Below the distinct suture are numerous axial crinkles. The outer lip is sharp, broadly notched above, where there is a thick, button-like parietal callus. There are fine serrations deep within the outer lip and 4 light brown columellar folds.

Occurrence: Representatives of this species are found in very small numbers in some RL and OL sediments.

Total number collected: 4.

Distribution: Southern Florida and the West Indies.

Genus THALA H. and A. Adams, 1853

Thala foveata (Sowerby, 1874)

References: Dall, 1883: 327-328, pl. 10: 12, *Mitra floridana* Dall, 1883, synonym; Dall, 1889a: 110, pl. 48: 5; Abbott, 1974: 240, no. 2634.

Description: The largest shell found (ht 8.5 mm, diam. 2.9 mm) is fusiform and has 6 whorls. The nuclear whorl is smooth, transparent and brown. The remaining whorls are red-brown and sculptured with spiral and transverse cords of equal intensity which create a cancellate surface. Nodules are formed at the cord intersections. The principal spiral cords increase from 3 on the first postnuclear whorl to 14 on the fifth postnuclear whorl. The body whorl is comparatively large (ht 5.5 mm), making up about two-thirds of the total shell height. The aperture is elongate (height 3.8 mm) and narrow. The outer lip is thickened and has 11 denticles within. The base of the columella bears 4 brown folds.

Occurrence: Representatives of this species are found in relatively small numbers in some RL and OL sediments.

Total number collected: 16.

Distribution: Southern Florida and Bermuda.

Superfamily CONACEA Rafinesque, 1815
Family CONIDAE Rafinesque, 1815
Genus CONUS Linnaeus, 1758

Conus jaspideus subsp. *stearnsii* Conrad, 1869

References: Clench, 1942: 9, pl. 5: 1-4; Olsson and Harbison, 1953:174-175, pl. 26:5; Abbott, 1954: 262, pl. 22: y; Perry and Schwengel, 1955: 180, pl. 37: 256; Abbott, 1958:91; Morris, 1973:239, pl. 66: 6; Abbott, 1974: 256, no. 2793.

Description: The largest shell (ht 13 mm, diam. 5.6 mm) is slender, juvenile and has 8 nearly flat-sided whorls. The shell is cream-colored with amber markings and numerous series of microscopic white spiral dashes. The spire is acute (mean spire angle 68°) and flat-sided. There are 12 spiral grooves on the lower half of the body whorl.

Occurrence: Representatives of this species are found in very small numbers in OL and TD sediments and to a lesser extent in some RL sediments.

Total number collected: 12.

Remarks: Specimens of *C. stearnsii* and *C. floridanus* Gabb, 1868, collected from beach drift at Naples, Florida were useful for comparison with the juvenile shells from Nichupté Lagoon.

Family TURRIDAE Swainson, 1840
Subfamily CLAVINAE Powell, 1942
Genus NEODRILLIA Bartsch, 1943

Neodrillia cydia Bartsch, 1943

References: Bartsch, 1943: 84-90, pl. 7: 1, 2, 4, 6-8, *Neodrillia* species, synonyms; Abbott, 1958: 96; Warmke and Abbott, 1962: 136, pl. 25: s; Abbott, 1974: 271, no. 3020.

Description: The bleached, chalky-white shell is elongate (ht 14.5 mm, diam. 5 mm) and heavy. The nuclear whorls are smooth and the remaining 6 whorls are sculptured with prominent oblique, slightly curved, axial ribs (9 ribs on the body whorl) which are crossed by numerous fine spiral striae. The ribs are less pronounced at the suture which is distinct. The outer lip of the specimen is broken. The anterior canal is short and straight. There is a callus on the inner lip.

Occurrence: One specimen was recovered from OL sediments of Core 18 (depth 190 cm).

Total number collected: 1.

Distribution: Southern Florida and the West Indies.

Remarks: Abbott (1958: 96) states that the numerous species named by Bartsch represent only one variable species.

Genus CRASSISPIRA Swainson, 1840
Subgenus CRASSISPIRELLA Bartsch and Rehder, 1939

Crassispira sp., cf. *C. fuscescens* (Reeve, 1843)

References: Abbott, 1958: 94-95, includes synonymy; Warmke and Abbott, 1962: 134, pl. 25: w.

Description: The shiny, red-brown shell is of medium size (ht 11.5 mm, diam. 4 mm) and thick. The only specimen recovered from Nichupté Lagoon sediment is broken and probably lacks the first 3 whorls. The remaining 5 whorls each have about 14 axial ribs which are crossed by numerous thin, but strong, spiral threads. Where the axial ribs and spiral threads cross, small white nodules are formed. The suture is distinct and anteriorly bounded by a broad, smooth spiral cord and a concave band bearing 4 small spiral threads. Where the axial ribs and spiral threads cross, small white nodules are formed. The suture is distinct and anteriorly bounded by a broad, smooth spiral cord and a concave band nearing 4 small spiral threads. The aperture is short (ht 4 mm), has a U-shaped posterior notch and a straight anterior canal.

Occurrence: One specimen was taken from OL sediment of Core 24 (depth 260 cm).

Total number collected: 1.

Distribution: Florida Keys and the West Indies.

Remarks: The specimen from Nichupté Lagoon is comparable to *C. cubana* Melvill, 1923 (Abbott, 1974: 273, no. 3052) and its synonym *C. mesoleuca* Rehder (1943: 202-203, pl. 20: 15). Also, the specimen may be compared with *Drillia (Clathrodrillia) solida* (C. B. Adams, 1850) (Clench and Turner, 1950: 342-343, pl. 29: 8, *Pleurotoma solida* C.B. Adams, 1850; Abbott, 1974:270: no. 2997) and its synonym *Drillia*

ebenina Dall (1890: 33, pl. 2: 8). Abbott (1958: 94) places *solida* and *ebenina* in synonymy with *C. fuscescens* but later (Abbott, 1974: 270) mentions *fulvenscens* (spelling?) as similar but separate and belonging in the genus *Crassispira*.

Without verified comparative material and a clear understanding of the status of *C. fuscescens* and similar species, the identity of the specimen from Nichupté Lagoon cannot be established.

Subgenus MONILISPIRA Bartsch and Rehder, 1939

Crassispira leucocyma (Dall, 1883)

References: Dall, 1883: 328-329, pl. 10: 8, *Drillia leucocyma;* Dall, 1889a: 96, pl. 48: 7; Abbott, 1954: 271, text fig. 57: d; Perry and Schwengel, 1955:183, pl. 38: 263; Abbott, 1958: 95; Warmke and Abbott, 1962: 135, pl. 25: q; Morris, 1973: 246, pl. 68: 6; Abbott, 1974: 273, no. 3067.

Description: The brown shell (ht 10 mm, diam. 3.5 mm) has 8 whorls. The first 2 whorls are smooth and brown. The postnuclear whorls are sculptured with spiral and axial cords. The spiral cords consist of a strong thread between the upper inconspicuous suture and a broad, spirally striated fasciole which is followed by 2 (on the first postnuclear whorl) to 3 strong spiral rounded threads. The spiral cords are crossed by growth striae and 10 short, yellow axial ribs which begin at the fasciole and end above the suture. On the base of the shell, the spiral threads are nodulose. The aperture is narrow, notched posteriorly and has a short, straight anterior canal.

Occurrence: Representatives of this species are found in very small numbers in the RL and OL sediments of Cores 111, 18 and 24 and TD sediments of Core 32.

Total number collected: 15.

Distribution: Southern Florida and the West Indies.

Remarks: One of the juvenile shells has the same size and characteristics described by Dall (1883: 328-329).

Subfamily MANGELIINAE Fischer, 1887
Genus MANGELIA Risso, 1826

Mangelia bartletti (Dall, 1889)

References: Dall, 1889a: 100, pl. 12: 6, 14: 5, 8, *Cythara bartletti;* Abbott, 1958: 97, pl. 3: s; Wwrmke and Abbott, 1962: 137, pl. 25: f; Abbott, 1974: 278, no. 3159.

Description: The small, white shell (ht 6 mm, diam. 2.5 mm) has 5 whorls and is juvenile. The nuclear whorl is smooth, the first postnuclear whorl is marked with 10 thin, axial ribs, and the remaining whorls are sculptured with 12 to 18 axial ribs and very fine growth lines which are crossed by 10 to 12 weaker spiral striae. The aperture is elongate. The outer lip is broken.

Occurrence: Representatives of this species are found in relatively small numbers in some OL and TD sediments.

Total number collected: 9.

Distribution: Bermuda, southern Florida and the West Indies.

Mangelia biconica C. B. Adams, 1850

References: Clench and Turner, 1950: 260, pl. 32: 2; Abbott, 1958: 98, pl. 3: p; Warmke and Abbott, 1962: 137, pl. 25: k.

Description: The small shell (ht 5.8 mm, diam. 2.8 mm) is white with yellow-brown bands on the shoulders of the whorls and the middle of the body whorl. The 1½ nuclear whorls are smooth whereas the remaining 4 whorls are sculptured with 14 narrow axial ribs which are crossed by fine spiral striae (12 to 14 on the body whorl). The outer lip is thin with a thickened rib behind and curved within.

Occurrence: Representatives of this species are found in very small numbers in some RL and OL sediments.

Total number collected: 6.

Distribution: North Carolina, south to the West Indies, Gulf of Mexico, south to Yucatan.

Genus PYRGOCYTHARA Woodring, 1928

Pyrgocythara sp.

Description: The golden brown shell is small (ht 7 mm, diam. 3 mm), elongate-ovate and has 6 whorls. The first 12 whorls are smooth and dark brown and the next whorl is marked with 10 thin, closely-spaced axial riblets, which are followed by the postnuclear sculpture. The postnuclear whorls are marked with 12, increasing to 16, strong axial ribs and finer spiral threads. There is a prominent spiral cord just anterior (toward the base) to the shoulder of each whorl which is very slightly nodulose at the rib intersections. In addition to this cord, there are numerous spiral threads. In some specimens, the shoulder area is lighter in color than the rest of the shell. The spire is about half the height of the shell. The aperture is small (ht 2.8 mm), oval and channeled anteriorly and posteriorly. Anterior to the well developed U-shaped posterior notch, there is a denticle. The outer lip is sharp with a varix directly behind it.

Occurrence: Representatives of this species are found in small numbers in some RL and OL sediments.

Total number collected: 11.

Remarks: The specimens from Nichupté Lagoon are comparable to *P. hemphilli* Bartsch and Rehder (1939: 132-133, pl. 17: 2; Abbott, 1974: 284, no. 3305), described from western Florida. Although they may represent juveniles of this species, specimens from Nichupté Lagoon appear to be wider and have a few more ribs per whorl than specimens described as *P. hemphilli*.

Subclass OPISTHOBRANCHIA Milne-Edwards, 1848
Order PYRAMIDELLOIDA Gray, 1840
Superfamily PYRAMIDELLACEA Gray, 1840
Family PYRAMIDELLIDAE Gray, 1840
Genus PYRAMIDELLA Lamarck, 1799
Subgenus LONGCHAEUS Mörch 1875

Pyramidella crenulata (Holmes, 1859)

References: Dall, 1890-1903: 247-248, with synonym list; Andrews, 1971: 127, fig.; Odé, 1971-1972: 32; Morris, 1973: 256, pl. 71: 6; Abbott, 1974: 291, no. 3462.

Description: The glossy-white shell is medium-sized (ht 7.2 mm, diam. 3.8 mm), elongate conic and has 10 flat-sided postnuclear whorls. The suture is distinct, deep and marked with microscopic axial scratches. The anterior margin of the sutural chan-

nel is also crenulate. The base of the shell is rounded. The body whorl bears a crenulated spiral channel which extends to the mid-outer lip. Another, smaller crenulated spiral channel extends from above the upper columellar fold to the base of the outer lip. The outer lip is thin and smooth within. The columella has 3 folds. The posterior fold is strong and nearly perpendicular, whereas the anterior folds are weak and oblique. The inner lip is reflected over the umbilical region.

Occurrence: One specimen was taken from TD sediments of Core 32.

Total number collected: 1.

Distribution: South Carolina to Texas and the West Indies.

Subgenus STYLOPSIS A. Adams, 1860

Pyramidella sp. Plate I, fig. 5

Reference: Adams, 1860: 406, *Stylopsis*.

Description: The minute shell (ht 2 mm, diam. 0.46 mm) is translucent white and smooth except for microscopic growth striae. The upturned, sinistral protoconch forms a blunt apex and the 5 postnuclear whorls are swollen, yet laterally compressed. The sutures are moderately impressed. The body whorl is elongate, whereas the aperture is elongate-oval and somewhat produced anteriorly. There is no umbilical depression and no columellar fold. The inner lip is reflected slightly and a callus is formed on the columella.

Occurrence: Representatives of this species are found in RL sediments of Cores 23 and 24.

Total number collected: 5.

Remarks: Specimens resemble the figure of *Stylopsis octona* Guppy 1896 (Guppy and Dall, 1896:317, pl. 27: 8), a smaller shell (ht 1.25 mm, diam. 0.3 mm) from the Oligocene deposits of Trinidad. Also specimens from Nichupté Lagoon may be compared with *P. resticula* Dall, 1889 (Dall, 1889b: 338), a larger shell (ht 3.5 mm, diam. 0.7 mm) with 8 whorls, from the Recent of Florida. Representatives of *P. resticula* are described as being covered with fine, even, microscopic spiral grooves, lacking on shells from Nichupté Lagoon.

Subfamily ODOSTOMIINAE Pelseneer, 1928
Genus ODOSTOMIA Fleming, 1813
Subgenus ODOSTOMIA Fleming, 1813

Odostomia laevigata d'Orbigny, 1842

References: Clench and Turner, 1850: 322 pl. 40: 4, *O. ovuloides* C. B. Adams, 1850, synonym; Warmke and Abbott, 1962:147, pl. 26: k; Abbott, 1974: 291-292, no. 3473.

Description: The white, glossy shell is small (ht 2.9 mm, diam. 1.2 mm), has 5 postnuclear whorls and is elongate-oval. The whorls are moderately rounded but not inflated. The suture is lightly impressed. There is an oblique fold near the insertion of the twisted columella. In broken specimens, this fold is seen as a ridge extending into previous whorls. In specimens from Nichupté Lagoon, the height to diameter ratio is a fairly consistent 2.4/1.

One specimen from Back-Lagoon Marsh area (Core 111) possessed similar dimensions and shape, but was dull light brown with a brown columellar fold. This shell was comparable to representatives of *Sayella livida* Rehder (1935:129-130, pl. 7:7; Abbott, 1974: 300, no. 3649).

Occurrence: Representatives of this species are found in very small numbers in some RL, OL, TD and Inglés Lagoon sediments.

Total number collected: 18.

Distribution: North Carolina, south to Florida and the West Indies. Brazil.

Remarks: Identification of specimens was verified by Dr. D. R. Moore (personal communication, 1974).

Rehder (1935: 130) reported *S. livida* as 'very close' to *Sayella hemphilli* (Dall, 1883: 286, pl. 18: 11; Dall, 1885a: 286, pl. 18: 11; Dall, 1889a: 92, pl. 47: 11; Odé, 1971-1972: 28; Abbott, 1974: 300, no. 3650). Odé (1971-1972: 26) places *O. laevigata* in the genus *Sayella* and further states that the difference between *S. livida* and *laevigata* is difficult to discern (Odé, 1971-1972: 28).

Subgenus MENESTHO Möller, 1842

Odostomia impressa (Say, 1822)

References: Say, 1822: 244, *Turbonilla impressa*; Dall, 1889: 130, pl. 52:11; Abbott, 1954: 288, text fig. 62:i; Perry and Schwengel, 1955: 122, pl. 23: 162; Wells, 1959:140-144; Andrews, 1971: 130, fig.; Odé, 1970b: 61, fig.; Odé, 1971-1972: 8; Abbott, 1974: 294, no. 3522.

Description: The small, white shell (ht 4 mm, diam. 1.7 mm) is elongate-conic and has 5 postnuclear, flat-sided whorls. The whorls are marked by deep, spiral grooves (3 grooves per whorl) which bear microscopic, axial scratches. The sutures are channeled. The aperture is oval. The outer lip is thin and reflects the external sculpture. The inner lip is thickened and reflected over the umbilical region. There is a strong columellar tooth near the point of insertion.

Occurrence: Representatives of this species are recovered from most RL sediments. One specimen was found in OL sediment of Core 24 (depth 185 cm).

Total number collected: 39.

Distribution: Massachusetts, south to the Gulf of Mexico.

Remarks: Identification of the specimens was verified by Moore (personal communication, 1974).

Subgenus EVALEA A. Adams, 1860

Odostomia sp.

Description: The largest shell found (ht 2.5 mm, diam. 1.2 mm) is small, white, elongate-conic and probably juvenile. The nuclear whorls are immersed obliquely. There are 4.5 well rounded, slightly inflated, postnuclear whorls. The surface of the shell is marked with exceedingly fine spiral striae and retractive growth lines. Four coarse spiral threads are present on the basal periphery. The suture is impressed. The aperture is oval. The outer lip is thin and the thin inner lip is reflected over the open umbilicus. A few specimens bear a spiral thread posterior to the suture, creating a slightly shouldered appearance. There is a very low fold on the columella, near insertion.

Occurrence: Representatives of this species are found in some RL sediments and to a lesser extent, in some OL sediments.

Total number collected: 15.

Remarks: The unshouldered specimens may represent examples of *O. ryclea* (Bartsch, in Dall, 1927a: 85) from Georgia, whereas the obsoletely shouldered

shells are comparable to *O. virginica* (Henderson and Bartsch, 1914: 418, pl. 13: 3; Abbott, 1974: 296, no. 3546) from Virginia and *O. ryalea* (Bartsch, in Dall, 1927a: 85-86) from Florida.

Genus SAYELLA Dall, 1885

Odé (1971-1972: 25-26) provides a list of species, often placed in other genera or families, which belong in the genus *Sayella*. The history of this genus is confused and complex. Individuals of *Sayella* are variable and perhaps the multitude of species described may be more properly placed in fewer species, when a detailed study of the animal and shell is accomplished (Odé, 1971-1972: 28-29). Such a study is beyond the scope of this project. Observations and tentative assignment to species, based only on shell characters, is given below.

Sayella livida Rehder, 1935

Remarks: See *Odostomia laevigata* (d'Orbigny, 1842).

Sayella sp., cf. *S. crosseana* (Dall, 1885)

References: Dall, 1885a: 286, pl. 18: 10; Dall, 1889a: 92, pl. 47: 10; Odé, 1971-1972: 30-31, fig. 19; Abbott, 1974: 300, no. 3651.

Description: The small, slender, white shell (ht 2.4 mm, diam. 0.8 mm) has 5 postnuclear whorls. The columella is twisted and a small, oblique fold is present near its insertion. The base is umbilicated. Most of the specimens have distinct sutures but nearly flat-sided whorls. Some of the shells, having slightly rounded whorls, resemble dwarfed, slender *S. laevigata*. In specimens from Nichupté Lagoon, the height to diameter ratio varies from 2.45/1 to 3/1.

Occurrence: One specimen was taken from RL sediment of Core 17 (depth 0-15 cm) and one specimen was taken from Inglés Lagoon sediment (depth 5 cm).

Total number collected: 2.

Distribution: Florida Keys, the Gulf of Mexico and the West Indies.

Sayella sp., cf. *S. fusca* (C. B. Adams, 1839)

References: Dall, 1889a: 130, pl. 52: 15; Bartsch, 1909: 73, pl. 11: 4; Clench and Turner, 1950: 283-285, pl. 38: 20-21; Odé, 1971-1972: 30, fig. 17; Abbott, 1974: 300, no. 3648.

Description: The white, stubby shell is small (ht 3.7 mm, diam. 1.6 mm), elongate-conic and has 6 postnuclear whorls. The sutures are distinct. The aperture is oval and slightly pinched above. The inner lip is thin and reflected over the umbilicus.

Occurrence: One specimen was found in RL sediments of Core 24 (depth 0-5 cm).

Total number collected: 1.

Distribution: Prince Edward Island, south to Florida and the Gulf of Mexico.

Subfamily TURBONILLINAE Simroth, 1907
Genus TURBONILLA Risso, 1826
Subgenus CARELIOPSIS Mörch 1875

Turbonilla bermudensis Dall and Bartsch, 1911
Plate I, figures 3, 4

Reference: Dall and Bartsch, 1911: 279, pl. 35: 4.

Description: The minute, white shell (ht 2.2 mm, diam. 0.6 mm) is elongate-conic in shape. The 1½ nuclear whorls are planorboid, well rounded and have an axis at right angles to the succeeding 6 postnuclear whorls. The postnuclear whorls are slightly shouldered and marked with finely incised, wavy, spiral threads. There are 26 spiral threads on the penultimate whorl. The sutures are well impressed. The aperture is elongate-oval (ht 0.6 mm). The outer lip is thin and the inner lip is slightly curved and reflected over the base.

Occurrence: Representatives of this species are found in relatively small numbers in RL, OL and TD sediments.

Total number collected: 79.

Distribution: Bermuda.

Remarks: Specimens from Nichupté Lagoon were compared with the type specimen from the U.S. National Museum (USNM no. 221614).

Subgenus STRIOTURBONILLA Sacco, 1892

Turbonilla sp., cf. *T. pyrrha* Bush, 1899

References: Bush, 1899: 160-162, pl. 8: 1; Odé, 1971-1972: 77; Abbott, 1974: 303, no. 3691.

Description: The small, translucent-white shell (ht 4.5 mm, diam. 1.2 mm) is needle-shaped and has 9 whorls. The nuclear whorl is prominent and slightly oblique. The postnuclear whorls are evenly rounded and increase in size gradually. The mean angle of divergence is 16°. The sutures are distinct. Sculpture consists of delicate axial ribs (28 ribs on the penultimate whorl), between which are fine spiral striae. The aperture is oval and the lip is thin. There is a faint columellar fold. The body whorl shows evidence of damage and repair.

Occurrence: One specimen was recovered from TD sediments of Core 32.

Total number collected: 1.

Distribution: The West Indies.

Remarks: Bush (1899: 160-162) describes several varieties of this variable species and the variety most like the shell from Nichupté Lagoon sediments is figured by Bush (1899, pl. 8: 1).

Specimens are also comparable with *C. puncta* C. B. Adams, 1850 (Verrill and Bush, 1900: 530, pl. 64: 19, 19a; Clench and Turner, 1950: 332-333) except that the whorls of specimens from Nichupté Lagoon are more rounded. Unfortunately, the type specimens for both *latior* and *puncta* are lost.

Turbonilla (?) sp.

Description: The white shell is small and broken (ht 4 mm, diam. 1.2 mm, decollate), consisting of only 5 whorls, including the body whorl and aperture. The whorls are nearly flat-sided and marked with 16, increasing to 20, prominent axial ribs with numerous, very fine, even spiral striae in the intercostal spaces. The spiral striae do not cross over the ribs. The axial ribs continue over the periphery of the body whorl and gradually disappear near the aperture, whereas the spiral striae are very fine, but not diminished on the base of the body whorl. The sutures are impressed. The outer lip is rounded and sharp. The columella is slightly twisted.

Occurrence: Two specimens were taken from RL and OL sediments of Core 17 (depth 15 cm, 140 cm).

Total number collected: 2.

Remarks: Specimens from Nichupté Lagoon may be compared with descriptions of *T. insularis* Dall and Simpson (1901: 415, pl. 53: 21) from Puerto Rico.

The 12 to 13 postnuclear whorls of *T. insularis* (ht 7.1 mm, diam. 1.8 mm) are marked with 16, increasing to 28 axial ribs with 11 even, spiral striae in the intercostal spaces.

Subgenus CHEMNITZIA d'Orbigny, 1839

Turbonilla heilprini (Bush, 1899)

References: Bush, 1899: 146, 167-168, 172, pl. 8: 3; Verrill and Bush, 1900: 528, pl. 65: 12; Odé, 1971-1972: 50, 63.

Description: The small shell (ht 2.8 mm, diam. 0.7 mm) is slender, elongate-conic and white. The 1½ whorl protoconch is smooth and slightly oblique. The 7 postnuclear whorls taper gradually and are moderately convex. Sutures are distinct and straight. Sculpture consists of straight, nearly perpendicular, rounded axial ribs (16 ribs on the body whorl) and between the rips are smooth interspaces which terminate at the periphery of the body whorl with square-cut ends. Except for the ribs, the shell is smooth. The aperture is oval and external sculpture is seen within. The outer lip is thin and the inner lip is thickened and reflected slightly.

Occurrence: Representatives of this species are found in relatively small numbers in some OL and TD sediments and to a lesser extent in some RL sediments.

Total number collected: 17.

Distribution: Bermuda, southern Florida, the Gulf of Mexico and the West Indies.

Turbonilla unilirata Bush, 1899

References: Bush, 1899: 146, 165, 173, pl. 8: 6; Warmke and Abbott, 1962: 149; Odé, 1971-1972: 37, fig. 62.

Description: The small shell (ht 2.2 mm, diam, 0.7 mm) is slender, elongate and white. The protoconch of 1½ whorls is small, smooth and nearly perpendicular to the shell axis. The 6 postnuclear whorls are marked with slightly oblique, axial ribs (18 on the body whorl). Between the ribs are wider interspaces which terminate at the periphery of the body whorl with square-cut ends. The interspaces are smooth except for one spiral thread located below the suture, which crosses the ribs. The aperture is subangulate. The outer lip is broken. The inner lip is straight and slightly reflected.

Occurrence: Representatives of this species are found in very small numbers in some RL and OL sediments.

Total number collected: 4.

Distribution: North Carolina, south to the West Indies.

Remarks: Specimens were identified by Odé (1972, personal communication).

Order CEPHALASPIDEA Fischer, 1883
Superfamily ACTEONACEA d'Orbigny, 1842
Family ACTEOCINIDAE Pilsbry, 1921
Genus ACTEOCINA Gray, 1847

Acteocina candei (d'Orbigny, 1842)

References: Dall, 1889a: 84, pl. 41: 13, *Tornatina candei;* Dall and Simpson, 1901: 363, pl. 57: 7, juvenile; Warmke and Abbott, 1962: 143, pl. 27: g; Wells and Wells, 1962:87-93, figs. 4, 7-10, 12; Abbott, 1974: 313, no. 3919.

Description: The small shell (ht 3.5 mm, diam. 1.6 mm) is white and smooth, except for microscopic growth lines. The spire is elevated and projecting. The shell is spindle-shaped, that is, the greatest diameter is midway between the tapering spire and base. The suture is channeled. The elongate aperture tapers posteriorly.

Occurrence: Representatives of this species are found in nearly all RL, OL and TD sediments.

Total number collected: 217.

Distribution: North Carolina, south to Argentina.

Remarks: Identification of specimens was verified by Dr. D.R. Moore (personal communication, 1973).

Acteocina canaliculata (Say, 1826)

References: Verrill, 1873:663, pl. 25: 160, *Utriculus canaliculata;* Dall, 1889a:84, pl. 52:27; Dall, 1922:96; Abbott, 1954:280, pl. 26: x; Abbott, 1958: 101; Wells and Wells, 1962: 87-93, figs. 1-3, 5-6, 11, 13-16.

Description: The small shell (ht 3.5 mm, diam. 1.7 mm) is white and smooth, except for microscopic growth lines. The spire is generally low, but its height is somewhat variable. The shell is cylindrical with straight sides and the body whorl is shouldered. The suture is channeled. The aperture is elongate and the outer lip is sometimes slightly sinuous.

Occurrence: Representatives of this species are found only in the BLM sediments of Core 113 and in sediments from the brackish Inglés Lagoon (Core 26).

Total number collected: 95.

Distribution: Massachusetts, south to the West Indies.

Superfamily CYLICHNACEA A. Adams, 1850
Family CYLICHNIDAE A. Adams, 1850
Genus CYLICHNA Lovén, 1846

Cylichna sp.

Description: The small, white shell (ht 5 mm, diam. 2.5 mm) is cylindrical with straight, flat sides and a depressed spire. The aperture is narrow, longer than the body whorl and slightly widening anteriorly. The surface of the shell is marked with incised, wavy, spiral striae and very fine growth lines. The columella is short, smooth and thinly callused. The outer lip is sharp.

Occurrence: Representatives of this species are found in very small numbers in some RL sediments and to a lesser extent, in some OL sediments.

Total number collected: 8.

Remarks: Specimens from Nichupté Lagoon are very much like *C. krebsi* Mörch, 1874 (Warmke and Abbott, 1962: 144, pl. 27: b) except that they are nearly twice the size of specimens described as *C. krebsi*.

Superfamily BULLACEA Rafinesque, 1815
Family BULLIDAE Rafinesque, 1815
Genus BULLA Linnaeus, 1758

Bulla striata Bruguière, 1792

References: Abbott, 1954: 277, pl. 13: p; Perry and Schwengel, 1955: 193, pl. 39: 281; Warmke and Abbott, 1962: 141, pl. 27: e; Andrews, 1971: 134, fig.; Morris, 1973: 264, pl. 72: 22; Abbott, 1974: 319, pl. 10: 4000.

Description: The largest shell found (ht 15.5 mm, diam. 9.5 mm) is white with purplish brown mottlings.

The solid shell is oval with a sunken spire. The surface of the shell is glossy and smooth except for a few spiral striae near the apical end and fine spiral grooves (less than 10) toward the base. The aperture is narrow, longer than the body whorl and becomes wider anteriorly. The outer lip is sharp. The parietal area is covered with a white callus.

Occurrence: Representatives of this species are found in most Inglés Lagoon and RL sediments and to a lesser extent, in OL and TD sediments.

Total number collected: 43.

Distribution: Coastal Gulf of Mexico and the West Indies.

Remarks: The specimens may be considered the Caribbean form or subspecies of the species *Bulla umbilicata* Röding, 1798 *(B. occidentalis* A. Adams, 1850 is a synonym).

Family HAMINOEIDAE Pilsbry, 1895
Genus ATYS Montfort, 1810

Marcus (1970: 928) reviews the problem of separating shells resembling *Atys riiseana* and *A. caribaea* using only shell characters. This problem of differentiation was also encountered with shells from Nichupté Lagoon. Unfortunately, all of the specimens are small and perhaps immature. No soft part information is available. Although the shape of specimens is slightly variable (perhaps a factor of growth), the shells lack the incised spiral striae over the entire shell, characteristic of *A. caribaea* (d'Orbigny, 1841) (Abbott, 1958: 100; Rice and Kornicker, 1962: 378, pl. 3: 3; Warmke and Abbott, 1962: 143, pl. 27: q; Marcus, 1970: 933-935, fig. 19; Morris, 1973:264-265, pl. 72: 15), and will be, with some question, called *A. riiseana*. Without comparative material and soft part data, this identification cannot be made with certainty.

Atys sp., cf. *A. riiseana* Mörch, 1875

References: Abbott, 1954: 278, text fig. 59:c (incorrectly labeled *A. caribaea*, Abbott, 1958:99); Warmke and Abbott, 1962: 143-143, pl. 27: i; Marcus, 1970: 930-933, fig. 10; Abbott, 1974: 320, no. 4008.

Description: The translucent-white shell is small (ht 6 mm, diam. 3 mm) and elongate-oval. The central portion of the shell is rather smooth, lacking the finely incised spiral striae characteristic of *A. caribaea*. The columella is straight, thickened and the inner lip is reflected, partially concealing the narrow, but distinct umbilicus. Numerous, finely incised spiral grooves are present on both ends of the shell.

Occurrence: Representatives of this species are found in relatively small numbers in some OL and TD sediments. Two specimens were taken from RL sediments of Cores 23 (depth 10 cm) and 24 (depth 35 cm).

Total number collected: 23.

Distribution: Southeastern Florida and the West Indies, south to Brazil.

Genus HAMINOEA Turton and Kingston, 1830

Haminoea elegans (Gray, 1825)

References: Dall and Simpson, 1901: 364; Abbott, 1954: 279; Abbott, 1958: 101; Warmke and Abbott, 1962: 141-142, pl. 27: m; Marcus and Marcus, 1963b: 6; Marcus and Marcus, 1967: 601; Morris, 1973: 265, pl. 72: 19.

Description: The small, white shell (ht 6 mm, diam. 4 mm) is very thin and fragile. It is difficult to recover undamaged specimens from the sediment. The shell is oval but rounded anteriorly and posteriorly. The surface of the shell is marked with fine, wavy, spiral lines. The outer lip arises on the left side of the apical perforation.

Occurrence: Representatives of this species are found in relatively small numbers in some OL sediments. Fragmental and juvenile specimens were taken from the RL sediments of Cores 30 and 23.

Distribution: Texas, Florida, the West Indies to Brazil.

Total number collected: 12.

Remarks: Identification of specimens was facilitated by comparison with representatives of *H. succinea* (Conrad, 1846) from Naples, Florida beach drift. Specimens of *H. succinea* are less obese, have more numerous and finer spiral striae and the outer lip arises on the right side of the apical perforation.

Order THECOSOMATA Blainville, 1824
Family CUVIERIDAE Gray, 1840
Subfamily CAVOLINIINAE H. and A. Adams, 1854
Genus CAVOLINIA Abildgaard, 1791

Cavolinia longirostris (Blainville, 1821)

References: Dall, 1889a: 82; Abbott, 1954: 296, text fig. 64: v; Warmke and Abbott, 1962: 152 text fig. 22: v; Andrews, 1971: 138; Morris, 1973: 275, pl. 75: 4; Abbott, 1974, pl. 327, no. 4062.

Description: The small shell (longitudinal measurement 4 mm) is white and inflated. The ventral face of the shell is rounded and marked with faint, concentric threads. The dorsal face of the shell has 3 longitudinal ribs, the central rib extending in front into a long beak. The spines are short and truncated.

Occurrence: One specimen was taken from TD sediments of Core 32 (depth 190 cm).

Total number collected: 1.

Distribution: Worldwide, pelagic (50° N to 50° S).

Subfamily CLIONAE Jeffreys, 1869
Genus CRESEIS Rang, 1828

Creseis sp.

Description: The minute shell (length 3 mm) is a fragmental, straight, slender, glassy, fragile cone.

Occurrence: Two very small specimens were taken from TD sediments of Core 32.

Total number collected: 2.

Remarks: Although only 1/10 the length, the shells from Nichupté Lagoon are comparable to and may represent fragmental or juvenile specimens of *Creseis acicula* (Rang, 1828) (Abbott, 1974:325, no. 4048).

Subclass PULMONATA Cuvier, 1817
Order BASOMMATOPHORA Keferstein, 1864
Superfamily MELAMPIDACEA Stimpson, 1851
Family MELAMPIDAE Stimpson, 1851
Genus MELAMPUS Montfort, 1810

Melampus coffeus (Linnaeus, 1758)

References: Crosse and Fischer, 1882: 178, pl. 8: 11, 12; Dall, 1889a: 92; pl. 47: 3; von Martens, 1890-1901: 558-559; Fluck, 1905: 80; Coomans, 1958: 103, pl. 11: top left; Holle and Dineen, 1959: 50,

pl. 5: 1; Warmke and Abbott, 1962: 153, pl. 28: p;, Houbrick, 1968: 18; Abbott, 1974:332, no. 4088.

Description: The largest specimen found is small (ht 11 mm, diam. 7 mm), brown with four narrow cream-colored spiral bands. The aperture is elongate with a columellar fold, a double fold on the upper parietal wall and fourteen teeth on the inside of the outer lip.

Occurrence: Representatives of this species were found only in the BLM sediments of Core 112 (depth 40 cm).

Total number collected: 4.

Distribution: Bermuda, southern Florida, the West Indies, south to Brazil.

Remarks: Identification of specimens from Nichupté Lagoon was verified by comparison with material at the Museums of Zoology, University of Michigan and the Ohio State University.

Genus DETRACIA Gray, in Turton, 1840

Detracia bullaoides (Montagu, 1808)

References: Dall, 1889a: 92 pl. 47:7; Warmke and Abbott, 1962:153, pl. 28: o; Abbott, 1974: 332, no. 4092.

Description: The one shell found is small (ht 5.5 mm, diam. 3.0 mm), has 7 whorls (body whorl ht 4.5 mm), and is probably juvenile. The shell is tan with 4 darker brown bands on the body whorl. The aperture is elongate with a columellar fold and three small teeth (lower tooth largest) on the lower inside of the outer lip.

Occurrence: One specimen was recovered from the BLM sediments of Core 112 (depth 40 cm).

Total number collected: 1.

Distribution: Bermuda, southern Florida and the northern West Indies.

Remarks: The specimen was compared with material from Florida at the Ohio State University Museum of Zoology.

Subfamily PEDIPEDINAE Crosse and Fischer, 1880
Genus MARINULA King and Broderip, 1832

Marinula succinea (Pfeiffer, 1854)

References: Dall, 1885a: 279, pl. 18: 4, *Pedipes elongatus*, synonym; Clench, 1964:125; Abbott, 1974: 333, no. 4100.

Description: The small shell (ht 4 mm, diam. 2 mm) is white to tan and has 4 whorls. The spire is blunt. The aperture is elongate (ht 2.5 mm) and the outer lip is sharp and pinched above and rounded below. The callused columella bears a strong tooth which slants downward. There is a double fold on the parietal area and the posterior fold (or middle tooth) is stronger than the anterior fold.

Occurrence: Two specimens were taken from the BLM sediments of Core 112 (depth 40-75 cm).

Total number collected: 2.

Distribution: Georgia, south to the northern West Indies.

Genus BLAUNERIA Shuttleworth, 1854

Blauneria heteroclita (Montagu, 1808)

References: Binney, 1865: 21, fig. 22, *B. pellucida* Pfeiffer, 1854; Crosse and Fischer, 1882: 179, pl. 8: 8; von Martens, 1890-1901: 563-564; Abbott, 1974: 334, no. 4104.

Description: The largest shell found (ht 6 mm) has 8 whorls. The thin, white shell is oblong and sinistral. The narrow, elongate aperture has a strong columellar fold.

Occurrence: Representatives of this species are found only in the BLM sediments of Core 112 (depth 0-75 cm).

Total number collected: 24.

Distribution: Bermuda, Florida, Gulf of Mexico, the West Indies, south to Brazil.

Remarks: Identification of specimens was confirmed by comparison with collections at the University of Michigan, Museum of Zoology.

Superfamily ANCYLACEA Rafinesque, 1815
Family ANCYLIDAE Rafinesque, 1815
Genus FERRISSIA Walker, 1903

Ferrissia sp., cf. *F. excentrica* (Morelet, 1851)

References: Bourguignat, 1853:175; Pilsbry, 1889: 64, pl. I:4; von Martens, 1890-1901: 402-403; Walker, 1903: 27-28, pl. I: 19-21; Walker, 1918: 120; Wurtz, 1951: 125; Basch, 1963: 426-428.

Description: The two shells found are small (length 4 mm, diam. 2.5 mm, alt. 1 mm), white and depressed, subquadrate patelliform in outline. The summit of the shell is anterior to the apex which is blunt, directed posteriorly and to the right (when the anterior portion of the shell is directed away from the observer). The nuclear whorls of the shell are smooth whereas the postnuclear whorls are marked with numerous radial striae. The striae are visible on the inside of the shell.

Representatives of *Ferrissia* from Nichupté Lagoon are similar to descriptions of some specimens that have been assigned to *Ferrissia excentrica* (Morelet, 1851). Descriptions of *F. excentrica* are quite variable in regard to diagnostic shell characteristics. For example, all of the above references except Pilsbry (1889) and Wurtz (1951) state the size of representatives of this species to be 7 mm X 4.5 mm X 2.0 mm. Pilsbry (1889: 64), however, reports the dimensions as 4 mm X 3 mm X 1.1 mm, similar to those of specimens from Nichupté Lagoon. Specimens from Nichupté Lagoon conform to descriptions of *F. excentrica* in general shape and position of the blunt apex.

Von Martens (1890-1901: 402, pl. 21: 11, 12) described a new species, *Ancylus papillaris*, which he concluded to be closely related to *F. excentrica*. Wurtz (1951: 130) listed *A. papillaris* von Martens as a species unassigned to a genus, perhaps because of inaccessibility of the von Martens type material. Representatives of *A. papillaris* are small (length 4.4 mm, diam. 2.9 mm, alt. 1.4 mm) and representatives of *Ferrissia* from Nichupté Lagoon are similar to descriptions of *A. papillaris* (von Martens, 1890-1901: 402) which may be a smaller form of *F. excentrica*.

Pilsbry (1913: 668-671, pl. 26: 4-8) describes a new species of *Gundlachia*, *G. bakeri*, from Brazil and mentions the resemblance of non-septate forms of this species to *Ancylus (=Ferrissia) excentrica* Morelet (Pilsbry, 1913: 671). Pilsbry (1913: 671; 1924: 55-57) maintains that *Gundlachia* is a distinct genus and that the ability to form septa is a valid taxonomic character. Dall (1904: 97-98), however, considers the genus *Gundlachia* an *Ancylus* that develops a septum to survive the winter. Basch (1959a:

1-9) outlines the history of the genus *Gundlachia* and concludes that its status is unclear. Perhaps *G. bakeri* is a form of *F. excentrica* that sometimes develops a septum in response to environmental stress.

Occurrence: Two specimens were recovered from the BLM sediments of Core 113 (depth 0-10 cm).

Total number collected: 2.

Distribution: Texas, Florida, West Indies, Mexico, Central America and Brazil (?).

Family PLANORBIDAE Rafinesque, 1815
Genus BIOMPHALARIA Preston, 1910

The history of the generic name *Biomphalaria* Preston, 1910 is complex. Wright (1962: 32-41) proposed to the International Commission on Zoological Nomenclature that the names *Planorbina* Haldeman, 1842, *Taphius* H. and A. Adams, 1855, and *Armigerus* Clessin, 1884, be suppressed, placed among Rejected and Invalid Generic Names in Zoology and replaced by the name *Biomphalaria*. The Commission (Opinion 735) acted upon the proposition and suppressed the names *Planorbina, Taphius* and *Armigerus*. Most workers have accepted the decision of the Commission and some also regard *Australorbis* Pilsbry, 1934 and *Tropicorbis* Brown and Pilsbry, 1914 as synonymous with *Biomphalaria* Preston, 1910 (Paraense, 1958: 65-80; Harry, 1962: 35; Chrosciechowski, 1968: 4-5).

Biomphalaria havanensis (Pfeiffer, 1839)

References: Baker, 1945: 497, pl. 130: 18-28; Paraense and Deslandes, 1958: 87-91, fig. 1; Harry and Hubendick, 1964: 46-48, figs. 99-104 (?), 139-143.

Description: The largest shell (of a total of three specimens) is small (greatest diameter 6.5 mm, spertural height 2.5 mm), has 3½ whorls and is planispirally coiled. The shell is light tan, smooth and has very fine growth lines and microscopic spiral striae. Both sides of the shell are broadly and shallowly concave. The whorls are rounded. The center of the right side (that is, with coiling in a clockwise direction) is more deeply depressed than that of the left. Sutures on both the right and left sides of the shell are deeply impressed. The aperture is nearly even with the right side of the shell and expands very slightly beyond the left side.

The ratio of shell dimensions of specimens from Nichupté Lagoon conforms with ratios determined from dimensions given by Harry and Hubendick (1964: 51, Table I) for *Taphius (=Biomphalaria) havanensis*. Harry (1962:45) compiled a synonymy list for *T. havanensis*. Some workers consider *B. havanensis* a synonym of *B. peregrinus* (Harry and Hubendick, 1964: 48) but Paraense (1966:292), on the basis of radula studies, considers the two distinct. Specimens from Nichupté Lagoon are less like representatives of *B. peregrinus* (Baker, 1945, pl. 130: 38-41, 135: 1-4) than those of *B. havanensis* and some synonyms (Baker, 1945 pl. 128: 26-33, *Tropicorbis obstructus* (Morelet, 1849); pl. 129: 1-3, 5-7, 10-15, *T. orbiculus* (Morelet, 1948) = *Planorbis liebmanni* Dunker, 1856; pl. 130: 18-28, *T. havanensis* (Pfeiffer, 1839); pl. 132: 15-21, *T. riisei* (Dunker); Paraense and Deslandes, 1958: 91, fig. 1).

Specimens from Nichupté Lagoon also resemble figures of *Planorbis (=Biomphalaria) fieldii* Tryon, 1863: 146, pl. 1: 4-5; von Martens, 1890-1901: 394-395, pl. 21: 6; Baker, 1945:501, pl. 132:24-30).

Occurrence: One specimen was recovered from the sediment of Inglés Lagoon (Core 26, depth 70 cm) and two specimens were taken from the BLM sediment of Core 113 (depth 170 cm).

Total number collected: 3.

Distribution: Southern Florida, Louisiana, Texas, West Indies, Mexico, Central America and most of South America.

Family PHYSIDAE Fitzinger, 1833
Genus PHYSA Draparnaud, 1801

Physa marmorata Guilding, 1828

References: Clench, 1930: 301-315; Clench, 1936: 337-338, pl. 25: 6, *Aplexa marmorata;* Harry and Hubendick, 1964: 13-15, fig. 72, 110.

Description: The small tan, fragile shell (ht 9 mm, greatest diam. 5.1 mm, apertural height 7.0 mm) has 3½ whorls. Coiling is sinistral. The aperture is elongate, rounded below and forming an acute angle above. The outer lip is thin and easily broken. The columellar and parietal regions are covered by a white callus. The columellar lip is a low ridge. The apex is smooth and the sutures are indistinct.

The ratio of shell dimensions of specimens from Nichupté Lagoon conforms with ratios determined from dimensions given by Clench (1936, pl. 25:6 and Harry and Hubendick (1964: 13).

Occurrence: Representatives of this species were recovered only from BLM sediments of Core 113 (depth 0-55 cm).

Total number collected: 12.

Distribution: West Indies, south to Brazil.

Order STYLOMMATOPHORA A. Schmidt, 1856
Family PUPILLIDAE Turton, 1831
Genus GASTROCOPTA Wollaston, 1878

Gastrocopta pellucida (Pfeiffer, 1841)

References: Pilsbry, 1916-1918: 75-82, pl. 15: 1-5, 7-13, pl. 16, pl. 17:1-3, 8; Pilsbry, 1930: 298; van der Schalie, 1948:41-42, pl. 3: 6; Harry, 1950: 22-23; Haas 1960: 10, pl. 3: a-c; Coomans, 1967b: 131.

Description: The brown or, in some cases, white shell is small (ht 2.2 mm, diam. 1.0 mm), subcylindrical and has 4 whorls. The whorls are marked with minute, oblique transverse striae. The body whorl is flattened over the palatal plicae and has, in most specimens, a moderately developed crest behind the lip. The peristome is greatly expanded, is thin at the edge, but has a thin callous rim within. The angulo-parietal lamella is bifid, consisting of two laminae: the left lamina enters deeply and the outer extension of the left lamina is joined to the right lamina which extends outward toward the outer lip. The columellar lamella is strong and enters, and, in some specimens, has a low tubercle just below it. The basal plica and upper palatal plica are short. The lower palatal plica is long and enters deeply.

There is considerable variation of form among previously reported representatives of *G. pellucida* and its subspecies and varieties (Pilsbry, 1890: 44, pl. 1: g-k; Pilsbry, 1900a: 498, pl. 62: 7; Pilsbry, 1903: 765; Vanatta, 1912: 17, pl. 2; Pilsbry, 1916-1918: 75-82, pls. 15: 1-5, 7-13, pl. 16, pl. 17: 1-3, 8; Pilsbry, 1948: 913-916, figs. 494-

495). This variation of form is also observed in specimens from Nichupté Lagoon. Most specimens found are of the form described above (21 of 25) and closely resemble representatives of the subspecies *G. p. hordeacella* (Pilsbry 1890) (Pilsbry, 1890: 44-45, pl. 1: g-k; Pilsbry, 1900b: 594, pl. 22: 3; Haas, 1960: 18, pl. 3: a).

Three specimens lack a bilobed angulo-parietal lamella. The lamella appears bilobed in front view but sinuous and not bilobed when viewed from below. These specimens are similar to *G. riograndensis* (Sterki, Pilsbry, 1917) (Pilsbry, 1916-1918:69, pl. 12: 9-10; Pilsbry, 1948: 911, fig. 492: 9-10) but probably represent a form of *G. pellucida*.

One specimen is white, cylindric and has no crest behind the outer lip. The angulo-parietal lamella, columellar lamella and lower palatal plica are weak, thin, blade-like and enter. The basal plica and upper palatal plica are very small. The shell is comparable to a form of *G. p. hordeacella* (Pilsbry, 1890) from Key West, Florida (Vanatta, 1912, pl. 2: 16), but the teeth are more blade-like than is characteristic of that subspecies. In this way the specimen resembles *G. p. parvidens* (Sterki, 1899) (Pilsbry, 1900b: 594, pl. 22:2; Pilsbry, 1916-1918: 80-82, pl. 17: 8). Also, this specimen is similar to a form of *G. pentodon* (Say, 1821) (Vanatta and Pilsbry, 1906: 123-124, pl. 4: 20, 23 (only); Pilsbry, 1916-1918: pl. 28-31, pl. 3: 2, 3, pl. 4: 15, pl. 5: 28-41; Pilsbry, 1948: 886-889, fig. 477: 2, 3, 5, 6) but lacks the crest and is slightly larger (ht 2 mm, diam. 1 mm) and more cylindric than is usual for *G. pentodon*.

Occurrence: Representatives of this species were recovered from the BLM sediments of Cores 112 and 113.

Total number collected: 11.

Distribution: Florida, Texas west to California, Mexico, West Indies.

Family SUCCINEIDAE Beck, 1837
Genus SUCCINEA Draparnaud, 1801

References: von Martens, 1890-1901:330-341; Pilsbry, 1926a:102-103; Bequaert and Clench, 1933: 537; Richards, 1937:255; Pilsbry, 1948: 771-847; van der Schalie, 1948: 43-44; Harry, 1950:22, fig. 2.

Succinea sp. 1

Description: The shell is opaque, white, ovate, small (ht 3.6 mm, diam. 3.0 mm, apertural ht 2.5 mm) and has 2 whorls. The body whorl and aperture are expanded. Only two juvenile specimens have been found so further classification is not possible.

Occurrence: Two specimens were taken from the BLM sediments of Core 113 (depth 170 cm).

Total number collected: 2.

Distribution: Nichupté Lagoon.

Succinea sp. 2

Description: This shell is translucent gray, more elongate and slightly larger (ht 4.0 mm, diam. 2.5 mm, apertural height 3.0 mm) than *Succinea* sp. 1. It also has 2 whorls and is not mature. The aperture is elongate, oval and extends 13 mm below the body whorl.

Occurrence: One specimen was recovered from the BLM sediment of Core 112 (depth 30 cm).

Total number collected: 1.

Distribution: Nichupté Lagoon.

Family ACHATINIDAE Swainson, 1840
Genus LAMELLAXIS Strebel and Pfeffer, 1882

Lamellaxis micra (d'Orbigny, 1835)

References: Pilsbry, 1906:193-198, pl. 27:56, 28: 59-60, 62, *Opeas micra* (includes synonymy list and varieties through 1900); Pilsbry, 1926b: 130; Richards, 1937: 254; Baker, 1945: 90, *Lamellaxis micra*; van der Schalie, 1948: 53-54, pl. 4: 12, *L. micra margaritacens* (Shuttleworth, 1854); Harry, 1950:18; Wurtz, 1950: 95-110.

Description: The small shell (ht 3.9 mm, diam. 1.5 mm) has 5 whorls that taper gradually to an obtuse apex. The first two whorls are smooth, whereas the remaining whorls are marked with widely spaced, fine transverse striae. The aperture is small (ht 1.0 mm) and oval. The columella is straight. The inner lip is narrowly folded back and covers the umbilicus.

Occurrence: Two specimens were taken from BLM sediments of Core 112 (depth 0-5 cm).

Total number collected: 2.

Distribution: Bermuda, South Carolina, south to Bolivia.

Family POLYGYRIDAE Pilsbry, 1895
Genus POLYGYRA Say, 1818

Polygyra cereolus carpenteriana (Bland, 1860)

References: Pilsbry, 1940: 582-586, fig. 379: k; Harry, 1950: 8.

Description: The small shell (ht 2.1 mm, diam. 6 mm) is discoidal umbilicate, brown and marked with fine transverse striae. The shell has 5 whorls. The outer and basal margins of the aperture are reflected and thickened within. The one specimen found was damaged such that the parietal margin cannot be described.

Occurrence: Two specimens were taken from the BLM sediments of Core 112 (depth 0-30 cm).

Total number collected: 2.

Distribution: Southern Florida, eastern Mexico, Yucatan.

Family SAGDIDAE Pilsbry, 1895
Genus THYSANOPHORA Strebel and Pfeffer, 1880

Thysanophora sp., cf. *T. conspurcatella* (Morelet, 1851)

References: Pilsbry, 1891b: 315; Baker, 1922: 56; Pilsbry, 1926a: 77, 120-121, fig. 8a; Baker, 1927: 240; Goodrich and van der Schalie, 1937: 26.

Description: The small shell (ht 2.5 mm, diam. 4.3 mm) has 4½ whorls. The spire is low and the first 1½ whorls are smooth. The remaining whorls are marked with oblique transverse threads and growth lines. The adult body whorl is slightly flattened and slopes inward below the shoulder. The aperture is subtriangular in outline.

Adult specimens from Nichupté Lagoon differ from described *T. conspurcatella* by their larger size (*T. conspurcatella* ht 2 mm, diam. 3.5 mm, 3½ whorls, Pilsbry, 1926a, pl. 121). Also the first 1½ whorls are smooth, whereas in described *T. conspurcatella*, only the initial one-third whorl is smooth (Pilsbry, 1926: 121).

Occurrence: Representatives of this species were taken from the BLM sediments of Core 112 (depth 0-30 cm).

Total number collected: 4.

Distribution: Yucatan, Guatemala.

CLASS SCAPHOPODA Bronn, 1862
Family SIPHONODENTALIIDAE Simroth, 1895
Genus CADULUS Philippi, 1844

Cadulus carolinensis Bush, 1885

References: Bush, 1885: 471, pl. 45: 19; Dall, 1889a: 78, pl. 41: 19; Abbott, 1954: 327, text fig. 69: a; Perry and Schwengel, 1955: 101, pl. 45: 316; Andrews, 1971:145–146, fig.; Morris, 1973: 283, pl. 74: 20; Abbott, 1974: 389, no. 4544.

Description: The small, white shell (length 5 mm) is smooth, tubular and slightly swollen posteriorly from the middle. There are 4 shallow slits in the apex which gives the edge a scalloped appearance.

Occurrence: Representatives of this species were recovered from the OL sediments of Cores 18 (depth 280 cm) and 24 (depth 185–240 cm) and TD sediments of Core 32 (depth 190 cm).

Total number collected: 4.

Distribution: North Carolina, south to Florida and Texas.

Family DENTALIIDAE Gray, 1834
Genus DENTALIUM Linnaeus, 1758

Dentalium antillarum d'Orbigny, 1842

References: Abbott, 1954: 330; Warmke and Abbott, 1962: 224, text fig. 34: f.

Description: One broken specimen was recovered from the sediment. This white fragment is small (length 8 mm, diam. 2 mm) and broken at both ends. The surface is marked with strong, longitudinal ribs (12 ribs increasing to 18) and microscopic transverse striae between the ribs.

Occurrence: One specimen was taken from the OL sediments of Core 23 (depth 120 cm) and TD sediments of Core 32 (depth 125 cm).

Total number collected: 2.

Distribution: Southern Florida to the West Indies.

CLASS POLYPLACOPHORA Blainville, 1816
Order NEOLORICATA Bergenhayn, 1955
Family ISCHNOCHITONIDAE Dall, 1889
Genus ISCHNOCHITON Gray, 1847

Ischnochiton sp., cf. *I. papillosus* (C. B. Adams, 1845)

References: Clench and Turner, 1950: 322, pl. 42: 4, *Chiton papillosus;* Warmke and Abbott, 1962: 217, text fig. 32: a; Kaas, 1972:87–89, pl. 6: t; Abbott, 1974: 394 no. 4612.

Description: The small, dissociated valves (intermediate valve width 2.5 mm, length 1.0 mm) are marked with even pits on the upper surface. Color varies from olive-green to brown with white dorsal stripe extending across the central area of most intermediate valves. Some valves are green or brown with white mottlings. Many head and tail valves found are olive-green to orange-brown with white granules. The insertion plates are very narrow and smooth and the head and tail valves each have about 10 slits, whereas the intermediate valves each have one slit on either side of the valve.

Occurrence: Representatives of this species were recovered from most RL sediments.

Total number collected: 81 valves.

Distribution: Florida and the West Indies.

Remarks: Isolated valves were counted, thus the true number of individuals is not indicated. Of the 24 valves recovered from the RL sediments of Core 18 (depth 0–10 cm), 3 valves were tail valves. The intermediate valve was most commonly encountered.

Family ACANTHOCHITONIDAE Pilsbry, 1893
Genus ACANTHOCHITONA Gray, 1821

Acanthochitona sp., cf. *A. pygmaea* (Pilsbry, 1893)

References: McGinty, 1937: 141; Moore, 1960: 69, text fig. 43: 2, 3; Kaas, 1972: 49–50, figs. 82–89; Morris, 1973:279, pl. 76: 7; Abbott, 1974: 406, no. 4757.

Description: The intermediate valve is small (width 3.3 mm) and arched. The jugum is white, wide, triangular and covered with 7 well defined, granulose, longitudinal riblets. The latero-pleural areas are variegated brown and white and covered with large, round flattened granules (granule diam. 0.1 mm).

Occurrence: Two intermediate valves were recovered from the OL sediments of Cores 18 (depth 190 cm) and 17 (depth 115 cm).

Total number collected: 2 valves.

Distribution: Eastern Florida, the West Indies, south to Colombia.

Genus CRASPEDOCHITON Shuttleworth, 1853

Craspedochiton sp., cf. *C. hemphilli* (Pilsbry, 1893)

References: Pilsbry, 1893:32, *Acanthochitona hemphilli;* Warmke and Abbott, 1962:216, text fig. 32f; Righi, 1968: 75, figs. 73–82; Kaas, 1972:38–41, pl. 2: 1, 2; Abbott 1974: 407, no. 4763.

Description: The larger of 2 intermediate valves recovered from the sediment is small (length 3.8 mm, diam. 4.5 mm), bleached white and worn smooth; however, several diagnostic characteristics may be noted. The heart-shaped valve is bisected by the narrow, straight-sided, slightly elevated jugal band. The insertion plates are large and single-slitted.

Occurrence: Two intermediate valves were taken from the OL sediment of Core 17 (depth 115 cm).

Total number collected: 2 valves.

Distribution: Lower Florida Keys and the West Indies.

CLASS BIVALVIA Linnaeus, 1758
Order NUCULOIDA Dall, 1889
Family NUCULIDAE Gray, 1824
Genus NUCULA Lamarck, 1799

Nucula sp.

Description: The minute shell (length 2 mm, ht 1.5 mm) is ovate, white and sometimes translucent. The exterior surface of the shell is marked with fine concentric growth lines and microscopic radial striae. The interior is iridescent and marked with anterior and posterior muscle scars. The hinge bears 5 anterior and 8 posterior chevron-shaped teeth. The ventral margin is finely crenulate within.

Occurrence: Representatives of this species are found in relatively small numbers in most TD and OL sediments and to a lesser extent, in some RL sediments.

Total number collected: 63.

Remarks: The specimens resemble miniature *N. aegeënsis* Jeffreys, 1879 (Dall, 1889a: 42; Warmke and

Abbott, 1962: 155, text fig. 23; Abbott, 1974: 410, no. 4791) reported from North Carolina, south to the West Indies and Brazil.

ORDER ARCOIDA Stoliczka, 1871
Family ARCIDAE Lamarck, 1809
Subgenus BARBATIA Gray, 1842

Barbatia cancellaria (Lamarck, 1819)

References: Abbott, 1954: 343, pl. 27: q; Abbott, 1958: 110; Warmke and Abbott, 1962: 158, pl. 30: j; Rice and Kornicker, 1965: 132, pl. 10: 5, 6; Stanley, 1970:122, pl. 4: 5-8; Andrews, 1971:150, fig.; Morris, 1973: 10, pl. 10: 12; Abbott, 1974: 421-422, no. 4966.

Description: The largest specimen found (length 8 mm, ht 4 mm) is a worn, red-brown left valve with a white ray extending from the umbo to the ventral margin. The shell is obliquely rectangular and rounded at both ends. External sculpture consists of numerous finely beaded ribs (slightly eroded) and irregular concentric growth lines. The hinge is straight with a narrow ligament area and small teeth which are obliquely inclined to the anterior.

Occurrence: Representatives of this species are found in very small numbers in TD and OL sediments of Cores 32, 33 and 24. One specimen was taken from RL sediments of Core 23 (depth 10 cm).

Total number collected: 6.

Distribution: Southern Florida, the West Indies and the Gulf of Mexico, south to Brazil.

Remarks: Formerly listed as *Arca barbata* Linné (Dall, 1889a: 40), but this name refers to a Mediterranean species.

Subgenus ACAR Gray, 1857

Barbatia sp., cf. *B. domingensis* (Lamarck, 1819)

References: Abbott, 1954: 343, pl. 27: u; Perry and Schwengel, 1955: 37, pl. 3: 11; Abbott, 1958: 111; Warmke and Abbott, 1962:158, pl. 30:d; Bretsky, 1967:14, 2 figs., 2 tables; Stanley, 1970: 123, pl. 5:3, 4; Andrews, 1971: 151, fig.; Morris, 1973: 10, pl. 10: 13; Abbott, 1974: 422, no. 4967.

Description: The largest shell found is a minute, juvenile, but distinctive, right valve (length 3.8 mm, ht 1.2 mm) and specimens are numerous enough to warrant description. The white shell is rectangular with the straight, posterior end larger (ht 2 mm) than the rounded, anterior end (ht 1.5 mm). The surface of the shell is finely (initial 0.5 mm), developing to coarsely reticulate with prominent beads. There is a ridge of stronger beads extending from the posterior point toward the umbo. The hinge line is straight with a long, narrow ligament posterior to the beak and a few teeth obliquely inclined to the center. The ventral margin is crenulate.

Occurrence: Representatives of this species are taken in very small numbers from TD and OL sediments of Cores 32, 24 and 30.

Distribution: Bermuda, North Carolina to Texas, south to the West Indies and Brazil.

Order MYTILOIDA Férussac, 1822
Superfamily MYTILACEA Rafinesque, 1815
Family MYTILIDAE Rafinesque, 1815
Subfamily MYTILINAE Rafinesque, 1815
Genus BRACHIDONTES Swainson, 1840
Subgenus HORMOMYA Mörch, 1853

Brachidontes exustus (Linnaeus, 1758)

References: Abbott, 1954:352-353, pl. 35: j; Perry and Schwengel, 1955:52, pl. 7:35; Richards, 1962: 56, pl. 4:13, 14; Warmke and Abbott, 1962: 162, pl. 31: f; Stanley, 1970: 133-134, pl. 8: 4-6; Andrews, 1971:156-157, fig.; Odum and Heald, 1972: 690; Morris, 1973: 18, pl. 12: 14; Abbott, 1974: 429, pl. 20: 5044.

Description: The largest specimen found (length 7 mm, ht 14 mm) is equivalve and inequilateral. The exterior of the valve is marked with numerous fine, sometimes wavy, axial ribs. Most shells are yellow-brown and juvenile. The interior is iridescent white, flushed with brown and sometimes purple. In each valve, there are 2 to 4 small anterior teeth and 6 smaller teeth beyond the ligament.

Occurrence: Representatives of this species are taken in relatively large numbers from Inglés Lagoon and RL sediments and to a far lesser extent, from TD and OL sediments.

Total number collected: 1,122.

Distribution: North Carolina to Texas, south to the West Indies. Brazil to Uruguay.

Subfamily CRENELLINAE Gray, 1840
Genus CRENELLA Brown, 1827

Crenella divaricata (d'Orbigny, 1853)

References: Abbott, 1954:351; Keen, 1958:50, fig. 88; Warmke and Abbott, 1962:161, text fig. 26; Abbott, 1974: 431, no. 5053.

Description: The small shell (length 2.4 mm, ht 3 mm) is white, oval and inflated (diam. 1 mm). The exterior surface of the valves is marked with fine, bifurcate, radiating ribs and finer concentric striae. The hinge line is characteristic and well illustrated by Warmke and Abbott (1962:161, text fig. 26). The ventral margin is crenulate.

Occurrence: Representatives of this species are found in sediments near the tidal channel which allows influx of more normal marine waters into the lagoon. Specimens were taken from OL and TD sediments, and to a lesser extent, RL sediments of Cores 30, 23, 24 and 32.

Total number collected: 94.

Distribution: North Carolina, south to the West Indies.

Remarks: Keen (1958:50) lists the West Coast range of this species as southern California to Peru and comments that future study may show the West Coast species as distinct and separate from the eastern form.

Genus MUSCULUS Röding, 1798

Musculus lateralis (Say, 1822)

References: Say, 1822:264, *Mytilus lateralis* (sic) Abbott, 1954: 355, text fig. 75: c; Abbott, 1958: 114; Richards, 1962:57, pl. 5, 7, 8; Warmke and Abbott, 1962:163, pl. 31:c; Andrews, 1971: 158, fig.; Morris, 1973: 20, pl. 13: 1; Abbott, 1974: 432, no. 5069.

Description: The largest specimen found (length 4 mm) is juvenile, white and fragile. The exterior of the shell is marked with fine growth striae and small radial ribs at both ends. The central area of the valve has fine growth striae only. There are no hinge teeth. The interior of the valve is iridescent

Occurrence: Single representatives of this species were taken from RL sediments of Core 17 (depth 30 cm) and RL and OL sediments of Core 24 (depths 35 and 125 cm)

Total number collected: 3.

Distribution: North Carolina, south to the West Indies.

Remarks: The ecology and commensal activity of this species are discussed by Bertrand (1971: 23-29).

Subfamily MODIOLINAE Keen, 1958
Genus MODIOLUS Lamarck, 1799

Modiolus modiolus squamosus Beauperthuy, 1967

References: Abbott, 1974: 435, no. 5089.

Description: The only specimen recovered is large (length 15.5 mm, ht 28 mm) and brown. The anterior ventral area is dark brown whereas the rest of the valve is covered by the periostracum, but lighter brown beneath. The interior of the shell is dull purple with a darker bluish purple area corresponding to the dark brown area on the exterior. The anterior margin is smooth and there is a ligamental groove posterior to the umbones.

Occurrence: One complete specimen, filled with mud and detritus, was taken from RL sediments of Core 18 (depth 10 cm).

Total number collected: 1.

Order PTERIODA Newell, 1965
Superfamily PTERIACEA Gray, 1847
Family PTERIIDAE Gray, 1847
Genus PINCTADA Röding, 1798

Pinctada imbricata Röding, 1798

References: Dall and Simpson, 1901: 463, *Pteria radiata*, synonym; Abbott, 1954:359, pl. 35: c; Perry and Schwengel, 1955:41, pl. 4: 18; Abbott, 1958: 115; Rice and Kornicker, 1962: 380, pl. 6: 6, 9; Warmke and Abbott, 1962: 166, pl. 32: b; Stanley, 1970: 136-137, pl. 11: 5-7; Andrews, 1971: 162-163, fig.; Morris, 1973: 25, pl. 15: 1; Abbott, 1974: 440, pl. 20: 5122.

Description: Specimens recovered from Nichupté Lagoon sediments are generally fragmentary and fragile. The largest specimen found (length 19 mm, ht 15 mm) is a left valve, white and devoid of periostracum. The periostracum observed adhering to some specimens is brown to greenish brown to green. Two valves recovered have greenish brown periostracum which is marked by white, radiating, irregular dashes. The hinge lines of all specimens observed are straight with pseudocardinal and lateral teeth in each valve. The left valve has a single lateral tooth and the right valve has a double lateral. There is a byssal gape under the anterior wing of the right valve. The interior of the shell is highly nacreous and a nearly central muscle scar is present.

Occurrence: Fragmentary representatives of this species are found in most RL sediments and to a lesser extent, in OL and TD sediments.

Total number collected: 82.

Distribution: Bermuda, South Carolina to Texas and the West Indies, south to Brazil.

Remarks: A similar bivalve, *Pteria colymbus* (Röding, 1798), is described as often occurring with *Pinctada imbricata* and having a brown periostracum with broken radial lines of cream color (Andrews, 1971: 162). The diagnostic characters of shell shape and wing development are useless for the fragments of hinge lines recovered from Nichupté Lagoon; however, hinge characteristics proved most useful. There are 2 cardinal and 1 lateral teeth in each valve of specimens of *P. colymbus* (Abbott, 1954:359, pl. 35: d; Perry and Schwengel, 1955:41, pl. 4: 17; Warmke, and Abbott, 1962:165, pl. 31: i; Morris, 1973: 24-25, pl. 15:2). With this distinctive characteristic of hinge development, specimens from Nichupté Lagoon are identified as *Pteria imbricata*.

Family PECTINIDAE Rafinesque, 1815
Subfamily PECTININAE Rafinesque, 1815
Genus LYROPECTEN Conrad, 1862

Lyropecten antillarum (Récluz, 1853)

References: Récluz, 1853: 153-154, pl. 5: 1, *Pecten antillarum;* Dall and Simpson, 1901:466; Abbott, 1954: 366, pl. 34: g, left; Abbott, 1958: 116, pl. 4: m, map 3; Warmke and Abbott, 1962: 169, pl. 33: f; Abbott, 1974: 448-449, no. 5203.

Description: One slightly damaged left valve was recovered from Nichupté Lagoon sediment. The valve is small (length 16 mm, ht 18 mm) and nearly flat (width 1.5 mm). The auricles are uneven and together measure 80 per cent of the valve length. The exterior of the valve is marked by eleven wide, low, moderately rounded tadial ribs crossed by closely spaced, microscopic growth striae. The shell is faded, light yellow and mottled with white.

Occurrence: One valve was taken from OL sediments of Core 24 (depth 240 cm).

Total number collected: 1.

Distribution: Bermuda, southeastern Florida and the West Indies.

Superfamily ANOMIACEA Rafinesque, 1815
Family ANOMIIDAE Rafinesque, 1815
Genus ANOMIA Linnaeus, 1758

Anomia simplex d'Orbigny, 1845

References: Dall, 1889a:32, pl. 53: 1, 2; Abbott, 1954: 372, pl. 35:k; Perry and Schwengel, 1955: 51, pl. 6: 32; Warmke and Abbott, 1962: 172, pl. 34: h; Stanley, 1970: 144, pl. 14:1-3; Andrews, 1971: 167-168; Morris, 1973:38, pl. 18: 6; Abbott, 1974: 451, pl. 20: 5232.

Description: The largest specimen found (length 16 mm, ht 16 mm) is an irregular, subcircular, moderately convex (diam. 6 mm) upper (free, left) valve. The exterior of the shell is wrinkled and yellow-cream in color. The interior is nacreous and marked by a nearly central, oblong callus on which there are 3 small muscle scars and above which there is one larger muscle scar. Close above and to the left of the larger muscle scar is a pit-shaped resilifer (fossette).

The juvenile valve proved to be a problem in identification until the adult was found and used for comparison. Small, translucent-white juvenile shells are circular (length 5 to 10 mm) and thin but not fragile. The most noticeable characteristic is the elongate triangular callus, the apex of which extends to the resilifer. This triangular callus is also seen on the umbo of the adult shell. The callus is on the interior of the shell but is visible from the outside. Juvenile shells differ from the adult mainly by being thinner, flatter and smooth.

Occurrence: Juvenile representatives of this species were recovered in very small numbers from some Inglés Lagoon, RL and OL sediments. The single adult valve found was taken from RL sediments of Core 23 (depth 30 cm).

Total number collected: 9.

Distribution: Eastern United States, Gulf of Mexico, the West Indies, south to Brazil.

Superfamily LIMACEA Rafinesque, 1815
Family LIMIDAE Rafinesque, 1815
Genus LIMA Bruguière, 1797
Subgenus LIMARIA Link, 1807

Lima pellucida C. B. Adams, 1846

References: Clench and Turner, 1950: 324, pl. 43: 8, 9; Abbott, 1954: 370; Abbott, 1958: 117; Warmke and Abbott, 1962:171, pl. 34:e; Rice and Kornicker, 1965:134, pl. 11: 11, 12; Andrews, 1971: 169, fig.; Morris, 1973: 33, pl. 18: 2; Abbott, 1974: 453, no. 5243.

Description: The small, fragile valve (length 12 mm, ht 14 mm, diam. 4 mm) is translucent-white and obliquely oval. The exterior of the valve is marked with very fine radial striae. The hinge is straight and short (length 3 mm) and the auricles are small.

Occurrence: One unweathered valve was recovered from RL sediments of Core 18 (depth 10 cm).

Total number collected: 1.

Distribution: Bermuda, North Carolina to Florida, Texas, south to Brazil.

Genus LIMATULA Wood, 1839

Limatula sp., cf. *L. hendersoni* Olsson and McGinty, 1958

References: Olsson and McGinty, 1958: 47, pl. 4: 6; Warmke and Abbott, 1962: 172; Abbott, 1974: 454, no. 5261.

Description: The largest specimen found is minute (length 1.4 mm, ht 2.3 mm) and translucent white. The shell is elongate, convex and nearly equilateral. The exterior of the shell is marked with 12 to 20 low, radial ribs, crossed by very fine growth striae. The 2 middle ribs are stronger than the others and between them lies a median furrow or sulcus. The ribs become obsolete anteriorly and posteriorly. The hinge line is short (length 0.6 mm) and bears a triangular resilifer.

Occurrence: Representatives of this minute bivalve were found only in the TD sediments of Core 32.

Total number collected: 15.

Distribution: Florida and the West Indies.

Remarks: Olsson and McGinty (1958: 47) do not describe the shell as having a median furrow, but do note that median ribs are larger than marginal ribs.

A shell of similar shape and possessing a median furrow is *L. subovata* (Jeffreys, 1876: 427-428; Abbott, 1974: 454 no. 5264) from Massachusetts. Abbott places this species in the genus *Limea*. This designation is not followed here because unlike *subovata*, representatives of *Limea* have short denticles on each side of the hinge line. Jeffreys (1876:427) describes the hinge line of *subovata* as smooth and compares it with *subauriculata* (Montagu, 1808). Specimens from Nichupté Lagoon have wider and less numerous ribs (12 to 20 ribs) than do representatives of *subovata* (50 ribs). The dimensions of the shell of *subovata* (length 3.6 mm, ht 6.3 mm) is nearly three times that of the largest shell from Nichupté Lagoon.

Order VENEROIDEA H. and A. Adams, 1856
Superfamily LUCINACEA Fleming, 1828
Family LUCINIDAE Fleming, 1828
Genus LINGA de Gregorio, 1884

Linga pensylvanica (Linnaeus, 1758)

References: Deshayes, 1861: 317, pl. 13: 1; Dall and Simpson, 1901: 493; Abbott, 1954: 385, pl. 38: h; Abbott, 1958:119; Rice and Kornicker, 1962: 381, pl. 8: 6; Warmke and Abbott, 1962: 176, pl. 36: a; Stanley, 1970: 152-153, pl. 18: 1-4; Morris, 1973: 48, pl. 21: 15; Abbott, 1974: 458, pl. 22: 5282.

Description: The largest shell found (length 21 mm, ht 21 mm, diam. 6.4 mm) is a right valve. The white shell is nearly circular and inflated. The beak is elevated and arches anteriorly over the large heart-shaped lunule. There is a distinct radial furrow which extends from behind the beak to the posterior ventral margin where it terminates forming a sinus. The exterior of the shell is marked with regular concentric ridges. The ligament is immersed. On the left valve, there are 2 strong cardinal teeth and one anterior and 2 posterior lateral tooth. In the right valve there is a bifid cardinal tooth, an elevated anterior, and double posterior lateral teeth.

Occurrence: Representatives of this species are found primarily in TD sediments but also in some RL and OL sediments.

Total number collected: 13.

Distribution: Southeastern United States to the West Indies.

Genus PARVILUCINA Dall, 1901

Parvilucina multilineata (Tuomey and Holmes, 1857)

References: Dall, 1901c:825, pl. 39: 2, *Phacoides crenella* Dall, synonym; Abbott, 1954: 386-387, text fig. 78: f; Perry and Schwengel, 1955: 64, pl. 40: 291; Andrews, 1971:175, fig.; Morris, 1973: 47, pl. 21: 10; Abbott, 1974: 459, no. 5290.

Description: The white shell is small (length 6 mm, ht 5 mm, diam. 1.6 mm), obese and nearly circular. The surface of the shell is very finely sculptured with numerous, fine concentric growth threads and finer radial threads. In both valves, there are 2 cardinal and strong anterior and posterior lateral teeth. In the right valve, the lateral teeth are developed in pairs, the dorsal lateral teeth (both anterior and posterior) are strong whereas the ventral lateral teeth are weak. The interior margin of the shell is finely crenulate.

Occurrence: Representatives of this species are found in some RL and OL sediments.

Total number collected: 30.

Distribution: North Carolina to Florida, Texas, and Brazil.

Remarks: Evidence of periods of halted growth (irregular hump mentioned by Abbott, 1954:387) is observed on valves from Nichupté Lagoon.

Subgenus CAVILINGA Chavan, 1937

Parvilucina blanda (Dall, in Dall and Simpson, 1901)

References: Dall and Simpson, 1901: 493-494, pl. 58: 13, *Phacoides trisulcatus* Conrad var. *blandus* Dall; Warmke and Abbott, 1962: 176, pl. 36: d; Ab-

bott, 1974:459, no. 5294 (photo no. 5294 is not this species.

Description: The white shell is small (length 5 mm, ht 6 mm, diam. 1.8 mm) and obliquely subtriangular in outline. The beak is elevated and arches anteriorly over the deep lunule. The surface of the shell is marked with numerous even, concentric ridges and grooves. On most valves found, 3 to 4 of the grooves are deeper than the others. One smaller left valve (ht 4 mm) is marked with 5 deeper grooves. In the left valve, there are 2 cardinal teeth and 2 anterior and 2 posterior lateral teeth. In the right valve, there are 2 cardinal teeth and single anterior and posterior lateral teeth. The interior margin is finely denticulate.

Occurrence: Representatives of this species are found in sediments near the mangrove channel which allows influx of more normal marine waters into the lagoon. Specimens were taken from RL, OL and TD sediments of Cores 23, 24 and 32.

Total number collected: 31.

Distribution: The West Indies.

Remarks: Most of the valves found have been bored.

Genus CODAKIA Scopoli, 1777
Subgenus CTENA Mörch, 1860

Codakia orbiculata (Montagu, 1808)

References: Dall and Simpson, 1901: 491; Abbott, 1954:391, pl. 30: L; Perry and Schwengel, 1955: 66, pl. 11: 68; Abbott, 1958: 120, pl. 4: r; Warmke and Abbott, 1962: 178, pl. 36: h; Rice and Kornicker, 1965: 134-135, pl. 12: 11, 12; Abbott, 1974: 460, no. 5300.

Description: The small, white shell (length 7.5 mm, ht 6 mm, diam. 2 mm) is suborbicular and compressed. The beak is sharp and arches slightly anteriorly over the elongate lunule. The shell is marked by radial ribs which are crossed by fine concentric threads. In the left valve, there are 2 cardinal teeth and 2 anterior and 2 posterior lateral teeth. In the right valve, there are 2 cardinal teeth and single anterior and posterior lateral teeth.

Occurrence: Representatives of this species are found in some RL, OL and TD sediments.

Total number collected: 47.

Distribution: Bermuda, south to Brazil.

Genus LUCINA Bruguière, 1797

Lucina pectinata (Gmelin, 1791)

References: Dall and Simpson, 1901: 493; Abbott, 1954: 388, pl. 38:g; Perry and Schwengel, 1955: 65, pl. 11:64; Warmke and Abbott, 1962: 177, pl. 36: b; Stanley, 1970: 149-150, pl. 16: 1-3; Andrews, 1971: 176, fig.; Morris, 1973: 47-48, pl. 21: 12; Abbott, 1974: 460, pl. 22: 5305.

Description: The shell is of medium size (length 19 mm, ht 16 mm), rounded trigonal and compressed. The shell is marked with unequally spaced, moderately sharp, concentric ridges. The beak is sharp and arches anteriorly over the high blade-like lunule. The posterior dorsal slope is rostrate, whereas the anterior dorsal slope is less rostrate. The arched beaks are more prominent and cardinal teeth more obvious in juvenile shells. In the left valve, there are 2 cardinal teeth, of which the anterior tooth is stronger, and double anterior and posterior lateral teeth. The ventral anterior lateral is high and strong. In the right valve there is one cardinal and single anterior and posterior lateral teeth.

Occurrence: Two hinge line fragments were taken from BLM sediments of Core 113 (depth 105 cm) and one worn specimen was found in RL sediments of Core 24 (depth 5 cm).

Total number collected: 3.

Distribution: North Carolina to the West Indies, Texas, south to Central America and Brazil.

Subgenus LUCINISCA Dall, 1901

Lucina nassula Conrad, 1846

References: Conrad, 1846: 24; Abbott, 1954: 388; Perry and Schwengel, 1955: 64, pl. 11:65; Richards, 1962:61, pl. 7: 14, 15; Morris, 1973: 47, pl. 21:8; Abbott, 1974: 460, no. 5306.

Description: The white shell is nearly circular and moderately inflated (length 11 mm, ht 10.4 mm, diam. 3 mm). The surface of the shell is marked by strong, closely spaced concentric and radial ribs, creating a reticulate network. The concentric ribs are blade-like and crenulate. In the right valve, there is a strong cardinal tooth and an elevated and split anterior lateral tooth and a strong, split posterior lateral tooth. In the left valve, there are 2 cardinal teeth, of which the anterior is stronger and both anterior and posterior lateral teeth. The anterior muscle scar is elongate whereas the posterior muscle scar is subtriangular. The pallial line is simple and deeply impressed. The ventral margin is crenulate within and beaded without.

Occurrence: Representatives of this species are found in some RL, OL and TD sediments.

Total number collected: 78.

Distribution: North Carolina to Texas and the West Indies.

Subgenus CALLUCINA Dall, 1901

Lucina sp., cf. *L. radians* Conrad, 1841

References: Dall and Simpson, 1901: 494; Warmke and Abbott, 1962: 177, pl. 36: j; Abbott, 1974:461, no. 5311.

Description: The largest shell found (length 4.5 mm, ht 4 mm, diam. 1.2 mm) is a white juvenile, nearly circular and compressed left valve. The shell is marked with very fine and closely spaced concentric ridges. The beak arches anteriorly over the deep lunule. In this left valve there are 2 cardinal teeth and strong anterior and posterior lateral teeth. The pallial line is impressed. The ventral margin is crenulate within.

Occurrence: Single isolated valves were taken from the RL sediments of Core 17 (depth 15 cm), OL sediments of Core 24 (depth 185 cm). Three specimens were taken from the TD sediments of Core 32.

Total number collected: 5.

Distribution: Bermuda, North Carolina to Florida and the West Indies.

Remarks: The shell externally resembles a small *Dosinia*.

Subfamily DIVARICELLINAE Gilbert, 1967
Genus DIVARICELLA von Martens, 1880
Subgenus DIVALINGA Chavan, 1951

Divaricella quadrisulcata (d'Orbigny, 1842)

References: Dall, 1901b: 815; Dall and Simpson,

1901:494; Clench and Turner, 1950: 255-256, pl. 46: 1, 2, *Lucina americana* C. B. Adams, 1852, synonym; Abbott, 1954:391, pl. 30:m; Abbott, 1958: 121; Rice and Kornicker, 1962: 382, pl. 8: 3; Richards, 1962: 62, pl. 7:28, 29; Warmke and Abbott, 1962: 179, pl. 36: 1; Stanley, 1970: 153, pl. 15: 6, 7; Morris, 1973: 50, pl. 21: 5; Abbott, 1974: 462, no. 5331.

Description: The white shell is nearly circular (length 16 mm, ht 15.5 mm, diam. 5.5 mm) and moderately inflated. Surface ornamentation is distinct. In addition to growth lines, there are chevron-shaped ridges whose peaks align from the beak to the anterior margin. There are 2 cardinal teeth in each valve. Lateral teeth are absent. The valve margins are finely crenulate.

Occurrence: Representatives of this species are found only in the TD sediments of Core 32.

Total number collected: 6.

Distribution: Massachusetts, south to Brazil.

Family UNGULINIDAE H. and A. Adams, 1857
Genus DIPLODONTA Bronn, 1831

Diplodonta nucleiformis (Wagner, 1838)

References: Wagner, 1838: 52, pl. I: 4, *Mysia nucleiformis;* Dall, 1901b:793; Dall and Simpson, 1901: 495; Warmke and Abbott, 1962: 175, pl. 35: j; Morris, 1973: 44, pl. 20: 22; Abbott, 1974: 465, no. 5369.

Description: The small white shell (length 9 mm, ht 8.2 mm, diam. 3.2 mm) is orbicular and moderately inflated. The external sculpture consists only of fine concentric striae. The two shells found are left valves. In the left valve there is an anterior bifid cardinal tooth, a thin, elongate posterior cardinal tooth and no lateral teeth. The pallial line is simple and continuous. The ligament is external.

Occurrence: Single representatives of this species were found in some sediments near the mangrove channel which allows the influx of more normal marine waters into the lagoon. One valve was taken from the RL sediments of Core 24 (depth 5 cm) and one was taken from the TD sediments of Core 32 (depth 160 cm).

Total number collected: Two left valves.

Distribution: North Carolina, south to Brazil.

Superfamily CYRENOIDACEA Olsson, 1961
Family CYRENOIDIDAE H. and A. Adams, 1857
Genus CYRENOIDA de Joannis, 1835

Cyrenoida floridana Dall, 1896

References: Dall, 1889a: 50; Dall, 1896a: 52; Rhoads, 1899: 48; Dall, 1901b: 817, 829, pl. 42: 7; Altena, 1968: 157; Moore, 1969b: 517-518, fig. E22; Abbott, 1974: 466, no. 5383.

Description: The largest shell found is a right valve (length 7 mm, ht 6.2 mm, diam. 1.7 mm). The silky, white valve is nearly circular, thin and smooth with fine growth striae. In some specimens, the tan periostracum is adhering in small patches. The right valve has 2 and the left valve has 1 ⌣-shaped cardinal lamina. In other words, the anterior cardinal teeth form posterior bent portions of their own original anterior lateral teeth. In the right valve, the ventral cardinal lamina is shorter and less developed than the dorsal. In the left valve, the posterior cardinal 'hook' is bifid. An elongate, external ligament enfolds a smaller resilium. The inner ventral margin is smooth.

Occurrence: Representatives of this species are found only in the BLM sediments of Cores 111, 112 and 113.

Total number collected: 17.

Distribution: Georgia and Florida.

Remarks: Identification of specimens was verified by Dr. D. R. Moore (personal communication, 1974).

Specimens from Nichupté Lagoon may also be compared with *C. americana* Morelet, 1851 (Dall and Simpson, 1901: 494, pl. 58: 5), from Puerto Rico, which is distinguished from *C. floridana* by being larger, less delicate and more quadrate (Dall,1901b: 817). However, reported measurements do not bear out this comparison: *C. americana,* reported length: 15 mm; *C. floridana,* reported length: 13.5 mm. Also, comparison of the figures of each species indicates that shells of *C. floridana* are posteriorly more quadrate than those of *C. americana.*

Specimens from Nichupté Lagoon may also be compared with *C. guatemalensis* Pilsbry, 1919 (p. 221-222, pl. 11:9) except that *C. guatemalensis* is more orbicular and has numerous small calcareous lumps on the interior of the valve.

Superfamily GALEOMMATACEA Gray, 1840
Family LASAEIDAE Gray, 1847
Genus ERYCINA Lamarck, 1805

Erycina sp., cf. *E. fernandina* Dall, 1899
Plate I, figs. 6, 7

References: Dall, 1899: 887, pl. 88: 6; Abbott, 1974: 468, no. 5405, the American species are with question placed in this genus.

Description: The white shell is small (length 3 mm, height 2.1 mm, diameter 0.5 mm), subquadrate, and inequilateral. The dorsal and ventral margins are subparallel. The anterior portion of the shell is extended and the umbo is very low, inconspicuous and placed near the posterior portion of the shell. The exterior of the shell is marked only by fine incremental lines of growth. The hinge of the right valve consists of a strong, oblique anterior cardinal tooth, which Dall termed a conspicuous hook on the anterior lateral tooth, and strong elongate lateral teeth which form sockets with the valve margin. The resilifer is a well developed, triangular pit. The hinge of the left valve consists of a smaller, oblique cardinal tooth (nearly parallel with the hinge), a minute cardinal tooth below the beak, a weak elongate anterior lateral tooth and a weak, short posterior lateral tooth.

Occurrence: Representatives of this species are found in very small numbers in some OL sediments near the tidal channel which allows the influx of more normal marine waters into the lagoon (Cores 30 and 23) and in TD sediments of Core 32.

Total number collected: 8.

Distribution: This species was described from dredged coralgal sand, off Fernandina, Florida.

Family LEPTONIDAE Gray, 1847
Subfamily MONTACUTINAE Clark, 1855
Genus MYSELLA Angas, 1877

References: Moore, 1969b:531; Abbott, 1974: 473; Keen and Coan, 1974: 101.

Description: The white, translucent shell is small, compressed, elliptical and inequilateral. The beak is distinct, well rounded and placed near the posterior portion of the shell. The shell is

smooth with faint growth lines. On the hinge of the right valve there are, on either side of the beak, 2 short, triangular teeth, which are separated by a V-shaped notch, the sides of which are nearly perpendicular. These 2 teeth are strong and anterior tooth is slightly larger than the posterior. Above the teeth is a groove to receive the left valve margin. The hinge of the left valve is similar in structure but the teeth are very weak and inconspicuous and the angle formed by them is obtuse. The resilium in each valve is small, but distinct and triangular.

Mysella sp. 1

Description: In addition to the preceding comments, it is possible to make the following observations: The dorsal and ventral margins of the small shell (length 2.4 mm, ht 1.6 mm) are nearly parallel. The anterior margin of the shell is evenly rounded, whereas the posterior margin is less fully rounded.

Occurrence: Representatives of this species are found in very small numbers in some RL, OL and TD sediments.

Total number collected: 34.

Remarks: Specimens from Nichupté Lagoon are comparable with *Mysella planulata* (Stimpson, 1857 (Abbott, 1974: 473, no. 5443) which is known from Nova Scotia to Texas and the West Indies. *M. fragilis* Verrill and Bush (1898: 780, pl. 92: 8) is a synonym.

Mysella sp. 2

Description: The small shell (length 2.4 mm, ht 1.6 mm) is similar to *Mysella* sp. 1 in dimensions and hinge structure but not shape. The anterior margin of the shell (ht 1.6 mm) is rounded and wider than the posterior (ht 1.1 mm). The thickness of the shell is diminished at the free margins so that a flange-like structure is developed.

Occurrence: Representatives of this species are found in relatively small numbers in most RL sediments and to a lesser extent in some TD sediments.

Total number collected: 27.

Remarks: Specimens from Nichupté Lagoon are comparable with figures of *M. ovata* Jeffreys, 1881 (Verrill and Bush, 1898:781, pl. 92: 10, shell with iron oxide encrustation: *not* Jeffreys, 1881: 698, pl. 61: 4) and *M. barbadensis* Dall, 1889 (p. 892, pl. 87: 3; Abbott, 1974:474, no. 5455) except that specimens from Nichupté Lagoon are less ovate, the beak is not placed as near the posterior margin and the latter is better developed and rounded.

Mysella sp. 3

Description: A single left valve was recovered from Nichupté Lagoon sediments, but its differences with the above described specimens make it distinctive. This shell is slightly larger (length 2.5 mm, ht 1.8 mm) than *Mysella* sp. 1. The posterior margin of the valve is more quadrate. The exterior margin of the shell is marked with evenly spaced, comparatively strong, concentric ridges.

Occurrence: One left valve was recovered from RL sediments of Core 111 (depth 130 cm).

Total number collected: 1.

Remarks: The shell is very similar to *M. casta* Verrill and Bush, 1898 (p. 781, pl. 94: 5; Abbott, 1974: 472-473, no. 5450) except that the specimen from Nichupté Lagoon is more rounded anterodorsally. *M. casta* was described from shells dredged in 14-17 fathoms off Cape Hatteras.

Superfamily CARDITACEA Fleming, 1820
Family CARDITIDAE Fleming, 1820
Subfamily CARDITAMERINAE Chavan, 1967
Genus CARDITAMERA Conrad, 1838

Carditamera floridana Conrad, 1838

References: Abbott, 1954: 378, pl. 30: a; Perry and Schwengel, 1955: 60, pl. 10: 56; Moore, 1969b: 549, fig. E49:.6; Stanley, 1970: 147-148, pl. 14: 11-13; Andrews, 1971: 179-180; Morris, 1973: 43, pl. 20: 8; Abbott, 1974: 476, pl. 21: 5478.

Description: The largest specimen found (length 10.5 mm, ht 7.5 mm, diam. 3.2 mm) is juvenile and white with light orange-brown concentric bars. The solid, compressed shell is equivalve, inequilateral and subrectangular, with the beak positioned anterior to the center of the shell. There are 18 strong, radiating, beaded ribs. The beaks nearly touch when the valves are together. The ligament is external and the escutcheon is very small. The small, heart-shaped lunule is deeply indented under the beaks. The right valve has a strong triangular cardinal tooth which becomes elongate and narrow posteriorly. The left valve has 2 diverging cardinal teeth. The anterior tooth is short and high whereas the posterior tooth is long and narrow. Both valves have one short and high anterior lateral tooth and a long and narrow posterior lateral tooth.

Occurrence: Representatives of this species are found in most RL sediments and to a lesser extent in some OL sediments.

Total number collected: 82.

Distribution: Southern Florida, Texas, south to Mexico.

Remarks: Juvenile specimens from Nichupté Lagoon were compared with adult specimens collected in the Florida Keys.

Genus PLEUROMERIS Conrad, 1867

Pleuromeris tridentata (Say, 1826)

References: Abbott, 1954: 380; Perry and Schwengel, 1955: 60, pl. 10: 57; Morris, 1973: 44, pl. 20: 10; Abbott, 1974: 477, no. 5489.

Description: The largest shell found (length 4 mm, ht 4 mm) is trigonal and white with an orange-brown umbonal region. More commonly encountered is the juvenile, red-brown shell (length 2.6 mm, ht 2.7 mm). The shell surface is marked with about 16 strong, radiating, beaded ribs. The ribs become broader and more flattened toward the ventral margin. The beaks are close and point slightly to the anterior. The escutcheon is small and narrow and the small lunule is oval and slightly impressed. The right valve has a strong, triangular, bilobed cardinal tooth, whereas the left valve bears a large socket and 2 diverging cardinal teeth flanking the socket. The right valve has a low anterior lateral tooth and socket and a low posterior lateral tooth. In the left valve there is a smaller anterior lateral tooth and a low posterior lateral tooth with socket.

Occurrence: Representatives of this species are

found in relatively large numbers in TD sediments of Core 32 and to a lesser extent, in some RL and OL sediments near the tidal channel which allows the influx of more normal marine waters into the lagoon.

Total number collected: 103.

Distribution: North Carolina, south to Florida.

Remarks: Specimens from Nichupté Lagoon were compared with shells from beach drift samples collected at Naples, Florida.

This species was formerly placed in the genus *Venericardia*.

Family CONDYLOCARDIIDAE Bernard, 1897
Genus CARDITOPSIS E. A. Smith, 1881

Carditopsis smithii (Dall, 1896)

References: Bernard, 1896: 169-207, fig. 5; Dall, 1896b: 16, fig. 4, *Carditella smithii;* Pilsbry and Olsson, 1946: 6-7, pl. 1: 9, 10, *Condylocardia floridensis,* synonym; Abbott, 1958: 118; Moore, 1969b: 558-559, fig. E60; Waller, 1973: 48, figs. 18-19; Abbott, 1974: 479, no. 5511.

Description: The minute, translucent, yellow-orange shell (length 1.3 mm, ht 1.26 mm) is solid, trigonal and nearly equilateral. The umbo bears a prodissoconch which is surrounded by a raised edge. The external surface has 11 beaded radial ribs. Each valve has an internal resilium pit bordered by small cardinal teeth and a single distal, strong lateral socket. In addition, the right valve has a strong anterior lateral tooth and the left valve has a posterior lateral tooth.

Occurrence: Representatives of this minute species are found in relatively small numbers in some RL, OL and TD sediments.

Total number collected: 22.

Distribution: Bermuda and the West Indies.

Family CRASSATELLIDAE Férussac, 1822
Genus CRASSINELLA Guppy, 1874

Crassinella lunulata (Conrad, 1834)

References: Verrill and Bush, 1900: 518, pl. 63: 11; Dall and Simpson, 1901: 497, *C. guadeloupensis* (d'Orbigny, 1846) form of *C. lunulata;* Clench and Turner, 1950: 322, pl. 44: 5-6, *Thetis parva* C. B. Adams, 1845, synonym; Warmke and Abbott, 1962: 173, pl. 35: k; Harry, 1966: 65-89, figs. 1, 5-7, 9, 13, 15-17 (fig. 16 is very close to specimens from Nichupté Lagoon); Moore, 1969b: 577, fig. 377; 4: Abbott, 1974: 482, no. 5540.

Description: The small shell (length 2.6 mm, ht 2 mm) is moderately thick, subtriangular and strongly compressed. The beak is acute and strongly opisthogyrous. The anterior margin of the shell is straight, whereas the posterior margin is strongly concave. The ventral margin is evenly rounded. Both the long and shallow lunule and wider escutcheon are well defined. The shell is marked with 11 strong, concentric ridges and innumerable evenly spaced, microscopic radial striae. The left valve has an elongate triangular anterior cardinal tooth and a posterior cardinal tooth which bends around the posterior margin of the resilium is present. There is a straight, deep and narrow groove and associated obsolete lateral tooth, along the posterior dorsal margin. This groove receives the posterior dorsal margin of the right valve and the obsolete lateral tooth fits into a poorly defined depression in the right valve (Harry, 1966: 74). There is a shallow groove along the ventral margin of the shell.

Occurrence: Representatives of this species are found only in the TD sediments of Core 32.

Total number collected: 4.

Distribution: Massachusetts, south to Florida, the West Indies and Brazil.

Remarks: Harry (1966: 65) recognizes only 2 biological species (*C. lunulata* and *C. martiniquensis* (d'Orbigny, 1842)) of the 9 nominal species of *Crassinella* described from the Western Atlantic and includes a synonymy list and study of the genus (Harry, 1966: 67-71).

Superfamily CARDIACEA Oken, 1818
Family CARDIIDAE Oken, 1818
Subfamily FRAGINAE Stewart, 1930
Genus AMERICARDIA Stewart, 1930

Americardia guppyi (Thiele, 1910)

References: Thiele, 1910: 129-130, pl. 9: 25; McLean, 1939: 166, pl. 25: 7, 8; Clench and Smith, 1944: 19-20, pl. 11: 3, 4, *Trigoniocardia antillarum* (d'Orbigny, 1942) (really *guppyi*); Abbott, 1958: 124-125, pl. 4: o, q; Warmke and Abbott, 1962: 183, pl. 38: a; Abbott, 1974: 484, no. 5561.

Description: The small, white shell (length 4.9 mm, ht 4.4 mm) is subquadrate, rounded anteriorly and truncated posteriorly and moderately inflated. The surface of the shell is marked with about 30 strong, finely imbricate, radial ribs. The right valve has a strong triangular cardinal tooth and short anterior and posterior lateral teeth with associated sockets. The left valve has 2 divergent cardinal teeth, a short, high anterior lateral tooth with associated socket and an elongate posterior lateral tooth.

Occurrence: Representatives of this species are found in relatively small numbers in TD and OL sediments and to a lesser extent, in some RL sediments.

Total number collected: 48.

Distribution: Abbott, (1958: 125) removes the confusion regarding *A. guppyi* and *Trigoniocardia antillarum* (d'Orbigny, 1842).

Subfamily LAEVICARDIINAE Keen, 1936
Genus LAEVICARDIUM Swainson, 1840

Laevicardium mortoni (Conrad, 1830)

References: Conrad, 1830b: 259-260, pl. 11: 5-7, *Cardium mortoni;* Dall, 1901a: 388; McLean, 1939: 170-171, pl. 25: 3, 6; Clench and Smith, 1944: 27, pl. 12: 6, 7; Abbott, 1954: 400, pl. 39: L; Perry and Schwengel, 1955: 68, pl. 13: 76; Baker and Merrill, 1965: 104; Stanley, 1970: 156, pl. 19: 9-11; Andrews, 1971: 182, fig.; Morris, 1973: 56, pl. 23: 10; Abbott, 1974: 486, no. 5573.

Description: The largest shell found (length 21 mm, ht 21 mm) is a cream-colored left valve with brown, zigzag markings. Other specimens lack the markings and a few are brown. The shell is subtrigonal and moderately inflated. The exterior of the shell is marked with very fine concentric striae and is microscopically papillose. The interior of the shell is marked with fine radial ribs. The ligament is long and external. The lunule and escutcheon are not defined. The right valve has 2 strong, cardinal teeth (the posterior tooth is lar-

ger and triangular), 2 anterior lateral teeth (the dorsal tooth is thin and blade-like and the ventral tooth is high and strong), and one elongate, posterior lateral tooth with associated groove. The left valve has 2 strong cardinal teeth (the anterior tooth is larger and triangular), one anterior lateral tooth with associated groove and one elongate, posterior lateral tooth.

Occurrence: Representatives of this species are found in most Inglés Lagoon and RL sediments and to a lesser extent, in some OL sediments.

Total number collected: 160.

Distribution: Massachusetts, south to Guatemala.

Family MESODESMATIDAE Gray, 1839
Subfamily ERVILIINAE Dall, 1895
Genus ERVILIA Turton, 1822

Ervilia concentrica (Holmes, 1860)

References: Dall, 1896c: 26; Dall and Simpson, 1901: 474, pl. 58:12; Warmke and Abbott, 1962:205; Davis, 1967:231-241, fig. 1, 2: left, pl. 1: 3, 4, 2: 1-8; Andrews, 1971: 137-188, fig.; Abbott, 1974: 493, no. 5616.

Description: The small, white shell (length 4.5 mm, ht 3 mm) is equilateral, subtrigonal and not inflated. The posterior margin is narrower than the rounded anterior margin. The exterior surface of the shell is marked with regular, concentric ridges. Radial striae are present on the posterior surface of each valve. There is a large resilifer in each valve. The right valve has a strong cardinal tooth anterior to the resilifer and a socket posterior to the resilifer. The left valve has a smaller cardinal tooth posterior to the resilifer and a socket anterior to the resilifer. In the right valve there is an anterior-dorsal marginal groove and in the left valve there is a posterior-dorsal ridge to correspond with the groove. The pallial sinus is deep and narrow.

Occurrence: Representatives of this species are found in TD sediments of Core 32. One specimen was taken from OL sediments of Core 23 (depth 150 cm).

Total number collected: 16.

Distribution: Bermuda, North Carolina, south to Florida and the West Indies to Brazil.

Remarks: Identification of specimens was verified by Moore (personal communication, 1974).

Ervilia nitens (Montagu, 1806)

References: Dall, 1896c: 25-26; Warmke and Abbott, 1962: 205, pl. 43: b; Morris, 1973: 72, pl. 30: 7; Abbott, 1974: 493, no. 5617.

Description: The small white shell (length 3.2 mm, ht 2.1 mm) is oval and not inflated. The beaks are placed slightly to the anterior. Many of the specimens are white with a rose flush on the umbones and posterodorsal margin of the shell. The hinge line and interior of the valve are similar to those described above for *E. concentrica*. The exterior of the shell is marked with microscopic, radial striae and very irregular concentric ridges.

Occurrence: Representatives of this species are found in TD sediments of Core 32 and to a lesser extent, in some OL sediments of Core 23 and 24.

Total number collected: 20.

Distribution: Bermuda, Florida and the West Indies.

Superfamily TELLINACEA Blainville, 1814
Family TELLINIDAE Blainville, 1814
Subfamily TELLININAE Blainville, 1814
Genus TELLINA Linnaeus, 1758
Subgenus ANGULUS Mühlfeld, 1811

Tellina mera Say, 1834

References: Dall, 1900: 296, pl. 2: 11, *T. promera*, synonym; Abbott, 1958: 134, pl. 5: a, b, *T. guadeloupensis* (sic) non d'Orbigny, 1842; Warmke and Abbott, 1962: 193, pl. 40: c; Boss, 1968: 304-306, pl. 152: 4, 153: 1; Abbott, 1974: 501, no. 5677.

Description: Specimens vary in size from large adult shells (length 21.5 mm, ht 17.5 mm, diam. 4 mm) to juvenile shells. The shell is dull (sometimes iridescent), white, rounded subtrigonal and solid. The pointed beaks, placed posterior to the center of the shell, point toward each other and touch when the valves are together. The valves are anteriorly rounded, posteriorly blunt and slightly produced, and slightly twisted to the right. The shell is smooth with fine growth striae. The right valve has an elongate, anterior cardinal tooth, skewed, bifid posterior cardinal tooth, a strong anterior lateral tooth with socket, which is proximal to the cardinal complex, and a weak, blade-like posterior lateral tooth with socket. The left valve has an anterior bifid cardinal tooth and a weak posterior blade-like cardinal tooth. The lateral teeth in the left valve are obsolete. The pallial sinus is equal in both valves, rises from the small, posterior adductor scar and descends gently toward, but does not meet, the elongate, irregular, anterior adductor muscle scar. The sinus is broadly rounded anteriorly, then parallel to the pallial line until about the middle of the ventral margin, where it joins the pallial line which extends nearly to the posterior adductor muscle scar.

Occurrence: Representatives of this species are found in relatively large numbers in RL sediments, to a lesser extent in most OL and Inglés Lagoon sediments, and one specimen was taken from TD sediments of Core 32.

Total number collected: 159.

Distribution: Bermuda, Southern Florida, the West Indies, south to Brazil.

Subgenus SCISSULA Dall, 1900

Tellina similis Sowerby, 1806

References: Olsson and Harbison, 1953: 127, pl. 14: 8; Abbott, 1954: 426, pl. 40: m, text fig. 86: e; Perry and Schwengel, 1955: 82, pl. 43: 305; Abbott, 1958: 133, pl. 5: h, i; Warmke and Abbott, 1962:192, pl. 40: n; Boss, 1968: 328-331, pl. 160: 1, 2; Stanley, 1970:179, pl. 32:1-7; Morris, 1973: 76, pl. 28: 4; Abbott, 1974: 503, pl. 23: 5696.

Description: The largest specimen found (length 22.75 mm, height 13 mm) is elongate-subquadrate and white, with a suffusion of yellow on the umbo. The beak is opisthogyrous and placed slightly posterior to the middle of the shell. The shell is marked with weak, concentric growth striae (striae are strongest on the posterior part of the right valve) and oblique to these growth lines are fine striae which are especially well developed on the anterior portion of the valves. The well developed escut-

cheon is broad and short. In the right valve there is a skewed, posterior, bifid cardinal tooth whose posterior lobe is larger, an anterior laminate cardinal tooth and a strong anterior lateral tooth which is proximal to the cardinal complex. In the left valve, there is an elongate anterior, bifid cardinal tooth, a posterior, laminate cardinal tooth and no true lateral teeth.

Occurrence: Representatives of this species are found in relatively small numbers in most OL and TD sediments and to a lesser extent, in some RL sediments.

Total number collected: 29.

Distribution: Bermuda, eastern Florida, south to the West Indies and Panama.

Tellina candeana d'Orbigny, 1842

References: Olsson and Harbison, 1953: 127-128, pl. 14:4; Abbott, 1958:133-134, pl. 5: e, f; Warmke and Abbott, 1962: 193, pl. 40: j; Boss, 1968: 336-338, pl. 162: 2; Morris, 1973: 73, pl. 28: 13; Abbott, 1974: 503, no. 5698.

Description: The largest specimen found (length 11 mm, ht 7.5 mm) is elongate-subtrigonal and white. The blunt beak is opisthogyrous and placed posterior to the middle of the shell. The shell is marked with concentric growth striae and oblique fine striae. In the right valve, there is a slightly skewed, posterior, bifid cardinal tooth whose posterior lobe is larger, an anterior cardinal tooth, a strong, elongate, anterior lateral tooth which is proximal to the cardinal teeth and a smaller posterior lateral tooth which is distal to the cardinal teeth. In the left valve there is an elongate, anterior bifid cardinal tooth, a posterior laminate cardinal tooth and no true lateral teeth.

Occurrence: Representatives of this species are found in very small numbers in some OL and TD sediments.

Total number collected: 5.

Distribution: Bermuda, southern Florida, south to the West Indies.

Remarks: *T. candeana* may be separated from *T. similis* (above) by the difference in shape (subtrigonal versus subquadrate) and the presence of a posterior lateral tooth in the right valve of *T. candeana* (absent in *T. similis*).

Family SEMELIDAE Stoliczka, 1870
Genus CUMINGIA Sowerby, 1833

Cumingia tellinoides (Conrad, 1830)

References: Conrad, 1830b: 258, pl. 11: 2, 3, *Mactra tellinoides;* Dall, 1889a: 62, pl. 56: 14; Perry and Schwengel, 1955:85-86, pl. 17:107; Stanley, 1970: 177, pl. 31: 1-3; Andrews, 1971: 201-202; Morris, 1973: 85, pl. 29: 10; Abbott, 1974: 514, no. 5798.

Description: The largest specimen found (length 16 mm, ht. 9.5 mm) is elongate-trigonal. The thin white shell is marked with fine, slightly raised, concentric striae. The anterior margin is rounded and the posterior margin is slightly pointed. The beak is placed just posterior to the middle of the shell. In each valve, there is a large spoon-shaped resilifer (chondrophore) below the beak. In the right valve there is a small cardinal tooth anterior to the resilifer and strong anterior and posterior lateral teeth with associated sockets. In the left valve there is a small, but distinct, cardinal tooth anterior to the resilifer and very weak lateral teeth.

Occurrence: Representatives of this species are found in relatively small numbers in most RL sediments and to a lesser extent, in some OL sediments. Single valves were taken from BLM sediments of Core 112 (depth 5 cm) and Inglés Lagoon sediment.

Total number collected: 89.

Distribution: Nova Scotia, south to Cuba, Texas.

Remarks: Specimens from Nichupte Lagoon are more rounded posteriorly than representatives of the subspecies *vanhyningi* Rehder (1939: 19-20, pl. 6: 13, 14).

Family SOLECURTIDAE d'Orbigny, 1846
Genus TAGELUS Gray, 1847

Tagelus divisus (Spengler, 1794)

References: Dall, 1889a: 58, pl. 56: 5; Abbott, 1954: 440-441, pl. 30: g; Perry and Schwengel, 1955: 87, pl. 17:111; Warmke and Abbott, 1962:202, pl. 42: 1; Stanley, 1970: 174-175, pl. 29: 7, 8; Andrews, 1971:200, fig.; Morris, 1973: 83, pl. 31: 1; Abbott, 1974: 516, no. 5816.

Description: The largest specimen found (length 29 mm, ht 11 mm) is white with some light brown periostracum adhering to the anterior and posterior dorsal margins of the shell. The valve is worn but a lighter ray extends mid-shell, from the beak to the ventral margin. The shell is flattened, elongate-cylindrical and gaping both anteriorly and posteriorly. Each valve has 2 cardinal teeth (the anterior tooth is projecting) and no lateral teeth. The pallial line is well marked and has a deep sinus.

Occurrence: One valve was recovered from OL sediments of Core 24 (depth 240 cm).

Total number collected: 1.

Distribution: Massachusetts, south to Brazil.

Family CORBICULIDAE Gray, 1847
Genus POLYMESODA Rafinesque, 1820
Subgenus PSEUDOCYRENA Bourguignat, 1854

Polymesoda maritima (d'Orbigny, 1842)

References: Conrad, 1846:23, pl. I:1, *Cyrena floridana,* synonym; Abbott, 1954:381, pl. 30: y; Perry and Schwengel, 1955: 59, pl. 9: 53; Andrews, 1971: 205, fig.; Morris, 1973: 40, pl. 19: 10; Abbott, 1974: 521, no. 5851.

Description: The largest specimen found (length 24 mm, ht 18.5 mm) is trigonal and inequilateral. The beak is anterior to the middle of the shell. The interior and exterior of the smooth shell are purple-brown with some concentric white bands. The right valve has 3 cardinal teeth, of which the anterior is simple and blade-like, the middle and posterior teeth are bifid; it also has strong, double anterior and posterior lateral teeth with associated sockets. The left valve has 3 cardinal teeth, of which the anterior and middle teeth are bifid and the posterior tooth is simple and blade-like; it also has strong, single anterior and posterior lateral teeth with sockets. The pallial sinus is very narrow and deep and situated near the posterior muscle scar.

Occurrence: Representatives of this species are found in large numbers in the BLM sediments of Cores

111 and 113. Four specimens were taken from sediments of Inglés Lagoon (Core 26, depth 70 cm).

Total number collected: 204.

Distribution: Florida and Texas.

Superfamily VENERACEA Rafinesque, 1815
Family VENERIDAE Rafinesque, 1815
Subfamily CHIONINAE Frizzell, 1936
Genus CHIONE Mühlfeld, 1811

Chione cancellata (Linnaeus, 1767)

References: Dall, 1890-1903: 1290-1291; Dall and Simpson, 1901: 483-484; Abbott, 1954: 407, pl. 39: h; Perry and Schwengel, 1955: 73, pl. 14: 86; Abbott, 1958: 129; Rice and Kornicker, 1962: 383, pl. 8: 4; Richards, 1962: 64, pl. 9: 2; Warmke and Abbott, 1962: 185, pl. 4: f, ei: o; Moore, 1969b: 686, pl. E150: 1; Moore and Lopez, 1969: 131-148; Stanley, 1970: 161, pl. 22: 3-5; Andrews, 1971: 210, fig.; Morris, 1973: 59-60, pl. 25: 2; Abbott, 1974: 523, pl. 23: 5865.

Description: The specimens are subtrigonal, solid and variable in size (largest shell: length 24.5 mm, ht 19.5 mm). Juvenile shells are usually rounded-trigonal, whereas adults are subtrigonal with a slightly rostrate posterior margin. Most of the valves are cream-colored with a violet to brown interior. Some valves have a pink, orange or tan umbonal area. The beaks are placed anterior to the middle of the shell and point anteriorly, toward the compressed, heart-shaped brown lunule. The escutcheon is flat, long, smooth, V-shaped and marked with brown stripes. The largest shell has 7 stripes on the escutcheon. The exterior of the shell is marked with concentric, lamellar ridges (maximum number of ridges in shells from Nichupté Lagoon: 16) and moderately developed, regular radial ribs. Where the radial ribs cross the concentric ridges, crenulations are formed on the elevated, concentric, lamellar ridges. There are 3 cardinal teeth in each valve. The anterior tooth is short and high, the middle tooth is strong, triangular and sometimes grooved, and the posterior tooth is strong and elongate. The pallial sinus is short and angular. The inner margin of the valve is crenulate.

Occurrence: Representatives of this species are found in most RL sediments and to a lesser extent, in OL and TD sediments.

Total number collected: 301.

Distribution: North Carolina to Florida, Texas and the West Indies. Brazil.

Chione sp.

Description: Specimens resemble miniature representatives of *Chione cancellata*, both internally and externally. The largest shell (length 4 mm, ht 3.4 mm) is cream-colored with brown rays, rounded-trigonal and the beaks are slightly anterior to the middle of the shell. Sculpture consists of concentric ridges and radial threads. Although the radial threads are comparable, the concentric ridges are finer and more numerous than those observed for the typical shells of *C. cancellata*. The concentric ridges on the posterior slope are slightly lamellate. Where the radial threads cross the ridges, very fine crenulations are formed on the lower edge of each ridge. The pallial sinus is small. The inner ventral margin is crenulate.

Occurrence: Representatives of this species are found primarily in TD and OL sediments and to a lesser extent, in RL sediments.

Total number collected: 58.

Remarks: Shells from Nichupté Lagoon may represent juvenile specimens of *C. intapurpurea* (Conrad, 1849) (Warmke and Abbott, 1962: 186, pl. 38: n; Andrews, 1971: 212, fig.; Abbott, 1974: 523, pl. 24: 5867) which has been reported from North Carolina to Texas, south to Brazil.

Genus ANOMALOCARDIA Schumacher, 1817

Anomalocardia auberiana (d'Orbigny, 1842)

References: Conrad, 1846:24, pl. 1: 13, *Venus cuneimeris*, synonym; Dall, 1903: 359, 376; Abbott, 1954: 409, pl. 39: j; Perry and Schwengel, 1955: 75, pl. 14: 91; Stanley, 1970: 163, pl. 21: 8, 9; Andrews, 1971: 209-210, fig.; Morris, 1973: 62, pl. 24: 1; Abbott, 1974: 525, no. 5887.

Description: The shell is trigonal and extended posteriorly. Size appears to be environmentally diagnostic: the largest shell from lagoonal sediments (length 12 mm, ht 8.5 mm) is larger than the largest shell from more brackish conditions (length 5.2 mm, ht 3.8 mm). The shell color varies from cream-colored to tan with brown rays. The interior of the shell is marked with small, but distinct, rounded, concentric ridges. The lunule is impressed, whereas the escutcheon is wide, elongate, depressed and devoid of ridges. There are 3 cardinal teeth in either valve. The pallial sinus is small. The interior margin is crenulate.

Occurrence: Representatives of this species are found in very large numbers in Inglés Lagoon and most BLM sediments and to a lesser extent in some RL sediments.

Total number collected: 1,211.

Distribution: Southern Florida, Texas, the West Indies, south to Central America.

Subfamily MERETRICINAE Gray, 1847
Genus TRANSENNELLA Dall, 1883

Transennella cubaniana (d'Orbigny, 1845)

References: Dall and Simpson, 1901:486, *Meretrix cubaniana;* Dall, 1903: 367; Perry and Schwengel, 1955:71, pl. 13:79; Warmke and Abbott, 1962: 187, pl. 39: d; Abbott, 1974: 529, no. 5920.

Description: The small, rounded trigonal shell (length 6.4 mm, ht 5.3 mm) is white and some shells have pink or orange beak areas. The beaks are high and slightly turned forward over the well defined lunule. The exterior of the shell is marked with fine, concentric ridges. There are 3 cardinal teeth in either valve. In the right valve, the 2 anterior cardinal teeth are blade-like and close together and larger. The right valve has 2 anterior lateral teeth and a posterior groove. The dorsal anterior lateral tooth is short and high and the ventral anterior lateral tooth is thick and elongate. In the left valve, the cardinal teeth are blade-like and the middle tooth is stronger and triangular. The anterior lateral tooth is high, with a dorsal groove and a weak posterior lateral tooth. The inner margin of both valves is tangentially grooved.

Occurrence: Representatives of this species are found in relatively large numbers in most TD sediments and to a lesser extent in OL sediments near

the tidal channel which allows the influx of more normal marine waters into the lagoon.

Total number collected: 249.

Distribution: Southern Florida to the West Indies.

Subfamily PITARINAE Stewart, 1930
Genus PITAR Römer, 1857

Pitar fulminata (Menke, 1828)

References: Dall, 1890-1903: 1264-1266, generic description and history; Dall, 1903: 353-354; Abbott, 1954: 414, pl. 39: d; Abbott, 1958: 131, pl. 4: 4, f; Abbott, 1974: 530, pl. 24: 5930.

Description: The cream-colored shell with light brown zigzag markings is small (length 10.5 mm, ht 8.7 mm), rounded trigonal and nearly equilateral. The shell is smooth with fine, irregular concentric striae. Each valve has 3 cardinal teeth. The anterior cardinal tooth is small and curved, the middle cardinal tooth is triangular and straight and the posterior cardinal tooth is elongate, narrow, larger and grooved. In each valve are 2 anterior lateral teeth and a posterior lateral tooth. The dorsal anterior lateral tooth is short and high and the ventral anterior lateral tooth is elongate. In the left valve, the narrow anterior cardinal tooth is joined dorsally to the larger, wedge-shaped, median cardinal tooth. The posterior cardinal tooth is elongate and grooved. The anterior lateral tooth is short and weak and the hinge bears a posterior lateral groove. A dorsal posterior marginal groove is in the right valve and a dorsal, anterior marginal groove in the left valve. The interior ventral margins are smooth. The pallial sinus is deep and extends nearly to the middle of the valve.

Occurrence: Representatives of this species are found in relatively small numbers in TD and most OL sediments and to a far lesser extent in some RL sediments near the tidal channel.

Total number collected: 22.

Distribution: Bermuda, North Carolina, south to Florida and the West Indies. Brazil.

Subfamily GEMMINAE Dall, 1902
Genus GEMMA Deshayes, 1853

Gemma gemma (Totten, 1834)

References: Dall, 1890-1903: 1329-1332, pl. 24: 1-4; Dall, 1903: 365; Abbott, 1954: 418-419, pl. 38: k, text fig. 84; Sellmer, 1967: 137-223, 51 figs.; Moore, 1969b:681, pl. E147:6; Shulenberger, 1970: 163-170, 6 figs.; Narchi, 1971:866-885, fig. 2; Morris, 1973:67, pl. 24: 11; Abbott, 1974: 534, no. 5967.

Description: The small, white (commonly purplish) shell (length 1.6 mm, ht 1.7 mm) is rounded trigonal and subequilateral. The glossy shell is marked with numerous, fine, concentric lines. The shell has no escutcheon but has an external ligament and a large lunule. The right valve has 3 divergent cardinal teeth (the central tooth is large and triangular), an elongate anterior lateral tooth and a posterior lateral groove. The left valve has 3 divergent, laminate cardinal teeth, an elongate posterior tooth and an anterior lateral groove; Moore (1969b: 681) does not regard the laterals as true lateral teeth. The pallial sinus is small, but distinct. The inner ventral margin is crenulate.

Occurrence: Representatives of this species are found locally in large numbers in some Inglés Lagoon, BLM, RL sediments and to a lesser extent in OL and TD sediments.

Total number collected: 1,041.

Distribution: Nova Scotia, south to the West Indies.

Remarks: Identification of the specimens was verified by Dr. D. R. Moore (personal communication, 1974). Dall (1890-1903: 1331-1332) discusses the species *G. gemma* and the variety *purpurea* (Lea, 1842). The specimens from Nichupté Lagoon are too small to make the distinction between the species and its variety without verified comparative material.

Genus PARASTARTE Conrad, 1862

Parastarte triquetra (Conrad, 1846)

References: Conrad, 1846: 24, pl. I: 6, *Astarte triquetra;* Dall, 1883: 339-340, pl. 10: 1-3; Dall, 1889a:48, pl. 49:6-8; Dall, 1890-1903: 1333; Dall, 1903: 365; Abbott, 1954: 419, text fig. 85; Perry and Schwengel, 1955:75, pl. 14: 92; Warmke and Abbott, 1962: 190, pl. 39: 1; Moore, 1969b: 681, pl. E147: 1; Morris, 1973:67, pl. 24: 8; Abbott, 1974: 534, no. 5969.

Description: The small, white, rarely brown, shell (length 2.3 mm, ht 3.0 mm, diam. 0.6 mm)is trigonal and equilateral. The shell is smooth, except for occasional growth striae. The shell has a short external ligament, a large lunule and no escutcheon. The right valve has a strong central cardinal tooth, with 2 smaller cardinal teeth flanking it. The left valve has 2 strong, diverging cardinal teeth. The dorsal margins are more feebly grooved than in specimens of *G. gemma*. The pallial line is sharply flexed but there is no true sinus. The inner, ventral margin is crenulate.

Occurrence: Representatives of this species were found in relatively large numbers in the BLM sediment of Core 113 (depth 85-105 cm) and to a lesser extent in some RL sediments of Core 111.

Total number collected: 79.

Distribution: Florida, south to the West Indies.

Remarks: Specimens of *P. triquetra* were separated from specimens of *G. gemma* by their different overall shape and lack of pallial sinus. Also, cardinal teeth of shells of *G. gemma* are more curved, while those in shells of *P. triquetra* are straight.

REFERENCES CITED

ABBOTT, R. T. (1944) The genus *Modulus* in the Western Atlantic. -- Johnsonia 1 (14): 1-6, 2 pls.

---- (1954) American Seashells. -- New York, D. Van Nostrand Co., Inc., 1st ed., 541 p., 40 pls., 100 text figs.

---- (1958) The marine mollusks of Grand Cayman Island, British West Indies. --Mon. Acad. Nat. Sci. Philadelphia, 11: 138 p., 5 pls.

---- (1958a) The gastropod genus *Assiminea* in the Philippines. --Proc. Acad. Nat. Sci. Philadelphia, 110: 213-278, pls. 15-25.

---- (1974) American Seashells. -- New York, Van Nostrand Reinhold Co., 2ded., 663 p., 24 pls., illus.

ADAMS, A. (1860) On some new genera and species of Mollusca from Japan. -- Ann. Mag. Nat. Hist., (3) 5 (45): 405-413.

ADAMS, C. B. (1845) Specierum novarum conchyliorum, in Jamaica reportorum Synopsis. -- Proc. Boston Soc. Nat. Hist., 2: 1-17.

---- (1846) Descriptions of undescribed species of shells from the island of Jamaica. -- Proc. Boston Soc. Nat. Hist. 2: 102-103.

AGUAYO, C. G. (1938) Los Moluscos fluviatiles Cubanos, Parte II - Sistematica. -- Mem. Soc. Cubana Hist. Nat., 12 (4): 243-276, pl. 16, text figs. 5-11.

---- & JAUME, M. L. (1947) Nuevos gasteropodos de Cuba. -- Rev. Soc. Malac. 5 (2): 53-58, 3 figs.

ALTENA, C.O. van Regteren (1968) The Holocene and Recent marine bivalve Mollusca of Surinam. -- Stud. Fauna Suriname and other Guyanas, 10 (42): 153-179, figs. 145-152.

ANDREWS, Jean (1971) Sea shells of the Texas Coast. -- Texas, Univ. of Texas Press, 298 p., illus.

BAKER, E.B. & MERRILL, A.S. (1965) An observation of *Laevicardium mortoni* actually swimming. -- Naut. 78 (3): 104.

BAKER, F. C. (1891) Notes on a collection of shells from southern Mexico. -- Proc. Acad. Nat. Sci. Philadelphia, 1891: 45-55.

---- (1945) The molluscan family Planorbidae (Collation, revision and additions by H. J. Van Cleave). -- Univ. Illinois Press, 530 p., 141 pls.

BAKER, Fred (1913) The land and fresh-water mollusks of the Stanford Expedition to Brazil. -- Proc. Acad. Nat. Sci. Philadelphia, 65: 618-668, pls. 21-27.

BAKER, H.B. (1922) The Mollusca collected by the University of Michigan-Walker Expedition in southern Vera Cruz, Mexico. -- Occ. Papers, Mus. Zool., Univ. Michigan, no. 106, 94 p., 17 pls.

---- (1927) Minute Mexican land snails. -- Proc. Acad. Nat. Sci. Philadelphia, 79:223-246, pls. 15-20.

---- (1945) Some American Achatinidae. -- Naut. 58: 84-92.

---- (1946) Index to F. C. Baker's 'The Molluscan family Planorbidae.' -- Naut. 59 (4): 127-141.

---- (1956) Family names in Pulmonata. -- Naut. 69: 128-139.

---- (1957) Families of Pulmonata. -- Naut. 70: 141-142.

BARTSCH, Paul (1909) Pyramidellidae of New England and the adjacent region. -- Proc. Boston Soc. Nat. Hist. 34 (4): 67-113, pls. 11-14.

---- (1912) New marine mollusks from Bermuda. -- Proc. U.S. Natl. Mus. 41 (1861):303-306, pl. 28.

---- (1920) The West American mollusks of the families Rissoellidae and Synceratidae, and the rissoid genus *Barleeia*. -- Proc. U. S. Natl. Mus., 58 (2331): 159-176, pls. 12, 13.

---- (1943) A review of some West Atlantic turritid mollusks. -- Mem. Soc. Cubana Hist. Nat. 'Felipe Poey' 17(2): 81-122, pls. 7-15.

---- (1947) A monograph of the West Atlantic mollusks of the family Aclididae. -- Smithson. Misc. Coll. 106 (20): 29 p., 6 pls.

---- (1955) The pyramidellid mollusks of the Pliocene deposits of North St. Petersburg, Florida. -- Smithson. Misc. Coll. 125 (2): 1-102, 18 pls.

---- & REHDER, H.A. (1939) New turritid mollusks from Florida. -- Proc. U. S. Natl. Mus. 87 (3070): 127-138, pl. 17.

BASCH, P. F. (1959a) Status of the genus *Gundlachia*. -- Occ. Papers Mus. Zool. Univ. Michigan, no. 602: 1-9, 2 figs., 1 table.

---- (1959b) Land Mollusca of the Tikal National Park, Guatemala. -- Occ. Papers Mus. Zool. Univ. Michigan, no. 612: 15 p.

---- (1963) A review of the Recent freshwater limpet snails of North America. -- Bull. Mus. Comp. Zool., Harvard, 129 (8): 399-461, 20 figs.

BAYER, F. M. (1943) Observations on marine Mollusca, with descriptions of new species. -- Naut. 56 (4): 109-115, pls. 12-15.

BEAU, M. (1851) Catalogue des coquilles trouvées à l'ile de la Guadeloupe. -- Jour. Conchyl. 2: 422-

---- (1858) De l'utilité de certains mollusques marins vivants sur les côtes de la Guadeloupe et de Martinique. -- Jour. Conchyl. 7: 25-40.

BEQUAERT, J. C. (1942a) Random notes on American Potamididae. -- Naut. 56 (1): 20-30.

---- (1942b) *Cerithidea* and *Batillaria* in the Western Atlantic. -- Johnsonia 1(5): 1-12, 5 pls.

---- and CLENCH, W.J. (1933) The non-marine mollusks of Yucatan. -- IN Shattuck, G.C., The Peninsula of Yucatan. Medical, biological, meteorological and sociological studies. -- Carnegie Inst. Washington, Publ. 431: 525-545, pl. 68, fig. 26, 2 maps.

---- (1936) A second contribution to the molluscan fauna of Yucatan. -- IN: Pearse, A.S. *et al.*, The cenotes of Yucatan. A zoological and hydrographic survey. -- Carnegie Inst. Washington Publ. 457: 61-75, pls. 1, 2.

---- (1939) A third contribution to the molluscan fauna of Yucatan. -- IN: Pearse, A.S., Fauna of the caves of Yucatan. Carnegie Inst. Washington, Publ. 491: 257-260.

BERNARD, Félix (1896) Études comparatives sur la coquille des lamellibranches. Condylocardia. -- Jour. Conchyl, 44: 169-207, pl. 6, 5 figs.

BERTRAND, G. A. (1971) The ecology of the nest-building bivalve *Musculus lateralis* commensal with the ascidian *Molgula occidentalis*. -- Veliger 14 (1): 23-29, 2 pls., 2 text figs.

BINNEY, W. G. (1865a) Land and freshwater shells of North America. Part II. -- Smithson. Misc. Coll. 143: 161 p., 261 figs.

---- (1865b) Land and freshwater shells of North America. Part III. -- Smithson. Misc. Coll. 144: 120 p., 231 figs.

---- & BLAND, T. (1869) Land and freshwater shells of North America. Part I. -- Smithson. Misc. Coll. 194: 316 p., 545 figs.

BOCK, W. D. & MOORE, D. R. (1971) The foraminifers and micromollusks of Hogsty Reef and Serrana Bank and their paleoecological significance. -- Trans. Fifth Carib. Geol. Conf., p. 143-146, 2 figs.

BOSS, K. J. (1966) The subfamily Tellininae in the Western Atlantic. The genus *Tellina* (Part I). -- Johnsonia, 4(45): 217-272, pl. 127-142.

---- (1968) The subfamily Tellininae in the Western Atlantic. The genera *Tellina* (Part II) and *Tellidora*. -- Johnsonia 4 (46): 273-344, pls. 143-163.

----, ROSEWATER, J. & RUHOFF, F. A. (1968) The zoological taxa of William Healey Dall. -- U. S. Natl. Mus. Bull. 287: 427 p.

BOURGUIGNAT, J. R. (1853) Catalogue des espèces du genre *Ancylus*. -- Jour. Conchyl. 4:169-199, pl. 6: 9-12.

BRADY, M. J. (1971) Sedimentology and diagenesis of carbonate muds in coastal lagoons of NE Yucatan. -- Unpubl. Ph.D. dissert., Rice Univ., Texas, 188 p., 53 text figs., 6 tables, 1 map.

BRETSKY, S. S. (1967) Environmental factors influencing the distribution of *Barbatia domingensis* (Mollusca: Bivalvia) on the Bermuda platform. -- Postilla, Peabody Mus. Nat. Hist., Yale Univ., no. 108, 14 p., 2 figs., 2 tables.

BUSH, K.J. (1885) Additions to the shallow-water Mollusca of Cape Hatteras, N.C., dredged by the U.S. Fish Commission Steamer 'Albatross' in 1883 and 1884. -- Trans. Conn. Acad. Arts Sci., 6 (2): 453-480, pl. 45.

---- (1895) Report on the Mollusca dredged by the 'Blake' in 1880, including descriptions of several new species. -- Bull. Mus. Comp. Zool., Harvard, 23 (6): 197-244, 2 pls.

---- (1897) Revision of the marine gastropods referred to *Cyclostrema, Adeorbis, Vitrinella* and related genera; with descriptions of some new genera and species belonging to the Atlantic fauna of America. -- Trans. Conn. Acad. Arts Sci., 10(1): 97-144, pl. 22, 23, 10 figs.

---- (1899) Descriptions of new species of *Turbonilla* of the western Atlantic fauna, with notes on those previously known. -- Proc. Acad. Nat. Sci. Philadelphia, p. 144-177, pl. 8.

---- (1909) Notes on the family Pyramidellidae. -- Amer. Jour. Sci., (4) 27 (23): 475-484, 12 figs.

CHROSCIECHOWSKI, P.R. (1968) Conocimiento actual de los caracoles de la familia Planorbidae de Venezuela. -- Bol. Informativo de la direccion de Malariol. y saneamiento ambiental, 8K1): 3-10, 3 figs.

CLENCH, W. J. (1930) Notes on Physidae with descriptions of new species. -- Occ. Papers Boston Soc. Nat. Hist., 5: 301-315, 3 figs.

---- (1936) The Physidae of the West Indies. -- Mem. Soc. Cubana Hist. Nat., 10: 335-342, 1 pl.

---- (1942) The genus *Conus* in the Western Atlantic. -- Johnsonia 1(6): 40 p., 15 pls.

---- (1945) The genus *Conus* in the Western Atlantic. -- Johnsonia 1(18): 4.

---- (1951) Land shells of Mona Island, Puerto Rico. -- Journ. Conchyl. 90: 269-276, 1 pl.

---- (1953) The genus *Conus* in the Western Atlantic. -- Johnsonia 2 (32): 363-376, pls. 181-185.

---- (1964) The genera *Pedipes* and *Laemodonta* in the Western Atlantic. -- Johnsonia 4(42): 117-127, pls. 76-79.

---- & SMITH, L. C. (1944) The Cardiidae in the Western Atlantic. -- Johnsonia 1 (13): 32 p., 13 pls.

---- & TURNER, R.D. (1948) The genus *Truncatella* in the Western Atlantic. -- Johnsonia 2 (25): 149-164, pls. 65-73.

---- & ---- (1950) The Western Atlantic marine mollusks described by C. B. Adams. -- Occ. Papers Mollusks, Harvard, 1 (15): 233-403, pl. 29-49.

---- & ---- (1956a) Freshwater mollusks of Alabama, Georgia and Florida from the Escambia to the Suwannee River. -- Fla. State Mus. Bull. Biol. Sci. 1 (3): 97-239, 9 pls.

---- & ---- (1956b) The family Melongenidae in the Western Atlantic. -- Johnsonia 3 (35): 161-188, pl. 94-109.

---- & ---- (1962) New names introduced by H. A. Pilsbry in the Mollusca and Crustacea. -- Acad. Nat. Sci. Philadelphia, Spec. Publ. 4: 218 p.

COAN, E.V. (1964) A proposed revision of the Rissoacean families Rissoidae, Rissoinidae and Cingulopsidae. -- Veliger, 6 (3): 164-171, 1 fig.

---- (1965) A proposed reclassification of the family Marginellidae. -- Veliger, 7 (3): 184-194, 8 figs.

CONRAD, T. A. (1830a) On the geology and organic remains of a part of the Peninsula of Maryland. Appendix: containing descriptions of twenty-nine new species of fossil shells, noticed in the preceding paper. -- Jour. Acad. Nat. Sci. Philadelphia, 6: 205-217, 217-230, pls. 9, 10.

---- (1830b) Descriptions of fifteen new species of fossil and Recent shells and corals. -- Proc. Acad. Nat. Sci. Philadelphia, 6: 256-268, pl. 11.

---- (1846) Descriptions of new species of fossil and Recent shells and corals. -- Proc. Acad. Nat. Sci. Philadelphia, 3 (1): 19-27, pl. 1.

COOMANS, H. E. (1958) A survey of the littoral Gastropoda of the Netherlands Antilles and other Caribbean Islands. -- Stud. Fauna Curaçao and other Caribbean Islands, 8 (31): 42-111, pls. 1-16.

---- (1963a) The marine Mollusca of St. Martin, Lesser Antilles, collected by H.J. Krebs. -- Stud. Fauna Curaçao and other Caribbean Islands, 16(72): 59-87, figs. 117-121, 2 tables.

---- (1963b) The marine Mollusca of Sint Martin, Lesser Antilles, especially from the French part. -- Jour. Conchyl. 103: 113-186, 2 figs., 3 tables.

---- (1967a) The classification of *Columbella dormitor* with a description of a new genus *Minipyrene*. -- Beaufortia, Ser. Misc. Publ., Mus. Zool. Univ. Amsterdam, 14 (168): 71-80, 9 figs.

---- (1967b) The non-marine Mollusca of St. Martin. -- Stud. Fauna Curaçao and other Caribbean Islands, 24 (94): 118-145, figs. 38-41.

---- (1969) Biological aspects of mangrove mollusks in the West Indies. -- Malacologia 9 (1): 79-84.

CRANDALL, O. A. (1901) The American Physae. -- Naut. 15: 25-30, 42-45, 54-58, 69-71.

CROSSE, H. (1877) **Monographie de** la famille des Caecidae, par le marquis L. de Folin (1875). -- Jour. Conchyl. 25: 316-317, pls. 5:1, 5:2.

---- & FISCHER, P. (1879) De la résorption des parois internes du test chez les Auriculidae. -- Jour. Conchyl. 27: 143-144.

---- & ---- (1882) Note complémentaire sur la résorption des parois internes du test, chez les Auriculidae. -- Jour. Conchyl. 30:177-181, pl. 8.

DALL, W.H. (1883) On a collection of shells sent from Florida by Mr. Henry Hemphill. -- Proc. U. S. Natl. Mus., 6(21): 318-342, pl. 10.

---- (1885a) Notes on some Florida land and freshwater shells with a revision of the Auriculacea of the eastern United States. -- Proc. U.S. Natl. Mus., 8(17): 255-289, pls. 17, 18.

---- (1885b) List of marine Mollusca comprising the Quaternary fossils and Recent forms from American localities between Cape Hatteras and Cape Roque including the Bermudas. -- U. S. Geol. Survey, Bull. 24: 336 p.

---- (1886) Report on the results of dredging, under the supervision of Alexander Agassiz, in the Gulf of Mexico (1877-78) and in the Caribbean Sea (1879-80) by the U.S. Coast Survey steamer 'Blake,' Lieut.-Commander C.D. Sigsbee, U,S.N., and Commander J. R. Bartlett, U.S.N., commanding. 29---Report on the Mollusca. Part I - Brachiopoda and Pelecypoda. -- Bull. Mus. Comp. Zool. Harvard, 12 (6): 11-318, pl. 1-9.

---- (1889a) A preliminary catalogue of the shell-bearing marine mollusks and brachiopods of the south-eastern coast of the U.S., with illustrations of many of the species. -- U. S. Natl. Mus. Bull., 37: 221 p.

---- (1889b) Reports on the results of dredging, under the supervision of Alexander Agassiz, in the Gulf of Mexico (1877-1878) and in the Caribbean (1879-1880) by the U. S. Coast Survey steamer 'Blake.' Lieut-Commander C. D. Sigsbee, U. S. N. and commander J. R. Bartlett, U.S.N., commanding. 29 - Report on the Mollusca. Part 2. Gastropoda and Scaphopoda. -- Bull. Mus. Comp. Zool. Harvard, 18 (1): 1-492, pls. 10-40.

---- (1889c) Scientific results of explorations by the U.S. Fish Commission Steamer Albatross, Part 7 - Preliminary Report on the collection of Mollusca and Brachiopoda obtained in 1887-99. -- Proc. U. S. Natl. Mus., 12 (773): 219-362, pls. 5-14.

---- (1890-1903) Contributions to the Tertiary fauna of Florida with special reference to the Miocene Silex-Beds of Tampa and the Pliocene Beds of the Caloosahatchie River. -- Trans. Wagner Free Inst., 6 parts, 1654 p., 60 pls., 2 tables, 1 map.

---- (1896a) On the American species of *Cyrenoidea*. Naut. 10: 51-52.

---- (1896b) The Mollusks and Brachiopods of the Bahama expedition of the State University of Iowa. -- Bull. Lab. Iowa, 4: 12-27, 1 pl.

---- (1896c) On the American species of *Ervilia*. -- Naut. 10 (3): 25-27.

---- (1899) Synopsis of the Recent and Tertiary Leptonacea of North America and the West Indies. -- Proc. U.S. Natl. Mus., 21 (1177): 873-879, pls. 87-88.

---- (1900) Synopsis of the family Tellinidae and of the North American species. -- Proc. U. S. Natl. Mus., 23 (1210): 285-326, pls. 2-4.

---- (1901a) Synopsis of the family Cardiidae and of the North American species. -- Proc. U. S. Natl. Mus., 23 (1214): 382-392.

---- (1901b) Synopsis of the Lucinacea and of the American species. -- Proc. U. S. Natl. Mus., 23 (1237): 779-833, pls. 39-42.

---- (1903) Synopsis of the family Veneridae and of the Recent North American species. -- Proc. U.S. Natl. Mus., 26 (1312): 335-412, pls. 12-16.

---- (1904) *Gundlachia* and *Ancylus*. -- Naut. 17 (3): 97-98.

---- (1922) Note on *Acteocina*. -- Naut. 35 (3): 96.

---- (1927a) Small shells from dredgings off the southeast coast of the United States Fisheries steamer Albatross in 1885 and 1886. -- Proc. U. S. Natl. Mus. 70(2667): 1-134.

---- (1927b) Diagnosis of undescribed new species of mollusks in the collection of the United States National Museum. -- Proc. U.S. Natl. Mus. 70(2668): 1-11.

---- & BARTSCH, Paul (1909) A monograph of West American pyramidellid mollusks. -- U.S. Natl. Mus. Bull. 68: 258 p., 30 pls.

---- & ---- (1911) New species of shells from Bermuda. -- Proc. U.S. Natl. Mus. 40 (1820): 277-288, pl. 35.

---- & SIMPSON, C.T. (1901) The Mollusca of Porto Rico. -- Bull. U. S. Fish Commission for 1900, 20(1): 351-524, pls. 53-58.

DAVIS, J. D. (1967) *Ervilia concentrica* and *Mesodesma concentrica*. Clarification and synonymy. -- Malacologia 6 (1,2): 231-241, 2 figs., 2 pls.

DESHAYES, G. P. (1861) Etudes sur les Lucines. -- Jour. Conchyl. 9: 317-335, pls. 13, 14.

DESJARDIN, Max (1949) **Les** *Rissoina* de l'Ile de Cuba. -- Jour. Conchyl. 89: 193-208, pl. 9, 10.

EKDALE, A. A. (1972) Ecology and paleoecology of marine invertebrate communities in calcareous substrates, northeast Quintana Roo, Mexico. --Unpubl. M.S. thesis, Rice Univ., Texas, 159 p.

---- (1974) Marine mollusks from shallow-water environments (0 to 60 meters) off the northeast Yucatan coast, Mexico. -- Bull. Marine Sci. 24 (3): 638-668, 4 figs.

FARFANTE, I. P. (1943) The genus *Diodora* in the Western Atlantic. -- Johnsonia 1(11): 20 p., 6 pls.

---- (1947) The genera *Zeidora, Nesta, Emarginula, Rimula* and *Puncturella* in the Western Atlantic. -- Johnsonia 2(24): 93-148, pls. 41-64.

FISCHER, Paul (1857) Etudes sur un groupe de coquilles de la famille des Trochidae. -- Jour. Conchyl. 6: 42-53, 168-176, 284-288, pl. 10.

---- (1860) Recensement des Paludines épineuses. -- Jour. Conchyl. 8: 362-367.

---- & CROSSE, H. (1894) Etude sur les mollusques terrestres et fluviatiles. IN: Milne-Edwards, Mission scientifique au Mexique et dans l'Amérique centrale. -- Paris, 88 p., 4 pls.

FLUCK, W. H. (1905) Shell collecting on the Mosquito Coast. Parts 1-5. -- Naut. 19: 8-12, 16-19, 32-34, 55-57, 78-80.

FOLIN, L. de (1867) Descriptions d'espèces nouvelles de Caecidae. -- Jour. Conchyl. 15: 44-58,

GARCIA-CUBAS, Antonio (1963) Systematica y distribucion de los micromoluscos recientes de la Laguna de Terminos, Campeche, México. -- Bol. Inst. Geol. Mexico, 67 (4): 1-55, pls.

GOODRICH, Calvin, & van der Schalie, H. (1937) Mollusca of Peten and North Alta Vera Paz, Guatemala. -- Misc. Publ. Mus. Zool. Univ. Michigan, no. 34: 50 p., 1 pl., 1 map.

GOULD, S. J. (1968) The molluscan fauna of an unusual Bermudian pond. A natural experiment in form and composition. -- Breviora, 308: 13 p., 2 figs., 2 tables.

GUPPY, R. J. L. & DALL, W.H. (1896) Descriptions of Tertiary fossils from the Antillean Region. -- Proc. U. S. Natl. Mus., 19 (1110): 303-331, pls. 27-30.

HAAS, Fritz (1960) Caribbean land mollusks. Vertiginidae. -- Stud. Fauna Curaçao and other Carib. Islands, 10(41): 1-17, 5 pls., 2 figs., 1 table.

HARRIS, G. D. (1896) A reprint of the Paleontological writings of Thomas Say; with an introduction by G. D. Harris. -- Bull. Am. Paleont., 1 (5): 270-354, pls. 7-13.

HARRY, H. W. (1950) Studies on the nonmarine Mollusca of Yucatan. -- Occ. Papers Mus. Zool. Univ. Michigan, no. 524, 34 p.

---- (1962) A critical catalogue of the nominal genera of neotropical Planorbidae. -- Malacologia, 1(1): 33-53.

---- (1966) Studies on bivalve molluscs of the genus *Crassinella* in the northwestern Gulf of Mexico. -- Publ. Inst. Marine Sci., Univ. Texas, 11: 65-89, 17 figs., 1 table, 1 map.

---- & HUBENDICK, Bengt (1964) The freshwater pulmonate Mollusca of Puerto Rico. -- Medd. Göteborgs Mus. Zool., Reports, no. 136, 77 p., 160 figs.

HEILPRIN, Angelo (1891) Geological researches in Yucatan. -- Proc. Acad. Nat. Sci. Philadelphia, 1891: 136-158.

HENDERSON, J. B. & BARTSCH, P. (1914) Littoral marine mollusks of Chincoteague Island, Virginia. -- Proc. U. S. Natl. Mus. 47 (2055): 411-421, pls. 13, 14.

HOLLE, P. A. & DINEEN, C. F. (1959) Studies on the genus *Melampus*. -- Naut. 73 (1): 28-35, pls. 5-6, 4 tables; 73 (2): 46-51.

HOUBRICK, J. R. (1968) A survey of the littoral marine mollusks of the Caribbean coast of Costa Rica. -- Veliger 11 (1): 4-23, 2 figs., 2 tables.

---- (1974a) Growth studies on the genus *Cerithium* with notes on ecology and microhabitats. -- Naut. 88 (1): 14-27, 4 figs.

---- (1974b) The genus *Cerithium* in the Western Atlantic. -- Johnsonia 5 (50: 33-84, pls. 13-47.

JACKSON, J. B. C. (1972) The ecology of the mollusks of *Thalassia* communities in Jamaica, WestIndies. -- Marine Biology, 14(4): 304-337, 16 figs., 11 tables.

JAUME, M. L. (1946) Moluscos marinos litorales del Cabo Catoche, Yucatan, México. -- Rev. Soc. Malac. 'Carlos de la Torre,' 4: 95-110.

JEFFREYS, J. G. (1876) New and peculiar Mollusca of the *Pecten, Mytilus* and *Arca* families procured in the 'Valorous' Expedition. -- Ann. Mag. Nat. Hist., (4) 18 (49): 424-436.

---- (1881) On the Mollusca procured during the 'Lightning' and 'Porcupine' Expeditions, 1868-70 (Part 3). -- Proc. Zool. Soc. London, paper 5: 693-724, pl. 61.

JOHNSON, C. W. (1934) List of marine Mollusca of the Atlantic Coast from Labrador to Texas. -- Proc. Boston Soc. Nat. Hist., 40: 1-204.

KAAS, P. (1972) Polyplacophora of the Caribbean region. -- Stud. Fauna Curaçao and other Carib. Islands, 41 (137): 162 p., 247 figs., 9 pls.

KEEN, M. A. (1958) Seashells of Tropical West America. -- Calif., Stanford University Press, 624 p., 10 pls., illus.

---- & COAN, Eugene (1974) Marine molluscan genera of Western North America, an illustrated key. -- Calif., Stanford Univ. Press, 208 p., illus.

KISCH, B. S. (1959) La collection de Caecidae du marquis de Folin au Muséum national d'Histoire naturelle. -- Jour. Conchyl. 99(1): 15-42, 2 figs.

MANSFIELD, W. C. (1939) Notes on the Upper Tertiary and Pleistocene mollusks of peninsular Florida. -- Fla., Dept. Conserv., Geol. Bull. 18: 1-75, 4 pls., 2 figs., 5 tables.

MARCUS, Eveline (1970) Opisthobranchs from northern Brazil. -- Bull. Marine Sci., 20 (4): 922-951, 49 figs.

---- & MARCUS, Ernst (1962) Studies on Columbellidae. -- Bol. Fac. Filos. Cienc. Saõ Paulo, Zool., 24: 335-402, 8 pls.

---- & ---- (1963a) On Brazilian supralittoral and brackish water snails. -- Bol. Inst. Oceanográfico, 13(2): 41-52, 9 figs.

---- & ---- (1963b) Opisthobranchs from the Lesser Antilles. -- Stud. Fauna Curaçao and other Carib. Islands, 19 (79): 76 p., 68 figs., 1 table, 1 map.

---- & ---- (1967) Opisthobranchs from the southwestern Caribbean Sea. -- Bull. Marine Sci., 17(3): 597-628, 50 figs., 1 table.

MARTENS, Eduard von (1890-1901) Land and freshwater Mollusca. -- Biologia Centrali-Americana, Zoologia, v. 9, 706 p., 44 pls.

MAURY, C. J. (1917) Santo Domingo type sections and fossils, Part I, Mollusca. -- Bull. Am. Paleontology, 5 (29): 164-415, 39 pls.

---- (1920a) Recent Mollusca of the Gulf of Mexico and Pleistocene and Pliocene species from the Gulf States, Part I, Pelecypoda. -- Bull. Am. Paleont., 8(34): 33-148, 1 pl.

---- (1920b) Recent Mollusca of the Gulf of Mexico and Pleistocene and Pliocene species from the Gulf States, Part II. -- Bull. Am. Paleont., 9 (38): 32-172.

MAZE, H. (1883) Catalogue révisé des mollusques terrestres et fluviatiles de la Guadeloupe et de ses dépendances. -- Jour. Conchyl. 31: 5-54, 2 pls.

McGINTY, T. L. (1937) *Acanthochitona pygmaea* (Pilsbry). -- Naut. 50 (4): 141.

---- (1945) Descriptions of a new *Teinostoma*. -- Naut. 58(4): 142-143.

McLEAN, R.A. (1939) The Cardiidae of the Western Atlantic. -- Mem. Soc. Cubana Hist. Nat. 'Felipe Poey,' 13(3): 157-173, pl. 23-26.

MELVILL, J. C. (1923) Descriptions of twenty-one species of Turridae from various localities in the collection of Mr. E.R. Sykes. -- Proc. Malac. Soc. London, 15: 162-171, pls. 4, 5.

MEYER, Otto (1886) Contributions to the Eocene Paleontology of Alabama and Mississippi. -- Bull. Ala. Geol. Soc. 1(2): 63-85, 3 pls.

MOORE, D. R. (1958) Notes on Blanquilla Reef. -- Publ. Inst. Marine Sci. Univ. Texas 5: 151-155.

---- (1962) The systematic position of the family Caecidae. -- Bull. Marine Sci. Gulf and Carib. 12: 695-701.

---- (1964) The family Vitrinellidae in southern Florida and the Gulf of Mexico. -- Miami, unpubl. Ph.D. dissert., Univ. of Miami, 248 p., pls.

---- (1970) A new *Caecum* from Puerto Rico and the Virgin Islands. -- Bull. Marine Sci. 20 (2): 368-373, 2 figs.

---- (1971a) *Marginellopsis serrei* Bavay, 1911. -- Mollusk Chaser, Florida Shell Club, Inc., 9(5) 1, fig.

---- (1971b) A further note on *Marginellopsis serrei*. -- Mollusk Chaser, Florida Shell Club, Inc., 9(9): 2, fig.

---- (1972) Ecological and systematic notes on Caecidae from St. Croix, U. S. Virgin Islands. -- Bull Marine Sci., 22(4): 881-889, 12 figs.

---- (1973) Mollusks from a small landlocked Mexican lagoon. -- Bull. Am. Malacol. Union, p. 5-6.

MOORE, H. B. & LOPEZ, N.N. (1969) The ecology of *Chione cancellata*. -- Bull. Marine Sci., 19 (1): 131-148, 13 figs.

MOORE, R.C., ed. (1960) Treatise on Invertebrate Paleontology. -- Kansas, Geol. Soc. Am. and Univ. of Kansas Press, Part I, Mollusca 1, 351 p., 216 figs.

---- (1969a) Ibid., Part N, Mollusca 6, 489 p., 301 figs.

---- (1969b) Ibid., Part N, Mollusca 6, v. 2, p. 491-952, 311 figs.

MORRIS, P. A. (1973) A field guide to shells of the Atlantic and Gulf Coast and the West Indies. -- Boston, Houghton Mifflin Co., 330 p., 76 pls.

MORRISON, J.P.E. (1958) Ellobiid and other ecology in Florida. -- Naut. 71 (4): 118-124.

---- (1965) New brackish water mollusks from Louisiana. -- Proc. Biol. Soc. Washington, 78: 217-223, 9 figs.

MORSE, E. S. (1909) An early stage of *Acmaea*. -- Proc. U.S. Natl. Mus. 34(8): 313-323, 8 figs.

NARCHI, Walter (1971) Structure and adaptation to *Transennella tantilla* (Gould) and *Gemma gemma* (Totten). -- Bull. Marine Sci., 21 (4): 866-885, 9 figs.

NEWELL, N. D. (1965) Classification of the Bivalvia. -- Am. Mus. Novitates, 2206: 25 p., 3 figs., 1 table.

NEWELL, N. D., IMBRIE, J., PURDY, E.G. & THURBER, D. L. (1959) Organism communities and bottom facies, Great Bahama Bank. -- Am. Mus. Nat. Hist., Bull. 117, 117-228.

NICOL, David (1967) How to distinguish between *Limopsis* and *Glycimeris*. -- Naut. 81(2):45-46.

ODÉ, Helmer (1968) Vitrinellidae in Texas, a review and some observations. -- Texas Conchologist, 4(5):37-39.

---- (1969a) *Rissoina catesbyana* Orbigny, 1842. -- Texas Conchologist 6(1): 4-5, 2 figs.

---- (1969b) *Olivella minuta* and *Olivella dealbata*. -- Texas Conchologist 6(3):25-26, 2 figs.

---- (1969c) *Odostomia seminuda* C. B. Adams, 1839. -- Texas Conchologist 6(4):36, 42. 2 figs.

---- (1969d) Notes concerning Texas beach shells (Family Aclididae). -- Texas Conchologist 6 (4): 34-35.

---- (1970a) Family Assimineidae. -- Texas Conchologist 6(5):46.

---- (1970b) *Menestho impressa* Say, 1822. -- Texas Conchologist, 6(6): 61, fig.

---- (1970c) *Teinostoma biscaynensis* Pilsbry and McGinty, 1945. -- Texas Conchologist 6 (9): 97, fig.

---- (1970d) *Vitrinella floridana* Pilsbry and McGinty, 1946. -- Texas Conchologist 7(1):4, fig.

---- (1971-1972) Notes concerning Texas beach shells (Superfamily Pyramidellacea). -- Texas Conchologist, 8: 22-23, 34-38, 50-52 62-65 74-79, 86-89, 94-99; 9: 1-17, 25-32, illus.

---- (1971) *Henrya goldmani* Bartsch, 1947. -- Texas Conchologist, 7 (8): 90, fig.

---- (1973a) *Assiminea succinea* Pfeiffer, 1840. -- Texas Conchologist, 9(3):54, 1 fig.

---- (1973b) *Rissoina multicostata* C. B. Adams. -- Texas Conchologist, 10(3):31.

---- (1974a) Mollusk assemblages of the Texas coastal bays. -- Texas Conchologist 10: 63-67, 75-83, 5 tables.

---- (1974b) *Anticlimax pilsbryi* McGinty, 1945. -- Texas Conchologist, 10(4):40, fig.

ODUM, W.E. & HEALD, E.J. (1972) Trophic analysis of an estuarine mangrove community. -- Bull. Marine Sci. 22(3):671-738, 29 figs., 2 tables.

OLSSON, A.A. (1956) Studies on the genus *Olivella*. -- Proc. Acad. Nat. Sci. Philadelphia, 108: 155-225, pls. 8-16.

---- & HARBISON, Anne (1953) Pliocene Mollusca of southern Florida with special reference to those from North St. Petersburg. -- Acad. Nat. Sci. Philadelphia, Monogr. 8, 457 p., 65 pls., 2 figs., 2 maps.

---- & McGINTY, T. L. (1958) Recent marine mollusks from the Caribbean coast of Panama with the description of some new genera and species. -- Bull. Am. Paleont. 39(177): 58 p., 5 pls.

PALMER, K. Van Winkle (1958) Type specimens of marine Mollusca described by P. P. Carpenter from the West Coast (San Diego to British Columbia). -- Geol. Soc. Amer., Mem. 76, 376 p., 35 pls., 2 tables.

PARAENSE, W. L. (1958) The genera *Australorbis*, *Tropicorbis*, *Biomphalaria*, *Platytaphius* and *Taphius*. -- Rev. Brasil. Biol. 18(1):65-80.

---- (1966) The synonymy and distribution of *Biomphalaria peregrina* in the Neotropical region. -- Rev. Brasil. Biol. 26(3):269-296, 36 figs.

---- & DESLANDES, N. (1958) Observations on *Taphius havanensis*. -- Rev. Brasil. Biol. 18 (1): 87-91, 4 figs.

PARODIZ, J.J. (1957) Freshwater gastropods, Bahama Islands. -- Ann. Carnegie Mus., 35, 9 p., 2 figs.

PERRY, L. M. & SCHWENGEL, J. S. (1955) Marine shells of the western coast of Florida. -- Bull. Am. Paleont. 26(95): 318 p., 55 pls.

PETIT, M. (1851) Notice sur le genre Marginelle, *Marginella*, Lamarck, suivie d'un catalogue synonymique des espèces de ce genre. -- Jour. Conchyl., 2:38-59, 2 pls.

---- (1852) Nouvelle classification des coquilles vivantes placées par Lamarck dans son genre Pyrule, ou rangées depuis dans ce genre par d'autres. -- Jour. Conchyl. 3:140-159, 3 pls.

PHILLIPS, J.S. (1846) Description of a new freshwater shell and observations on *Glandina obtusa*, Pfeiffer. -- Proc. Acad. Nat. Sci. Philadelphia, 3:66-67, pl. 1:11.

PILSBRY, H. A. (1889) Recent additions to the United States snail fauna. -- Naut. 3 (6): 61-64, pl. 1.

---- (1890) Note on a southern *Pupa*. -- Proc. Acad. Nat. Sci. Philadelphia, p. 44-45, pl. 1.

---- (1891a) Preliminary notices of new Mexican shells. -- Naut. 5(1):8-10.

---- (1891b) Land and fresh-water mollusks collected in Yucatan and Mexicol. -- Proc. Acad. Nat. Sci. Philadelphia, p. 310-334, pls. 14-15, figs. 370-371.

---- (1893) Notes on the Acanthochitidae with descriptions of new American species. -- Naut. 7(3): 31-32.

---- (1900a) The air-breathing mollusks of the Bermudas. -- Conn. Acad. Arts Sci., Trans., 10(10): 491-509, pl. 62.

---- (1900b) A partial revision of the Pupae of the United States. -- Proc. Acad. Nat. Sci. Philadelphia, p. 582-611, pls. 22, 23, 2 figs., 1 table.

---- (1903) Mexican land and freshwater mollusks. -- Proc. Acad. Nat. Sci. Philadelphia, p. 763-789, pls. 47-54.

---- (1913) Notes on *Gundlachia* Pfeiffer. -- Pr. Acad. Nat. Sci. Philadelphia, 65: 668-671, pl. 26: 4-8.

---- (1916-1918) Pupillidae (Gastrocoptinae). -- Manual of Conchology, (2) 24: 380 p., 49 pls., 17 figs.

---- (1919) Mollusca from Central America and Mexico. -- Proc. Acad. Nat. Sci. Philadelphia, p. 212, 213, pl. 11, 9 figs.

---- (1920) Some Auriculidae and Planorbidae from Panama. -- Naut. 33(3):76-78, fig. d.

---- (1924) South American land and freshwater mollusks: notes and descriptions, the South American genera of Ancylidae. -- Proc. Acad. Nat. Sci. Philadelphia, 76: 54-59.

---- (1926a) The land mollusks of the Republic of

Panama and the Canal Zone. -- Proc. Acad. Nat. Sci. Philadelphia, 78: 57-126, 40 figs., pls. 9, 10.

---- (1926b) Costa Rican land shells collected by A.A. Olsson. -- Proc. Acad. Nat. Sci. Philadelphia, 78: 127-133, 4 figs., pl. 11.

---- (1930) List of land and fresh-water mollusks collected on Andros, Bahama. -- Proc. Acad. Nat. Sci. Philadelphia, 82: 297-302, pls. 22, 30 (part).

---- (1934) Review of the Planorbidae of Florida, with notes on other members of the family. -- Proc. Acad. Nat. Sci. Philadelphia, 86:29-66, pls. 7-11, 7 figs.

---- (1939a) Land Mollusca of North America (North of Mexico). -- Acad. Nat. Sci. Philadelphia, Monogr. 3, v. 1, part 1, 573 p., 377 figs.

---- (1939b) A new Floridian *Cyclostrema*. -- Naut. 53(2):53, pl. 8:3.

---- (1940) Ibid., v. 1, part 2:574-994, figs. 378-580.

---- (1946a) Ibid., v. 2, pt. 1:520 p., 281 figs.

---- (1946b) The type specimens of C. B. Adams' Jamaican species of *Vitrinella*. -- Notulae Naturae, Acad. Nat. Sci. Philadelphia, no. 162, 5 p., 1 pl.

---- (1948) Land Mollusca of North America (North of Mexico). -- Acad. Nat. Sci. Philadelphia, Mon. 3, v. 2, pt. 2:521-1113, figs. 282-585.

____ & AGUAYO, C.G. (1933) Marine and freshwater mollusks new to the fauna of Cuba. -- Naut. 46 (4): 116-223.

---- & ---- (1934) *Meioceras bermudezi*, new name for *M. constrictum* Pilsbry and Aguayo. -- Naut. 47 (3): 112.

---- & McGINTY, T. L. (1945a) Cyclostrematidae and Vitrinellidae of Florida, part 1. -- Naut. 59 (1):1-13, pls. 1, 2.

---- & ---- (1945b) Ibid., part 2. -- Naut. 59 (2): 52-59, 7w, pl. 6.

---- & ---- (1946a) Ibid., part 3. -- Naut. 59 (3): 77-88, pl. 8.

---- & ---- (1946b) Ibid., part 4. -- Naut. 60 (1):12-18, pl. 2.

---- & ---- (1950) Ibid., part 5. -- Naut. 63(3): 85-87.

---- & OLSSON, A. A. (1946) *Condylocardia* in Florida and Middle America. -- Naut. 60 (1): 6-7, pl. 1: 9, 10.

---- & ---- (1950) Review of *Anticlimax*, with new Tertiary species. -- Bull. Am. Paleont. 33 (135): 1-22, pl. 1.

---- & VANATTA, E.G. (1934) *Melongena corona* and its races. -- Naut. 47(4):117-121, pl. 12.

PONDER, W.F. (1972) The morphology of some mitriform gastropods with special reference to their alimentary and reproductive systems (Neogastropoda). -- Malacologia, 11(2):295-342, 9 figs.

PULLEY, T. E. (1952) An illustrated checklist of marine mollusks of Texas. -- Texas Jour. Sci. 4(2): 167-199, 13 pls.

REHDER, H.A. (1935) New Caribbean marine shells. -- Naut. 48(4):127-130, pl. 7.

---- (1939) New marine mollusks from the West Atlantic. -- Naut. 53(1):16-21, pl. 6.

---- (1943) New marine mollusks from the Antillean region. -- Proc. U. S. Natl. Mus., 93 (3161): 187-203, pls. 19, 20.

RHOADS, S. N. (1899) Annotated list of land and freshwater shells recently collected in the vicinity of Miami, Florida. -- Naut. 13:43-48.

RICE, W. H. & KORNICKER, L.S. (1962) Mollusks of Alacran Reef, Campeche Bank, Mexico. -- Publ. Inst. Marine Sci., Univ. Texas, 8:366-403, 9 pls.

---- (1965a) Mollusks of Alacran Reef, Campeche Bank, Mexico, Addendum. -- Publ. Inst. Marine Sci. Univ. Texas, 10:172.

---- (1965b) Mollusks from the deeper waters of the northwestern Campeche Bank, Mexico. -- Publ. Inst. Marine Sci. Univ. Texas, 10:108-171, 16 pls., 1 fig., 4 tables.

RICHARDS, H. G. (1937) Land and freshwater mollusks from the island of Cozumel, Mexico and their bearing on the geological history of the region. -- Proc. Am. Philos. Soc. Philadelphia, 77 (3): 249-263, 4 pls.

---- (1962) Studies on the marine Pleistocene. -- Trans. Am. Philos. Soc. Philadelphia, new ser., 52 (3): 141 p., 21 pls., 35 figs.

---- (1966) Pleistocene Pelecypoda of Virginia. -- Va. Minerals, Div. Minl. Resources, 12 (3): 18-24, pls.

---- (1972) Additional Pleistocene mollusks of Virginia. -- Va. Minerals, Div. Minl. Resources, 18(3):9-13, 1 pl., 1 fig.

RICHARDS, H.G., ABBOTT, R.T. & SKYMER, T. (1969) The marine Pleistocene mollusks of Bermuda. -- Notulae Naturae, Acad. Nat. Sci. Philadelphia, no. 425, 10 p., 1 fig.

RIGHI, G. (1968) On the radulae and spines of some Polyplacophora and Archaeogastropoda from Curaçao. -- Stud. Fauna Curaçao and other Carib. Islands, 25: 73-82, figs. 71-103.

ROBERTSON, Robert (1958) The family Phasianellidae in the Western Atlantic. -- Johnsonia 3 (37): 245-283, pls. 136-148.

---- (1959) The family Phasianellidae in the Western Atlantic. -- Johnsonia 3(39):344-346.

---- (1960) The mollusk fauna of Bahamian mangroves. -- Am. Malacol. Union, Ann. Rept. 26:22-23.

---- (1961) A second Western Atlantic *Rissoella* and a list of the species in the Rissoellidae. -- Naut. 74:131-136, pl. 9; 75:21-26.

---- (1971) Scanning electron microscopy of planktonic larval marine gastropod shells. -- Veliger, 14(1):1-12, 9 pls.

RUSSELL, H. D. (1941) The Recent mollusks of the family Neritidae of the Western Atlantic. -- Bull. Mus. Comp. Zool. Harvard, 88(4):343-404, 7 pls.

SAY, Thomas (1822) An account of some marine shells of the United States. -- Jour. Acad. Nat. Sci. Philadelphia, 2(2):221-248, 257-276, 302-325.

SCHALIE, H. van der (1948) The land and freshwater mollusks of Puerto Rico. -- Misc. Publ. Mus. Zool., Univ. Michigan, no. 70, 134 p., 14 pls., 64 maps, 4 figs.

SELLMER, G. P. (1967) Functional morphology and ecological life history of the gem clam *Gemma gemma*. Malacologia 5(2):137-223, 51 figs.

SHULENBERGER, Eric (1970) Responses of *Gemma gemma* to a catastrophic burial. -- Veliger, 13 (2): 163-170, 6 figs.

SMITH, E. A. (1885) Report on the Lamellibranchiata collected by H. M. S. 'Challenger' during the years 1873-76. -- Challenger Report, Zoology, 13 (35):1-341, 25 pls.

SMITH, Maxwell (1937) East coast marine shells. Descriptions of shore mollusks together with many living below the tide mark, from Maine to Texas inclusive, especially Florida. -- Ann Arbor, Mich., (privately published) 308 p., 74 pls.; map, text-figs.

STANLEY, S. M. (1970) Relation of shell form to life habits in the Bivalvia. -- Geol. Soc. Am., Mem. 125, 296 p., 40 pls., 48 figs.

STIMPSON, W. (1851) Monograph of the genus *Caecum* in the United States. -- Proc. Boston Soc. Nat. Hist., 4:112-113.

TAYLOR, D. W. & SOHL, N. E. (1962) An outline of gastropod classification. -- Malacologia 1 (1): 7-32, 2 figs.

THIELE, J. (1910) Molluskenfauna Westindiens. -- Zool. Jahrb., Jena, Suppl. 11: 109-132, table 9.

THOMPSON, F. G. (1968) The aquatic snails of the family Hydrobiidae of peninsular Florida. -- Fla., Univ. of Fla. Press, 268 p., 69 figs., 5 tables.

TORRE, Alfredo de la (1960) Caribbean species of *Truncatella*. Naut. 73(3): 79-88.

TRYON, G. W. (1863) Descriptions of two new species of fresh-water Mollusca from Panama. -- Proc. Acad. Nat. Sci. Philadelphia, p. 146, pl. 1:4-6.

TURNEY, W. J. & PERKINS, B. F. (1972) Molluscan distribution in Florida Bay. -- Univ. Miami, Comp. Sedimentology Lab., Sedimenta III, 37 p., 19 figs. 12 tables.

VANATTA, E. G. (1904) A list of shells collected in western Florida and Horn Island, Mississippi. -- Proc. Acad. Nat. Sci. Philadelphia, 55:756-759.

---- (1912) Land shells of southern Florida. -- Naut. 26 (2): 16-22, pl. 2.

---- (1913) Descriptions of new species of marine shells. -- Proc. Acad. Nat. Sci. Philadelphia, 65: 22-27, pl. 2, 3 figs.

---- & PILSBRY, H. A. (1906) On *Bifidaria pentodon* and its allies. -- Naut. 19(11): 121-128, pls. 6, 7.

VERRILL, A. E. (1873) Report upon the invertebrate animals of Vineyard Sound and the adjacent waters with an account of the physical character of the region. -- U.S. Fish Comm., Report for 1871-2: 294-778, pls. 20-32.

---- (1881) Notice of recent additions to the marine Invertebrata of the northeastern coast of America, with the descriptions of new genera and species and critical remarks on others. -- Proc. U.S. Natl. Mus., 3:356-405.

---- & BUSH, K. J. (1898) Revision of the deep-water Mollusca of the Atlantic Coast of North America with descriptions of new genera and species. -- Proc. U.S. Natl. Mus., 20 (1139): 775-901, pls. 71-97.

---- & ---- (1900) Additions to the marine Mollusca of the Bermudas. -- Trans. Conn. Acad. Arts Sci., 10: 513-544, pls. 63-65.

VOKES, H.E. (1967) Genera of the Bivalvia: a systematic and bibliographic catalogue. -- Bull. Am. Paleont., 51(232): 111-394.

WAGNER, William (1838) Description of five new fossils, of the older Pliocene Formation of Maryland and North Carolina. -- Jour. Acad. Nat. Sci. Philadelphia, 8: 51-53, pl. 1.

WALKER, Bryant (1903) Notes on eastern American *Ancyli*. Naut. 17:25-31, pl. 2.

---- (1918) A synopsis of the classification of the freshwater Mollusca of North America, north of Mexico and a catalogue of the more recently described species, with notes. -- Misc. Publ. Mus. Zool., Univ. Michigan, no. 6, 213 p., 233 figs.

WALLER, T. R. (1973) The habits and habitats of some Bermudian marine mollusks. -- Naut. 87 (2): 31-52, 1 table, 33 figs.

WARD, W. C. (1970) Diagenesis of Quaternary eolianites of northeast Quintana Roo, Mexico. -- Unpubl. Ph.D. dissert., Rice University, Texas, 207 p.

WARMKE, G. L. & ABBOTT, R. T. (1962) Caribbean Seashells, a guide to the marine mollusks of Puerto Rico and other West Indian islands, Bermuda and the lower Florida Keys. -- Penna., Livingston Publ. Co., 345 p., 44 pls., 34 figs.

---- & ALMODÓVAR, L.R. (1963) Some associations of marine mollusks and algae in Puerto Rico. -- Malacologia 1(2):163-177, 1 fig., 10 tables.

WARWICK, T. (1944) Inheritance of the keel in *Potamopyrgus jenkinsi* (Smith). -- Nature, London, 154:798-799.

WEISBORD, N. E. (1926) Notes on marine mollusks from the Yucatan Peninsula, Mexico. -- Naut. 39: 81-87.

WELLS, H. W. (1959) Notes on *Odostomia impressa* (Say). -- Naut. 72(4):140-144, 2 figs.

---- (1962) The distinction between *Acteocina candei* and *Retusa canaliculata*. -- Naut. 75(3): 87-93, 11 figs.

WRIGHT, C. A. (1962) *Planorbina* Haldeman, 1842, *Taphius* Adams and Adams, 1855, and *Armigerus* Clessin, 1884; proposed suppression under the plenary powers. Z. N. (S). -- Bull. Zool. Nomenclature, 19(1):39-41.

WURTZ, C. B. (1950) Results of the Catherwood-Chaplin West Indies Expedition, 1948. Part 4. Land snails of North Cat Cay (Bahamas), Cayo Largo (Cuba), Grand Cayman, Saint Andrews and Old Providence. -- Proc. Acad. Nat. Sci. Philadelphia, 102:95-110, pl. 2.

---- (1951) Catalogue of Ancylidae of South and Central America and the West Indies, with description of a new species. -- Naut. 64: 123-131, pl. 4: 8.

APPENDIX A

Sample	Split	Weight g	Sample Depth cm
111-0	1/2	13.1	15
111-1	1/2	13.0	30
111-2	1	11.8	80
111-3	1	18.2	105
111-4	1/2	19.0	130
111-5	1	46.2	155
111-6	1/2	21.4	180
111-7	1/2	18.2	205
111-8	1/2	16.6	230
111-9	1/2	19.0	255
111-10	1/2	14.1	280
112-0	1	15.4	5
112-1	1	14.7	30
112-2	1	12.8	40
112-3	1	5.8	75
112-4	1	6.8	100
112-5	1	20.0	120
112-6	1	6.3	140
113-0	1	17.5	10
113-1	1	25.2	55
113-2	1	22.6	85
113-3	1	24.3	105
113-4	1	17.0	130
113-5	1	10.9	155
113-6	1	10.0	170
26-0	1/2	24.6	5
26-1	1/4	12.1	10
26-2	1/2	22.7	30
26-3	1/4	15.5	40
26-4	1/2	14.5	70
18-0	1	100.0	10
18-1	1/4	25.5	190
18-2	1/4	27.8	280
17-0	1	44.0	15
17-1	1/2	15.1	30
17-2	1/2	19.0	55
17-3	1/2	14.4	90
17-4	1	24.0	115
17-5	1	45.8	140
17-6	1	32.7	170
17-7	1	39.0	190
17-8	1	51.2	220
17-9	1	54.4	260
17-10	1	29.4	280
30-0	1	16.3	5
30-1	1	19.0	30
30-2	1	14.1	40
30-3	1	17.0	60
30-4	1	20.4	70
23-0	1/2	29.0	10
23-1	1	35.5	30
23-2	1/2	35.3	55
23-3	1/2	28.5	90
23-4	1/2	34.8	120
23-5	1	67.9	150
24-0	1/2	16.8	5
24-1	1/2	23.3	35
24-2	1/2	22.1	125
24-3	1	55.5	185
24-4	1/2	25.6	240
24-5	1	46.8	260
32-0	1/4	16.5	5
32-1	1/4	13.0	20
32-2	1	84.3	65
32-3	1/4	17.5	100
32-4	1	54.5	125
32-5	1/2	37.3	160
32-6	1/4	23.5	190

Table 5. Sample Data.

TABLE 6

	26				111 (upper)		112 (upper)					113						
	0	1	2	3	0	1	0	1	2	3	4	0	1	2	3	4	5	6
Acteocina canaliculata	18	13	23	17	-	-	-	-	-	-	-	-	1	3	20	-	-	-
Alvania auberiana	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anomalocardia auberiana	673	151	133	119	-	2	-	5	-	-	-	-	38	15	13	-	-	-
Anomia simplex	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Assiminea succinea	2	2	2	3	-	-	12	8	5	48	-	22	16	1	7	8	5	-
Bivalvularia havanensis	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Blauneria heteroclita	-	-	-	-	-	-	9	2	11	2	-	-	-	-	-	-	-	-
Brachidontes exustus	86	79	83	6	1	-	3	1	-	-	-	-	-	-	-	-	-	-
Bulla striata	3	1	1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bullacea spp. (juveniles)	13#	1#	3#	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerithidea costata	72	4	4	24	45	47	7	2	2	14	-	-	154	42	121	4	-	-
Crepidula spp. (juveniles)	-	3#	-	2#	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cuningia tellinoides	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Cyrenoida floridana	-	-	-	-	1	-	1	-	-	1	-	7	2	-	3	1	-	1
Detracia bullaoides	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Diastoma varium	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ferrissia cf. excentrica	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Finella dubia	1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gastrocopta pellucida	-	-	-	-	-	-	6	4	-	-	-	1	-	-	-	-	-	-
Gemma gemma	15	7	21	91	-	-	-	-	-	-	-	-	1	8	43	-	-	-
Henrya zoldmani	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-
Laevicardium mortoni	70	21	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lamellaxis micra	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Lucina pectinata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2*	-	-	-
Marginella apicina	-	1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Marginella spp. (juveniles)	1#	2#	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Marinula succinea	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
Meloceras nitidum	4	-	1	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
Melampus coffeus	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
Melongena bispinosa	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neritina virginea	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
Odostomia laevigata	2	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parastarte triquetra	-	-	-	-	-	-	-	-	-	-	-	-	-	54	9	-	-	-
Physa marmorata	-	-	-	-	-	-	-	-	-	-	-	11	1	-	-	-	-	-
Polygyra carpenteriana	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Polymesoda maritima	-	-	-	4	67	23	-	-	-	-	-	-	87	6	17	-	-	-
Pyrgophorus coronatus	-	-	-	-	1	-	6	5	12	13	-	182	143	69	232	77	15	63
Sayella cf. crosseana	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Succinea sp. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Succinea sp. 2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Tellina sera	13	1	1	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-
Thyasophora cf. conspurcatella	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-
Tricolia affinis	-	-	-	-	-	-	1*	-	-	-	-	-	-	-	-	-	-	-
Truncatella barbadensis	-	-	-	-	-	-	6	1	-	-	-	-	-	-	-	-	-	-
Truncatella caribaensis	-	-	-	-	-	-	1	1	3	-	-	-	-	-	-	-	-	-
Truncatella pulchella	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-
Truncatella form bilabiata	-	-	-	-	-	-	8	1	-	-	-	-	-	-	-	-	-	-
Truncatella scalaris clathrus	-	-	-	-	-	-	4	2	5	1	-	-	-	-	-	-	-	-

* = fragmental or abraded specimens.
\# = juvenile specimens.

Table 6. Sample by sample species distribution in Inglés Lagoon (Core 26) and the Back-Lagoon Marsh.

TABLE 1

	112 (lower)		111 (lower)									17										
	5	6	2	3	4	5	6	7	8	9	10	0	1	2	3	4	5	6	7	8	9	10
Acanthochitona cf. pygmaea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Acmaea pulcherrima	-	-	-	1	1	1	-	3	2	4	1	2	-	-	2	1	6	-	2	3	3	3
Acteocina candei	29	19	-	-	1	-	-	-	-	-	1	3	-	-	-	-	8	1	1	-	-	-
Alvania auberiana	-	-	-	-	-	-	-	-	1	-	-	4	-	2	1	-	-	-	-	2	1	-
Americardia guppyi	-	-	-	1	-	-	-	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-
Amphithalamus cf. valloi	-	-	-	-	4	-	12	9	3	6	11	10	9	27	62	38	12	2	-	-	-	-
Anachis sparsa	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-
Anomalocardia auberiana	41	10	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Anomia simplex	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Assiminea succinea	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Astraea americana	-	-	-	-	-	-	-	-	-	4	-	-	-	-	1	2	-	-	-	-	-	-
Astraea phoebia	-	-	-	-	-	-	-	-	-	-	-	1*	-	-	-	-	-	-	-	-	-	-
Atys cf. riiseana	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	3	4	1
Barleeia sp.	-	-	1	-	10	-	11	2	4	6	2	6	-	1	3	9	10	2	3	-	-	1
Brachidontes exustus	12	6	2	-	2	-	-	-	-	-	-	78	32	66	3	-	3	1	-	-	-	-
Bulla striata	-	5	-	-	1	-	-	-	-	-	-	2	-	1	2	-	-	1	-	-	-	-
Bulliacea spp. (juveniles)	39ø	15ø	-	-	8ø	-	-	-	-	-	-	4ø	-	-	1ø	1ø	-	2ø	2ø	-	5ø	-
Carditamera floridana	-	-	3	-	9	-	4	-	-	-	-	19	14	5	1	-	6	-	1	1	1	-
Carditopsis smithii	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Cerithiopsis greeni	-	-	-	-	-	-	-	-	-	2	-	5	-	-	1	-	-	-	-	-	-	-
Cerithiopsis sp. 1	-	-	-	-	2	-	-	-	-	-	-	7	3	4	2	4	1	-	-	-	-	-
Cerithiopsis sp. 2	-	-	-	-	-	-	-	1	-	-	-	3	-	1	-	-	-	-	-	-	-	-
Cerithium algicola	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Cerithium eburneum	-	1	1	-	10	-	5	-	-	-	2	18	5	2	3	-	5	-	1	-	-	-
Cerithium litteratum	-	-	-	-	6ø	-	12ø	2	-	1	10	-	-	-	-	-	2	-	-	-	-	-
Cerithium lutosum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-
Cerithium muscarum	-	-	-	-	2	-	1	-	-	-	-	14	-	1	-	-	4	-	-	-	-	-
Cerithium spp. (juveniles)	8ø	-	-	-	12ø	2ø	5ø	-	1ø	4ø	-	24ø	6ø	9ø	-	3ø	-	1ø	-	-	2ø	-
Chione cancellata	-	-	4	-	16	-	5	1	-	2	1	20	26	21	5	2	26	3	1	-	-	-
Chione sp.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Codakia orbiculata	-	-	-	-	-	-	2	-	-	1	2	-	-	1	-	-	-	-	-	-	-	-
Columbella mercatoria	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
Conus stearnsi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-
Cosmioconcha nitens	-	-	-	-	1	-	-	1	1	-	-	2	4	2	4	1	3	2	-	3	2	-
Craspedochiton cf. hemphilli	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Crassispira leucocyma	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Crepidula convexa	2	2	-	-	-	-	-	-	-	-	1	1	3	6	-	-	-	-	-	-	1	-
Crepidula plana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Crepidula spp. (juveniles)	22ø	19ø	-	2ø	17ø	3ø	1ø	-	-	1ø	-	27ø	5ø	8ø	-	-	-	1ø	5ø	3ø	4ø	-
Cumingia tellinoides	-	-	-	-	-	-	1	1	-	1	2	11	1	4	1	-	6	2	1	2	1	-
Cylichna sp.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Diastoma varium	-	-	-	-	1	-	-	-	-	-	-	61	5	20	2	2	13	1	-	-	-	-
Diastoma sp.	-	-	-	-	-	-	-	-	-	-	-	27	2	20	-	-	-	-	-	-	-	-
Diodora cayenensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1*	-	-	-	-	-	-
Epitonium echinaticostum	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-
Finella dubia	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-

	112 (lower)		111 (lower)									17										
	5	6	2	3	4	5	6	7	8	9	10	0	1	2	3	4	5	6	7	8	9	10
Gemma gemma	531	213	3	-	32	1	12	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Granulina ovuliformis	-	-	-	-	1	-	-	-	-	-	-	2	-	1	-	-	-	-	1	1	-	-
Haminoea elegans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1
Henrya goldmani	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyalina albolineata	-	-	-	-	-	-	1	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-
Hyalina pellida	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	3	-	-	-	-
Ischnochiton cf. papillosus	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Laevicardium mortoni	4	2	-	-	-	-	-	-	-	-	-	3	3	4	-	-	-	-	-	-	-	-
Linga pensylvanica	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Lucina nassula	-	-	-	-	3	-	2	3	1	1	2	4	2	3	3	-	3	-	1	-	-	-
Lucina cf. radians	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Manzelia biconica	-	-	-	-	1	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
Marginella apicina	-	-	1	-	2	-	2*	-	-	-	-	5	1	2	-	-	1	-	-	-	-	-
Marginella eburneola	-	-	-	-	-	-	-	-	-	1	2	4	-	-	-	-	1	1	-	-	-	-
Marginella labiata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Marginella lavalleeana	1	1	-	1	12	2	7	-	2	-	-	2	7	3	1	-	-	-	2	-	-	1
Marginella roosevelti	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-
Marginella spp. (juveniles)	5Ø	5Ø	-	-	19Ø	-	-	1Ø	2Ø	-	-	11Ø	-	-	1Ø	1Ø	-	-	2Ø	-	-	-
Marginellopsis serrei	-	-	-	2	10	-	-	-	-	-	1	1	1	1	-	1	1	2	1	-	1	1
Meioceras cornucopiae	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-
Meioceras nitidum	2	8	-	1	16	-	-	-	-	-	1	150	52	45	13	12	95	4	2	11	1	-
Melanella sp.	-	-	-	-	-	-	-	-	-	-	1Ø	1	-	-	-	1	1	-	-	-	-	-
Mitrella argus	-	-	-	-	-	-	3	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Mitrella nycteis	-	-	-	-	-	-	-	-	-	1	1	-	-	-	1	1	-	-	1	1	-	1
Modulus modulus	4	4	1	1	31	3	4	3	-	1	2	61	9	10	1	5	11	1	5	-	-	1
Musculus lateralis	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Myscila sp. 1	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	2	-	-	1	-
Myscila sp. 2	-	-	-	-	2	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Myscila sp. 3	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nassarius albus	-	-	-	-	3	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Neritina virginea	-	-	1Ø	-	1Ø	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nucula sp.	-	-	-	-	-	-	2	-	-	3	5	-	-	-	-	-	3	-	-	-	-	-
Odostomia impressa	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Odostomia laevigata	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
Odostomia sp.	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	1	-	-	-	-
Olivella dealbata	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1	1	2	1	4	-
Parastarte triquetra	-	-	7	-	1	-	8	-	-	-	-											
Parvilucina multilineata	-	-	-	-	-	-	-	-	-	-	-	13	1	1	-	-	-	-	-	-	-	-
Persicula fluctuata	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Pinctada imbricata	-	-	-	-	-	-	2	-	1	1	-	12	1	5	2	-	9	-	-	-	2	1
Pitar fulminata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Pyrgocythara sp.	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Rissoella caribaea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Rissoina bryerea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Rissoina cancellata	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rissoina multicostata	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-
Rissoina striosa	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
Sayella cf. crosseana	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Smaragdia viridemaris	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	112 (lower)		111 (lower)									17										
	5	6	2	3	4	5	6	7	8	9	10	0	1	2	3	4	5	6	7	8	9	10
Tegula fasciata	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-
Tellina candeana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Tellina mera	2	2	1	1	9	-	4	-	-	-	1	3	5	3	1	2	13	3	4	5	4	-
Tellina similis	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	4	-	-	-	-	-
Thala foveata	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	1	-
Tricolia affinis	-	-	-	-	2	-	12	3	5	10	6	13	4	3	6	9	10	1	-	-	-	-
Tricolia bella	-	-	-	-	4	-	9	-	1	6	4	-	-	-	-	2	-	-	-	-	-	-
Triphora nigrocincta	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
Triphora sp.	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbonilla bermudensis	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	2	-	-	-	-	-
Turbonilla heilprini	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
Turbonilla unilirata	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Turbonilla sp.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
Vermicularia spirata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1ø	-	-	-
Vexillum albocinctum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Vexillum hanleyi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Vitrinella helicoidea	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Zebina browniana	-	-	-	-	3	-	10	1	4	8	3	10	6	6	1	3	12	7	5	2	-	3
Miscellaneous gastropods	-	-	-	-	-	-	5ø	-	1ø	2ø	2ø	2ø	1ø	3ø	5ø	2ø	2ø	8ø	5ø	1ø	3ø	-
Miscellaneous bivalves	-	-	-	-	-	-	2ø	-	1ø	-	-	3ø	2ø	5ø	1ø	1ø	5ø	4ø	2ø	2ø	2ø	1ø

* = fragmental or abraded specimens.
ø = juvenile specimens.

Table 7. Sample by sample species distribution in Cores 112 (lower), 111 (lower), 17.

TABLE 8

	18			30					23						24						32						
	0	1	2	0	1	2	3	4	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	6
Acanthochitona cf. pygmaea	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acmaea pulcherrima	-	7	6	14	15	26	8	27	10	-	1	3	-	-	1	18	2	9	9	14	4	-	1	1	1	-	-
Acteocina candei	2	8	1	34	3	5	5	5	2	10	4	4	8	13	-	1	-	-	4	3	3	1	5	19	4	1	9
Alaba incerta	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2
Alvania auberiana	3	-	2	23	4	-	4	8	2	-	3	5	2	5	-	4	-	2	1	3	-	1	1	1	-	1	4
Americardia guppyi	-	1	2	-	-	1	-	-	2	-	1	2	5	13	-	-	2	1	-	1	-	1	2	4	1	2	2
Amphithalamus cf. vallei	9	27	1	4	2	3	2	35	16	-	3	-	-	-	9	5	-	5	1	-	-	-	-	1	1	-	-
Arcopsis sparsa	3	1	-	-	-	-	-	-	1	2	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	1
Anomalocardia auberiana	2	1	-	2	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anomia simplex	-	-	1ø	1ø	1ø	-	-	-	-	1	1ø	1ø	-	-	-	1ø	-	-	-	-	-	-	-	-	-	-	-
Anticlimax pilsbryi	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2
Anticlimax sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Astraea americana	5	6	3	2	-	-	1	5	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Astraea phoebia	-	1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atys cf. riiseana	-	-	3	-	-	1	-	-	1	-	-	-	-	1	-	1	-	1	1	2	-	-	-	-	-	1	1
Barbatia cancellaria	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	1	-	-	1	-	-	-	1
Barbatia cf. domingensis	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	1	-	-	-	-	-
Barleeia sp.	31	16	-	25	11	15	2	5	-	-	3	2	-	-	10	152	-	3	-	1	-	-	-	-	-	-	-
Brachidontes exustus	133	-	-	96	3	4	-	3	47	285	9	4	3	4	13	49	-	-	1	-	-	-	1	3	-	-	-
Bulla striata	2	2	2	5	-	-	-	-	1	3	-	1	-	-	4	2	-	1	-	2	-	-	-	1	-	-	-
Bullacea spp. (juveniles)	3	2	7	30	1	7	-	-	9	23	-	-	2	8	6	4	-	-	-	-	2	-	-	2	-	-	1
Cadulus carolinensis	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1
Caecum floridanum	-	1	-	1	-	1	-	-	1	-	2	3	3	7	-	1	-	-	-	-	2	-	1	3	-	-	-
Caecum imbricatum	-	-	-	-	1	1	-	2	5	-	4	5	3	16	-	2	-	1	1	-	5	3	8	7	5	4	6
Caecum pulchellum	-	-	-	4	-	7	3	3	4	-	2	5	4	17	1	4	-	-	-	-	-	-	1	-	-	-	-
Carditamera floridana	3	1	-	2	-	-	-	-	4	1	1	1	2	-	-	-	-	3	-	-	-	-	-	-	-	-	-
Carditopsis smithii	-	-	-	3	-	-	1	-	2	-	-	-	-	-	-	-	4	3	1	1	-	-	2	3	-	-	-
Caval ina longirostris	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Cerithiopsis greeni	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerithiopsis sp. 1	2	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-
Cerithiopsis sp. 2	2	2	-	2	1	-	-	-	-	-	-	-	-	-	-	5	-	1	-	1	-	-	-	-	-	-	-
Cerithiopsis sp. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Cerithium algicola	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1
Cerithium eburneum	5	5	2	24	1	11	1	8	5	29	5	4	3	-	6	7	2	-	-	12	1	-	1	1	-	-	-
Cerithium litteratum	-	2	2	-	1	-	-	2	3	-	3	10	5	-	-	1	1	3	1	5	4	-	1	6	2	5	3
Cerithium lutosum	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	3	1	1	1	4
Cerithium muscarum	4	-	-	5	-	-	-	-	2	2	1	-	-	-	10	1	-	-	-	-	-	-	-	-	-	-	-
Cerithium spp. (juveniles)	3	8	5	48	-	-	-	-	37	116	-	-	-	6	5	12	4	16	8	2	6	1	2	5	-	3	8
Chione cancellata	7	7	3	15	3	2	-	4	9	2	11	19	6	8	-	15	1	4	3	8	8	6	4	7	4	-	12
Chione sp.	-	-	-	-	-	-	-	-	3	-	-	-	1	4	-	-	3	7	8	10	-	-	3	6	5	4	2
Codakia orbiculata	2	-	-	4	2	4	3	2	2	2	-	-	1	-	-	1	-	3	5	1	-	1	-	3	2	-	3
Columbella mercatoria	4	1	-	-	-	1	-	1	2	-	-	-	-	2	-	-	-	-	1	2	-	-	-	-	1	-	1
Conus stearnsii	1	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	1	-	1	-	1	1	-	-	-	-
Cosmioconcha nitens	-	4	3	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-	-	-	-	-
Crassinella lunulata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2
Crassispira fuscescens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Crassispira leucocyma	2	1	-	-	-	-	-	-	-	-	-	-	-	-	4	3	-	-	1	1	-	-	-	-	1	-	-
Cranolla divaricata	-	-	-	1	-	2	-	-	4	-	5	4	8	7	-	-	1	3	1	4	4	5	7	4	8	4	22

	18			30					23						24						32						
	0	1	2	0	1	2	3	4	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	6
Crepidula convexa	7	-	1	3	-	-	-	-	8	-	-	-	-	-	2	3	-	-	1	-	-	-	-	-	-	-	-
Crepidula plana	-	-	1	-	-	-	-	-	1	-	-	-	1	-	-	2	2	7	7	10	-	-	-	2	-	1	1
Crepidula spp. (juveniles)	11♂	1♂	1♂	4♂	2♂	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2♂
Crescis sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2♂
Crucibulum striatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Cuningia tellinoides	13	2	6	3	-	1	-	1	4	4	1	3	-	-	7	4	-	2	1	1	-	-	-	-	-	-	-
Cylichna sp.	-	-	-	5	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dentalium antillarum	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diastoma varium	151	10	-	63	3	2	-	-	17	186	6	3	1	2	55	35	-	-	-	-	1	-	-	7	2	2	3
Diodora dysoni	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-
Diplodonta nucleiformis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-
Divaricella quadrisulcata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	1	-	-
Emarginula pumila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
Epitonium echinaticostum	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Ervilia concentrica	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ervilia nitens	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	1	-	3	3	4	1	4
Erycina cf. fernandina	-	-	-	-	-	-	1	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	1	2	-	-	1
Finella dubia	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1
Gemma gemma	-	-	-	-	2	-	-	-	3	-	1	2	-	2	21	4	-	-	-	1	3	1	6	7	2	1	3
Granulina ovuliformis	1	1	1	4	4	-	1	-	-	3	-	-	-	-	2	7	-	-	-	1	-	-	-	-	-	-	-
Haminoea elegans	-	1	-	1	-	-	-	-	1*	-	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Henrya poldmani	7	-	-	2	-	1	-	-	2	-	-	2	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-
Hyalina albolineata	1	3	-	2	-	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Hyalina avena	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-
Hyalina pallida	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
Ischnochiton cf. papillosus	24	-	-	16	1	-	-	-	14	17	-	-	-	-	2	6	-	-	-	-	-	-	-	-	-	-	-
Laevicardium mortoni	6	-	-	15	-	-	-	2	4	3	1	2	2	2	4	2	-	1	-	-	-	-	-	-	-	-	-
Lima pellucida	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Limatula cf. hendersoni	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	2	3	2	1	4
Linga pensylvanica	-	-	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1	3	-	2	3
Littorina melanostoma	-	-	-	-	-	-	-	-	1	-	1	-	-	2	-	-	-	-	-	-	-	-	1	1	-	-	-
Lucina nassula	3	2	4	2	3	2	1	3	2	-	3	2	-	-	-	-	3	5	6	7	-	-	1	-	-	1	-
Lucina pectinata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1*	-	-	-	-	-	-	-	-	-	-	-	-
Lucina cf. radians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-
Lyropecten antillarum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Mangelia bartletti	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	-	1	1	1	-	-
Mangelia biconica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
Marginella apicina	3	1	-	3	-	-	-	-	-	1	-	-	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-
Marginella eburnea	1	-	-	7	1	-	-	-	-	4	-	-	-	-	6	7	-	1	-	2	-	-	-	1	-	-	-
Marginella labiata	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Marginella lavallecana	5	-	3	2	1	-	-	1	3	1	1	1	3	5	4	-	-	-	2	10	2	1	2	6	-	2	6
Marginella roosevelti	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-
Marginella spp. (juveniles)	7♂	-	1♂	2♂	-	2♂	-	1♂	11♂	10♂	-	-	-	-	8♂	1♂	-	1♂	-	-	-	-	-	1♂	-	-	-
Marginellopsis serrei	2	6	1	3	2	4	1	5	3	-	2	1	2	-	3	4	2	8	11	18	5	3	4	2	-	1	1
Meioceras cornucopiae	-	5	4	3	4	5	2	1	5	4	1	-	1	3	5	-	-	1	2	4	2	2	7	2	-	-	2
Meioceras nitidum	104	33	15	580	209	128	83	85	63	592	70	53	30	39	520	329	1	3	-	3	-	-	2	-	-	-	-
Melanella sp.	-	3	1	-	-	-	-	2	1	-	1	1	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-
Melongena bispinosa	1♂	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mitrella argus	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Mitrella nycteis	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-

	18			30					23						24						32						
	0	1	2	0	1	2	3	4	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	6
Modiolus squamosus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modulus modulus	46	18	4	38	1	8	1	10	37	12	4	2	3	3	34	46	4	3	8	2	3	3	2	1	1	-	1
Musculus lateralis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Mysella sp. 1	-	-	1	11	1	3	-	-	-	-	3	2	-	-	1	2	-	2	-	-	-	-	-	1	-	-	-
Mysella sp. 2	15	-	-	2	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Nassarius albus	-	2	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	1	-	1	1	-	-	-	-
Neodrillia cydia	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nucula sp.	4	-	2	3	-	4	2	1	-	-	3	2	-	1	-	-	4	1	2	11	1	2	2	2	1	1	1
Odostomia impressa	5	-	-	-	-	-	-	-	1	25	-	-	-	-	5	-	-	1	-	-	-	-	-	-	-	-	-
Odostomia laevigata	-	2	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-
Odostomia sp.	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Olivella dealbata	-	5	-	-	-	1	1	1	2	-	5	1	-	7	-	-	-	-	-	8	1	2	-	4	4	-	7#
Olivella minuta	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	1	1	-
Pachystremiscus ornatus	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pachystremiscus pulchellus	-	-	-	-	-	-	-	-	8	-	10	7	3	10	-	-	-	1	2	-	-	2	-	1	-	-	-
Parvilucina blanda	-	-	-	-	-	-	-	-	2	-	1	1	2	4	-	-	1	1	-	-	-	1	4	3	3	2	6
Parvilucina multilineata	-	-	-	2	-	3	-	2	-	-	6	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Parviturbo cf. rehderi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1#	-	-	-	-	-	-
Persicula fluctuata	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pinctada imbricata	11	3	2	2	1	2	1	-	7	3	4	4	-	-	2	3	-	-	-	-	-	-	-	-	1	-	-
Pitar fulminata	-	2	1	-	2	-	-	-	2	-	-	1	2	2	1	-	1	1	-	-	-	-	-	3	3	-	-
Pleuromeris tridentata	-	-	-	1	-	-	-	-	1	-	4	3	5	2	-	-	4	2	2	2	9	4	12	15	9	7	21
Pyramidella crenulata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Pyramidella sp.	-	-	-	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Pyrgocythara sp.	-	1	-	2	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Rissoella caribaea	-	-	-	-	-	-	-	4	2	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Rissoina bryerea	2	-	-	3	-	-	2	2	1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Rissoina cancellata	-	-	-	1	-	-	-	1	1	-	-	1	-	-	-	-	1	2	1	5	2	-	1	-	-	-	-
Rissoina catesbyana	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rissoina multicostata	-	-	-	-	-	3	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Rissoina striosa	6	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Sayella fusca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Smaragdia viridemaris	-	1	-	-	1	-	-	-	1	-	2	-	2	-	-	-	-	-	1	3	1	-	2	1	1	-	1
Solariorbis cf. terminalis	-	-	-	-	-	-	-	-	-	-	1#	-	-	-	-	2	1	1	1	-	-	-	-	-	-	-	-
Tageius divisus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Tegula fasciata	-	1	-	2	-	3	-	1	1	-	1	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-
Teinostoma cf. clavium	-	-	-	-	-	-	-	-	1	-	1	3	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Teinostoma cf. megastoma	1	-	1	-	1	-	1	-	-	1	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Tellina candeana	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tellina mera	7	9	8	9	2	3	-	3	2	5	4	3	2	2	5	7	-	2	2	-	-	-	1	-	-	-	-
Tellina similis	3	-	2	1	2	-	1	-	2	-	1	-	1	1	-	-	-	2	2	1	-	-	-	2	-	-	1
Thala foveata	1	-	-	-	-	-	-	-	-	4	-	-	-	-	-	5	-	1	1	-	-	-	-	-	-	-	-
Transennella cubaniana	-	-	-	-	-	-	-	2	1	-	6	12	3	15	-	-	1	-	4	6	11	4	27	42	27	16	72
Tricolia affinis	139	6	2	37	10	6	4	3	27	64	12	8	23	1	54	43	-	1	-	4	4	5	12	21	9	10	18
Tricolia bella	2	3	-	6	-	4	-	2	9	-	6	4	2	1	-	10	4	5	2	7	4	-	2	7	-	2	3
Triphora nigrocincta	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
Triphora turristhomae	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
Triphora sp.	5	-	-	-	-	1	-	-	1	-	1	-	-	-	6	4	2	-	-	-	-	-	-	-	-	-	-
Truncatella bilabiata	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-

	18			30				23					24					32					
	0	1	2	0	1	2	3	4	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	6
Turbonilla bermudensis	8	1	-	16	1	10	-	8	17	2	1	2	-	-	-	2	-	-	-	1	2	-	-	2	1	-	-
Turbonilla hellprini	-	3	-	2	1	1	1	-	-	-	-	1	-	2	-	-	-	-	-	3	-	-	1	-	-	-	-
Turbonilla cf. pyrrha	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Turbonilla unilirata	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Vermicularia spirata	-	-	-	-	-	-	-	-	3♦	1	-	-	-	-	-	-	-	3	1	-	-	-	1	-	-	-	-
Vexillum albocinctum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Vexillum hanleyi	-	1	-	1	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Vitrinella floridana	1	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vitrinella helicoidea	-	-	-	-	-	-	-	-	1	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zebina browniana	35	10	-	-	-	-	1	4	4	2	1	-	-	5	-	3	2	3	4	25	5	4	5	4	-	1	3
Miscellaneous gastropods	3♦	3♦	1♦	-	-	-	-	14♦	-	2*	-	1*	3*	-	4*	-	1*	2*	-	1*	8*	6*	3*	23*	1*	1*	4*
Miscellaneous bivalves	-	-	-	6♦	-	-	1♦	10♦	1*	-	-	5*	2♦	1*	-	2*	-	1*	4*	-	4*	7*	1*	5*	2♦	-	3*

* = fragmental or abraded specimens.
♦ = juvenile specimens.

Table 8. Sample by sample species distribution in Cores 18, 30, 23, 24, 32.

TABLE OF CONTENTS

	PAGE
Abstract	59-21
Introduction	59-21
Previous work	59-21
Setting of Nichupté Lagoon	59-22
Depositional environments	59-22
History of Nichupté Lagoon	59-24
Area of study	59-25
Method of investigation	59-25
Descriptions of cores investigated	59-25
Molluscan distribution	59-27
Comparison with Florida Bay molluscan distribution	59-33
Summary and conclusions	59-33
Acknowledgements	59-33
Systematics	59-35
References cited	60-24
Appendices	60-32

Note. Page citations are to Sterkiana numbers 59 and 60 and pages in the respective number.

SPECIES INDEX TO STERKIANA 41-60

Acanthinula 41: 13
  harpa 57: 36
Acanthochitona 60: 13
  hemphilli 60: 13
  pygmaea 59: 30; 60: 13, 28, 34, 37
Acanthopleura 41: 7
  picea 41: 7
Acar 60: 14
Acella haldemani 52: 19
Acer 52: 3, 11
Achatina 41: 8, 9
  achatina 55: 26
  fasciata 41: 9
  fulica 45: 19; 55: 1, 10, 26
  lubrica 57: 33
  marginata 41: 9
Achromobacter 45: 4
Acicula 41: 20
Acmaea 41: 6; 59: 34, 35; 60: 29
  fascicularis 41: 6
  mesoleuca 41: 6
  patina 41: 6
  persona 41: 6
  pulcherrima 59: 28, 32; 60: 34, 37
  pustulata f. pulcherrima 59: 35
  spectrum 41: 6
  testudinalis 41: 6
  triangularis 47: 3
Acroloxus lacustris 59: 14
Actinonaias 42: 13, 32; 43: 23
  carinata 42: 32; 43: 22, 24, 25; 49: 32; 52: 46, 50, 51; 57: 42
  ellipsiformis 42: 9, 39; 57: 40, 42
  gibba 49: 32
  ligamentina 42: 6, 7; 49: 24, 32, 52: 52
  pectorosa 49: 24; 52: 46, 48, 50, 51
  pleasi 42: 32
  streckeri 42: 32
Acteocina 60: 8, 27
  canaliculata 59: 27, 28; 60: 8, 33
  candei 59: 28, 32; 60: 8, 31, 34, 37
  infrequens 47: 16
Actinobdella 58: 5
Adelges 45: 15
Adeorbis 41: 3; 60: 26
Agave parviflora 45: 29
  treleasei 45: 28
Aglaia 41: 13, 16
  cornea 41: 16
  lapicida 41: 16
Agriolimax 51: 36
  agrestis 55: 19, 33; 57: 34
  campestris 47: 8; 57: 34
  reticulatus 57: 34, 37
Alaba 59: 46
  cerithioides 59: 46
  incerta 59: 28, 32, 46; 60: 37
Alabina cerithioides 59: 46
Alaria arisaemoides 55: 44, 54
  canis 55: 54
  intermedia 55: 44
  mustelae 55: 44
Alasmidonta 42: 12, 14
  calceola 49: 32
  calceolus 57: 40, 42
  heterodon 49: 23
  marginata 42: 35; 43: 24; 49: 23; 52: 46, 50, 51; 57: 42
  minor 52: 50, 51
  undulata 49: 23
  varicosa 49: 23
  viridis 49: 23, 32
Alcadia 41: 20
  hispida 41: 20
  (Penisoltia) minima 53: 6
  palliata 41: 20
Alexa 41: 18
Alexia 41: 19
Aligena 47: 9
  redondoensis 47: 9
Allassostoma parvum 55: 44, 52
Alloglossidium corti 55: 44, 53
  kenti 55: 44
Allogona profunda 41: 53; 43: 9, 22-24; 45: 34; 49: 32; 57: 34
  profunda efasciata 48: 2
Alnus 47: 39; 52: 3; 56: 26
Alvania 59: 40
  auberiana 59: 27, 28, 32; 40; 60: 33, 34, 37
Amblema 42: 12, 14, 16, 17, 35; 43: 23
  costata 42: 17, 18; 43: 22, 24, 25; 52: 46; 57: 42
  hippopea 42: 17
  ovalis 42: 17
  perplicata 42: 17, 18
  peruviana 42: 17; 52: 46, 50, 51
  plicata 42: 6, 7, 9, 17, 33, 38; 46: 6; 49: 20, 23
  quintardi 42: 17, 18
  rariplicata 42: 17, 18
  undulata 42: 17
Ambrosia 52: 13
Ambystoma macrodactylum 55: 54
Ameiurus nebulosus 57: 30
Americardia 60: 20
  guppyi 59: 31, 32; 60: 20, 34, 37
Ammonitella 48: 6, 11, 15
  yatesi 48: 11, 14
  yatesi allyni 48: 11, 14
Amnicola 50: 77; 52: 6, 16, 20, 22; 56: 51; 57: 15, 27; 58: 7, 9
  auberiana 41: 1
  candeana 41: 1
  Dupoteti 41: 1
  leightoni 52: 16
  limosa limosa 48: 17, 21-27
  limosa 49: 25, 32; 50: 4-7, 76-80, 88; 52: 1, 7, 9, 10, 16-26; 55: 47; 56: 27, 29, 30, 38-42, 44-46, 48, 49, 51, 52, 59, 62; 57: 7, 8, 9, 14, 15; 22, 25, 27, 31; 58: 12, 14, 16-18, 20, 21, 24, 48; 59: 7-9
  limosa porata 48: 17, 18, 21-27
  lustrica 46: 7; 52: 1, 6, 7, 9, 10, 16-25; 56: 27, 28, 38-42, 44, 45, 48-53, 56, 59, 62; 57: 8, 9, 14, 15
Amnicola (cont.)
  pallida 57: 8
  porata 49: 32
  walkeri 52: 16; 56: 38
Ampullaria 58: 5
Ampelita 41: 13, 17
  paludosa 41: 17
Amphithalamus 59: 40
  vallei 59: 28, 32, 36, 40; 60: 34, 37
Amusium 41: 21
Anachis 59: 50
  sparsa 59: 28, 50; 60: 34, 37
Anadonta 47: 8
  californiensis 47: 8
Anatlfa 41: 33
  dentifera 41: 33
  laevis 41: 33
  striata 41: 33
Anculosa carinata 49: 33
  praerosa 48: 3, 25; 52: 53
  subglobosa 49: 25
Ancylus 41: 17; 58: 7; 60: 10, 25, 27
  excentrica 60: 10
  fluviatilis 50: 81
  haldemani 49: 32
  papillaris 60: 10
  parallelus 57: 12
Ancyrobdella 58: 5
Anguispira 41: 54; 55: 38; 57: 39
  alternata 41: 39, 54; 42: 44; 43: 4, 22-24; 45: 1, 4, 6, 9, 10, 35; 46: 16; 48: 2; 49: 28; 52: 16-18; 55: 38; 57: 33, 38
  alternata angulata 49: 28
  alternata crassa 49: 28
  alternata fergusoni 49: 28
  alternata jessica 49: 15, 28
  alternata knoxensis 49: 28
  alternata mordax 49: 28
  alternata strongylodes 49: 28
  clarki 41: 54; 45: 33
  columbo 49: 15
  cumberlandiana 49: 15; 55: 38
  fergusoni 41: 43, 54; 42: 44
  jessica 42: 44
  knoxensis 49: 15
  kochi 43: 5, 22-24; 47: 19, 20; 48: 2; 45: 1, 4, 5-7, 9-11, 14-19; 49: 36, 37; 55: 38
  lawae 49: 15
  mordax 42: 44; 49: 15
  mordax paucicostata 49: 15
  paucicostata 45: 33
  picta 45: 33
  smithi 49: 15
  strongylodes 42: 44; 45: 36; 46: 16; 49: 15
Angulus 41: 31; 60: 21
Annularia mayensis 45: 40
Anodon papyracea 49: 32
Anodonta 41: 24, 26; 42: 9, 12, 14-16, 36-38; 45: 26; 52: 16; 57: 15; 58: 5
  cataracta 49: 23
  corpulenta 42: 8, 15
  edentula 41: 26
  Ferrussaciana 41: 26

Anodonta (cont.)
fluvialis 41: 26
Footiana 41: 26
gracilis 41: 26
grandis 42: 5, 6, 8, 9, 15, 16, 33, 39; 43: 10; 46: 14; 52: 46, 50, 51; 57: 42
g. corpulenta 42: 33
g. stewartiana 42: 15, 16, 18
imbecilis 41: 26; 42: 5, 6, 8, 14-16, 33, 36, 38; 46: 6; 49: 23; 52: 46, 50, 51; 57: 42
Lewisii 41: 26
Oregonensis 41: 26
ovata 41: 26
salmonea 41: 26
suborbiculata 42: 14, 15, 16
subcylindracea 41: 26
Anodontoides 42: 12
ferussacianus 46: 12, 14; 57: 40, 42; 57: 40, 42
f. subcylindraceus 43: 10
subcylindricus 43: 24
Anomalocardia 41: 30; 60: 23
auberiana 59: 27, 31; 60: 23, 33, 34, 37
Anomia 41: 21; 60: 15
cepa 41: 21
ephippium 41: 21
lampe 41: 21
simplex 59: 27, 31; 60: 15, 33, 34,37
Anticlimax 59: 28, 42; 60: 30, 37
athleenae 59: 43
pilsbryi 59: 28, 42, 43; 60: 29, 37
proboscidae 59: 43
schumoi 59: 43
tholus 59: 42
Aorchis extensus 55: 45
Apatemon gracilis 55: 43, 55; 59: 14
(Strigea) gracilis 58: 10, 11
Aplexa 41: 18
hypnorum 49: 25; 50: 67, 82; 51: 3, 5; 56: 31, 32, 39-42; 57: 26, 31, 32; 58: 5, 6, 9, 12, 14, 16-19, 22, 25, 30, 31, 36-42, 46, 48; 59: 1, 2, 4, 8, 9, 14
marmorata 60: 11
Apophallus brevis 55: 47, 54
Apterona 58: 51
crenulella f. helix 58: 51
Arca 41: 23; 47: 16; 60: 28
Americana 41: 23
barbata 41: 24; 60: 14
grandis 41: 23
Holbingii 41: 24
imbricata 41: 24
inaequivolvis 41: 23
lactea 41: 24
multicostata 41: 23
Noae 41: 24
pacifica 41: 24
ponderosa 41: 23
"Port-Saïd 41: 24
squamosa 41: 24
transversa 41: 23
tuberculata 41: 23
umbonata 41: 24
zebra 41: 24
Arcidens 42: 12, 14, 15, 19
confragosus 42: 14; 55: 37; 57: 42
Arriolimax 48: 6, 13, 16
californicus brachycephallus 48:13, 15
columbianus 45: 2, 13
Arion: 51: 13, 15, 16, 18, 24, 26, 41
ambiguus v. armoricana 51: 31
ater 51: 12, 13, 15, 18, 20, 24, 26, 30, 42; 55: 1, 12, 32, 35, 36
bourguignati 41: 28, 31
Arion (cont.)
circumscriptus 41: 55, 57; 51: 12, 22, 28, 31, 32, 41, 42; 55: 2, 14, 15, 32-34, 36, 37; 57: 33, 39
empiricorum 51: 24
fasciatus 41: 55, 57; 49: 16; 51: 12, 15, 18, 22, 28, 30, 31, 32; 55: 2, 14, 33; 57: 33, 38
f. var. flavescens 51: 30
f. var. grisea 51: 31
f. var. neustriacus 51: 31
f. var. sylvatica 51: 31
hortensis: 41: 55; 49: 28; 51: 12, 13, 15, 18, 22, 26, 28, 41, 42; 55: 2, 13, 34, 36; 57: 33, 38
intermedius 41: 55; 51: 12, 13, 16, 18, 22, 24; 55: 2, 15, 36; 57: 33, 38, 39
minimus 51: 22
neustriacus 51: 31
nilssoni 51: 30
rufus 51: 42
silvaticus 51: 12, 22, 28, 31, 32; 55: 2, 15
subfuscus 41: 55; 51: 12, 13, 15, 18, 20, 22, 26, 30, 41, 42; 55: 2, 13, 33; 57: 33
Arionta 41: 13
Arkansia 42: 12, 14, 15
wheeleri 42: 14, 37
Armiger crista 52: 19
Armigerus 60: 11, 31
Artemis 41: 29, 30
Asclepias syriaca 52: 21
Asellus aquaticus 58: 6
Ashmunella 45: 24; 48: 16
angulata 45: 24, 25
bequaerti 46: 8
carlsbadensis 46: 6, 8
chiricahuana 45: 24, 25
duplicidens 45: 25
edithae 46: 8
esuritor 45: 25
ferrissii 45: 24
mudgei 46: 8
metamorphosa 45: 25
proxima 45: 23, 24
Aspergillum 41: 33
Assiminea 60: 24, 39, 40
succinea 59: 27, 28, 39; 60: 29, 33, 34
Astarte 41: 29
Banksii 41: 29
castanea 41: 29
elliptica 41: 29
lactea 41: 29
sulcata 41: 29
triquetra 60: 24
undata 41: 29
Astraea 59: 37
americana 59: 27, 28, 34, 37; 60: 34, 37
longispina 59: 34
phoebia 59: 28, 37; 60: 34, 37
Astragalus 48: 8
Asymphylodora amnicolae 55: 47, 55
Atys 60: 9
caribaea 60: 9
riiseana 59: 28; 60: 9, 34, 37
Auricula 41: 19
Auridistomum chelydrae 55: 44
Australorbis 50: 10, 45; 60: 11, 29
glabratus 50: 91, 92; 54: 18, 19-21; 57: 31; 58: 6, 8;
Australorbis glabratus (cont.)
59: 7, 10-12
nigricans 59: 10
Avicula 41: 22
asellus 41: 22
atlantica 41: 22
sterna 41: 22
Azygia longa 55: 47, 54

Baicaloclepsis 58: 5
Bambucus 52: 9, 10
Bankinia 41: 2
Barbatia 59: 32; 60: 14
cancellaria 59: 31, 34; 60: 13,37
domingensis 60: 14, 26, 37
Barleea 59: 27
Barleeia 59: 28, 36, 41; 60: 25, 34, 37,
Batillaria 60: 25
minima 59: 34
Batracobdella 58: 5, 7; 59: 13
kasmiana 58: 5
michiganensis 58: 5,7
paludosa 58: 5, 7; 59: 12, 18
phalera 58: 5, 7; 59: 17
picta 58: 5, 7; 59: 9, 13, 17
reticulata 58: 5, 7
tricarinata 58: 5
Bdellarogatis 58: 6, 9
Begonia 55: 16
Betula 52: 11
Bifidaria 45: 26
armifera 57: 35
contracta 57: 35
corticaria 57: 35
curvidens 57: 36
pentodon 57: 36; 60: 31
rupicola 57: 36
tappaniana 41: 48
Bilharzia japonica 56: 8
Binneya 48: 6, 13; 51: 15
notabilis 48: 13, 14
Biomphalaria 50: 8, 10, 42, 45, 89, 92; 53: 9, 11, 13-15; 56: 2, 8; 57: 19, 21, 29; 60:11, 29
angulosa 53: 8, 15, 16; 54: 22
alexandrina 53: 8, 9, 10, 12, 13-16
boissyi 54: 20
choanomphala 54: 11
glabrata 50: 10, 11, 42, 45, 46, 89; 53: 8-18;54: 10, 18-22; 57: 19-21, 24, 26-28, 30
gracilentus 46: 7
havanensis 59: 27, 28; 60:11, 33
kansasensis 50: 85
obstructus 46: 7
peregrina 60: 29
peregrinus 60: 11
pfeifferi 50: 45, 91; 53: 7-12, 16, 18, 26, 28-36, 38, 39, 42-48, 51, 52; 54: 1, 3-12, 15-17, 19, 21, 22, 25-27; 56: 8; 57: 20, 26, 27, 32
sudanica 53: 10, 14, 15; 54:11
s. tanganyicensis 53: 15; 54: 10, 17
Bison antiquus 49: 7
bison occidentalis 49: 1,7, 9
Bithynia tentaculata 48: 17-19, 21-27; 49: 25; 55: 1, 6, 36; 57: 22, 24, 31
Bittium varium 59: 34, 46
Blaesospira echinus 53: 5
Blarina 57: 39
Blauneria 60: 10
heteroclita 59: 27, 28; 60: 10, 33

Blauneria pellucida 60: 10
Boreobdella 58: 5
verrucata 58: 5
Bothriopupa variolosa 45: 33
Brachidontes 60: 14
exustus 59: 27, 31, 32, 34; 60: 14, 33, 34, 37
Bradybaena circulus 55: 26
despecta 55: 26
fodiens 55: 27
mighelsiana 55: 27
serotina 55: 27
sieboldtiana 55: 27
similaris 55: 2, 20, 34
tourannensis 55: 27
Buccinum 47: 13
fasciatus 45: 37
strigillatum 47: 13
undatum 47: 13
viridum 47: 13
Bufo americanus 58: 7, 9; 59: 10
Bulimulus 41: 8, 9
arenaria 41: 10
cinerea 41: 10
dealbata 41: 9
dealbatus 41: 38; 49: 2
d. mooreanus 48: 2
detritus 41: 9
durus 41: 9
exilis 41: 9
faba 41: 10
fallax 41: 10
gibba 41: 10
(Strophia) incana 41: 9
inscendens 47: 19, 20; 49: 36, 37
Kamneri 41: 9
Knorri 41: 9
madrideus 41: 10
monachi 41: 10
mumia 41: 9
muscorum 41: 10
pellucida 41: 10
sepulchralis 41: 9
simplex 41: 10
uva 41: 9
Bulimus 41: 8
tentaculatus 55: 6
Bulinus 41: 18; 50: 42; 53: 8, 10, 11, 12, 14-17; 54: 20; 56: 2; 57: 21, 29; 59: 10
africanus 53: 8, 10, 16; 54: 20
elatus 41: 18
forskalii 53: 10, 14, 16; 54: 10, 15, 19
globosus 50: 10, 45, 91; 53: 7, 8, 10, 14-18, 25-29, 32-35, 37, 38, 40-43; 54: 1, 9-12, 16, 21, 25-27; 56: 8; 57: 20, 21, 26, 31
hypnorum 41: 18
nasutus 53: 10, 11, 14-17; 54: 20
n. productus 54: 22
pfeifferi 50: 10, 11, 45
tropicus 53: 14; 54: 22
truncatus 57: 20, 27; 58: 6, 8; 50: 10, 11, 45; 53: 8-16; 54: 10, 17, 18, 20-22
ugandae 53: 14
Bulla 41: 7; 60: 8
ampulla 41: 7
media 41: 7
obstricta 41: 7
occidentalis 41: 7; 60: 9
striata 59: 27, 28, 32; 60: 8, 33, 34, 37
umbilicata 60: 9
Bullacea 59: 28; 60: 33, 34, 37
Bullata lacrimula 60: 3
Byssoarca 41: 24
Bythinia australis 58: 5
tentaculata 58: 5, 7, 10, 12, 16, 21, 48, 50; 59: 2, 8, 9

Cadulus 60: 13
carolinensis 59: 30, 32; 60: 13, 37
Caecum 59: 32, 43; 60: 31
coronatum 59: 44
floridanum 59: 28, 43; 60: 37
imbricatum 59: 28, 43, 44; 60: 37
insigne 59: 44
pulchellum 59: 28, 43; 60: 37
Caecilioides gundlachi 55: 32
Calamagrostis 52: 11
Calla 52: 3; 56: 26
Callista 41: 31, 32
gigantea 41: 32
maculata 41: 32
Callucina 60: 17
Calypte helenae 45: 38
Calyptraea 41: 5
Campanula 52: 21
Campeloma 55: 47, 49, 52; 58: 7
decisum 48: 3; 48: 18, 21-27; 49: 25, 32; 55: 47; 58: 12, 14, 16, 17, 21, 22, 48; 59: 8
d. fecunda 48: 3
integra 49: 32
lima 49: 32
ponderosum 48: 3
rufa 49: 32
rufum 43: 24; 55: 40, 46, 47
subsolidum 48: 18
Candona 52: 6, 7, 9, 13, 14, 17, 19, 20-22, 26; 56: 38, 41
acuta 56: 38, 40
ohioensis 56: 38, 40, 49
truncata 56: 38
Cantharus 47: 13
Canthyria 42: 12, 14
collina 49: 23
Capsa 41: 31
Cardita 41: 27
Floridana 41: 27
sulcata 41: 27
Carditamera 60: 19
floridana 59: 27, 31, 32, 34; 60: 14, 33, 34, 37
Carditella smithii 59: 31; 60: 20, 34, 37
Carditopsis 60: 20
Cardium 41: 27
bullatum 41: 27
casertanum 57: 5
citronum 41: 27
consors 41: 27
costatum 41: 27
echinatum 41: 27
edule 41: 27
Islandicum 41: 27
magnum 41: 27
minimum 41: 27
mortoni 60: 20
muricatum 41: 27
nodosum 41: 27
Norvegicum 41: 27
penicillatum 41: 27
Careliopsis 60: 7
latior 60: 7
puncta 60: 7
Carex 52: 9, 10, 16, 17, 21, 22
Carunculina 42: 9, 29, 51
cylindrella 52: 46, 48, 50, 51
glans 49: 33
moesta 52: 46,50,51
parva 42: 29, 38; 46: 14; 57: 42
Carychium 41: 19
canadense 41: 57
Carychium (cont.)
clappi 41: 44; 42: 45; 49: 17, 26
costatum 49: 26
exiguum 41: 39, 44, 57; 43: 3; 45: 35; 49: 26, 34; 51: 3, 4; 52: 14, 22; 56: 32, 38, 39, 42, 44-46, 48, 51, 52, 55, 59
exile 41: 44, 57; 42: 45; 45: 35, 36; 46: 17; 49: 17, 26, 34
floridanum 41: 44; 46: 7; 49: 17
minimum 55: 1, 6, 32
nannodes 42: 45; 43: 3; 49: 17,26
occidentale 47: 44
perexiguum 45: 36
stygium 49: 17
Castoroides 56: 50
Cataulus 41: 20
Cathaemasia hians 55: 46
Catinella hubrichti 41: 43, 56; 49: 27
oklahomarum 41: 43, 56, 57; 42:45; 46: 17; 49: 16, 27, 32, 34
pinicola 41: 56; 49: 32
pugilator 41: 43
texana 46: 10, 17; 49: 16
vagans 41: 39
vermeta 41: 39, 43, 56, 57; 42: 44; 43: 3; 45: 35, 36; 46: 17; 49: 16, 27; 57: 36
wandae 46: 17
Catostomus commersoni 58: 7
Cavilinga 60: 16
Cavolina longirostris 59: 28, 32; 60: 9, 37
Cavolinia 60: 9
Cecilioides acicula 41: 53; 49: 31; 55: 1,7,36
aperta 55: 1, 8
Cecorchis medius 55: 54
Cepaea hortensis 55: 2, 23, 33, 35; 57: 34, 38, 39
nemoralis 41: 51; 42: 41, 45; 49: 32, 35; 55: 2, 23, 32-34; 57: 34, 39
Cephalogonimus americanus 55:44,54
Cepolis varians 45: 33
(Hemitrochus) varians 55: 2, 21
Cerastium 52: 16, 17, 21, 22
Ceratisolen 41: 33
Ceratophyllum 53: 10; 56: 3
Cercaria bessiae 55: 44
brookoveri 55: 47
burti 55: 43, 55
concavocorpa 55: 44, 54
convoluta 55: 44
douglasi 55: 45, 46, 54
dubia 58: 10; 59: 14
flabelliformis 55: 46
goodmani 55: 54
helvetica 55: 44
helvetica XXIV 55: 45, 46
inhabilis 55: 44
mesotyphla 55: 45
microcercous 55: 46
pigmentata 55: 45, 46
poconensis 55: 44, 55
pseudoburti 55: 43
stagnicolae 50: 89; 57: 30
szidati 55: 47, 52
thomasi 55: 45
trigonura 55: 46
trivolvis 55: 44-46
Cercariaeum constantiae 55: 52
mutabile 55: 43
Cerithidea 59: 44; 60: 25
costata 59: 27, 28, 44; 60: 33
scalariformis 59: 34
Cerithiopsis 59: 47

Cerithiopsis sp. 1 - 59: 28, 47; 60: 34, 37
sp. 2 - 59: 28, 47; 60: 34, 37
sp. 3 - 59: 28, 47; 60: 37
gemmulosa 59: 47
greeni 59: 28, 47; 60: 34, 37
maisana 59: 47
Cerithium 59: 28, 44; 60: 34, 37, 28
algicola 59: 28, 45; 60: 34, 37
ambiguum 59: 44, 45
eburneum 59: 28, 32, 34, 45; 60: 34,37
greeni 59: 47
litteratum 59: 28, 32, 34, 45; 60:34 37
lutosum 59: 28, 32, 45; 60: 34,37
lymani 59: 45
mirabile 59: 48
muscarum 59: 27, 28, 34, 45; 60:34,37
variabile 59: 45
Chaenaxis tuba 45: 26
Chaetogaster 50: 70; 59: 6, 7, 13
limnaei 58: 14, 16, 45, 48, 50; 59: 6, 7, 9, 11, 12, 14
l. vaghini 59: 6, 11
Chama 41: 26; 47: 4
arcinella 41: 26
macrophylla 41: 26
sulcata 41: 26
Chara 52: 3, 6, 7, 9, 12, 16, 17-18, 20, 22-24,26; 56: 26, 27, 31, 41, 44, 46, 49, 51, 52; 57: 9
Chemnitzia 60: 8
Chione 59: 31; 60: 23, 34, 37
amathusia 41: 30
cancellata 59: 31, 32; 60: 23, 34, 37; 60: 28
intapurpurea 60: 23
pygmaea 59: 34
Chirocephalopsis bundyi 58: 10
Chironomus 58: 48; 59: 7, 9
(Cryptochironomus) acutus 53: 17
Chiton cinereus 41: 7
Cumingii 41: 7
discrepans 41: 7
magnificus 41: 7
marmoreus 41: 7
papillosus 60: 13
Siculus 41: 7
squamosus 41: 7
Chlorella 53: 14
Chlorostoma 41: 2
Choanopoma 41: 20
angustre 41: 20
hystrix 53: 6
Wilhelmi 41: 20
Chondropoma 41: 20
echinulatum 53: 5
incrassatum 53: 6
payanum 41: 20
plicatulum 41: 20
Chondropoma sinuosum 53: 6
vignalensis 53: 6
Chondropometes vignalensis 53: 6
Chondrothyretes incrassata 53: 6
Chondrothyra (Hendersonoma percrassa 53: 6
Chrysemis picta 55: 55
Chrysodomus 47: 13
Cingula concinna 59: 40
Cincinnatia emarginata 58: 6
Cionella 41: 8, 9; 46: 8
Glaynii 41: 9
lubrica 41: 57; 42: 45; 43: 22, 24; 48: 3; 49: 26; 51: 4; 52: 22; 56: 36, 39, 42, 48; 57: 33
lubrica exigua 41: 57
lubricella 41: 57; 42: 45; 49: 26
morseana 41: 44, 57; 42: 45; 43: 3; 45: 35; 46: 17; 49: 17, 26
Cionella (cont.)
subcylindrica 41: 9; 57: 33
Circe 41: 29
gibbus 41: 29
pectinata 41: 29
Circinaria concava 57: 34
Clausilia 41: 7, 21
Braunii 41: 21
Clathrodrillia fuscescens 60: 5
lineolata 55: 27
nigricans 41: 21
ventricosus 41: 21
Clinostomum heterostomum 55: 44
marginatum 55: 44, 53
Cochlicella barbara 55: 27
conoidea 55: 27
ventrosa 55: 2, 21
Cochlicopa 45: 21, 22, 25
lubrica 57: 33
Cochliopa riograndensis 46: 7
texana 46: 7
decisa 49: 25
virginica 49: 25
Cochlodesma 41: 33
Codakia 41: 27; 60: 17
orbiculata 59: 31, 32, 34; 60: 17, 34, 37
Collisella 59: 35
Columbella 59: 50
dormitor 60: 26
fenestrata 59: 50
mercatoria 59: 28, 34, 50; 60: 34,37
perpicta 59: 50
Columbellopsis 59: 50
Columella columella alticola 46: 6, 9
edentula 41: 57; 43: 3; 47: 44; 49: 27, 32; 57: 35
simplex 42: 45; 45: 35; 49: 32;
Conchlodinella illamellata 53: 6
mixta 53: 6
Conchodromus 42: 13
Condylocardia 60: 25, 30
floridensis 60: 20
Coniella subcylindrica 48: 3
Conradilla 42: 10, 13
caelata 49: 24; 52: 46, 52
Conulus 45: 23
chersinus 57: 36
fulvus 57: 36
minutissima 57: 34
Conus 47: 18; 60: 4, 26
comptus 47: 18
floridanus 60: 4
gladiator 47: 18
jaspideus stearnsi 60: 4
mahogani 47: 18
nux 47: 18
orion 47: 18
perplexus 47: 18
princeps 47: 18
purpurascens 47: 18
regularis 47: 18
stearnsii 59: 28; 60: 4, 34, 37
virgatus 47: 18
Corbicula 41: 28, 50; 43: 9, 11-18; 52: 49, 54, 55; 55: 33, 35
awajiensis 43: 13
elatior 43: 13
felnouilliana 43: 12
fluminalis 43: 15
fluminea 43: 9, 12-16; 55: 31,33,34
(Cyrenodonax) formosana 43: 13
insularis 43: 13
japonica 43: 13, 15, 17
javanica 43: 13, 18
leana 43: 13, 16; 55: 26, 33
lindoensis 43: 18
manilensis 43: 2, 9, 11-18; 55: 2, 26, 32-36
Corbicula (cont.)
maxima 43: 13
producta 43: 13
sandai 43: 13, 14, 18
vicina 43: 13
Corbula 41: 33
inaequalis 41: 33
Mediterraneus 41: 33
nasuta 41: 33
nucleus 41: 33
Corunculina 42: 29
Corydalus cornutus 55: 49
Cosmioconcha 59: 50
nitens 59: 28, 32; 50; 60: 34,37
Costoanachis 59: 50
Cotylophoron cotylophorum 55:46,52
Cotylurus 58: 11
communis 55: 46
cornutus 58: 11; 59: 14
flabelliformis 55: 45, 46, 53-55; 58: 10; 59: 10
michiganensis 55: 55
Craspedochiton 60: 13
hemphilli 59: 30; 60: 13, 34
Crassinella 60: 20, 27
lunulata 59: 31, 32; 60: 20, 37
guadaloupensis 60: 20
martiniquensis 60: 20
Crassiphiala bulboglossa 55: 39, 47-50, 52, 53
Crassispira 60: 4
cubana 60: 4
fulvenscens 60: 5
fuscescens 59: 28; 60: 4, 37
leucocyma 59: 28; 60: 5, 34, 37
mesoleuca 60: 4
Crassispirella 60: 4
Crassostrea gigas 45: 4, 12
virginica 50: 83, 90
Crenella 41: 23; 60: 14
divaricata 59: 31, 32; 60: 14, 37
Crenodonta 42: 17
peruviana 42: 17
Crepidula 41: 5; 59: 27, 28, 32, 49; 60; 5, 33; 34, 37,38
aculeata 41: 5
convexa 59: 27, 28, 49; 60: 34, 38
fornicata 41: 5
loricata 41: 5
maculosum 41: 5
nivea 41: 5
plana 59: 28, 49; 60: 34, 38
porcellana 41: 5
rugosa 41: 5
unguiculata 41: 5
Creseis 59: 28; 60: 9, 38
acicula 60: 9
Crucibulum 41: 5; 59: 49
striatum 59: 28, 50; 60: 38
Cryptobia salmositica 59: 9
Ctena 60: 17
Ctenopoma pulverulentum 53: 6
Cucullaea 41: 23
Cumberlandia 42: 12, 14
monodonta 49: 23; 57: 42
Cumingia 60: 22
tellinoides 59: 27, 31; 60: 22, 33, 34, 38
t. vanhyningi 60: 22
Cyanthocotyle 58: 11
Cyathocotyle 58: 11
Cyclas 41: 28
dubia 41: 28
fabalis 57: 3
palustris 41: 28
partumeia 57: 4
rhomboidea 57: 5
rivicola 41: 28
rosacea 57: 3

Cyclas (cont.)
striatina 57: 5
Cyclina 41: 29
Cyclocypris 56: 38,49
Cyclonaias 42: 11, 12, 14,19
tuberculata: 49: 23, 33; 50: 51; 52: 46; 57: 42
Cyclophorus 41: 20
oculus 41: 20
Polynema 41: 20
Cyclops 41: 3
Cyclostoma 41: 19; 45: 18
cirratum 53: 5
(Choanopoma) echinus 53: 5
elegans 41: 20; 45: 4, 15
payanum 41: 20
pterostomum 53: 6
sulcatum 41: 20; 45: 4
tricarinata 57: 7
Cyclostrema 60: 26, 30
Cylichna 59: 28; 60: 8
krebsi 60: 8
Cylindrella 41: 7, 8; 45: 41
angustior 53: 5
arcustriata 53: 5
artemisiae 41: 8
clara 53: 5
costata 41: 8
cristallina 53: 5
fusiformis 53: 6
garciana 53: 6
gracilis 41: 8
Humboltiana 41: 8
illamellata 53: 6
macra 53: 6
mixta 53: 6
plumbea 53: 6
striatella 53: 6
teneriensis 53: 6
trinitaria 41: 8
vignalensis 53: 6
violacea 53: 6
Cypraea 47: 5
Cypretta kawatai 53: 17
Cypricercus reticulatus 53: 17
Cypridopsis 52: 6, 7, 13, 14, 19, 20
hartwigi 53: 17; 54: 18
vidua 53: 17; 56: 38, 40
Cyprogenia 42: 13
aberti 42: 35
irrorata 52: 48
stegaria 49: 24
Cyraena 41: 28
Cyrena 41: 29
floridana 41: 29; 60: 22
Mexicana 41: 29
orientale 41: 29
Cyrenoida 60: 18, 29
americana 60: 18
floridana 59: 27, 31; 60: 18, 33
guatemalensis 60: 18
Cyrtonaias 42: 12
berlandieri 46: 7
Cythara bartletti 60: 5
Cytherea 41: 29

Daphnia 53: 10
Daucus carota 52: 11, 21
Davainea proglottina 51: 14
Decodon 52: 3; 56: 26
Dentalium 60: 13
antillarum 59: 30, 32; 60: 13, 38
Dero 53: 10
Deroceras 48: 6; 51: 13, 15, 26, 33, 34, 36, 42
aenigma 51: 2-4
agreste 41: 55; 51: 37; 55: 27; 57: 34
caruanae 51: 37; 55: 2, 20, 27
Deroceras (cont.)
gracile 47: 8
laeve 41: 55; 42: 44; 43: 5; 45: 35; 46: 14, 17; 49: 29; 51: 2, 12, 14, 15, 18, 36, 37, 38, 41; 55: 27, 33; 56: 33, 34, 39, 40, 42, 45, 51; 57: 34, 38
reticulatum 41: 55; 49: 29; 51: 12, 13, 15, 28, 37, 38, 41; 55: 2, 19, 33, 34; 57: 34, 38, 39
Detracia 60: 10
bullaoides 59: 27, 28; 60: 10, 33
Diastoma 59: 28, 46; 60: 34
gibberulum 59: 46
varium 59: 27, 28, 32, 46; 60: 33, 34, 38
Dicrocoelium dendriticum 57: 39
Dina 58: 7, 9
bucera 59: 18
dubia 58: 10
lateralis 59: 17
parva 58: 7, 10; 59: 17
Diodora 59: 35; 60: 27
cayenensis 59: 29, 35; 60: 34
dysoni 59: 29, 35; 60: 38
Dione 41: 29, 30
lupinaria 41: 30
rosea 41: 30
Diplodiscus temperatus 55: 43, 53
Diplodocus temperatus 55: 44
Diplodonta 60: 18
nucleiformis 59: 31; 60: 18, 38
Diplostomulum scheuringi 55: 43, 53
baeri eucoliae 55: 46, 53
flexicaudum 55: 46, 53, 55
trituri 55: 43
Dipsas 58: 5
Discopsis schumoi 59: 43
Discus 48: 6, 13; 49: 4; 57: 39
bryanti 49: 16
catskillensis 41: 54; 57: 34
clappi 49: 16
cronkhitei 41: 54; 42: 44; 43: 5; 45: 21; 46: 6, 9; 48: 2; 49: 4-7, 28; 51: 3, 4, 6, 7; 52: 14, 17, 22; 56: 34, 39, 42, 45, 48, 51, 52; 57: 34
macclintocki 45: 33
nigrimontanus 49: 16
patulus 41: 43, 54; 42: 44; 43: 5; 45: 1, 35; 48: 2; 49: 15, 28; 57: 34
p. edentulus 45: 35; 46: 16
rotundatus 45: 15; 55: 1, 12, 32, 34; 57: 34, 39
selenitoides 48: 13, 14
Dismobdella 58: 5
Divalinga 60: 17
Divaricella 60: 17
quadrisulcata 59: 31, 32; 60: 17, 38
Donax 41: 31, 32; 45: 4
anatina 41: 32
Conradi 41: 32
dentifera 41: 32
gouldi 45: 12, 15, 19
navicula 41: 32
politus 41: 32
punctatostriata 41: 32
variabilis 41: 32
Dosinia 41: 29, 30
concentrica 41: 30
discus 41: 30
Dunkeri 41: 30
Dreissena 41: 23, 50; 43: 12, 14, 18
polymorpha 43: 14, 15, 17, 18
Drillia ebenina 60: 4, 5
leucocyma 60: 5
(Clathrodrillia) solida 60: 4, 5
Dromus 42: 13
dromas 49: 24
Drosophila 45: 15
melanogaster 45: 20
Drymaeus alternans 55: 27
cuernavacensis 55: 27
hegewischi 55: 27
heynemanni 55: 27
hepatostomus 55: 27
Dysnomia 42: 10, 13; 52: 50
brevidens 43: 2; 52: 46, 48
capsaeformis 52: 46, 48, 50, 51
curtisi 52: 52
deviata 52: 52
florentina f. walkeri 52: 46, 48, 50, 51
triquetra 52: 46; 57: 42
turgidula 52: 52

Echinochasma donaldsoni 55: 52
Echinochasmus donaldsoni 55: 47
Echinoparyphium flexum 55: 45, 46, 54
Echinostoma lindoensis 43: 18
revolutum 55: 44-46, 52
Echinostomum callawayensis 55: 45, 54
Elenchus 41: 2, 4
cingulatus 41: 4
fasciatus 41: 4
virgineus 41: 4
Eleocharis 52: 3; 56: 26
Elephantulum 59: 43
Elliptio 42: 12, 14, 22, 23; 49: 34
complanatus (-a) 42: 9, 37; 43: 10; 49: 23, 32; 55: 37; 57: 42
congaraea 49: 23, 33
crassidens 43: 22, 24, 25; 49: 23; 52: 48, 50, 51; 57: 42
dilatata (-us) 42: 22, 23; 43: 22-24; 49: 23; 52: 46; 57: 42
fisherianus 49: 32
insulsus 49: 32
lanceolata 49: 23, 32
productus 49: 32
sayana 41: 48
Elliptoideus 42: 12, 14
Elodea 50: 77; 53: 10, 16; 56: 31; 57: 9
Emarginula 41: 5; 59: 35; 60: 27
pumila 59: 35; 60: 38
Emoda 45: 38
Enchytraeus albidus 58: 5
Epioblasma 42: 13; 52: 49, 50, 52
biloba 52: 49, 50
brevidens 49: 24
capsaeformis 49: 24
haysiana 49: 24
lenior 49: 24
torulosa gubernaculum 49: 24
triquetra 49: 24
(=Dysnomia) turgidula 52: 52
walkeri 49: 24
Epitonium 47: 9; 59: 48
echinaticostum 59: 29, 48; 60: 34, 38
Eremarionta 47: 11
Erpobdella 58: 7, 9-11; 59: 5
octoculata 58: 10, 11
punctata 58: 7, 11; 59: 13, 17
punctata annulata 59: 17
Ervilia 59: 32; 60: 21, 27
concentrica 59: 32; 60: 21, 27, 38
nitens 59: 31, 32; 60: 21, 38
Erycina 60: 18

Erycina (cont.)
fernandina 59: 31, 32, 36; 60:18,38
Escherichia coli 53: 17
Euconulus 52: 30, 31
chersinus 41: 38, 42; 42: 42; 43: 6; 45: 36; 46: 12, 14, 16; 49: 13, 30; 52: 31, 38; 56: 46; 57: 36
c. dentatus 49: 30
c. polygyratus 49: 30
c. trochulus 46: 9; 52: 31
dentatus 41: 42, 53; 42: 42; 45: 34; 49: 13
fulvus 41: 53; 42: 42; 45: 22, 23; 46: 9; 47: 44; 49: 30; 51: 3, 4, 7; 52: 14, 31, 38; 56: 32, 33, 38, 39, 45, 48, 49, 51, 52; 57: 36
polygyratus 41: 53
Euglandina rosea 41: 42; 48: 2
singleyana 46: 8
Eulima atypha 59: 49
Eulimax agrestis 57: 34
flavus 57: 34
Euomphalus 41: 2, 4
excavatus 41: 4
ligulatus 41: 4
Euparypha 41: 13
Euparyphium beaveri 55: 46
melis 55: 52
Eupatorium 52: 21
Eupera cubensis 46: 7
Euphorbia 55: 27
Eurycampta 45: 38
Eustomos chelydrae 55: 44, 46, 54
Eutrochatella (Ustronia) chrysochasma hernandezi 53: 6
Eutudorops (Eutudorex) pulverulentum 53: 6
Evalea 60: 6
Exiloidea 47: 13

Fagus 52: 8
Fartulum nebulosum 59: 44
Fasciola gigantea 55: 52; 54: 18; 55: 46
hepatica 50: 15, 82, 89; 55: 40-42, 46, 52, 53, 55; 57: 25, 30; 59: 7
Fascioloides magna 55: 46, 53, 55
Felania 41: 28
Ferrissia 57: 13; 60: 10
excentrica 59: 27, 29; 60: 10, 11, 33
fragilis 41: 40; 49: 26, 32; 55: 43
meekiana 55: 32
parallela 49: 26; 51: 5; 52: 13, 14, 16, 17, 24; 55: 43; 56: 31, 42, 45; 57: 4, 12, 14
rivularis 41: 40, 49: 26, 32; 55: 43
shimekii 52: 24
tenuis 53: 13
Ferussacia 41: 20
subcylindrica 57: 33
Ficus 47: 15
Finella 59: 46
dubia 59: 27, 29, 46; 60: 33, 34, 38
Fischerella ambigua 53: 7, 20, 44, 45; 54: 12, 16
Fissurella 41: 5
alba 41: 5
alternata 41: 5
Listeri 41: 5
virescens 41: 5
Fontigens 49: 25, 34
attenuata 49: 25
nickliniana 49: 25
orolibas 49: 25
Fossaria 52: 5; 56: 37, 40, 51, 52
dalli 46: 12, 14; 49: 26; 51: 3, 5, 6
humilis 49: 26; 56: 38
modicella 49: 26
obrussa 49: 26; 52: 24; 56: 29, 38-42, 44-46, 48-53, 56, 60, 62; 57: 8,9, 14, 15
Fossaria (cont.)
obrussa decampi 52: 6, 7, 9-11, 13, 16, 17, 19-22, 24, 25; 57: 10
o. exigua 49: 26
parva 49: 26; 56: 29, 39-42; 57: 8, 10, 14, 15
perplexa 57: 20, 31
Fraxinus 52: 3, 11, 12
Fremyella tenera 53: 18
Frutticola 41: 10, 13, 16
candidula 41: 16
griseola 41: 10, 16
rufescens 41: 10, 16
sericea 41: 16
Fusconaia 42: 5-7, 11, 12, 14, 20
askewi 42: 21
barnesiana 49: 23; 52: 46, 50, 51
barnesiana f. bigbyensis 52: 46, 48, 50, 51
cuneolus 49: 23
ebena 42: 20; 49: 19
ebenus 57: 42
edgariana 49: 23
flava 42: 20, 21, 33; 43: 24; 46: 12, 14; 57: 42
subrotunda 43: 24
s. lesueuriana 49: 23
Fusus nitens 59: 50

Galba 57: 30
bulimoides techella 55: 53
obrussa 57: 9
parva 57: 10
Gadinia 41: 6
Gastrocopta 45: 24, 26; 52: 10, 14, 17; 60: 11
abbreviata 45: 35, 36
armifera 41: 4, 39, 56; 42: 45; 43: 3; 45: 35, 36; 46: 9, 12, 14, 17; 48: 3; 49: 16, 27; 57: 35
a. clappi 49: 27
ashmuni 46: 9
clappi 42: 45; 49: 16
contracta 41: 39, 43, 56; 42: 45; 43: 3; 45: 35, 36; 46: 9, 12, 14, 17; 49: 17, 27; 51: 3, 4, 6, 7; 56: 35, 38, 39, 42, 48, 51, 55; 57: 35
corticaria 41: 39, 56; 43: 3; 45: 35, 36; 46: 12, 14; 49: 17, 27; 57: 35
cristata 41: 39, 56; 45: 36; 46: 14; 49: 27; 51: 7, 8; dalliana 46: 6, 9
holzingeri 41: 4; 42: 45; 45: 35, 36; 46: 14; 49: 27
intertexta 57: 37
multidentata 57: 37
pellucida 41: 39; 59: 27, 29; 60: 11, 33
p. hordeacella 41: 56; 42: 45; 45: 36; 49: 27; 60: 12
p. parvidens 60: 12
pentodon 41: 39, 44, 56; 42: 45; 43: 3; 45: 35, 36; 46: 9, 17; 49: 17, 27; 51: 2, 4; 56: 35, 38, 39, 42; 57: 4, 13-15, 36; 60: 12
perversa 45: 24
pilsbryana 46: 6, 9
procera 41: 39, 44, 56; 42: 45; 43: 3; 45: 35, 36; 46: 9, 14, 17; 48: 3; 49: 17, 27; 51: 7, 8, 36
riograndensis 60: 12
ruidosensis 45: 36
rupicola 41: 44; 57: 36
tappaniana 41: 44, 48, 56; 42: 45; 43: 3; 45: 35, 36; 46: 14; 49: 17, 27; 51: 2-4; 56: 35, 38-40; 42, 44, 45, 46, 48, 49, 51, 52, 55, 59, 62; 57: 36
Gastrodonta interna 41: 43; 43: 6; 48: 2; 49: 14
interna fonticula 49: 30
ligera 57: 37
suppressa 57: 37
Gemma 60: 24
gemma 59: 27, 31, 32; 60: 24, 33, 35, 38; 60: 30
g. purpurea 60: 24
Geomalacus 51: 16
Gibberula 60: 2
Gibbula 41: 2
Gigantobilharzia gyrauli 55: 44
huronensis 55: 45, 54
Gillia altilis 49: 25
Glandina 41: 7
obtusa 59: 21; 60: 29
rosea 41: 7
truncata 41: 7
turris 48: 2
Glebula 42: 10, 13, 35; 52: 43
rotundata 52: 28
Glossiphonia 58: 1, 5, 7, 12, 49; 59: 6, 8, 10, 13
annandaleri 58: 5
complanata 58: 3, 5, 7, 8, 11, 30-37, 48, 49; 59: 2, 6, 8, 9, 12, 17
heteroclita 58: 3, 5, 7, 8, 10, 11, 30-37, 48, 50; 59: 1, 2, 5, 6, 8, 10, 11, 14, 17
h. hyalina 58: 3, 5; 59: 1, 2, 8
intermedia 58: 5
novaecaledoniae 58: 5
paludosa 59: 11
swampia 58: 5, 7; 59: 13
tasmaniensis 58: 5
weberi 58: 5, 50
Glycimeris 41: 33; 60: 29
pectinata 59: 34
Glyphis 41: 5
Glyphyalinia approxima 45: 33
burringtoni 41: 53; 42: 42; 49: 13, 29
caroliniensis 41: 42; 42: 43; 49: 14, 29
cryptomphala 49: 14
c. solida 49: 29
cumberlandiana 41: 42, 53; 49: 13, 29
c. roanensis 49: 29
indentata 41: 42, 53; 42: 43; 45: 34, 36; 46: 9, 16; 49: 13, 29
i. paucilirata 49: 29
lewisiana 42: 43; 46: 16; 49: 13, 29
luticola 41: 53; 46: 16; 49: 29
pecki 45: 33
pentadelphia 49: 13
praecox 49: 14, 29
raderi 41: 53; 42: 42
rehderi 49: 29
rhoadsi 41: 42, 53; 42: 43; 49: 13, 29
r. austrina 49: 29
rimula 49: 14
roanensis 49: 13
roemeri 46: 9
sculptilis 41: 53; 42: 43; 49: 14, 29
solida 41: 42, 44, 53; 42: 43; 46: 16; 49: 14
specus 49: 13
virginica 42: 42, 29
wheatleyi 41: 53; 42: 42; 45: 34; 46: 16; 49: 13, 29
Glyptostoma 47: 8; 48: 6, 12
gabrielense 47: 8; 48: 12, 14
g. binneyanum 47: 8

Glyptostoma (cont.)
newberryanum 48: 2, 12, 14
n. depressum 47: 8
n. mimus 48: 12, 14
Glypthelmins quieta 55: 45, 54
pennsylvaniensis 55: 44, 53
Glyptotendipes 58: 48; 59: 7, 9
Gomphus spicatus 55: 54
Gonidea 42: 12, 14
Goniobasis 48: 3; 52: 9, 22, 27
arachnoidea 49: 25
carinifera 49: 25
clavaeformis 49: 25
depygis 48: 3
edgariana 52: 53
ementa 49: 32
floridensis 55: 51, 53
laqueata 43: 3; 52: 53
livescens 48: 3, 18, 21-27; 52: 1, 9, 10, 13, 14, 24, 25, 26; 57: 15; 58: 12, 16, 21, 23, 24, 48; 59: 8, 9
simplex 49: 25
spinella 49: 25
uncialis 49: 25
virginica 49: 25, 32
Gongylostoma angustior 53: 5
(Scopulospica) arcustriata 53: 5
(Liocallonia) clara 53: 5
fusiformis 53: 6
garciana 53: 6
(Badiofaux) macra 53: 6
(Badiofaux) plumbea 53: 6
(Pycnoptychia) striatella 53: 6
(Esochara) teneriensis 53: 6
(Badiofaux) vignalensis 53: 6
(Badiofaux) violacea 53: 6
Gorgoderina attenuata 55: 50
Gouldia 41: 29
Granulina 60: 3
ovuliformis 59: 29; 60: 3, 35, 38
Gulella bicolor 41: 42; 55: 2, 25, 34; 58: 51
Gundlachia 60: 10, 11, 25, 27, 29
bakeri 60: 10, 11
meekiana 49: 32
Guppya 52: 30, 33
gundlachi 45: 33
miamiensis 45: 33
sterkii 41: 42, 53; 42: 42; 43: 6; 45: 34; 46: 16; 49: 13, 30; 52: 33; 57: 36
Gyraulus 43: 22; 49: 4, 5, 8; 52: 5; 55: 44; 56: 51, 52
altissimus 49: 5; 52: 16; 57: 11
arcticus 49: 5
circumstriatus 51: 3, 5, 6; 56: 29, 30, 38-45, 48, 49, 50, 52, 58, 60, 62; 57: 8, 10, 14, 15
cyclostomus 49: 5
deflectus 48: 18, 19, 21-27; 49: 5, 26, 32; 51: 3,5-7; 52: 19; 56: 29, 38; 58: 16, 20; 59: 8
d. obliquus 48: 18, 21-27; 49: 32
hirsutus 48: 18, 21-27; 52: 16; 58: 12, 14, 16, 17, 48; 59: 8
hornensis 49: 5
parvus 46: 7, 14; 48: 18, 21-27; 49: 4, 5, 7, 26; 51: 3, 5; 52: 1, 6, 7, 9, 10, 11, 13-25; 55: 43, 44; 56: 27, 29, 30, 31, 37-39, 40-42, 44-46, 48-53, 56, 61, 64; 57: 8, 10, 14, 15; 58: 5-7, 9, 12, 14, 16-18, 34, 35, 45, 48; 59: 2, 8, 12

Haematoloechus 55: 43, 54
medioplexus 55: 44
parviplexus 55: 44
Haementaria 55: 6
Haemopis 58: 6, 9
Haemopis (cont.)
grandis 58: 6, 9; 59: 10
kingi 58: 7, 9; 59: 12
lateralis 58: 7
lateromaculatum 58: 7, 9; 59: 12
latomaculatum 58: 9
marmorata 58: 7, 9, 10; 59: 17
plumbea 58: 7, 9; 59: 17
sanguisuga 58: 7, 10, 11; 59: 18
terrestris 58: 7, 9
Haliotis 41: 4
Cracherodii 41: 4
pulcherrima 41: 4
ruber 41: 5
tuberculata 41: 5
Halimeda 59: 23, 24, 26
Halipegus eccentricus 55: 43, 45, 55
Hamamelis 52: 13
Haminoea 60: 9
elegans 59: 29; 60: 9, 35, 38
succinea 60: 9
Haplometrana intestinalis 55: 45, 54
utahensis 55: 45
Haplopappus 48: 9
Haplotrema 48: 12
catalinense 48: 12, 14
concavum 41: 38, 42, 53; 42: 42; 43: 7, 22, 24; 45: 34, 46: 16; 48: 2; 49: 13, 30; 52: 14, 57: 34
costatum 48: 13, 15
duranti 48: 13-15
keepi 48: 13
kendeighi 49: 13
sportella 47: 44
transfuga 48: 13, 14
voyanum 48: 13, 15
Hawaiia 52: 30, 40
minuscula 41: 38, 43, 53; 42: 43; 43: 6; 45: 35, 36; 46: 9, 14, 16; 49: 14, 30; 51: 3, 4; 52: 10, 14, 22, 31, 41; 56: 33, 39, 42; 57: 36
m. neomexicana 52: 41
Helicella amanda 55: 27
apicina 55: 27
arigonis 55: 27
armillata 55: 27
barcinensis 55: 27
calcarata 55: 27
candidula 55: 27
caperata 42: 41; 49: 32, 35; 55: 2, 21, 37
cincta 55: 27
conspurcata 55: 27
convexa 55: 28
corrugata 55: 28
cretica 55: 28
derbentina 55: 28
elegans 55: 2, 21, 28
explanata 55: 28
figulina 55: 28
gigaxi 55: 28
itala 55: 28
joppensis 55: 28
krynickii 55: 28
larnacensis 55: 28
littoralis 55: 28
maritima 55: 28
meda 55: 28
neglecta 55: 28
neritella 55: 28
obvia 55: 29
oweniana 55: 29
peritella 55: 29
profuga 55: 29
protea 55: 29
pyramidata 55: 29
seetzoni 55: 29
striata 49: 32; 55: 2, 21
substriata 55: 29
Helicella (cont.)
terrestris 55: 29
trochoides 55: 29
tuberculosa serrulata 55: 29
variabilis 55: 29
ventricosa 41: 41
vestalis 55: 29
virgata 55: 29
Helicigona (Arianta) arbustorum 55: 2, 21
Helicina 41: 20
alboviridis 53: 5
cespitum 55: 29
chrysocheila 55: 29
constellata 45: 38
convexa 55: 29
denticulata 55: 29
dysonic 55: 29
erythraea 53: 6
hernandezi 53: 6
montana 53: 6
orbiculata 45: 35, 36; 46: 17; 49: 17, 26
o. tropica 48: 3
pulcherrima 45: 38
regina 45: 38
rubella 53: 6
strebeli 55: 29
subfusca 41: 20
substriata 41: 20
turbinata 41: 20
zephirina 55: 29
Helicodiscus 46: 9; 49: 34; 52: 28, 40, 41
aldrichiana 52: 43
aldrichianus 49: 16
arizonensis 46: 9
barri 49: 16
diadema 42: 44; 49: 28
eigenmanni 46: 9
enneodon 49: 16, 28
fimbriatus 41: 43; 49: 16
hadenoecus 42: 44; 49: 16, 28
hexodon 45: 33; 49: 16
inermis 41: 54; 42: 44; 49: 16
intermedius 49: 32
jacksoni 41: 54; 45: 36; 46: 17; 49: 28; 52: 28
lineatus 57: 34
multidens 49: 16
notius 41: 39, 43, 54; 42: 44; 43: 5; 45: 35, 36; 46: 6, 9, 16; 49: 16, 28
n. specus 45: 33; 49: 16
nummus 41: 39; 43: 5; 45: 36; 46:9
parallelus 41: 39, 43, 54; 42: 44; 43: 5; 45: 35, 36; 46: 14, 17; 49: 16, 28; 52: 10, 14, 17; 55: 38; 56: 34, 38-40, 42, 51, 52, 55; 57: 34, 38
roundyi 45: 36; 52: 30, 36, 38, 44
saludensis 41: 43; 45: 33
shimeki 41: 54; 45: 36
singleyanus 41: 54; 43: 5; 46: 9; 49: 28; 51: 6-8
singleyanus inermis 49: 28, 32
tridens 41: 39; 45: 36; 46: 9; 52: 30, 38, 40, 43
triodus 49: 28
Helisoma 43: 22; 50: 85, 87; 52: 5; 56: 37, 51, 52; 58: 8; 59: 13
albus 41: 19
anceps 41: 40; 46: 7, 14; 48: 3; 49: 26, 32, 33, 35; 50: 4-6, 55-61, 88; 52: 1, 24; 53: 9; 55: 39, 42-45, 47-51, 53; 55: 39, 42-45, 47-51, 53; 56: 30, 31, 38-42, 44-46, 48, 49, 52, 58, 61, 62; 57: 8, 11, 14, 15, 22, 24,

Helisoma anceps (cont.)
57: 27, 28; 58: 5-8, 12, 14, 15-19; 23, 24, 26-30, 32-38, 40, 42-45, 47, 48; 59: 2-4, 8
anceps bartschi 49: 32
a. striatum 52: 1, 6, 9-11, 16-26
antrosum 50: 55; 55: 54, 55
bicarinatus 41: 19
campanulatum 50: 4-6, 14, 62, 63-66, 88; 52: 16-19, 24; 53: 9; 55: 43, 44; 56: 27, 30, 38-42, 45, 48, 49, 51, 52, 58, 61, 62; 57: 11, 14, 15, 22, 24, 28; 58: 5-9, 12, 14-18, 20-24, 26, 28-38, 40, 41, 43-45, 47, 48; 59: 2-4, 7-9
dilatata 41: 19
macrostoma 41: 19
megastoma 41: 19
parkeri 58: 6
parvus 41: 19
trivolvis 41: 19, 40; 46: 14; 48: 3, 18-27; 49: 26, 32; 50: 3-6, 42-44, 46-55, 63, 82, 84, 88; 51: 5; 52: 6, 7, 13, 14, 20, 24; 53: 9; 55: 43, 44; 56: 29, 31; 57: 22, 24, 27, 28; 58: 5-9, 12-49; 59: 1-4; 7-9
t. holstonense 49: 32
t. lentum 46: 7
t. marshalli 49: 32
Helix 41: 8, 10, 13
acuta 41: 12
albolabris 41: 11; 57: 35
alternata 41: 10; 57: 33
aperta 47: 6; 55: 2, 25
appressa 41: 11; 57: 34
arborea 57: 37
aspersa 41: 41; 42: 41, 45; 45: 1, 14; 46: 8; 47: 19; 48: 6; 49: 32, 36, 37; 55: 2, 25, 33, 34, 36
auricoma 41: 12
axia 55: 2, 24, 34
binneyana 57: 37
bonplandi 45: 38
candidissima 41: 12
cantiana 55: 2, 24
Carpenteriana 41: 11
carthusiana 41: 11
cellaria 57: 37
chersina 57: 36
clausa 41: 11
concava 57: 34
costata 41: 11
Cubensis 41: 12
denotata 57: 35
dentifera 57: 35
diodonta 57: 35
electrina 57: 37
elevata 57: 35
ericetorum 41: 12
exoleta 41: 11; 57: 35
fallax 41: 12; 57: 35
fraterna 57: 35
fuliginosa 57: 37
fulva 57: 36
griseola 41: 10
hemastoma 41: 12
hirsuta 41: 12; 57: 35
hispida 41: 10
holosericea 41: 11
hortensis 41: 12; 55: 32, 33-35, 37; 57: 34
indentata 57: 37
inflecta 41: 12; 57: 35
inornata 57: 37
intertexta 57: 37
Jerusalem 41: 12
labyrinthica 41: 10; 57: 36
lactea 55: 34, 36
lapicida 41: 10
Leaii 41: 12
leucorum 55: 30
ligera 57: 37
lineata 57: 34
major 41: 11
mazzullii 55: 30
melanostoma 55: 2, 25
minuscula 57: 36
minuta 57: 36
minutissima 57: 34
Mitchelliana 41: 11
monodon 41: 12; 57: 35
multidentata 57: 37
multilineata 41: 11; 57: 35
nemoralis 41: 11; 49: 33; 55: 31-36
orbiculata 41: 12
palliata 41: 11; 57: 35
paludosa 41: 11
Pennsylvanica 41: 11
perspectiva 41: 10; 57: 34
picta 45: 38
planorboides 57: 34
pomatia 41: 12; 45: 2; 55: 2, 24, 31, 33, 35, 36
profunda 41: 11; 57: 34
pulchella 41: 11; 57: 36
punica 55: 2, 24
radiosa 55: 30
rufa 57: 35
rufescens 41: 10; 55: 22
rugosiuscula 41: 12
sayii 41: 11; 57: 35
septemvolva 41: 11
secernenda 55: 30
similaris 41: 11
solitaria 41: 10
spiriplana 41: 11
stenotrema 41: 12
striatella 41: 10; 57: 34
subglobosa 57: 34
subtussulcata 53: 6
suppressa 57: 37
thyroidus 41: 11; 57: 35
tridentata 41: 10; 57: 35
uvulifera 41: 11
villosa 41: 12
viridula 57: 37
vortex 41: 10
vulgaris 55: 30
zaleta 57: 35
Helminthoglypta 47: 11; 48: 4, 6, 7, 15, 16
allynsmithi 48:7, 14
arrosa 48: 16
a. holderiana 48: 7, 13, 14
a. humboldtica 48: 7, 14
a. mattolensis 48: 14
a. miwoka 48: 7, 14
a. pomoensis 48: 7, 14
a. williamsi 48: 8, 14
ayresiana 48: 8, 15
a. sanctaecrucis 48: 8, 15
benitoensis 48: 8, 14
californiensis 48: 8, 14, 15
callistoderma 48: 8, 14, 15
caruthersi 47: 11
contracostae 48: 8, 14, 15
crotalina 47: 11
cuyama 48: 8, 15
cuyamacensis avus 48: 8, 14
c. lowei 48: 8, 14
c. piutensis 48: 8, 14
c. venturensis 48: 8, 14, 15
euomphalodes 48: 8, 14
fisheri 47: 11
fontiphila 47: 11; 48: 8, 14
graniticola 47: 11; 48: 8, 14
g. arida 47: 11
greggi 47: 11; 48: 8, 14
hertleini 48: 8, 15
inglesi 48: 8, 14
isabella 48: 9, 14
jaegeri 47: 11
lioderma 48: 9, 14
micrometalleoides 48: 9, 14
mohaveana 47: 11; 48: 9, 14
nicklíniana 48: 8
n. awania 48: 8, 14
n. bridgesi 48: 9, 13, 14
riparia 47: 11
sangabrielis 48: 9, 14
sequoicola consors 48: 9, 14
stageri 48: 9, 14
thermimontis 48: 9, 14
traski coelata 48: 9, 14
t. fieldi 48: 9, 15
t. pacoimensis 48: 9, 14
t. tejonis 48: 9
t. willeti 48: 9, 15
tudiculata 47: 8
t. angelena 48: 9, 14, 15
t. grippi 48: 9, 14
t. imperforata 47: 8
t. subdola 47: 8
walkeriana 48: 9
Helobdella 58: 1, 6-8, 10, 12, 36, 49, 50; 59: 1, 2, 4, 8, 12
elongata 58: 6, 9; 59: 17
fusca 58: 6, 8, 24, 26, 29-41, 48, 50; 59: 2-6, 8, 9, 10, 17
lineata 58: 3, 6, 8, 30-38, 40, 48, 50; 59: 2-6, 8, 9, 17
nepheloidea 59: 11
papillata 58: 3, 6, 8, 24, 26, 28-40, 48, 50; 59: 2-6, 8, 9, 17
punctatolineata 58: 6, 8, 50; 59: 8, 12
stagnalis 59: 2, 9, 12, 17; 58: 6, 8, 11, 48, 49
transversa 58: 6, 8
triserialis 58: 8
Hemiclepsis 58: 6; 59: 13
japonica 58: 6
marginata 58: 6, 11
Hemistena 42: 11, 12
Hemitrochus androsi 55: 30
streatori 55: 30
Hendersonia 50: 83
(Scobinopoma) cirrata 53: 5
occulta 41: 57; 42: 45; 49: 17, 26, 54
(Hendersonida) discolorans 53: 5
Henrya 59: 49
goldmani 59: 29; 60: 33, 35, 38
henryi 59: 49; 60: 29
morrisoni 59: 49
Herpobdella atomaria 59: 14
Heronimus chelydrae 55: 45, 53, 55
geomydae 55: 45
maternum 55: 45
Heterobilharzia americana 55: 39, 45, 53, 54
Hinnites gigantea 47: 4
Hippopus 41: 27
Hirudo 59: 5
Hojeda inaguensis 45: 33
Holospira 45: 24-26, 30
arizonensis mularis 45: 25
a. approximans 45: 23
cionella 45: 23
chiricahuana 45: 25
c. gracilis 45: 25
danielsi 46: 6, 9

Holospira (cont.)
ferrissi fossor 45: 26
goldfussi 46: 9
g. anachensis 46: 9
hamiltoni 46: 9
mesolia 46: 9
montivaga 46: 6, 9
m. breviara 46: 9
oritis 46: 9
pityis 46: 9
riograndensis 46: 9
yucatanensis 46: 9
Homalogyra atomus 55: 1, 6, 35
Hormomya 60: 14
Humboldtiana 46: 6, 8
agavephila 46: 8
cheatumi 46: 8
chisosensis 46: 8
ferrissiana 46: 8
palmeri 46: 8
texana 46: 8
ultima 46: 8
Hyalea tridentata 41: 20
Hyalella azteca 58: 8
Hyalina 41: 9, 17; 60: 3
albolineata 59: 29; 60: 3, 35, 38
arborea 41: 17; 57: 37
avena 59: 29, 32; 60: 3, 38
binneyana 57: 37
decolorata 41: 17
electrina 57: 37
exigua 57: 37
ferrea 57: 37
fuliginosa 57: 37
interna 41: 17
intertexta 57: 37
ligera 57: 37
limatula 57: 38
lineata 41: 17; 57: 34
minuscula 57: 37
multidentata 57: 37
nitida 41: 17; 57: 38
pallida 59: 29;60: 3, 35, 38
radiatula 57: 37
tenuilabra 60: 3
viridula 57: 37
Hydrobia 49: 25
jenkinsi 58: 5
jacksoni 49: 25
truncata 49: 25
Hydrocaris 57: 23
Hygromia cinctella 55: 30
hispida 55: 2, 22, 35
striolata 55: 2, 22, 35
Hymenolepis parvula 59: 5
Hypericum virginicum 52: 11
Hypnum 56: 31
Hypoderaeum conoideum 55: 46

Iberus alonensis 55: 30
Ictiobius 55: 54
Imperator 41: 2
Io 52: 52
brevis 49: 32
clinchensis 49: 32
fluvialis 49: 25, 32
lyttonensis 49: 32
paulensis 49: 32
powellensis 49: 32
spinosa 49: 32
Iphigenia 41: 31
Iris 56: 28
Ischnochiton 60: 13
papillosus 59: 30, 32; 60: 13, 35, 38
regularis 47: 6
Isocardia 41: 29
Isognomostoma inflecta 57: 35
Isthmia bollesiana 57: 36
Isthmia (cont.)
gouldii 57: 36
milium 57: 36
ovata 57: 36
simplex 57: 35
ventricosa 57: 36

Jacosta (Candidula) intersecta 55: 21, 33
Janthina 41: 4, 5
communis 41: 5
exigua 41: 5
striatula 41: 5
Jeanneretia (Guladentia) subtussulcata 53: 6

Kellettia 47: 13
Kellia 41: 27

Laemodonta 60: 26
Laevapex diaphanus 52: 13, 14, 24
fuscus 41: 40; 49: 26, 32; 55: 43
f. eugrapta 49: 32
kirklandi 52: 14, 24
Laevicardium 60: 20
mortoni 59: 27, 31, 32; 60: 20, 25, 33, 35, 38
Lambis lambis 45: 4
Lamellaria 47: 6
Lamellaxis 60: 12
clavulinus 45: 34;55: 1, 9
gracilis 42: 42; 45: 34; 49: 30; 55: 1, 8; 57: 33, 38; 58: 51
mauritianus 45: 34; 55: 1, 9
Lamellaxis mexicanus 55: 30
micra 41: 53; 45: 34; 55: 1, 9; 59: 27, 29; 60: 3, 33
m. margaritaceus 60: 12
Lamellidens 58: 6
Lampsilis 42: 7, 10, 13, 14, 27-30, 32, 35; 43: 22; 57: 15
anodontoides 42: 5, 6, 8, 28; 46: 14; 52: 46, 50, 51; 57: 42
a. fallaciosa 42: 8, 30, 31, 34
bracteata 46: 7
cariosa 49: 24
cohongoronta 49: 24
corvunculus 42: 29
fasciola 43: 24; 49: 24; 52: 46, 50, 51
gracilis 42: 25
higginsi 49: 19
hydiana 42: 31
laevissima 42: 26
laevissimus 42: 35
luteola 41: 40
luteolus 42: 36
ochracea 49: 24
orbiculata 42: 32; 49: 19; 57: 42
ovata 42: 5, 6, 8, 26, 28, 30-32; 43: 22, 24; 49: 24; 52: 46, 50-51
o. ventricosa 42: 32, 39; 43: 22-24; 52: 46, 50, 51
parva 42: 29
purpurata 42: 26
radiata 42: 5-7, 30, 31; 49: 24
r. hydiana 42: 31
r. luteola 42: 5, 6, 22, 27, 28, 31, 34
r. siliquoidea 42: 31; 43: 22-24; 46: 7
rafinesqueana 42: 30, 36
siliquoidea 43: 10; 46: 12, 14; 57: 42; 58: 5
subrostrata 42: 27, 28
teres 42: 31
ventricosa 42: 34, 36; 49: 24; 57:42
v. satura 42: 32
Lartetia 49: 25

Lasmigona 42: 12, 14, 15, 19
badium 49: 32
complanata 42: 5, 8, 15, 33; 52: 46, 50, 51; 57: 42
compressa 43: 24; 57: 42
costata 42: 7, 15; 43: 22, 24; 49: 23; 52: 46, 50, 51; 57: 42
holstonia 49: 23, 32
subviridis 49: 23
viridis 41: 47
Lastena lata 42: 11, 12, 14; 49: 23; 52: 50
Lathyrus 55: 29
Lechriorchis primus 55: 45
Lecythoconcha 58: 50
Leda 41: 23, 24
minuta 41: 24
parvula 41: 24
Lehmannia 51: 35
marginata 51: 16, 18, 35, 36
potrieri 45: 35; 46: 17; 49: 29, 32; 51: 35; 55: 2, 18, 30
valentiana 51: 12, 15, 16, 18, 26, 35, 36; 55: 18; 57: 34
valentina 57: 38
Lemna 52: 3; 56: 26
minor 52: 21
Lepidochiton raymondi 47: 9
Lepomis macrochirus 58: 7
Leptodea 42: 13, 24, 25, 26
fragilis 42: 5-8, 25, 34; 46: 12, 14; 52: 46, 50, 51; 57: 42
laevissima 42: 8, 26; 46: 12, 14; 57: 42
leptodon 42: 6, 7, 25; 52: 46; 57: 42
Leptolimnaea glabra 58: 5, 7
Leucochila armifera 57: 35
contracta 57: 35
corticaria 57: 35
fallax 57: 36
rupicola 57: 36
Leucochloridiomorpha constantiae 55: 47
macrocotyle 55: 47
Lexingtonia 42: 11, 12, 14, 20
dolabelloides 49: 23; 52: 46, 48, 50, 51
d. conradi 52: 50, 51
subplana 49: 23
Ligumia 42: 7, 10, 13, 27-30
latissima 49: 32
nasuta 43: 10, 24; 49: 24
recta 42: 27, 28; 43: 25; 49: 24, 32
r. latissima 43: 22-24; 52: 48; 57: 42
subrostrata 42: 5, 7, 27, 34; 46: 14
Liguus 45: 4, 6, 7, 10
fasciatus 45: 33, 37
Lima 41: 21, 22; 60: 16
hians 41: 22
pellucida 59: 31; 60: 16, 38
squamosa 41: 22
Limaria 60: 16
Limatula 60: 16
hendersoni 59: 31; 60: 16, 38
subauriculata 60: 16
subovata 60: 16
Limax 48: 6; 51: 15, 33, 35
agrestis 51: 37; 55: 19; 57: 34
arborum 55: 18, 33
ater 51: 24
campestris 51: 36; 57: 34
carolinianus 51: 33
cinereoniger 51: 34
fasciatus 51: 28

Limax (cont.)
flavus 41: 39, 55; 45: 35; 46: 17; 49: 29; 51: 12, 15, 26, 34; 55: 2, 17, 34, 36; 57: 34
gracilis 51: 36
intermedius 51: 22
laevis 51: 36
marginatus 49: 32; 55: 18, 35; 57:34
maximus 41: 55; 42: 44; 43: 5; 45: 35; 49: 29; 51: 12, 13, 15, 18, 26, 34, 35, 41, 42; 52: 2, 16; 55: 32, 33, 34; 57: 34
nictelius 55: 2, 18, 33
nyctelius 51: 36
poirieri 41: 55; 51: 35; 57: 34
reticulatus 51: 37
rufus 51: 24
subfuscus 51: 18
valentianus 51: 35, 42; 55: 36
Limea 60: 16
Limnaea 41: 17
auricularia 41: 17; 55: 31
clocles 48: 2
columella 41: 17
heterostropha 57: 12
pereger 54: 22
stagnalis 41: 17
Limnea clocles 48: 3
Limneus stagnalis 50: 90; 57: 31, 32
Limnophysa 41: 18
caperata 41: 18
catascopium 41: 18
Cubensis 41: 18
humilis 41: 18
modicella 41: 18
nigrescens 41: 18
palustris 41: 18
peregra 41: 18
reflexa 41: 18
solida 41: 18
umbrosa 41: 18
Limopsis 60: 29
Lincia? percrassa 53: 6
Linga 60: 16
pensylvanica 59: 31, 32, 34; 60: 16, 35, 38
Linstowiella szidati 55: 47, 52
Liocardium 41: 29
serratum 41: 29
substriatum 41: 29
Lioplax 49: 34
subcarinata 48: 3; 49: 25
Lissorchis fairporti 55: 44, 54
mutabile 55: 43, 55
Listeria 59: 10
Lithasia duttoniana 52: 53
geniculata 52: 53
g. fuliginosa 52: 52, 53
g. pinguis 52: 53
Litiopa 59: 46
melanostoma 59: 29, 32, 46; 60: 38
Littoridinops tenuipes 49: 25
Loligo opalescens 45: 4
Longchaeus 60: 5
Loripes 41: 28
Lotus 52: 6, 21, 22
Lucidella 41: 20
tantilla 45: 33
Lucina 41: 27, 28; 60: 17
americana 60: 18
chrysostoma 41: 28
dentata 41: 28
multilineata 59: 34
nassula 59: 31, 32; 60: 17, 35, 38
pectinata 59: 31; 60: 17, 33, 38
Pennsylvanica 41: 28
radians 59: 31; 60: 17, 35, 38
tigrina 41: 28
Lucinisca 60: 17
Ludwigia 53: 10
palustris 53: 10
Lumbricus ubellus 58: 9
Lymnaea 45: 13, 18, 20, 26; 50: 10, 15; 55: 46; 53; 58: 5, 6
acuminata 58: 6
auricularia 50: 82; 55: 1, 6, 31, 33-35; 57: 25; 58: 5
bulimoides 50: 15, 82; 57: 25, 30
b. techella 46: 7
caillaudi 53: 10, 12-14, 16; 54: 22
catascopium 48: 17, 21-27; 50: 5, 14, 28; 55: 46; 57: 21, 23, 25, 28; 58: 16, 20, 48; 59: 8
columella 41: 40; 48: 17, 21-27; 53: 8, 13-15; 54: 18, 23; 55: 39, 45, 46, 49; 58: 14-18, 48; 59: 8, 9
dalli 46: 7
elodes 48: 17; 50: 90; 56: 29; 57: 20, 21, 25, 27-29; 41: 18
emarginata 50: 3-6, 14, 28, 30-41, 82, 88; 55: 53; 58: 6-8, 16, 24, 48; 59: 8, 9
e. angulata 57: 27
humilis 41: 40; 46: 7; 50: 15, 90; 55: 39, 46; 57: 21, 23, 31; 58: 12, 14-16, 20, 22, 24, 48; 59: 7
japonica 50: 14, 90; 57: 20, 22, 31
lanceata 50: 92; 59: 14
limosa 59: 7
megasoma 58: 6, 8, 12, 16, 23, 36, 37, 47, 48; 59: 2, 8
natalensis 53: 13; 54: 18
obrussa 58: 12
ovata 58: 5; 59: 2
palustris 45: 2; 50: 10, 14, 45, 85; 53: 15; 54: 19; 55: 45, 46, 51, 54; 57: 30; 58: 5
p. nuttalliana 50: 15
parva 57: 10
pereger 59: 2, 7, 11
peregra 45: 13, 20; 55: 46; 57: 20; 58: 5, 7; 59: 7, 10
pervia 55: 46
radix 55: 46; 58: 5, 6
stagnalis 50: 3-7, 10, 13-31, 81, 83-85, 88, 90; 53: 14; 54: 21, 22; 55: 45, 46, 49, 55; 56: 28, 29, 37, 38, 42, 45, 48, 49, 52; 57: 19-23, 25, 28, 29, 31; 58: 5-11, 16, 20, 23, 36, 37, 47, 48; 59: 2, 8-10, 12
s. appressa 48: 18, 21-27; 50: 15, 89-91; 53: 13; 54: 20; 55: 51, 52; 57: 30-32; 58: 12
s. jugularis 52: 19
swinhoe 55: 46
tomentosa 50: 82, 89; 57: 25, 30
truncatula 53: 13; 54: 20, 22; 55: 46
virginica 49: 32
Lymneus obrussus 57: 9
Lyogyrus granum 49: 25
Lyonsia floridana 59: 34
Lyropecten 60: 15
antillarum 59: 31; 60: 15, 38

Machaera 41: 33
costata 41: 33
patula 41: 33
Macoma 41: 31, 32
nasuta 41: 32
Tampaensis 41: 32
Macrobdella 58: 6, 9
decora 58: 6, 9; 59: 17
Macroceramus infradenticulatus 53: 6
maculatus 53: 6
Macrocyclis 41: 9, 17
concava 41: 17; 57: 34
Macrocyclis (cont.)
sepulcralis 41: 17
Macrodeiroides typicus 55: 44, 54
Macron 47: 13
Mactra lactuca 41: 31
polynema 41: 31
rancutta 41: 31
similis 41: 31
solidissima 41: 31
stultorum 41: 31
tellinoides 60: 22
Malleus 41: 22
albus 41: 22
Mangelia 60: 5
bartletti 59: 29; 60: 5, 38
biconica 59: 29; 60: 5, 35, 38
Margarita 41: 2, 4
obscura 41: 4
striata 41: 4
Margaritana 41: 24, 26
complanata 41: 26
marginata 41: 26
monodonta 49: 32
rugosa 41: 26
Margaritifera 42: 12, 14
Marginella 60: 1, 29
sp. (juv.) 59: 29; 60: 33, 35, 38
apicina 59: 27, 29, 32; 60: 2, 33, 35, 38
carnea 60: 2
denticulata 60: 2
eburneola 59: 29; 60: 1, 35, 38
fluctuata 60: 2
labiata 59: 29; 60: 2, 35, 38
lavalleana 59: 29, 32; 60: 2, 35, 38
roosevelti 50: 29; 60: 2, 35, 38
Marginellopsis 60: 3
serrei 59: 29, 32; 60: 3, 28, 35, 38
Marinula 60: 10
succinea 59: 27, 29; 60: 10, 33
Marisa 55: 34
cornu-arietis 54: 18; 55: 1, 5, 36
Marvinmeyeria 58: 1, 6; 59: 8
lucida 58: 3, 6, 8, 24, 25, 30-39, 49, 50; 59: 1-6, 8, 9, 11, 17
Marstonia decepta 57: 9
Medionidus 42: 10, 13
conradicus 49: 24; 52: 46, 48
Megaceryle alcyon 55: 48
Megalodiscus 55: 54
microphagus 55: 44, 54
temperatus 55: 43, 44, 55
Megalonaias 42: 12, 14, 16, 17, 19
gigantea 42: 5, 17, 33; 52: 46; 57: 42
Megaspira 41: 7
Megerlia 41: 20
truncata 41: 20
Meioceras 59: 43, 44
bermudezi 59: 44; 60: 30
constrictum 59: 44; 60: 30
cornucopiae 59: 29, 32, 44; 60: 35, 38
nitidum 59: 29, 32, 44; 60: 33, 35, 38
Melampus 41: 19; 60: 9, 28
bidentatus 41: 19
coffea 41: 19
coffeus 59: 27, 29, 34; 60: 9, 33
olivaceus 41: 19
Melanella 59: 29, 34, 48; 60: 35, 38
affinis 59: 49
carolii 59: 49
Melanoides (Thiara) tuberculata 55: 1, 6, 35
Melantho ponderosa 48: 3
Meleagrina 41: 22

Melobesia 59: 23, 24
Melongena 60: 1
bispinosa 59: 29; 60: 1, 33, 38
corona 59: 34; 60: 30
Menestho 60: 6
impressa 60:29
Menetus 41: 19
brongniartianus 49: 26
dilatatus buchanensis 49: 26; 55: 44
complanatus 41: 19
contortus 41: 19
dilatatus 41: 40; 46: 7; 49: 26
exacutus 41: 19
sampsoni 46: 7
Meretrix cubaniana 60: 23
Mesembryanthemum 48: 6, 8
Mesodesma concentrica 60: 27
Mesodon 41: 11-13; 15, 38; 52: 28
albolabris 41: 11, 16; 57: 35
andrewsae 42: 41; 49: 12, 31
andrewsae altivagus 41: 52
a. normalis 49: 31, 33
appressus 41: 41, 52; 42: 41; 43: 8; 48: 2; 49: 12, 31, 33; 57: 34
a. sculptior 41: 52; 49: 33
archeri 45: 33
binneyanus 41: 37; 46: 15
burringtoni 42: 41; 49: 31
carthusiana 41: 11
chilhoweensis 49: 12
christyi 41: 41; 49: 12
clarki 49: 12
c. nantahala 45: 33
clausa 41: 11, 16
clausus 41: 37; 42: 41; 43: 8, 24-24; 45: 2, 13, 14, 20, 34; 46: 15; 47: 19, 20; 48: 2; 49: 12, 31, 37; 55: 38
c. trossulus 45: 33
clenchi 45: 33; 46: 15
costata 41: 15
dentifera 57: 35
downieanus 43: 8; 49: 12, 31
edentatus 46: 16
elevatus 41: 37, 44; 43: 8; 45: 34; 46: 15; 49: 12, 31; 57: 35
exoleta 41: 11, 15; 57: 35
ferrissi 49: 12
indianorum 41: 37, 38; 46: 15
i. lioderma 52: 28
inflectus 41: 38, 41; 42: 41; 43: 8; 45: 34, 36; 46: 15, 16; 48: 2; 49: 12, 31; 57: 35
i. edentata 41: 38
jonesianus 45: 33; 49: 12
kalmianus 49: 12
kiowaensis 41: 38; 46: 15
laevior 41: 52; 42: 41; 49: 12, 31
leatherwoodi 45: 33
lioderma 41: 38
major 41: 11, 16
magazinensis 46: 16
marmorata 41: 16
mitchelliana 41: 11, 16; 48: 2; 57:35
multilineata 41: 11, 15; 57: 35
normalis 41: 41; 42: 41; 49: 12
pennsylvanica 41: 11, 15; 43: 8, 22-24; 45: 34; 48: 2
perigraptus 41: 41; 43: 8; 46: 15; 49: 12, 31
profunda 41: 11, 15; 57: 34
roemeri 46: 8
rugeli 41: 41; 42: 41; 43: 8; 49: 12, 31
sanus 49: 12
sayanus 41: 52; 42: 41; 43: 8; 48: 2; 49: 12, 31; 57: 35
sayi 41: 11, 15
sayii 48: 2
Mesodon (cont.)
similaris 41: 11, 15
smithi 49: 12
spiriplana 41: 11, 16
subpalliatus 49: 12
thyroides 41: 11, 15, 41, 42
thyroidus 41: 37; 42: 41; 43: 8; 22, 24; 45: 4-7, 9, 10, 11, 34; 46: 15; 48: 2; 49: 12, 31; 57: 35
wetherbyi 49: 12
wheatleyi 42: 41; 49: 12, 31
zaletus 41: 37, 52; 42: 41; 43: 8; 45: 34; 46: 15; 49: 12, 31; 57: 35
Mesomphix 43: 24; 52: 30, 34, 36
andrewsae 49: 14
anurus 49: 14
capnodes 42: 43; 45: 34; 46: 16; 49: 14, 29; 52: 33, 36
cupreus 41: 53; 42: 43; 43: 6, 22, 24; 49: 14, 29; 52: 34, 36, 38; 57: 37
c. ozarkensis 52: 36
derochetus 43: 6
friabilis 43: 6; 45: 34; 46: 16; 52: 34, 36, 38
globosus 41: 43; 46: 16; 49: 14
inornatus 41: 53; 42: 43; 43: 6; 49: 14, 29; 57: 37
intertexta 57: 37
latior 43: 5; 49: 14; 57: 37
perlaevis 41: 43, 53; 42: 43; 43: 6; 49: 14, 29
p. vulgatus 49: 29
pilsbryi 41: 43
rugeli 42: 43; 49: 14, 29
r. oxycoccus 42: 43; 49: 29
ruidus 49: 14
subplanus 42: 43; 49: 14, 29
vulgatus 41: 53; 43: 6; 49: 14, 34; 52: 34, 36, 44
Metastoma roemeri 46: 9
r. brevissima 46: 9
Metorchis conjunctus 55: 39, 41, 47, 53
Micrarionta 47: 11; 48: 4, 6, 10, 16
aetotis 47: 11
aquaealbae 47: 11; 48: 10, 14
argus 47: 11
avawatzica 47: 11
baileyi 47: 11
borregoensis 47: 11
brunnea 47: 11; 48: 10, 14
cathedralis 47: 11
depressispira 47: 11
eremita 47: 11
facta 48: 10, 14
feralis 48: 10, 15
gabbi 48: 10, 14
harperi 47: 11; 48: 10, 14, 16
inmaculata 47: 11; 48: 10, 14
indioensis 47: 11
i. callinepius 47: 11
i. cathedralis 48: 10, 14
i. remota 47: 11; 48: 10, 14
i. wolfcottiana 47: 11
i. xerophila 47: 11
intercisa 48: 10, 14
kelletti 48: 10, 14
melanopylon 47: 11; 48: 10, 14
micrometalleus 47: 11
millepalmarum 47: 11; 48: 10, 14
morongoana 47: 11; 48: 10, 14
ora 47: 11
o. carrizoensis 47: 11
orcuttiana 47: 11
procopia 48: 10, 14
redimita 48: 10, 14
rixfordi 47: 11
rowelii 47: 11; 43: 19
Micrarionta (cont.)
rowelli acus 47: 11; 48: 10, 14
r. amboina 47: 11; 48: 10, 14
r. bakerensis 47: 11; 48: 10
r. chocolata 47: 11; 48: 10, 14
r. chuckwallana 47: 11; 48: 10, 14
r. desertorum 47: 11
r. granitensis 48: 10, 14
r. hutsoni 47: 11
r. mccoiana 47: 11; 43: 19; 48: 10, 14, 16
r. unifasciata 47: 11
rufocincta 48: 11, 14
stearnsiana 48: 11, 14
tryoni 48: 11, 14, 15
t. hemphilli 48: 11
Microceramus infradenticulatus 53: 6
maculatus 53: 6
texana 46: 9
Microconus caeca 55: 2, 18
granum 55: 2, 18
Micromya 42: 28; 52: 51
Microphysa 41: 10, 13, 14
nitida 41: 14
vortex 41: 10, 14
Microphysula ingersolli 46: 6, 8
Micropterus pseudalpiites 59: 9
Milax 51: 13, 38
budapestensis 55: 30
gagates 41: 55; 42: 44; 46: 17; 49: 29; 51: 12, 13, 15, 38, 39-41; 55: 1, 16, 33; 57: 34
insularis 51: 40; 55: 30
Mitra albocincta 60: 3
floridana 60: 4
Mitrella 59: 50
argus 59: 29, 50; 60: 35, 38
nitens 59: 50
nycteis 59: 29, 50; 60: 35, 38
Modiola 41: 23
barbatus 41: 23
modiolus 41: 23
tulipa 41: 23
Modiolus 60: 15
squamosus 59: 27, 31; 60: 15, 39
Modulus 59: 44; 60: 24
modulus 59: 29, 32, 34, 44; 60: 35, 39
Mohavelix 48: 6, 11
micrometalleus 48: 11, 14
Molgula occidentalis 60: 25
Mollibdella 58: 6, 9
Monacha cantiana 55: 2, 21
carthusiana 55: 30
obstructa 55: 30
olivieri 55: 30
rizzae 55: 30
schotti 55: 30
syriaca 55: 30
Moniliopsis chacei 47: 6
Monilispira 60: 5
Monodonta 41: 2; 45: 15, 19
turbinata 45: 1, 11
Monadenia 48: 4, 6, 15, 16
callipeplus 48: 6, 15
chaceana 48: 6, 15
circumcarinata 48: 6, 15
cristulata 48: 6, 15
fidelis 47: 44; 48: 16
f. klamathica 48: 6, 15
f. leonina 48: 6, 15
f. pronotis 48: 6, 14
f. salmonensis 48: 7
f. scottiana 48: 7, 15
f. smithiana 48: 7, 15
f. trinidadensis 48: 7, 14
hillebrandi yosemitensis 48: 7, 14
infumata alamedensis 48: 7, 13
mormonum buttoni 48: 7, 13, 14

Monadenia mormonum (cont.)
m. hirsuta 48: 7, 15
m. loweana 48: 7, 14
rotifer 48: 7, 15
setosa 48: 7, 15
troglodytes 48:7, 15
tuolumneana 48: 7, 15
Mooreobdella 58: 7, 9
bucera 58: 7, 10; 59: 17, 18
fervida 58: 7, 10; 59: 17
microstoma 58: 7, 10
Mopalia 41: 7
Morchiella 59: 41
Mudalia 49: 34
dentata 49: 33
livescens 41: 40
potosiensis 41: 40
Muricidea 47: 18
Muricopsis 47: 18
crinacioides 47: 18
Musculium lacustre 57: 3
rosaceum 49: 33
truncatum 49: 33
Musculus 60: 14
lateralis 59: 31; 60: 14, 25, 35, 39
Mya 41: 33
Mycetopus 41: 24
Myriophyllum 53: 10
japonicum 53: 10
Mysella 60: 18, 19
sp. 1 59: 31; 60: 18, 35, 39
sp. 2 59: 31; 60: 19, 35, 39
sp. 3 59: 31; 60: 19, 35
barbadensis 60: 19
casta 60: 19
fragilis 60: 19
ovata 60: 19
planulata 60: 19
Mysia nucleiformis 60: 18
Mytilus 41: 23; 60: 28
edulis 41: 23; 47: 14
Californicus 41: 23
galloprovincialis 41: 23; 45: 4, 13
lateralis 60: 14
palliopunctatus 41: 23
radiatus 41: 23

Nacella 41: 6
Najas 52: 21, 22
Nassarius 60: 1
albus 59: 29; 60: 1, 35, 39
ambiguus 60: 1
obsoletus 57: 22, 25, 29, 31
vibex 60: 1
Natica canrena 59: 34
Neodrillia 60: 4
cydia 59: 29; 60: 39
Nephelopsis 58: 7, 9, 10
obscura 58: 7, 9
Neptunea 47: 13
antiqua 47: 13
tabulata 47: 13
Nerita 41: 1
antillarum 41: 1
Bernhardi 41: 1
ornata 41: 1
peloronta 41: 1
plicata 41: 1
polita 41: 1
scabricostata 41: 1
Syncera Hepatica 59: 39
tessellata 41: 1
versicolor 41: 1
viridemaris 59: 38
viridis 41: 1
zebra 41: 1
Neritina 41: 1, 2; 59: 38
fluviatilis 41: 2
Neritina (cont.)
meleagris 41: 2
picta 41: 2
pupa 41: 2
reclivata 41: 2
virginea 59: 27, 29, 38; 60: 33, 35
Nesovitrea 56: 46
binneyana 52: 13, 14; 56: 33, 39, 42
electrina 41: 53; 42: 42; 46: 6, 9; 49: 29; 51: 3, 4, 6; 56: 40, 46
indentata 46: 12, 14
Nesta 60: 27
Nitella 52: 6, 23
Nitidella dichroa 59: 50
Nitocris trilineata 48: 3
Nitzschia frustulum 53: 20, 44; 54: 16
Nostoc 56: 3
muscorum 53: 7, 20, 22, 25, 44-48, 51; 54: 1, 12, 13, 16
Notemigonus crysoleucas 55: 48
Notocotylus quinqueserialis 55: 44
stagnicolae 55: 46, 55
urbanensis 55: 45
Notopthalmus crysoleucas 55: 39
viridescens 55: 49, 50
Nucula 41: 23, 24; 59: 31, 32; 60: 13, 35, 39
aegeensis 60: 13
nucleus 41: 24
radiata 41: 24
Nuphar 52: 3; 56: 26, 31
Nymphaea 52: 3; 56: 26
Nyssa 52: 11

Obliquaria 42: 6, 13, 19, 23
reflexa 42: 5, 6, 8, 24, 33; 52: 46, 50, 51; 57: 42
Obovaria 42: 7, 13, 29
castanea 42: 29
olivaria 57: 42
retusa 52: 48
subrotunda 52: 46, 50, 51
s. lens 43: 22, 24; 52: 45, 50
Oculobdella 58: 6; 59: 11
socimulcensis 58: 6
Odostomia 47: 18; 59: 29; 60: 1, 6, 35, 39
impressa 59: 29, 32; 60: 6, 31, 35, 39
laevigata 59: 27, 29; 60: 7, 33, 35, 39
ovuloides 60: 6
ryclea 60: 6
seminuda 60: 29
virginica 60: 7
Oligobdella 58: 6
Oligoclepsis 58: 6
Oligyra (Helicina) orbiculata 41: 39; 43: 3
orbiculata tropica 46: 7
Olivella 59: 32, 34; 60: 1, 29
dealbata 59: 29; 60: 1, 29, 35, 39
minuta 59: 29; 60: 1, 39; 60: 29
Omalodiscus pattersoni 51: 3, 5,7
Omalonyx 41: 8, 9
Omphalina arborea 57: 37
exiguus 57: 37
ferrea 57: 37
fuliginosa 57: 37
indentata 57: 37
inornata 57: 37
ligera 57: 37
minuscula 57: 37
nitida 57: 38
viridula 57: 37
Oncomelania 50: 87, 91, 92; 53: 18, 20; 54: 22; 56: 1-10, 12, 18
formosana 50: 87
Oncomelania (cont.)
hupensis 50: 87; 56: 1-7, 10-12, 17-20
h. chiui 56: 1, 4-7, 11, 14, 17,18
h. formosana 53: 9; 56: 1, 2, 4-8, 15, 18
h. nosophora 56: 1-8, 11, 12, 16, 18-20
h. quadrasi 56: 1-9, 13, 18
nosophora 50: 87
quadrasi 50: 87
Opeas clavulinum kyotense 55: 32
gracile 55: 36, 37
junceus 55: 1, 9
mauritianum 55: 8, 36
micra 60: 12
octonoides 55: 1, 9
pumilum 45: 34; 55: 1, 9, 35; 57: 33, 38
pyrgula 41: 42, 53; 42: 42; 49: 13, 30; 55: 1, 9
Opisthorchis tonkae 55: 47, 54
Opuntia 45: 22
littoralis 48: 10
Oreohelix 45: 21-25; 48: 6, 11
avalonensis 48: 11, 14
barbata 45: 25
chiricahuana 45: 25
clappi 45: 24, 25
yavapai 45: 22
y. extremitatis 45: 21
y. profundorum 45: 21
Orthalicus 41: 8, 9
boucardi 55: 30
decolor 55: 30
floridensis 45: 33; 55: 2, 20
obductus 55: 30
pulchellus protoglyptus 55: 30
reses 45: 33; 55: 2, 20
undatus 41: 9; 55: 30
zebra 41: 9
Ostrea 41: 21; 59: 34
ctenusyi 41: 21
lurida 47: 14
Virginiana 41: 21
Osmorhiza 52: 21
Oscillatoria 53: 14; 54: 12
formosa 53: 14; 54: 23
Otala lactea 45: 34; 46: 8; 49: 32; 55: 2, 22, 33-35
(Eobania) vermiculata 55: 2, 22,34
Oxychilus 47: 8
alliarius 47: 8; 55: 1, 11; 57: 37
cellarius 41: 53; 42: 42; 47: 8; 49: 30; 55: 1, 11; 57: 37
draparnaldi 41: 53; 42: 42; 47: 8; 49: 30; 55: 1, 11; 57: 37, 38
hammonis 55: 12
Oxyloma 51: 5; 56: 40, 53
decampi 41: 56
d. gouldi 41: 56; 49: 27
effusa 41: 55, 56
e. subeffusa 49: 28
retusa 52: 10, 11, 14; 56: 34, 38-40, 42, 44, 45, 48, 49, 51, 52, 55, 59, 62; 57: 36
salleana 45: 35; 46: 17
subeffusa 41: 55, 56; 42: 44
Oxytrema canaliculatum 41: 40
comalensis 46: 7

Pachydesma 41: 29
Pachylabra maura 58: 5
Pachystremiscus 59: 32, 43
ornatus 59: 29, 32; 43; 60: 39
pulchellus 59: 29, 32, 43; 60: 39
Pallifera 46: 8; 51: 33
costaricensis 55: 30

Pallifera (cont.)
dorsalis 41: 55; 42: 44; 43: 4; 49: 28; 51: 12, 15, 24, 33; 57: 34
fosteri 43: 4; 45: 35; 49: 16, 28
hemphilli 42: 44; 49: 16, 28, 34
h. secreta 49: 28
marmorea 41: 39; 45: 35; 46: 17; 49: 16
megaphallica 41: 43, 55; 42: 44; 49: 28
mutabilis 41: 43, 55; 42: 44; 45: 35; 46: 17; 49: 16, 28
ragsdalei 41: 39; 43: 4; 45: 35;46:17
(Pancaluptus) tournescalis 52: 43
secreta 41: 55; 42: 44; 49: 16
varia 42: 44; 43: 4; 49: 28
wetherbyi 43: 4; 49: 16
Paludestrina 45: 26
aponensis 57: 20
Paludina 58: 6
fasciata 58: 5
heterostropha 41: 48
limosa 57: 7
Pandora 41: 33
Parabdella 58: 6
Paraclepsis 58: 6
Paracoenogonimus szidati 55: 47
Paragonimus 55: 31
Paramphistomum cervi 55: 45, 46, 53
Parastarte 60: 24
triquetra 59: 27, 31, 34; 60: 24, 33, 35
Paratelphusa 58: 6
Paratorix 58: 6
Paravitrea 41: 53; 49: 34; 52: 30, 36, 40
andrewsae 42: 43; 49: 14,29
aulacogyra 45: 33
blarina 49: 14, 30
bidens 49: 29
calcicola 49: 14
capsella 42: 43; 43: 6; 49: 14, 29; 52: 40
clappi 45: 33
grimmi 42: 43; 49: 30
lamellidens 42: 43
lapilla 49: 14
metallacta 49: 14
multidentata 41: 53; 42: 43; 46: 16; 49: 14, 30; 57: 37
petrophila 43: 6; 46: 16; 49: 14; 52: 38, 40
placentula 43: 6; 49: 14; 52: 40
pontis 42: 43; 49: 30
reesei 42: 43; 49: 14, 30
roundyi 52: 38
seradens 49: 30
significans 45: 34; 46: 16; 52: 31, 38, 40
simpsoni 45: 35; 46: 16; 52: 31, 38, 40
smithi 45: 33; 49: 14
tantilla 49: 14
tridens 49: 14
variabilis 49: 14
walkeri 49: 14
Parmacella 51: 15
Partula 41: 8
Parvilucina 60: 16
blanda 59: 31, 32; 60: 16, 39
multilineata 59: 31; 60: 16, 35, 39
Parviturbo 59: 37
rehderi 59: 29, 37; 60: 39
Parviturboides interruptum (-us) 59:42
sanibelense 59: 42
zacalles 59: 42
Patella 41: 6
caerulea 41: 6
discors 41: 6
Patella (cont.)
Mexicana 41: 6
ornata 41: 6
umbella 41: 6
vulgata 41: 6
Patula 41: 9, 10, 13, 14
accompsa 41: 14
acuta 41: 14
alternata 41: 10, 14
arenaria 41: 14
ericetorum 41: 14
hispida 41: 10
intersecta 41: 14
lapicida 41: 10
neglecta 41: 14
nitens 41: 14
perspectiva 41: 10; 57: 34
pygmaea 41: 14
pyramidalis 41: 14
roseotincta 41: 14
rotundata 41: 14
rugosiuscula 41: 14
solitaria 41: 10, 14
striata 41: 14
striatella 41: 10, 14; 48: 2; 49: 6; 57: 34
umbilicata 41: 14
variabilis 41: 14
villosa 41: 14
Pecten 41: 21; 60: 28
antillarum 60: 15
concentrica 41: 22
dislocatus 41: 21
gibbus 41: 21
irradians 41: 21
Islandicus 41: 22
latiauritus 47: 14
magellanicus 41: 21
maximus 41: 21
opercularis 41: 22
pallium 41: 22
subrufus 41: 21
tenuicostatus 41: 21
varius 41: 22
Pectunculus 41: 23, 24
glycimeris 41: 24
pectinatus 41: 24
peloronta 41: 24
Pedipes 60: 26
elongatus 60: 10
Pegias fabula 49: 23
Pelobates fuscus 58: 5
Perenna 41: 8
Perca flavescens 43: 10; 58: 7
Percymoorensis 58: 6, 9, 10
Perna 41: 22
Persicula 60: 2
fluctuata 59: 29; 60: 11, 33
minuta 60: 2
Petasiger nitidus 55: 44, 52
Phacoides crenella 60: 16
nassula 59: 33
trisulcatus blandus 60: 16
Phalaria 52: 11
Phasianella 41: 2, 4
australis 41: 4
concolor 59: 39
puella 41: 4
pulla 41: 4
speciosa 41: 4
tritonis 41: 4
Philomycus 43: 9; 49: 33; 51: 32, 33
batchi 43: 3
bisdosus 42: 44; 49: 28
carolinianus 41: 43, 55; 42: 44; 43: 4; 45: 35; 46: 17; 49: 16,28; 51: 12, 15, 24,32, 33, 41; 57: 34, 39
Philomycus (cont.)
carolinianus collinus 49: 33
c. flexuolaris 49: 28
dorsalis 51: 33
flexuolaris 41: 44, 55; 42: 44; 49: 16; 51: 32
sellatus 49: 16
togatus 41: 44,55; 42: 44; 49: 16, 28
venustus 41: 43; 42: 44; 49:16, 28
virginicus 42: 44; 43: 4; 49: 28
Pholas 41: 33
anatifera 41: 33
ptidactylus 41: 33
Phormidium luridum 53: 18
Phosinella 59: 40
Phragmites 52: 3, 6, 8, 11, 13, 18; 56: 26
Physa 41: 17, 18; 45: 26;50: 10, 69, 71, 85-87; 51: 5; 52: 9, 10, 28; 55: 45; 56: 29-31, 52, 53; 57: 28; 58: 7-9; 59: 4, 6, 14; 60: 11, 26
acuta 41: 18; 49: 25; 55: 1, 6, 32; 59: 6, 10
ampullacea 41: 18; 55: 45
anatina 46: 14; 50: 69, 89; 52: 16, 28; 57: 26, 30
ancillaria 41: 18; 48: 3; 49: 25; 55: 45; 59: 7
aurea 41: 18; 49: 25, 33
crocata 49: 33
elliptica 41: 18; 56: 38
fontinalis 50: 67, 90; 57: 21, 26, 29; 58: 5, 7; 59: 6, 7, 10, 11
goodrichi 49: 25
gyrina 41: 18, 40; 48: 3, 18, 19, 21-27; 50: 4-6, 67-75, 77, 82, 88-90; 52: 19, 24; 53: 15; 54: 19; 55: 45, 51; 56: 27, 30, 31, 38-42, 44-46, 48, 49, 51-53, 58, 61, 64; 57: 21, 23, 24, 26, 28, 30; 58: 5-8, 12, 14-17, 19-24, 26, 28-36, 38, 39, 42, 43, 45, 48; 59: 2-4, 7-9
gyrina hildrethiana 55: 45
halei 55: 45
hawnii 50: 89
heterostropha 48: 3; 49: 5; 50: 67, 89; 52: 24; 55: 45, 49, 53; 56: 38; 57: 8, 12, 14, 15, 17, 24, 26, 30, 32; 58: 5-8; 59: 7
hildrethiana 41: 18; 52: 1, 7, 13, 14-17, 19-25
inflata 49: 33
integra 50: 71, 89; 52: 24; 55: 45; 57: 21, 26, 30; 58: 5-8, 12, 14, 16-18, 21, 34, 35, 44, 45, 48; 58: 5, 6; 59: 2, 8
jennessi skinneri 48: 18, 19, 21-27
marmorata 59: 27, 29; 60: 11, 33
marginata 41: 18
microstoma 49: 33
nitidus 58: 7
occidentalis 50: 81; 55: 45
osculans 47: 8; 58: 6
parkeri 55: 45; 57: 28; 58: 6, 8, 12, 16, 24, 36, 37, 47, 48; 59: 2, 8
princeps 59: 21
propinqua 50: 85, 91; 55: 45, 51; 57: 31
rivalis 41: 18; 55: 45
sayii 41: 48; 55: 45; 57: 28; 58: 12, 14-16, 22, 48; 59: 8
s. crassa 55: 45
skinneri 51: 5

Physa (cont.)
ventricosa 41: 18
virgata 41: 40; 46: 7
virginea 57: 20
Physopsis 50: 10, 42; 53: 11; 57: 21
Picea 52: 8, 13
Pileopsis 41: 5
Pilidium 41: 6
Pilsbryna 52: 41
aurea 45: 33; 49: 14
castanea 49: 14
tridens 45: 33
Pinctada 60: 14
imbricata 59: 31, 32; 60: 15, 35, 39
radiata 59: 34
Pinna 41: 22
Caroliniensis 41: 22
muricatus 41: 22
Pinus 52: 8
Pisciola salmositica 59: 9
Pisidium 41: 28; 45: 26; 52: 6, 7, 9-11, 13, 14, 19, 21, 22, 24; 56: 29, 44, 51, 52, 54; 57: 6, 15, 17; 58: 5, 6
abditum 41: 28; 57: 5
adamsi 46: 4; 49: 24; 56: 38
aequilaterale 49: 24
amnicum 46: 4
casertanum 46: 4, 7, 14; 49: 24, 33; 51: 3, 5; 52: 16; 56: 36, 38-42, 44-46, 48-51, 53, 58, 61, 64; 57: 4-7, 14, 15
compressum 41: 28; 46: 4, 14; 49:24; 51: 3, 5-7; 52: 16, 19; 57: 4, 6, 14, 15
dubium 49: 24
fallax 46: 4, 6
ferrugineum 46: 4; 52: 16, 19; 56: 38; 57: 4, 6, 7, 14, 15
henslowanum 46: 14
milium 52: 19
neglectum 49: 33
nitidum 46: 7; 49: 24, 33; 52: 16, 19; 56: 38
n. pauperculum 46: 4
obtusale 51: 5; 56: 36, 37, 42, 44-46, 50, 51, 53, 61; 57: 4, 6, 14,15
o. ventricosum 57: 7
punctatum 46: 4
punctiferum 49: 24
splendidulum 49: 33
supinum 46: 4
variabile 43: 2; 52: 16, 19; 56: 38
ventricosum 52: 19
v. rotundatum 57: 7
vesiculare 57: 6
virginicum 41: 28; 58: 6, 8
walkeri 49: 24; 52: 19
Pitar 60: 24
fulminata 59: 31, 32; 60: 24, 35, 39
Placobdella 58: 6, 9; 59: 14
gracilis 58: 6
hollensis 59: 17
montifera 58: 6, 9
ornata 58: 6, 9; 59: 17
papillosa 59: 17
parasitica 58: 6, 9; 59: 17
Placuna 41: 21
Plagiatura parva 55: 55
Plagiola 42: 13, 24
donaciformis 42: 24
elegans 42: 24
lineolata 42: 24; 52: 48; 57: 42
Plagiorchis 55: 54
ameiurensis 55: 44
corti 55: 44
goodmani 55: 46, 54
micracanthos 55: 46
muris 55: 46, 54
proximus 55: 46, 54
vespertilionis parorchis 55: 46, 54
Plagitura parva 55: 39, 44, 47, 49, 50, 52
Planogyra asteriscus 57: 36
Planorbarius 59: 18
corneus 58: 11
metedjensis 57: 30
Planorbella 41: 19
campanulatus 41: 19
Planorbina 60: 11, 31
Planorbis 41: 17, 19; 45: 26; 59: 18
albus 58: 5, 6
anceps 57: 11
bicarinatus 48: 3; 49: 33; 57: 11
boissyi 54: 17, 21
campanulatus 57: 11
circumstriatus 57: 10
corneus 41: 19; 57: 29; 58: 5-8; 59: 2
contortus 58: 5, 7
exacuous 57: 12
fieldii 60: 11
glabratus 54: 20; 57: 30; 59: 10
guadaloupensis 54: 18
lentus 41: 19
liebmanni 60: 11
nitidus 58: 5
parvus 57: 10
planorbis 58: 5
trivolvis 55: 54
umbilicatus 58: 5, 7
vortex 58: 5
Planorbula 51: 9
armigera 41: 5; 49: 26; 52: 13, 14, 24; 55: 44; 58: 6, 9, 12, 14-18, 20-22, 25, 28-30, 32-37, 40-46, 48; 59: 1, 2, 8, 9
campestris 41: 5, 9
crassilabris 46: 6, 7
wheatleyi 49: 26
Plantago 52: 21
Platanus 52: 13
Platytaphius 60: 29
Plectomerus 42: 12, 14, 18
dombeyanus 42: 7, 18
trapezoides 42: 18
Plethobasus 42: 11, 14, 19, 20
cooperianus 49: 18; 52: 48, 52
cyphyus 49: 23; 57: 42
Pleurobema 42: 11, 12, 14, 20
bigbyensis 49: 23
clava 43: 25
coccineum 49: 23
cordatum 52: 46, 50, 51; 57: 42
c. catillus 52: 46, 50, 51
c. coccineum 43: 22, 24
c. pyramidatum 52: 46
oviforme 49: 23; 52: 46, 50, 51
o. argenteum 52: 50, 51
pyramidatum 49: 23
Pleurocera 43: 23; 49: 19, 20
acuta 49: 19
acutum 43: 24; 48: 1-3; 52: 19-21, 24; 58: 12, 16, 23, 48; 59: 8, 9
a. tracta 48: 2
a. tractum 48: 18,21-27
canaliculatum 43: 3;48: 3; 49: 25; 52: 53
c. filum 52: 53
c. undulatum 52: 53
curtum 52: 53
labiata 48: 3; 48: 1, 2
neglecta 48: 2, 3
verrucosa 49: 19
Pleurodonte 45: 37
auricoma 55: 2, 20
marginella 55: 2, 20
Pleuromeris 60: 19
tridentata 59: 31, 32; 60: 19, 39
Plicatula 41: 21, 22
ramosa 41: 22
cristata 41: 22
Pneumobites parviplexus 55: 44, 53
Pneomonoeces medioplexus 55: 44, 52
Pneumostrongylus tenuis 51: 41; 55: 33
Podoclepsis 58: 6
Polydonta 41: 19
Polydontes 45: 37
Polygira 41: 11
Carpenteriana 41: 11
holosericea 41: 11
septemvolva 41: 11
uvulifera 41: 11
Polygonum 52: 3, 9, 10, 16, 17; 56: 26, 28, 32
Polygyra 41: 13, 15; 60: 12
albolabris 51: 42; 57: 35
appressa 57: 34
auriformis 46: 8
bahamensis 55: 30
carpenteriana 41: 15; 59: 27, 29; 60: 12, 33
cereolus 41: 41; 48: 2
c. carpenteriana 60: 12
chisosensis 46: 8
deltoidea 41: 36
dentifera 57: 35
dorfeuilliana 41: 37, 40; 45: 34, 36; 46: 15; 52: 28, 43
elevata 57: 35
exoleta 57: 35
fatigiata 48: 2; 49: 11
fraudulenta 57: 35
hippocrepis 46: 8; 55: 37
hirsuta 57: 35
inflata 41: 40; 57: 35
jacksoni 41: 36; 45: 34; 46: 15
leai 57: 35
leporina 41: 36; 45: 34, 36; 46: 15
lithica 46: 15
matermontana 55: 31
monodon 57: 35
m. fraterna 57: 35
mooreana 46: 8
multilineata 57: 35
obvoluta 41: 15
palliata 57: 35
peregrina 46: 15
plicata 42: 41; 43: 7; 49: 11, 31
postelliana 41: 41; 49: 31
p. peninsulae 45: 33
profunda 57: 34
pustula 41: 41
pustuloides 41: 41; 42: 41; 49: 11, 31
richardsoni 55: 31
sayi 57: 35
septemvolva 41: 15, 41; 48: 2; 58: 51
s. volvoxis 48: 2
tamaulipasensis 41: 36; 46: 8
texasiana 41: 36; 45: 36; 48: 8, 15; 48: 2; 49: 31; 58: 51
t. texasensis 46: 8
texasensis 46: 8
tholus 46: 8
thyroides 57: 35
tridentata 57: 35
troostiana 49: 11
uvulifera 41: 15

Polygyra (cont.)
uvulifera margueritae 45: 33
virginiana 49: 33
Polygyroidea 48: 6, 12
harfordiana 48: 12,14
Polygyriscus virginianus 42: 44; 45: 33; 49: 31
Polymesoda 60: 22
maritima 59: 27, 31; 60: 22, 33
Polymita 41: 13; 45: 37, 38
muscarum 55: 2, 21
Polypedilum 53: 17; 58: 48; 59: 7, 9
(Pentapedilum) analè 53: 17
kibatiense 53: 17
Pomacea paludosa 55: 1, 5
Pomatia 41: 13, 16
arbustorum 41: 16
aspersa 41: 16; 55: 35
candidissima 41: 17
cubensis 41: 17
hieroglyphica 41: 17
pomatia 41: 16
variabilis 41: 17
Pomatias 41: 12, 20
auricoma 41: 12
candidissima 41: 12
Cubensis 41: 12
Emmaus 41: 13
ericetorum 41: 12
hieroglyphica 41: 13
Jerusalem 41: 12
marmorata 41: 13
pomatia 41: 12
rugosiuscula 41: 12
variabilis 41: 13
villosa 41: 12
Pomatiopsis 50: 83, 87, 91; 56: 3, 8
cincinnatiensis 43: 20; 48: 3; 49: 17, 25; 50: 87; 53: 21; 54: 1; 56:3
lapidaria 41: 44, 57; 42: 45; 43: 3; 45: 35; 46: 17; 48: 3; 49: 17, 25; 50: 87; 52: 1, 13, 14, 24, 25; 56: 2, 8
Pontederia 52: 18
Populus 52: 11
deltoides 49: 8
tremuloides 49: 8; 52: 8, 11, 18
Porites 59: 24
Porphyrobaphe iostoma 55: 2, 20
Posthoplodiplostomum minimum 55: 45, 54, 55
Potamilus 42: 13, 25, 26
alatus 42: 26; 49: 24
capax 42: 26, 32
laevissimus 42: 5-9, 25, 26, 34; 46: 7
purpuratus 42: 6-8, 26, 27, 34; 46: 7
Potamogeton 52: 16, 17; 56: 27, 41; 57: 9
Potamopyrgus coronatus 59: 38
jenkinsi 60: 31
Praticolella ampla 55: 31
berlandieriana 46: 8; 55: 31; 58: 51
pachyloma 46: 8
Priotrochatella 45: 38
Pristiloma 48: 6, 13
juniperum 48: 13, 14
lansingi 47: 44
nicholsoni 48: 13, 14
shepardae 48: 13-15
stearnsi 48: 14
Probythinella lacustris 48: 17, 21-27
Prohemistomulum 58: 11
opacum 58: 11
Prolepis hortensis 51: 28
Promenetus 57: 13
exacuous 46: 6, 7;49: 26; 52: 7, 16, 17, 19, 20, 24; 55: 44; 56: 29,
Promenetus exacuous (cont.)
56: 30, 39-42, 48; 57: 8, 12-14; 58: 5-9, 12, 14, 16-19, 21, 22, 24-26, 30, 31, 33-35, 40, 41, 44, 45, 48; 59: 1, 2, 8
e. kansasensis 51: 5
e. megas 48: 18, 21-27
umbilicatellus 46: 6, 7; 51: 3, 5
Proptera 42: 25, 26
alata 52: 46, 50, 51; 57: 42
a. megaptera 43: 24, 25
laevissima 42: 26
purpurata 42: 26
Prosthogonimus macrorchis 55: 47, 54
rudolphii 55: 47
Protoclepsis tesselata 58: 11
Prunum 60: 2
Psammobia 41: 31, 33
feiroensis 41: 33
vespertina 41: 33
Pseudobilharziella querquedulae 55:45
Pseudocyrena 60: 22
maritima 59: 34
Pseudohyalina limatula 57: 38
minuscula 57: 37
Pseudomonas 45: 1-7, 9, 10, 12-15, 17, 18; 47: 20; 49: 36; 55: 38
aerofaciens 45: 12
aeruginosa 45: 2-4, 6, 11-13, 15, 20
eisenbergii 45: 4
fluorescens 45: 2-4, 10, 12
fragi 45: 4
geniculata 45: 13
middenbergii 45: 2, 4, 11, 12, 15,20
ovalis 45: 3
Pseudosubulina cheatumi 46: 8
Pseudosuccinea 57: 13
columella 49: 26; 55: 52, 53; 58: 12
Pseudotsuga menziesii 47: 39
Psilostomum ondatrae 55: 45, 52
Ptychobranchus 42: 6, 13, 22, 23; 43:22
clintonense 42: 23
fasciolare 43: 22, 24; 49: 23
fasciolaris 42: 23, 35; 52: 46
occidentalis 42: 5, 23, 31, 33
phaseolus 42: 23
subtentum 49: 23; 52: 50, 51
Pteria colymbus 60: 15
imbricata 60: 15
radiata 60: 15
Punctum 57: 34
blandianum 42: 44; 49: 16, 28
conspectum alleni 47: 44
lamellatum 42: 44; 49: 29
minutissimum 41: 43, 55; 42: 44; 43: 5; 45: 36, 36; 46: 17; 49: 16, 29; 51: 4; 57: 34
randolphi 47: 44
smithi 41: 55; 42: 44; 49: 16, 29
vitreum 41: 55; 42: 44; 45: 35, 36; 46: 9, 17; 49: 16; 49: 16, 29
Puncturella 60: 27
Pupa 41: 8; 45: 24; 60: 29
armifera 57: 35
badia 57: 36
contracta 57: 35
corticaria 57: 35
edentula 57: 35
fallax 57: 36
gouldii 57: 36
milium 57: 36
muscorum 57: 36
ovata 57: 36
pentodon 57: 36
(Gastrocopta) pilsbryana 45: 23
rupicola 49: 35; 57: 36
simplex 57: 35
tappaniana 41: 48
Pupilla 41: 8; 45: 21-23
blandi 45: 21; 46: 6, 9; 51: 3, 4, 6, 7
hebes 45: 21; 46: 6, 9
muscorum 41: 56; 45: 36; 49: 27; 51: 3, 4, 6,7; 57: 36
pentodon 57: 36
syngenes 45: 22, 23
Pupisoma dioscoricola 41: 44
macneili 41: 44
minus 41: 44
Pupoides albilabris 41: 39, 44, 56; 42: 45; 45: 35, 36; 46: 10, 14, 17; 48: 3; 49: 33; 52: 14; 57:36
albolabris 49: 27; 51: 3, 4
hordaceus 46: 10
inornatus 52: 28
marginatus 49: 33; 57: 36
Pusia 60: 3
Pyramidula alternata 57: 33
perspectiva 57: 34
striatella 45: 21; 57: 34
Pyramidella 59: 29; 60: 5, 6, 39
crenulata 59: 29, 32; 60: 5, 39
resticula 60: 6
Pyrgocythara 59: 29; 60: 5, 35, 39
hemphilli 60: 5
Pyrgophorus 59: 38
coronatus 59: 27, 29, 38; 60: 33
Pyrula 47: 15

Quadrula 42: 12, 14, 19; 43: 22
askewi 42: 21
cylindrica 42: 7, 18, 19, 33; 52: 46, 50, 51
c. strigillata 49: 23
forsheyi 42: 19
fragosa 42: 19
heros 42: 17
intermedia 49: 23; 52: 46
lachrymosa 42: 19
metanevra 42: 19; 57: 42
nodulata 42: 19; 57: 42
petrina 46: 7
plicata 42: 17
pustulosa 42: 5-8, 19-21, 33; 46: 7, 12, 14; 49: 23; 52: 46, 50, 51; 55: 37; 57: 42
p. prasina 43: 22, 24
quadrula 42: 5, 6, 8, 19, 20, 33, 37; 43: 24; 46: 12, 14; 49: 33; 52: 46, 50, 51; 55: 37; 57: 42
rubiginosa 42: 21
sparsa 49: 23
tuberculata 49: 33
undata 42: 17
verrucosa 49: 33
Quercus 52: 8, 13
Quickella 56: 40, 53
vermeta 56: 34, 38-40, 42, 45, 48, 51, 52, 56, 59, 62
Quincuncina 42: 12, 14, 19
Quinqueserialis quinqueserialis 55: 44

Rabdotus dealbatus 45: 34; 49: 13
Radiodiscus millecostatus 46: 6, 8
proameri 55: 31
Radix 41: 17
auricularia 41: 17; 49: 26; 55: 31, 32
ovata 58: 5
Rana catesbeiana 58: 9; 59: 13
pipiens 59: 14
Rangia cuneata 49: 24
Retinella 52: 13, 30, 33, 34
binneyana 57: 37
b. occidentalis 47: 44

Retinella (cont.)
burringtoni 43: 5; 57: 37
carolinensis 43: 5
cryptomphala 43: 4, 5; 52: 33, 34
c. solida 52: 34
electrina 47: 44; 52: 33, 38; 57: 37
hammonis 55: 31
indentata 41: 38; 43: 5; 45: 22, 23, 25; 48: 2; 52: 10, 13, 14, 17, 22, 23, 25, 31, 33, 34; 56: 33, 39, 40, 42, 45, 48, 49, 51, 52; 57:37
pentadelphia 52: 34
praecox 43: 5
rhoadsi 52: 23; 57: 37
sculptilis 43: 5
solida 43: 4, 5
wheatleyi 43: 5; 52: 28, 31, 33, 34; 57: 37
zikmundi 52: 28, 33, 34, 43
Retusa canaliculata 59: 34; 60: 31
Rhabditis macrocera 53: 14
Rhabdotus alternatus 46: 8
a. hesperius 46: 8
dealbatus 46: 8, 16
d. neomexicanus 46: 8
d. ragsdalei 46: 8
mooreanus 46: 8
pasonis 46: 8
pilsbryi 46: 8
Rhus 52: 3, 11; 56: 26
toxicodendron 52: 21
vernix 52: 21
Ribeiroia thomasi 55: 45
Rimula 60: 27
Rissoa laevissima 59: 41
multicostata 59: 41
scalarella 59: 40, 41
trivaricosa 59: 46
Rissoella 59: 40
caribaea 59: 30, 40; 60: 35, 39
Rissoina 60: 27
browniana 59: 34
bryerea 59: 30, 34, 40; 60: 35, 39
cancellata 59: 30, 32, 40; 60: 35,39
catesbyana 59: 27, 30, 32, 40; 60: 29, 39
multicostata 59: 30, 41; 60: 29, 35, 39
striosa 59: 30, 41; 60: 35, 39
Rotella 41: 3, 4
elegans 41: 4
vestiaria 41: 4
Rudbeckia hirta 52: 18
Rumina decollata 41: 42; 42: 42; 46: 8; 49: 30; 55: 1, 10; 55: 32, 33, 36

Sagittaria 53: 10
Salicornia 48: 8
Salix 52: 3, 13, 21; 56: 26
Salvelinus fontinalis 59: 9, 13
Sanguinolaria 41: 31, 32
Saxicava 41: 33
arctica 47: 14
Sayella 60: 6, 7
crosseana 59: 27, 30; 60: 7, 33, 35
fusca 59: 30; 60: 7, 39
hemphilli 60: 6
livida 60: 6, 7
Scaphites 47: 5
Schistosoma 54: 23
dermatitis 57: 27, 28
haematobium 53: 8, 18; 54: 18, 19, 20, 22, 23; 56: 2; 57: 21, 31
japonicum 56: 1-3, 8
mansoni 50: 42, 45, 87, 91; 53: 8, 17; 54: 18-22; 56: 2; 55: 41, 42; 57: 20, 26, 28, 30-32; 58: 8; 59: 7, 10, 12
mattheei 54: 20
Schistosomatium douthittii 55: 40, 41, 45; 55: 54
Schizothrix 56: 3
calcicola 53: 20, 44; 54: 16
Schwartziella 59: 40
Scirpus 56: 31
Scissula 60: 21
Scurria 41: 6, 7
Segmentina 41: 17
Selenites concava 57: 34
Sellacostyle mustelae 55: 40, 46, 55
Semitrochatella alboviridis 53: 5
Sepia bertheloti 50: 91
Serratia marcescens 45: 4, 12
Simpsoniconcha 42: 12
ambigua 55: 37; 57: 42
Siphonaria 41: 6
Smaragdia 59: 38
viridemaris 59: 30, 32, 38; 60: 35, 39
viridis 59: 34, 38
v. viridemaris 59: 38
Solariorbis 59: 42
terminalis 59: 30, 42; 60: 39
Solaropsis monile 55: 31
Solen 41: 33
ensis 41: 33
siliqua 41: 33
vagina 41: 33
Solidago ohioensis 52: 11
Sonorelix 48: 6
angelus 48: 11, 14
avawatzica 48: 11, 14
baileyi 48: 11, 14
borregoensis 48: 11, 14
b. carrizoensis 48: 11, 14
b. ora 48: 11, 14
rixfordi 48: 11, 14
Sonorella 45: 20-29; 48: 16
apache 45: 30
baboquivariensis 45: 28
bartschi 45: 25, 26
bicipitis 45: 23
bowiensis 45: 23
clappi 45: 27
coloradensis 45: 21, 22
eremita 45: 29
ferrissi 45: 30
granulatissima occidentalis 45: 27
hatchitana orientis 46: 8
micra 45: 24
optata 45: 23
papagorum 45: 29
santaritana 45: 27
sitiens 45: 29
s. arida 45: 29
tumamocensis 45: 29
virilis 45: 25
v. circumstriata 45: 24
v. leucura 45: 24
walkeri 45: 26, 27
w. aguacalientensis 45: 26
Spatha wahlbergi 58: 5
Speleodiscoides 48: 6, 13
spirellum 48: 13, 14
Sphaerium 41: 28; 48: 1; 51: 3, 5; 52: 6, 7, 16, 19, 21, 22, 24; 56: 29, 51; 57: 5, 14, 15; 58: 7, 9
aequilaterale 41: 28
altile 41: 28
corneum 46: 4; 58: 5
fabale 41: 28; 49: 24; 57: 3, 4, 14; 58: 12, 14, 16, 17, 48; 59: 7, 8
flavum 49: 33
lacustre 46: 4, 7; 49: 24, 33; 52: 16, 19; 57: 3, 4, 14; 58: 12, 14, 16, 17, 48; 59: 7, 8
occidentale 48: 3; 49: 24
partumeium 41: 28, 40; 46: 4; 49: 24, 33; 57: 4, 5, 14
Sphaerium (cont.)
pellucidum 57: 4
rhomboideum 41: 28; 52: 19; 56: 36, 38, 42, 48; 57: 3-5, 14
secure 41: 28; 46: 4; 49: 24; 52: 19
simile 41: 28; 49: 24, 33; 56: 38; 58: 5, 12, 16, 20-22, 37, 46, 48; 59: 2, 8, 9
striatinum 41: 28, 40; 43: 2; 46: 4, 7, 14; 49: 33; 56: 38; 57: 4, 5, 14; 59: 7
sulcatum 41: 28; 43: 2; 46: 7; 49: 33; 52: 16, 19; 56: 36, 42, 44, 45, 48
transversum 41: 28, 40; 43: 2; 46: 4, 7, 14; 58:5-8; 59: 7, 11
Sphyradium edentulum 57: 35
Spirodon carinata 49: 25
dilatata 49: 25
Spirogyra 53: 14
Spirorbis 51: 10
cuneatus 51: 10
Spirorchis elegans 55: 44, 53
elephantis 55: 44, 55
parvus 55: 44, 55
Spondylus 41: 21, 22; 47: 4
gaederopus 41: 22
regius 41: 22
Stagnicola 50: 14; 51: 3, 5; 52: 13, 16, 17; 58: 8; 59: 4
caperata 48: 3; 49: 26; 51: 3, 5, 6
catascopium 48: 3; 56: 28, 42, 45, 48, 49, 64; 58: 12
elodes 58: 6, 8, 12, 14-19, 22, 29-31, 35, 36, 42; 48; 59: 2-4, 8
emarginata angulata 50: 89; 55: 53; 57: 30
exilis 51: 5; 58: 3, 6, 9, 12, 14, 16-19, 21, 25, 30, 31, 36-41, 46, 48; 59: 1, 2, 4, 5, 8, 9,11
palustris 52: 7, 13, 14, 16, 24; 55: 46; 56: 28, 42,48; 57: 31; 58: 5, 12; 59: 2
p. elodes 48: 2, 3
p. nuttalliana 50: 91; 55: 51; 57: 31
reflexa 48: 3; 58: 10, 11
umbrosa 48: 3; 52: 6
Stenogyra 41: 8, 9
decollata 41: 9
octona 41: 9
Stenotrema 41: 12, 13, 15, 51; 43: 23; 49: 34; 52: 22
abaddona 52: 28
acuta 41: 15
altispira 42: 41; 49: 11, 31
angellum 43: 7; 49: 11
barbatum 41: 41, 51; 42: 41; 43: 7; 45: 34; 49: 11, 31, 34
barbigerum 41: 41; 49: 11
blandianum 45: 34; 46: 15
burringtoni 49: 31
caddoense 46: 15
calvescens 49:11
cohuttense 49: 12
deceptum 49: 12
depilatum 49: 11
edgarianum 49: 11
edvardsi 42: 41; 43: 4, 8; 49: 11, 31
fraternum 41: 37, 44, 51, 52; 42: 41; 43: 8, 22, 24; 45: 34; 49: 12, 31; 57: 35
f. imperforatum 41: 37; 46: 15
f. montanum 49: 31
glassi 45: 33

Stenotrema (cont.)
hirsuta 41: 12, 15
hirsutum 41: 51; 42: 41; 43: 7, 22, 24; 48: 2; 49: 11, 31, 34; 57: 35
hubrichti 45: 33
labrosum 41: 37; 45: 34; 46: 15
leai 41: 15, 51; 43: 8; 49: 31, 33; 51: 4; 52: 13, 14, 25; 56: 32, 40, 45, 51, 52; 57: 35
Leaii 41: 12
leai aliciae 41: 34, 52; 45: 36; 46: 8, 14, 15; 49: 12, 31
magnifumosum 41: 41; 49: 11
monodon 41: 12, 15; 48: 2; 49: 33; 57: 35
m. fraterna 57: 35
m. leaii 57: 35
pilsbryi 45: 33
pilula 41: 41; 49: 11
spinosum 49: 11, 31
stenotrema 41: 12, 37, 41, 51; 42: 41; 43: 7, 22, 24; 45: 34; 46: 15; 48: 2; 49: 11, 31
s. nudum 49: 11
s. voluminosum 49: 11
turbinella 49: 12
unciferum 46: 15
waldense 49: 11
wichitorum 52: 43
Sterkia 48: 6, 13
clementina 48: 10, 14
eyriesi rhoadsi 45: 33
Stichorchis subtriquetrus 55: 52
Stigeoclonium 53: 14
Striatura 52: 30, 41, 43
exigua 41: 54; 42: 44; 43: 7; 49: 30; 57: 37
ferrea 41: 54; 42: 44; 43: 7; 49: 15, 30. 56: 39, 42; 57: 37
meridionalis 41: 43, 54; 42: 44; 45: 35, 36; 46: 9, 16; 49: 15, 30; 52: 38, 43
milium 41: 54; 43: 7; 45: 36; 49: 30; 52: 43; 57: 37
pugetensis 47: 44
Strichorchis subtriquetrus 55: 46
Strigea elegans 55: 43, 54
michiganensis 55: 46
Strigilla 41: 31
Strioturbonilla 60: 7
Strobila 41: 10, 13, 15
labyrinthica 41: 10, 15; 57: 36
Strobilops 51: 3-5
aenea 41: 39, 43, 56; 42: 45; 43: 3; 45: 35, 36; 46: 17; 49: 16, 27; 52: 14, 28, 43; 57: 36
affinis 43: 3; 45: 35; 51: 1-4; 56: 35, 38, 39, 42, 45, 46, 48, 51, 52, 56, 59, 62; 57: 36
labyrinthica 41: 39, 43, 56; 42: 45; 45: 35, 36; 46: 8, 17; 49: 16, 27, 33; 51: 4; 57: 36
l. parietalis 41: 56; 49: 33
lonsdalei 45: 36
parietalis 42: 45
texana 46: 8
texasiana 41: 43; 45: 36; 46: 17; 49: 16, 27
virgo 57: 36
Strombus 47: 10
Strophia 41: 8
Strophitus 42: 12, 15
edentulus 43: 24; 49: 33
rugosus 42: 15; 52: 46, 50, 51; 57: 42
undulatus 42: 7, 15, 37; 49: 23, 32, 33
u. shaefferianus 49: 23, 33
u. tennesseensis 49: 33
Strophocheilus oblongus 55: 2, 20, 37
Stylopsis 60: 6
octona 60: 6
Subulina octona 49: 30; 55: 1, 8, 31, 36; 57: 38
Succinea 41: 8, 9; 43: 3; 45: 22, 25, 28; 46: 10. 51: 3, 5; 52: 17; 59: 27; 60: 12
sp. 1 - 59: 27, 30; 60: 12, 13
sp. 2 - 59: 27, 30; 60: 12, 33
aurea 49: 27, 34; 57: 36
avara 41: 9, 56; 47: 8; 49: 27; 52: 10, 14, 19, 22; 57: 36
Barbadensis 41: 9
campestris 41: 43
chittenangoensis 45: 33
concordialis 41: 39, 43, 56; 46: 17
greeri 49: 16
grosvenori 45: 35; 46: 10
horticola 55: 31
indiana 41: 43, 56; 46: 17; 52: 28
luteola 41: 39; 46: 10, 17
obliqua 41: 9; 57: 36
o. totteniana 57: 36
oregonensis 47: 8
ovalis 41: 9, 56; 42: 44; 43: 3; 45: 35; 48: 2; 49: 16, 27; 52: 10, 14; 56: 46; 57: 36, 38
Permensis 41: 9
pronophobus 49: 33
pseudavara 41: 39
putris 41: 9
pyrites 49: 27, 34
retusa 57: 36
rusticana 47: 8
sillimani 47: 8
solastra 46: 10
totteniana 57: 36
vaginacontorta 41: 39
wilsoni 41: 43, 56; 42: 44; 49: 27, 33
witteri 45: 35; 46: 17; 52: 28
Symphynota complanata 42: 15
Syncera 59: 39
affinis 59: 40
concolor 59: 39

Tachea 41: 12, 13, 16
acuta 41: 12
auricosoma 41: 16
carthusiana 41: 16
hemastoma 41: 12, 16
hortensis 41: 12, 16; 57: 34
Lucasii 41: 16
nemoralis 41: 11, 16
orbiculata 41: 12, 16
rufilabris 41: 16
Tagelus 60: 22
divisus 59: 31; 60: 22, 39
Tai intha 58: 5
shanensis 58: 6
Taphius 60: 29, 31
havanensis 60: 11, 29
Tapes 41: 30
decussata 41: 30
geographica 41: 31
histrionica 41: 31
litterata 41: 31
pullastra 41: 31
staminea 41: 30
sulcaria 41: 31
Taraxacum officinale 52: 21
Tarebia (Thiara) granifera 55: 1, 6,35
Tebennophorus carolinensis 51: 32; 57: 34
dorsalis 51: 33
Tegula 59: 36
Tegula (cont.)
brunnea 45: 15
fasciata 59: 30, 32, 34, 36; 60: 36, 39
funebralis 45: 1, 12, 15, 20
regina 47: 9
Teinostoma 59: 42; 60: 28
biscaynensis 60: 29
clavium 59: 30, 42; 60: 39
megastoma 59: 30, 42; 60: 39
parvicallum 59: 42
reclusa 59: 42
Tellidora 60: 25
Tellina 41: 31, 32; 60: 21, 25
anternata 41: 32
candeana 59: 31; 60: 22, 36, 39
carnaria 41: 32
cumana 41: 32
explanata 41: 32
exilis 41: 32
Groenlandica 41: 32
guadeloupensis 60: 21
incarnata 41: 32
interrupta 41: 32
lacustris 57: 3
lateralis 41: 32
magna 41: 32
mera 59: 27, 31, 32; 60: 21, 33, 36, 39
nitida 41: 32
planata 41: 32
promera 60: 21
radiata 41: 32
similis 59: 31, 33; 60: 21, 22, 36, 39
Tellinidora 41: 31
Telorchis bonnerensis 55: 45, 54
medius 55: 45
Tendipes 58: 8
plumosus 59: 11
(Parachironomus) varus 59: 7, 11
Terebra 59: 34
Terebratulina 41: 20
caput-serpentis 41: 20
Teredo 47: 14
Testacella 51: 11, 13, 40; 55: 34
haliotidea 51: 12, 15, 38, 40
haliotoidea 55: 1, 11
maugei 55: 1, 11
scutella 55: 1, 11
Tetracotyle 58: 11
flabelliformis 55: 45, 46
typica 58: 9, 11
Tetrapapillatrema 55: 54
Thala 60: 4
foveata 59: 30; 60: 4, 36, 39
Thalassia 60: 28
Thamnophis ordinoides 55: 53
Theba pisana 55: 31
virgata 55: 31
Theromyzon 58: 6; 59: 5
maculosum 59: 17
Thetis parva 60: 20
Thiara granifera 55: 31
Thracia 41: 33
Thuja 56: 31
Thujus plicata 47: 39
Thyasanophora 45: 25; 60: 12
conspurcatella 59: 27, 30; 60: 12, 33
horni 45: 22; 46: 8
hornii 45: 26
(Microphysula) ingersolli 45: 21
Thyridopteryx ephemaeriformis 58: 51
Toxolasma 42: 6, 9, 10, 13, 27, 29, 30; 52: 51
glans 42: 29, 30
lividum 49: 24
parva 42: 5, 8, 29, 30, 34

Toxolasma (cont.)
texasensis 42: 29
Tornatina candei 60: 8
Torquis 49: 4
Tracheophilus cymbium 55: 43
Tradescantia 55: 12
Transennella 60: 23
cubaniana 59: 31, 32; 60: 23, 39
tantilla 60: 29
Trepidopsis 41: 8
Tritonalia fusconotata 47: 18
Trichobilharzia cameroni 55: 45, 55
physellae 55: 45
Tricia (Helicella) holotricha 55: 28
(Helicella) lanuginosa 55: 28
(Helicella) striolata 55: 29
Tricolia 59: 37, 38
sp. 59: 34
affinis 59: 30, 32, 37, 38, 60; 60: 33, 36, 39
bella 59: 30, 32, 37, 38; 60: 36, 39
Tridacna 41: 27; 47: 5
Triganodistomum mutabile 55: 43, 55
Trigoniocardia antillarum 60: 20
medium 59: 34
Trilobopsis 48: 6, 12
penitens 48: 12, 14, 16
roperi 48: 12, 15
tehamana 48: 12, 15, 16
trachypepla 48: 12, 14
Triodopsis 41: 8, 11, 13, 15, 38; 52: 28; 55: 35; 57: 39
alabamensis 41: 41, 42; 42: 42; 49: 13
alleni 45: 34; 46: 16; 49: 13
albolabris 41: 37, 38, 42, 52; 42: 42; 43: 9, 22, 24; 48: 2; 49: 13, 32, 33; 52: 14; 56: 32, 39, 42, 51, 52; 57: 35, 38
a. traversensis 49: 33; 57: 39
appressa 41: 11, 15
burchi 42: 42; 49: 32
caroliniensis 41: 42, 52; 49: 13
claibornensis 43: 9; 49: 13
complanata 43: 9; 49: 13
cragini 41: 38; 45: 34, 36; 46: 16
denotata 41: 42; 41: 52; 42: 42; 43: 9; 45: 34; 48: 2; 49: 13, 32, 33; 57: 35
dentifera 41: 52; 42: 42; 49: 32; 57: 35
discoidea 45: 34
divesta 41: 38; 46: 16
fallax 41: 12, 15, 41, 42, 52; 42: 42; 49: 13, 31, 34; 57: 35
f. affinis 41: 41, 42; 49: 31
f. alabamensis 49: 31
f. hopetonensis 49: 31
f. obsoleta 41: 52; 49: 31, 33
fosteri 41: 52; 45: 34; 46: 16; 49: 13
fraudulenta 41: 52; 42: 42; 43: 8; 49: 31
f. vulgata 57: 35
holosericea 41: 15
hopetonensis 41: 41, 42, 53; 42: 42; 49: 13
h. chincoteagensis 49: 33
inflecta 41: 12, 15
juxtidens 41: 41, 52; 42: 42; 49: 32
lioderma 41: 38
major 41: 42; 49: 13
messana 41: 41, 42, 53; 42: 42; 49:31
multilineata 41: 52; 45: 34; 48: 2; 57: 35
neglecta 45: 34; 46: 16
n. vulgata 57: 35
notata 49: 33; 57: 35
obsoleta 41: 42; 42: 42
Triodopsis (cont.)
obstricta 49: 13
o. denotata 57: 35, 38
occidentalis 45: 33; 46: 16
palliata 41: 11, 15; 48: 12; 57: 35
pendula 49: 32
picea 41: 52
platysayoides 45: 33
rugosa 42: 42; 49: 12, 13, 32
r. anteridon 49: 32
soelneri 41: 42
tennesseensis 42: 42; 43: 9, 13, 32
tridentata 41: 10, 15, 41, 52; 42: 42; 43: 9, 22, 24; 48: 2; 49: 12, 13, 32; 57: 35, 38
t. juxtidens 43: 22, 24
vulgata 41: 52; 42: 42; 49: 13, 32
vannostrandi 41: 41, 42
Triphora 59: 30, 47, 48; 60: 36, 39
decorata 59: 48
modesta 59: 48
nigrocincta 59: 30, 48; 60: 36, 39
pyrrha 59: 48
turristhomae 59: 30, 32, 48; 60: 39
Tritogonia 42: 6, 9, 10, 12, 14, 18, 19
nobilis 42: 19
tuberculata 42: 18, 36
verrucosa 42: 5, 6, 8, 18, 33; 46: 12, 14; 49: 23, 33; 52: 46, 50, 51; 57: 42
Tritonalia 47: 17, 18
Triturus viridescens 59: 9
Trochatella 41: 20
Trochita 41: 5, 6
mamillaris 41: 6
radians 41: 6
Trochus 41: 2
Troglotrema mustelae 55: 46, 55
Tropicorbis 60: 11, 29
havanensis 60: 11
obstructus 60: 11
orbiculus 60: 11
risei 60: 11
Troschelviana chrysochasma 53: 6
erythraea 53: 6
Truncatella 59: 27, 30, 34, 39; 60: 26, 31
barbadensis 59: 39; 60: 33
bilabiata 60: 33, 39
caribaeensis 59: 39; 60: 33
pulchella 59: 39; 60: 33
p. bilabiata 59: 39
scalaris clathrus 59: 39; 60: 33
succinea 59: 39
Truncilla 42: 13, 24, 25
donaciformis 42: 5-8, 24, 34; 52: 46; 57: 42
truncata 42: 6, 8, 24, 34; 43: 2; 52: 46, 50, 51; 55: 37; 57: 42
Tryonia cheatumi 46: 7
Trypanosoma canadensis 59: 14
chrysemidis 59: 14
diemyctli 59: 9
Tubifex 53: 10
Tudora 41: 19
Turbo 41: 2, 3
argyrostomus 41: 4
chrysostomus 41: 3
cornutus 41: 4
coronatus 41: 3
crenulatus 41: 3
Fermoni 41: 3
fluctuatus 41: 3
fragaroides 41: 3
inaequalis 41: 3
Kausieri 41: 4
magus 41: 3
montagui 41: 3
Turbo (cont.)
Niloticus 41: 3
olivaceus 41: 3
Oliviri 41: 3
pica 41: 3
pulchellus 59: 38
radiatus 41: 3
rugosus 41: 3
tumidus 41: 3
umbilicatus 41: 3
undulatus 41: 3
unguis 41: 3
vernus 41: 3
versicolor 41: 4
Virgineus 41: 3
ziziphinus 41: 4
Turbonilla 59: 30, 36; 60: 7, 26, 36
bermudensis 59: 30, 32; 36; 60: 7, 36, 40
heilprini 59: 30; 60: 8, 36, 40
impressa 60: 6
insularis 60: 7, 8
pyrrha 59: 30; 60: 8, 36, 40
unilirata 59: 30; 60: 8, 36, 40
Turrithyra (Turrithyretes) echinulata 53: 5
(Turrithyretes) sinuosa 53: 6
Typha 52: 3, 11, 21; 56: 31
Typhocoelium cymbium 55: 55

Ulostoma profunda 57: 34
Ulmus 52: 3, 8, 11
Utriculus canaliculata 60: 8
Umbonium 41: 28
Umbrella 41: 20
indica 41: 20
Unio 41: 24; 42: 14, 37
alatus 41: 26
anodontoides 41: 25
cariosus 41: 26
circulus 41: 26
complanatus 41: 25
compressus 41: 25
cornutus 41: 24
dombeyana 42: 39
ebenus 41: 25
ellipsis 41: 26
formosus 41: 24
gibbosus 41: 25; 42: 23
graniferus 41: 25
haleianus 42: 29
lachrymosus 41: 25
laevissimus 41: 25
Lappianus 41: 25
ligamentinus 41: 25; 43: 25
littoralis 41: 25
lividus 52: 51
luteolus 41: 25; 42: 39
metanevrus 41: 25
multiradiatus 41: 26
nanus 41: 25
nasutus 41: 25
Novae-eboraci 41: 26; 43: 25
occidens 41: 26
parvus 41: 25; 42: 29
phaseolus 42: 23
pictorum 41: 25
planilaterus 49: 33
plicatus 41: 24
purpureus 41: 25
pustulatus 41: 25
radiatus 41: 25
requieni 41: 25
sayii 41: 48
siliquoidea 41: 25
tappanianus 41: 47, 48
tetralasmus 42: 22
texasensis 42: 29

Unio (cont.)
trigonus 41: 26
tuberculatus 41: 25
undulatus 41: 24
ventricosus 41: 26
verrucosus 41: 25
viridis 41: 48
Uniomerus 42: 12, 14, 22
obesus 42: 22, 23
tetralasmus 42: 5, 8, 22, 34; 46: 14; 49: 23
Urocoptis 45: 41
Uvulifer ambloplites 55: 44

Vaginulus alte 55: 31
linguaeformis 55: 31
olivaceus 55: 31
plebeius 55: 31
pulcher 55: 31
Vallisneria 50: 77; 53: 10; 56: 27; 57: 9
spiralis 53: 10, 16
Vallonia 41: 8, 13, 46; 45: 21; 49: 4
albula 57: 36
costata 41: 11, 57; 42: 45; 49: 27; 56: 36, 39, 42, 45; 57: 36
cyclophorella 51: 3, 4, 6; 52: 28
excentrica 41: 57; 42: 45; 45: 35; 49: 6, 7, 17, 26; 57: 36
gracilicosta 45: 36; 46: 6, 9; 51: 3, 4, 6
minuta 57: 36
paludosa 41: 11; 45: 35, 36; 46: 9, 14
perspectiva 41: 57; 45: 36; 46: 9; 49: 27
pulchella 41: 11, 16, 57; 42: 45; 43: 3; 45: 35; 49: 6-8, 26; 51: 3, 4, 6, 7; 52: 10, 14, 22; 55: 31; 56: 35, 39, 42, 45; 57: 36
p. gracilicosta 49: 6
Valvata 56: 41, 51, 52
arenifera 51: 10
bicarinata 48: 3
perdepressa 52: 21
piscinalis 55: 1, 5, 35, 36; 57: 28; 58: 5
sincera 48: 18, 21-27; 52: 16, 18; 56: 26, 27, 38, 39, 40, 42, 45, 48, 51; 57: 7, 8, 14
s. danielsi 57: 7
tricarinata 48: 18, 21-27; 49: 25; 52: 1, 5-7, 9, 10, 16-25; 56: 27, 30, 37-40, 42, 44-46, 48-53, 56, 60, 62; 57: 7, 8, 14, 15; 58: 12, 14, 16, 17, 48; 59: 8
t. bicarinata 49: 33
t. perconfusa 49: 25, 33
Vasotrema robustum 55: 45, 55
Vasum 41: 29
Venericardia 60: 20
Venerupis 41: 30
Ventridens 49: 34; 52: 30, 41; 57: 39
acerra 42: 43; 43: 6; 49: 15, 30; 52: 43
brittsi 46: 16; 52: 41, 42
cerinoideus 41: 43; 42: 43; 49: 30
coelaxis 42: 43; 49: 15, 30
collisella 42: 43; 49: 15, 30
decussatus 49: 15
demissus 41: 54; 42: 43; 43: 6; 48: 12; 49: 15, 30; 52: 14, 36, 41, 42
d. lamellidens 52: 42
elliotti 41: 43; 42: 44; 49: 15, 30
eutropus 49: 15
gularis 41: 43; 42: 43; 49: 15, 30
g. cerinoideus 41: 54
g. theloides 49: 30
intertextus 41: 43, 54; 42: 44; 43: 6; 49: 15, 30; 57: 37
Ventridens (cont.)
intertextus eutropis 43: 7
lasmodon 42: 43; 49: 15; 49: 30
lawae 42: 43; 43: 6; 49: 15, 30
ligera 41: 38; 43: 7; 48: 2; 49: 15; 52: 33, 41, 42; 57: 37
ligerus 41: 54; 42: 44; 45: 35; 46: 16; 49: 30
multidentata 57: 37
nodus 43: 6
percallosus 49: 15
pilsbryi 41: 43; 42: 43; 43: 7; 49: 15, 30
suppressus 41: 54; 42: 43; 49: 30; 57: 37
s. magnidens 49: 30
s. virginicus 49: 30
theloides 42: 43; 49: 15
virginicus 41: 54; 42: 43
Venus 41: 29, 30
cancellata 41: 30
columbiensis 41: 30
dentifera 41: 30
gallina 41: 30
gnidia 41: 30
luctuosa 41: 30
mercenaria 41: 30; 50: 89
Mortoni 41: 30
paphia 41: 30
purpera 41: 30
simillima 41: 30
subrugosa 41: 30
verrucosa 41: 30
Vermicularia 59: 34, 44
spirata 59: 44; 60: 36, 40
Veronicella ameghini 55: 1, 7
kraussi 55: 1, 7
moreleti 55: 1, 7
occidentalis 55: 1, 7
sloani 55: 1, 7
Vertigo 41: 8; 52: 10, 14
alabamensis 45: 33; 46: 10
a. conecuhensis 46: 10
arthuri 45: 33
bollesiana 41: 57; 49: 29; 57: 36
columbiana 47: 44
elatior 49: 27; 51: 3, 4, 6, 7; 56:38
gouldi 41: 57; 42: 45; 43: 3; 45: 35; 49: 17, 29; 57: 36
g. bollesiana 57: 36
hebardi 45: 33
milium 41: 39, 44, 56; 42: 46; 43: 3; 45: 35, 36; 46: 10; 49: 17, 27; 51: 3, 4; 57: 36
morsei 56: 35, 38, 39, 42, 45, 46, 48, 49, 51, 52, 56, 59, 62; 57:36
oralis 41: 44, 56; 42: 45; 45: 36; 49: 27
oscariana 41: 44, 56; 42: 45; 45: 35; 46: 17; 49: 17, 27
ovata 41: 39, 44; 56; 42: 45; 45: 35, 36; 46: 10, 49: 27; 51: 3, 4; 57: 36
parvula 42: 45; 49: 27
pentodon 57: 13
pygmaea 41: 57; 49: 27
pygmaeum 57: 36
rugosula 41: 39; 45: 36; 49: 17
simplex 57: 35
teskeyae 41: 44, 56; 42: 45; 45: 36; 49: 27
tridentata 41: 57; 42: 45; 43: 3; 45: 35; 49: 17, 27; 57: 36
ventricosa 41: 57; 43: 3; 49: 27; 57: 36
wheeleri 45: 33
Vespericola 48: 6, 12
columbiana oria 48: 12, 14
hapla 48: 12, 13
karakorum 48: 12, 14
Vespericola (cont.)
megasoma euthales 48: 12, 14
shasta 48: 12, 15
sierrana 48: 12, 15
Vexillum 60: 3
albocinctum 59: 30; 60: 3, 36, 40
hanleyi 59: 30; 60: 4, 36, 40
Viana 45: 38
Vibrio 45: 4
Villosa 42: 5-7, 10, 13, 27-30
constricta 49: 24
fabalis 49: 24; 52: 46
iris 42: 22, 28, 31; 43: 22, 24; 25; 57: 40, 42
i. nebulosa 49: 24
lienosa 42: 6, 28, 30, 31, 34
(Micromya) nebulosa 52: 46, 50, 51
perpurea 49: 24
(Micromya) taeniata 52: 46, 50, 51
vanuxemensis 52: 46,50, 51
vanuxemi 49: 24
Vitrea binneyana 57: 37
cellaria 55: 33; 57: 37
draparnaldi 55: 36
ferrea 57: 37
hammonis 57: 37
indentata 57: 37
Vitrina 41: 8; 45: 22, 23
alaskana 47: 44
diaphana 55: 31
limpida 41: 53; 45: 21; 57: 37, 39
pellucida 45: 21; 57: 37
p. alaskana 45: 21
Vitrinella 59: 41; 60: 26, 30
floridana 59: 30, 41; 60: 29, 40
helicoidea 59: 41; 60: 36, 40
Vitrinizonites latissimus 42: 43; 49: 14, 29
Vivipara viviparis 48: 2
Viviparus 55: 32; 58: 50
chinensis 58: 12
contectoides 48: 2; 55: 34
georgianus 49: 24
intertextus 48: 18, 21-27
japonicus 55: 4, 32, 34
malleatus 55: 1, 4, 32, 34-36; 57: 28, 31; 59: 8
(Cipangopaludina) malleatus 58: 12, 14, 16, 17, 48
oxytropis 55: 6; 58: 50
viviparus 55: 1, 5, 32
Volutharpa 47: 13
Volvarina 60: 3

Wardius zibethicus 55: 44, 54
Wolffia 52: 3; 56: 26
Wrightudora 53: 5

Xenopoma hystrix 53: 6
Xolotrema appressa 57: 34
palliata 57: 35

Zachrysia 45: 37
provisoria 55: 2, 20
Zalophancylus 54: 28
Zebina 59: 41
browniana 59: 30, 32, 40; 60: 36, 40
Zebinella 59: 41
Zeidora 60: 27
Zeugorchis zyntomentera 55: 45, 53
Zonites 41: 9, 17
Algirus 41: 17
arboreus 57: 37
chersina 57: 36
fuliginoea 41: 17; 57: 37
friabilis 41: 17
gularis 41: 17
indentatus 57: 37
inornatus 57: 37

Zonites (cont.)
intertextus 57: 37
ligerus 57: 37
limatulus 57: 38
minuscula 57: 37
multidentatus 57: 37
nitida 41: 17; 57: 38
suppressus 57: 37
viridulus 57: 37
Zonitoides 45: 26; 52: 30, 42
arborea 45: 23
Zonitoides (cont.)
arboreus 41: 39, 43, 54; 42: 44; 43: 7; 45: 35, 36; 46: 9, 14, 16; 47: 8; 48: 2; 49: 15, 30; 51: 4; 52: 17, 22, 23, 25, 38, 42; 56: 33, 39, 40, 42,445, 46, 48, 49, 51, 56, 59, 62; 57: 37, 38
exiguus 57: 37
lateumbilicatus 43: 7; 49: 15
limatulus 45: 35; 48: 2; 57: 37
milium 57: 37
minuscula 57: 37
Zonitoides (cont.)
minuscula 57: 37
nitidus 41: 54; 43: 7; 52: 31, 42 57: 38
patuloides 41: 43
(Ventridens) suppressa 55: 36
Zoögenetes harpa 57: 36
Zua subcylindrica 57: 33
Zygocotyle lunata 55: 44, 55

AUTHOR INDEX TO STERKIANA VOLUMES 51-60

BRANSON, Branley A. (1973) The Recent Gastropoda of Oklahoma, Part VII. The Zonitidae.-- 52: 28-44, 13 figs.

BROWN, Regina (1974) Resources for malacological research in Orton Memorial Library of Geology. -- 54: 29-50.

CAMP, Mark J. (1973) Pleistocene lacustrine deposits and molluscan paleontology of western Ohio, eastern Indiana and southern Michigan. -- 52: 1-28, 8 text figs., 9 tables.

---- (1974) Pleistocene Mollusca of three southeastern Michigan marl deposits. -- 56: 21-64, 10 pls., 10 text figs., 8 tables.

CARNES, Susan Fraker (1975) Mollusks from Southern Nichupté Lagoon, Quintana Roo, Mexico. -- 59: 21-50, 5 text figs., tables 1-4, pl. 1. 60: 1-40,

CHICHESTER, Lyle F. & GETZ, Lowell L. (1973) The terrestrial slugs of Northeastern North America. -- 51: 11-42, 8 text figs.

CORGAN, James X. (1974) Further notes on pseudogastropods. -- 54:28.

COURI, Claydon C. (1973) A new Pleistocene faunule from Meade County, Kansas. gg 51: 1-9, 3 text

DUNDEE, Dee S. (1974) Catalog of introduced molluscs of Eastern North America (north of Mexico). -- 55: 1-37.

FLOWERS, Will (1975) Notes on the current status of Wisconsin Unionidae. -- 57: 40-42, 1 fig., 2 tables.

FRENCH, John Robert Putnam III (1974) Improved methods for culturing the subspecies of *Oncomelania hupensis:* the snail hosts of *Schistosoma japonicum,* the oriental human blood fluke.-- 56:1-20, 10 text figs.

JACOBSON, Morris K. (1974) Charles Wright (1811-1885) in Cuba as revealed by his letters. -- 53: 1-6, 2 figs., incl. portrait.

KATSIGIANIS, Theodore & HARMAN, Willard N. (1974) Ecological notes on the trematode parasites of *Helisoma anceps* (Menke) in a eutrophic lake, including a check-list of the cercariae that occur on mollusks indigenous to Otsego County, New York. -- 55: 39-55, 7 text figs.

KLEMM, Donald J. (1975) Studies on the feeding relationships of leeches (Annelida: Hirudinea) as natural associates of mollusks. -- 58: 1-50, figs. 1-26, tables 1-38; 59: 1-20.

La ROCQUE, A. (1973) Pseudogastropods. -- 51:10.

---- (1973) Claude W. Hibbard (1905-1973). -- 52: 56.

---- (1974) Review of: Keen, A. Myra and Coan, Eugene (1973) Marine molluscan genera of western North America. An illustrated Key. Second edition. -- 55: 55.

LEFEVRE, G. & CURTIS, W.C. (1973) Reprints of rare papers on Mollusca: Studies on the reproduction and artificial propagation of fresh water mussels .... 53: (43-50) original pages 147-154. 57:(43-50) original pages 155-162.

LIANG, Yung-San (1974) Cultivation of *Bulinus (Physopsis) globosus* (Morelet) and *Biomphalaria pfeifferi pfeifferi* (Krauss), snail hosts of Schistosomiasis. -- 53: 7-52, 17 text figs., 37 tables; 54: 1-27, tables 38-47.

LITTLETON, Thomas G. (1975) *Gulella bicolor* (Hutton) in Texas. -- 58: 51.

MATHIAK, Harold A. (1974) Two rare mollusk records for Wisconsin. -- 55: 37.

---- (1974) Buttons to pearls to chips or a new use for clams. -- 55: 37.

NECK, Raymond W. (1975) Bagworms as pseudogastropods. -- 58: 51.

van der SCHALIE, Henry (1973) The mollusks of the Duck River drainage in central Tennessee. -- 52: 45-55, 1 text fig., 5 tables.

VAILLANCOURT, Guy & COUTURE, Richard (1975) Effets des variations de la température de l'eau sur quelques espèces de Physidae, Lymnaeidae, Planorbidae et Hydrobiidae (Gastropoda). -- 57: 18-32.

WOOTTON, Clyde Francis (1975) Pleistocene Mollusca of the Colon Deposit, St. Joseph County, Michigan. -- 57: 1-17, 5 text figs.

WURZINGER, K-Hans (1975) The land snails of New York State. Preliminary report. -- 57: 33-39.