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wards the dorsal anteriorly; head arquated; eye very large; pupil and iris very large; dorsal fin long, divided into two equal parts, the anterior part of 9 spinous rays, and much lower than the soft part, which is rounded, with 14 divided rays; anal equal to the posterior part of the dorsal and of 13 rays, of which 3 are spinous; caudal of 15 to 18 rays; pectoral large, placed very low near the operculum; thoracic fin much smaller than the pectoral, and placed exactly beneath them; anal large; scales very small; colour deep gray, tinted with bluish on the back, with metallic reflections on the sides and abdomen, and with points or small black and brown spots on the abdomen and back, and a spot upon the neck; lateral line straight, on the middle of the body; caudal fin subtruncated, of 17 or 18 rays; teeth very small, in many ranges on the jaws and palate; mouth deeply divided.

Lives in the small lagoons of tranquil water, which discharge by narrow channels into Lake Erie.

Its length is 9 lines.

An account of some of the marine shells of the United States. By THOMAS SAY. Read July 24, 1821.

During occasional visits to our sea coast, and particularly on a journey to East Florida, in company with Messrs. Maclure, Ord, and T. Peale, I availed myself of every favourable opportunity to collect ma-

rine shells, whilst engaged in the pursuit of other and more favourite objects.

No naturalist, however conversant he may be with marine productions, can examine our sea coast for a single day with ordinary assiduity, without discovering something new or interesting to reward his labours, and to gratify his laudable curiosity. Accordingly, these researches furnished my cabinet with a great number of shells which were unknown to me, and of which many appeared to be unnoticed in those works on conchology to which I could obtain access.

But, supposing that these apparently new species, many of which, being either abundant in individuals, or attractive to the eye by beauty of colouring or symmetry of form, had been often observed by foreign naturalists and collectors, and in all probability had long since been transmitted to Europe, and perhaps published in some splendid volume, or, to us, obscure tract, of which the title had not yet reached this country, I was induced to relinquish any further investigation of the subject, and to dwell upon the hope of receiving more exotic information than we already possessed.

This course I was the more readily inclined to pursue, in consequence of being informed that an American zoologist had already commenced the examination of our marine shells, with the intention of publishing the result of his observations. Several years have, however, since elapsed without any addition to our knowledge in this department of Natural History, from the pen of an American author.

Several naturalists who now devote a portion of their attention to conchology, and particularly to that of the United States, having recently requested me to publish an account of our marine shells, I have thought it might be useful to communicate to them immediately, descriptions of those which I do not find to be distinctly described by attainable authors. Such species or varieties, only, are made known in the following essay.

With a view to condense this paper as much as possible, I have omitted the generic characters, but at the same time, I have been careful to subjoin to the generic names that are here adopted, abbreviations of the author's names, who formed them respectively, or whose generic definitions I have followed.

TYPE AND CLASS,
MOLLUSCA GASTEROPODA.

PATELLA. *Lin. Lam.*

*P. *amœna.* Shell oblong-oval, whitish reticulated with reddish-brown, and sculptured with numerous minute concentric wrinkles and close set radii; *margin* entire; *apex* placed behind the middle, and pointing backwards.

Coast of New England states.

Length of a small specimen, 7-20, breadth 1-5 of an inch. Breadth of a larger one 3-10 nearly.

My cabinet.

It may be readily distinguished in general by the beautiful reticulated disposition of the rufous colour,

inclosing small irregularly oval, white, or yellowish-white spots. They sometimes however, are of a uniform greenish or brownish colour. Several specimens of this species were communicated to me by Mr. Aaron Stone, who found them on the coast of Maine.

FISSURELLA, *Lam.*

SPECIES.

*F. *alternata.* *Shell* oblong-ovate, moderately thick, cinereous or dusky, with equal concentric lines, crossed by alternately larger and smaller radii, all which are equable or not dilated in any part; *vertex* placed nearer the smaller end; *perforation* oblique, oblong and a little contracted in the middle; *within* white; margin simply crenate; *apex* with an indented transverse line at the larger end of the perforation.

Length four-fifths of an inch.

Breadth three-fifths.

Height more than two-fifths.

Inhabits the coast of the United States.

Cabinet of the Academy, and Philadelphia Museum.

Bears a general resemblance in its sculpture to *F. Græca*, but the radii are not dilated at the points where they are crossed by the concentric lines. I have specimens from the coast of Maryland that measure one inch and a half in length.

CREPIDULA. *Lam.*

SPECIES.

1. *C. fornicata*? *var.* *Shell* transversely wrinkled, varying in convexity, with obsolete longitudinal, undulated, rufous lines; one side more oblique than the other; *apex* excurved, a little prominent, but not separated from the body of the shell, and generally united with the margin of the aperture; *aperture* suboval; *diaphragm* a little concave, occupying at least half of the length, edge generally reclivate.

Inhabits the coast of the United States.

Length 2 inches.

Cabinet of the Academy and Philadelphia Museum.

Seems to differ from the species as described by Roissy in Sonni. Buff. by having lateral lineations instead of spots. It may very probably be a distinct species.

2. *C. *depressa.* *Shell* very much depressed, transversely wrinkled, nearly equilateral; *epidernis* pale yellowish-brown; *apex* not curved, forming a simple acute terminal angle upon the margin of the aperture; *aperture* subovate; within white; *diaphragm* convex, edge contracted in the middle and at one side.

Length four-fifths of an inch.

Inhabits the southern coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

Differs from the preceding in the form of the beak, which is never arquated.

3. C. **glauca*. Shell thin, convex, glaucous, with minute transverse wrinkles; *apex* conic, acute, not excurved, but declining and distinct from the margin of the aperture; *aperture* oval-orbicular; *within* entirely reddish-brown; *diaphragm* plain or convex, less than half the length of the shell, edge widely contracted in the middle.

Length about half an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

Very distinct from the preceding species.

4. C. **plana*. Shell depressed, flat, oblong oval, transversely wrinkled, lateral margins abruptly deflected; *apex* not prominent, and constituting a mere terminal angle, obsolete in the old shells; *within* white; *diaphragm* occupying half the length of the shell, convex, contracted in the middle and at one side.

Length 1 and 1-10 of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

A remarkably distinct species, the surface of the shell is flat, and sometimes slightly concave. The

young shell is generally orbicular, and gradually becomes proportionally more elongated as it increases in size. I have found it on the coasts of Maryland, Carolina, Georgia and East Florida, and my brother, Mr. Benjamin Say, discovered it on the shores of New Jersey.

5. *C. intorta?* var. *Shell* convex, ovate, with about twenty elevated, somewhat undulated, lines, with alternate smaller ones; lines somewhat confused on the convex side of the shell, the larger lines with a few slightly elevated, very thick fornicated tubercles; *apex* curving laterally, tip pointing upwards and not elevated from the body of the shell.

Inhabits the southern coast.

Of this shell I found but a single specimen, which is very imperfect. It seems to correspond very well with the description of *C. intorta* of the coast of England, with the exception of the form of the vertex, which in that species is said to *turn downwards*, whereas, in our shell, it not only turns downwards, but the curve is continued until the tip points upwards.

6. *C. *convexa.* *Shell* very convex, obsoletely wrinkled or glabrous, one side vertical, the other oblique; *apex* prominent, decurved, slightly inclining towards the oblique margin, tip generally free and extending lower than the edge of the aperture; *aperture* suboval; *diaphragm* less than half the length of the shell, edge simply arquated.

Length three-fifths of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This species is not uncommon, particularly upon our southern coast. The description is drawn from what are termed dead shells, but I have one specimen which is varied with rufous and whitish.

OLIVA, Brug.

SPECIES.

*O. *mutica.* Shell suboval, white, or yellowish-white; *body whirl* with about three revolving maculated bands of pale rufous, of which the superior one is continued upon the spire, the intermediate one is dilated so as to be sometimes confluent with the inferior one, which is narrowest; *spire* short; *suture* very narrow; *columella* destitute of striæ.

Length more than two-fifths of an inch.

Inhabits the southern shores.

Cabinet of the Academy and Philadelphia Museum.

A common shell, varying somewhat in colour; the bands are sometimes deep reddish-brown, sometimes livid, rarely all united and offering only a white line near the base. It seems allied to the *O. zonalis* as described by Lamarck, but is a larger species.

BUCCINUM, *L. Lam.*

*B. *ornatum.* Shell subturbinated, with about two bands of arched scales.

Inhabits the coast of East Florida.

Cabinet of Mr. William Hyde.

Shell subturbinated, with numerous revolving striæ and intermediate grooves; whitish cinereous, with rufous bands, and transverse, irregular wrinkles, and obsolete undulations separated by somewhat rugged incisures; near the base is a band of ten or twelve elevated arched scales, disappearing in the aperture; whirls flattened above the shoulder, and armed in that part with undulated lamellæ, which on the shoulder are elevated into prominent concave spines; *spire* prominent; *whirls* transversely undulated, the arched scales disappearing towards the tip; *aperture* effuse; *throat* varied with pale green and yellowish, the rufous bands being very distinct; *umbilicus* none.

Length 4 inches. Aperture 2 3-4 inches. Spire 1 $\frac{1}{2}$ inch.

This fine coronated shell, seems to agree better with the descriptions of *B. armigerum* and *bezoar*, than with those of any other species, as far as I have been able to ascertain. To the latter it seems to be more closely related, with Argenville's figure of which it corresponds in the form and position of the basal band of scales, excepting that it has this band far more oblique; that figure however is much less elongated than our shell, and it appears to have a

double series of prominent scales on the shoulder. The *bezoar*, moreover, is described to be umbilicated, a character which does not exist in our species.

COLOMBELLA, *Lam.*

SPECIES.

*C. *avara.* *Shell* small, covered with a dirty-brownish pigment, beneath which it is whitish reticulated or maculated with rufous; *spire* elevated, acute; *volutions* eight, with spiral impressed lines, and transverse elevated obtuse costa; the costa upon the body whirl are terminated at the middle, and are about eleven in number; *labium* with a distinct plate crenated on the submargin; *labrum* denticulated within, but not very perceptibly thickened on the inner middle.

Length less than half an inch.

Inhabits the coast of the southern states.

Cabinet of the Academy and Philadelphia Museum.

Does not fully correspond with the characters of this genus, as the labrum is not very distinctly dilated on the inner middle, and the spire has the elevation of a *Mitra*.

It is a common species, and occurs as far north as the coast of Maryland.

NASSA, Lam.

SPECIES.

1. N. **vibex*. Shell cancellate, ventricose, cinereous or pale reddish-brown, with two or three irregular, sometimes obsolete darker fascia; *body whirl* with twelve thick, prominent costa, and about as many revolving filiform lines, which are not much elevated, and but simply crenate the costa and lip; *labrum* incrassated, with about two more prominent teeth within; *labium* callous; *spire* short, rapidly attenuated to an acute tip.

Length three-fifths of an inch.

Inhabits the southern and middle coast.

Cabinet of the Academy and Philadelphia Museum.

Rather rare. I found but four specimens. For the locality of the coast of the middle states, I am indebted to my brother, Mr. B. Say, who brought me a specimen from the shores of New Jersey.

2. N. **trivittata*. Shell conic acute, yellowish-white, cancellate so as to appear granulated, granules prominent, equidistant; ten revolving impressed lines on the *body whirl*, and a somewhat more conspicuous groove near the summit of each volution; *spire* as long or longer than the body, and with a rufous revolving line near the suture; *body whirl* trilineate with rufous, the lines placed one near the suture, one

on the middle, and the third rather darker, at the origin of the beak ; *suture* regular and deeply impressed ; *beak* distinguished by a profound depression, from the body whirl, slightly reflected ; *labrum* not incrassated, with raised lines within upon the fauces which do not extend quite to the edge of the lip ; *labium* distinctly lamellar, with an obsolete fold of the basal edge, and a tooth near the superior junction with the labrum.

Length about 7-10 of an inch.

Inhabits the middle and southern states.

Cabinet of the Academy and Philadelphia Museum.

A very common species.

It somewhat resembles Maton and Rackett's figure of *Buccinum macula*, (Linn. Trans. Lond. vol. 8.) in the cancellated appearance, but it is a longer shell and destitute of the incrassated aperture. This species is closely allied to the genus *Phos* of Montfort, by the striated labrum, and the projection or slight fold at the base of the columella, but it has no appearance of umbilicus, a character, which, in the system of that author, is an essential one.

3. N. **obsoleta*. *Shell* ovate-conic, subacute, cancellate, exhibiting a granulated appearance, dark reddish-brown, or blackish, sometimes tinged with olivaceous ; *spire* shorter than the body ; *suture* not deeply impressed ; *beak* not distinguished from the body whirl by any profound depression, and not prominent ; *labrum* within lineated with elevated,

abbreviated or interrupted lines, not incrassated, purple-black; *columella* at base with a prominence or fold.

Length three-fifths of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

ANIMAL—*Foot* as long as the shell, rounded before, with the anterior angles elongated, conic, reflected and resembling short tentacula; *head* not extended beyond the shell; *eyes* above the base of the tentacula, placed on their exterior side and black; *tentacula* setaceous, abruptly smaller above the eyes; *trunk* cylindrical, the suture beneath, exerted over the head, half as long as the shell and very conspicuous.

Inhabits the shores of our estuaries in great numbers. When left by the recess of the tide, they collect together in small pools, or crawl in pursuit of the retiring water; but when left quite dry, they burrow in the sand so as to conceal themselves from the action of the sun, and patiently await the returning tide. They assemble about dead crabs and other animals, and appear to feed upon them.

This shell is more frequented by *Pagurus longicarpus* than any other; it bears a general resemblance to the preceding species, but is sufficiently distinguished by being less elongated, the suture and impressed lines not being so profound, and the beak less prominent and distinct; the colour also is very different.

It resembles the shell represented by Lister, plate 976, fig. 32. "Buccinum B. r. parvum nigrum ex toto læve." It is usually covered by a blackish pigment which obscures its character: within the aperture, on many specimens, a dull or obsolete whitish line may be seen.

The description shows the near approach of this shell to Montfort's genus *Phos*, to which it is as closely allied as the preceding species.

4. N. **acuta*. *Shell* conic-acute, whitish, cancellated so as to appear granulated, granules prominent, somewhat transverse, inequidistant, the transverse grooves being more profound and dilated than the spiral ones, which are six in number; *spire* longer than the body whirl, slender towards the tip, acute; *suture* impressed, but not profoundly; *beak* distinguished by a depression from the body whirl, and slightly reflected; *labrum* incrassated, and with elevated lines upon the fauces, which do not attain the edge of the lip.

Length half an inch.

Inhabits the shores of the southern states.

Cabinet of the Academy and Philadelphia Museum.

A species which not unfrequently occurs, it is very distinct from the two preceding ones, and may be readily distinguished from them by the incrassated outer lip.

CERITHIUM, *Brug.*

SPECIES.

*C. *dislocatum.* Shell attenuated, acute at the apex; *volution*s with numerous, minute, revolving impressed lines, and from fifteen to eighteen transverse, elevated costa to each *volution*, which are dislocated near the summit of each *volution* by a revolving line, as deeply impressed as the suture.

Length one and one-fourth of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This shell is very common on the southern shores, particularly on that of East Florida, but I have also found specimens on the shore of Maryland. Lister tab. 979, fig. 36, represents a shell very similar to this, but larger.

The effect of the impressed line, which revolves above the middle of the *volution*s, is, to separate the longitudinal raised lines into two series, whereof the lines of the superior series, are much shorter and thicker than the others.

FUSUS, *Montf.*

SPECIES.

*F. *cinereus.* Shell with a cinereous epidermis, reddish-brown beneath; *volution*s cancellate, the transverse costa eleven, robust; revolving lines filiform, irregularly alternately smaller, crenating the edge of the exterior lip, which is acute, and alternating with the raised lines of the fauces; *fauces* tinged with chocolate colour; *beak* short, obtuse, not rectilinear; *labrum* not incrassated.

Length one and one-fourth of an inch.

Inhabits the estuaries of the United States.

Cabinet of the Academy and Philadelphia Museum.

I have frequently found this species in oozy places of the bay of Great Egg Harbour, and on the Eastern shore of Maryland. My brother, B. Say, ascertained that it is also an inhabitant of the coast of New Jersey.

RANELLA, *Lam.*

SPECIES.

*R. *caudata.* Shell pale reddish-brown, cancellate with eleven robust costa to the body whirl, and several revolving filiform lines passing over them, which are more prominent upon the varice of the aperture, terminate at its inner edge, and there alter-

nate with the raised lines of the fauces; *volutions* flattened at their summits, abruptly declining to the suture; *canal* coarctate, rather longer than the spire; *beak* rectilinear, reflected at the tip.

Length one inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

A rather common species.

This generic name I think objectionable, inasmuch as it borders too closely upon *Renilla*, which designates a genus of the class Polypi of Lanarck. Montfort's appellation *Buffo* is not preferable for a similar reason, as it would be liable to be confounded with *Bufo*, a genus of Reptilia.

FULGUR, *Montf.*

*F. *pyruloides.* Shell with spiral striæ alternately larger; *whirls* white, transversely lineated with ferruginous lines, interrupted or obsolete on the middle; above flattened, unarmed; *spire* short; *suture* profoundly canaliculate.

Seba. Vol. 3. pl. 68. fig. 19, 20?

Lister, conch. pl. 877?

Length three inches and four-fifths.

Breadth one inch and one-tenth.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

At first sight this species would be referred to the

genus *Pyrula*, but upon inspection it will be observed to have a fold on the columella. I formerly mistook the young shells for those of *F. caniculata* or *granum*, which they much resemble in form, in the grooved sutures, and in the spiral striæ; but they differ from them in having a much less elevated spire, by being entirely destitute of armature, either of spines or tubercles upon the angulated ridge of the volutions, and by being marked with coloured lines. In this last character they approach *F. perversus*, but they will not be mistaken for that species.

As the shell advances in growth, the acute edge of the depressed top of the whirls becomes obtuse, and in the adult shell it is nearly obsolete; in which state the almost regular curve of the whirl is very like that of *Pyrula*.

Seba's figures above quoted, are probably intended for this species; they certainly represent it very well as it appears in the young state.

I think it highly probable that this is the *Bulla Ficus*, *Var. b.* Gmel. which Dillwyn describes under the name of *Bulla pyrum*, with the country of which he was unacquainted.

PYRULA, Lam.

SPECIES.

*P. *papyratia.* Shell inflated, thin, white, with small pale rufous spots, within pale, dull purplish-

red ; *whirls* with numerous spiral striæ, which are alternately larger, crossed by smaller striæ.

Length four inches and one-tenth.

Greatest breadth two inches and one-fifth nearly.

Inhabits the coast of Georgia and East Florida.

Cabinet of the Academy.

This species has been hitherto confounded with *P. ficus*, to which indeed it is closely allied, but differs in having the beak proportionably longer, and in being but slightly spotted.

It is also an inhabitant of the West Indies.

TURBO, *Lin. Montf.*

SPECIES.

1. *T. *irroratus*. *Shell* thick, greenish or pale cinereous, with numerous revolving, elevated, obtuse, equal lines, which are spotted with abbreviated brownish lines ; *suture* not indented ; *spire* acute ; *labium* incrassated, yellowish-brown ; *labrum* within white and thick, at the edge thin, and lineated with dark brownish ; *throat* white ; *columella* with an indentation ; *operculum* coriaceous.

Length four-fifths of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This has the general appearance of *T. littoreus*, but is sufficiently distinct by the above characters ; the calcareous deposit on the labium is copious.

An inhabitant of our estuaries of the middle and southern states. I have found them on the Eastern shore of Maryland, and upon the coast of Carolina, Georgia and Florida; and my brother obtained a specimen on the coast of New Jersey, of the length of one inch and one-tenth nearly. Mr. Cuvier would place this shell in the genus *Paludina*.

2. *T. *canaliculatus*. *Shell* thin globular, with about four volutions; *body whirl* with four profound striated grooves, and several smaller ones near the base and suture; *suture* profoundly indented; *colour* pale reddish-brown, immaculate.

Length about one-tenth of an inch.

Inhabits the southern coast.

ANIMAL—*foot* shorter than the shell, oval; *tentacula* rather robust, filiform, half as long as the foot; *eyes* at the external base of the tentacula.

I have obtained but a single individual of this species. If it is only an immature specimen, we know nothing of the parent of it.

3. *T. *palliatus*. *Shell* suboval, not remarkably thickened; *whirls* four or five, wrinkled transversely; *spire* short, convex, obtuse, much shorter than the aperture; *suture* moderately indented.

Length about one-third of an inch.

Greatest breadth about the same.

Inhabits the shores of the New England states.

Cabinets of Mr. Aaron Stone, Mr. Wm. Hyde and my own.

July 18 22

This species was found by Mr. Aaron Stone on sea-weed, about low water mark. It is often variegated with olivaceous and white, or green and yellowish, so as to exhibit a reticulated appearance; but they are very frequently covered with a greenish, or reddish-brown pigment, which sometimes conceals the reticulated surface; and sometimes with a plain yellowish white immaculate one. The shell within is very often of a dark reddish-brown colour, with the oral margin whitish; but the same part is sometimes entirely whitish.

4. *T. *obligatus*. Shell suboval, not thickened; whirls five, transversely wrinkled, and longitudinally striated with obtuse slightly elevated lines; spire short, much shorter than the aperture; suture indented.

Length about one-third of an inch.

Greatest breadth about the same.

Inhabits Portland, Maine.

Cabinets of Messrs. Stone, Hyde and Say.

This species strongly resembles the preceding, but is distinguished by the elevated, obtuse, revolving lines, or acute impressed ones. The colours are greenish, olivaceous, or whitish, with darker, irregular, transverse lines or shades, and the throat is dark reddish-brown, the margin of the mouth whitish. It is very possible that it is only a variety of the preceding.

5. *T. *vestita*. Shell conic, rather thin; whirls

about six, rounded, transversely wrinkled; *spire* as long as the aperture; *suture* deeply impressed.

Length two-fifths. Width more than three-tenths.

Inhabits Maine.

Cabinets of Messrs. Stone, Hyde and Say.

We are indebted for this shell to Mr. Aaron Stone. It is commonly invested with a dirty greenish-white pigment, beneath which it is sometimes reticulated with abbreviated yellowish lines, on a brown or dusky ground.

SCALARIA, *Lam.*

SPECIES.

1. *S. *lineata.* Shell brownish, elongated, with about seven volutions; *costa* robust, obtuse, little elevated, and from seventeen to nineteen on the body whirl; *body whirl* with generally a blackish, more or less dilated line, which is nearly concealed on the volutions of the spire by the suture; margin of the mouth robust, white, more dilated at the columella base.

Length about half an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

Very much resembles *Turbo clathratulus* of Montague, which is figured by Maton and Rackett as a variety of *T. Clathrus*, (Trans. Lin. Soc. Lond. vol. 8. pl. 5. fig. 1.) but the lip is more robust, and

the basal portion of that part is more dilated than the quoted figure of that species. It is possible, however, that it is only a variety of that species.

TURRITELLA, Lam.

SPECIES.

1. *T. *alternata*. Shell dusky; acute at the apex; *volution*s eight, with about eight unequal, revolving, slightly elevated lines, which are maculated with rufous, and decussated by transverse, elevated, obtuse lines, which are obsolete below the middle of the body whirl and prominent on the spine; *labrum* not thickened, a slight indentation at its base. re

Length one-fifth of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

ANIMAL—*Foot* longer than the aperture of the shell, rather acute behind, and truncated a little convexly before; *tentacula* filiform, cylindrical, obtuse at tip, nearly as long as the foot, white, annulate with brownish lines; *eye* at the external base of the tentacula, not prominent; *rostrum* about one-third the length of the tentacula; *operculum* blackish.

The shell when taken from the water, becomes whitish-cinereous. They abound amongst *Fucus*, and sometimes on the shell of *Limulus Polyphemus*. The animal considerably resembles that of *Melania Virginica* as respects form, and, in common with

many fresh water shells, it possesses the power of gliding along the surface of the water, with the shell downward.

This shell is somewhat like *T. reticulata*, but the sculpture is less profound, and it has never any appearance of varices, or incrassation of the labrum.

2. *T. *impressa*. Shell dusky, acute at the apex; *volutions* six, with about four acute, impressed revolving lines; *labrum* not thickened, a slight indentation at its base, and a projecting angle within on its middle.

Inhabits the coast of Maryland.

Length more than one-eighth of an inch.

I have seen but two specimens of this species. The aperture is precisely similar to that of the preceding species.

3. *T. *bisuturalis*. Shell thin, pellucid, small, conic; *whirls* five, wrinkles almost obsolete, a revolving impressed line near the suture; *suture* not deeply impressed; *spire* gradually tapering, rather longer than the aperture; *aperture* rounded at base, and perfectly entire.

Length rather more than one-tenth of an inch.

Inhabits Boston harbour.

My cabinet.

I am indebted to Mr. Aaron Stone, for this small species of *Turritella*. It is distinguished from all others that I have seen, by the single impressed line, which revolves near the suture.

BULLA.

SPECIES.

B. *solitaria. *Shell* remarkably thin and fragile, pellucid, oval, narrowed at base, with numerous impressed revolving lines, and transverse very obtuse wrinkles; *aperture* surpassing the tip of the shell; *spire* none, substituted by an umbilicus; *umbilicus* of the base none.

Less than half an inch.

Inhabits the southern coast of the United States.

I found a specimen of this species of *Bulla* on the coast of Maryland, but have not seen another. It is probable that it is rare. It approximates to the description of *B. hydatis*, but it can hardly be the same, as it is more oblong than the species *B. naucum*, agreeably to the figure in the *Encyc. Meth.*, which species is referred to by Dillwyn, as being of the same form with *hydatis*.

MELAMPUS, *Montf.*

SPECIES.

M. *bidentatus. *Shell* thin, fragile, dirty-brownish; very little elevated, obtuse; *body whirl* with minute transverse wrinkles, and revolving impressed striæ; *labium* bidentate, the superior tooth transverse, prominent, placed below the middle, the other oblique, less prominent, terminating at the exterior edge of the columella; *labrum* with four or five ele-

vated striæ, not attaining the edge; *base* not contracted.

Length nine-twentieths of an inch.

ANIMAL—about as long as the shell, and the foot is transversely bifid; *tentacula* somewhat wrinkled, cylindrical, rather smaller towards the tips, which are obtuse or rounded; *eyes* placed at the inner base of the tentacula; *rostrum* somewhat wrinkled, nearly as long as the tentacula, bilobate before; *foot*, anterior segment emarginate behind, posterior segment bifid at the extremity; all above, with the exception of the tentacula and rostrum glabrous, reddish-brown, beneath paler.

Inhabits East Florida.

Cabinet of the Academy and Philadelphia Museum.

Var. a. With three or four fuscous revolving lines; base of the aperture narrower than in the species.

Length seven-twentieths of an inch.

Inhabits the coast of Maryland and New Jersey.

These shells inhabit the salt marshes, and have the habit of crawling up the culms of grasses, and other plants. I observed them to be very numerous near the mouth of St. John's river. It is sufficiently distinct from the *M. coniformis* by the paucity of striæ on the labrum.

The *variety* is a very common inhabitant of our coast, and is very possibly a distinct species, as it is lineated and is narrower at base; if so, it may be called *lineatus*.

Great numbers of this species are devoured by the dusky duck (*Anas obscura*), and perhaps by other birds.

NATICA, Lam.

SPECIES.

1. N. **duplicata*. Shell thick, sub-globose, cinereous, with a black line revolving on the spire above the suture, and becoming gradually diluted, dilated, and obsolete in its course; within brownish-livid; a large incrassated callous of the same colour extends beyond the columella, and nearly covers the umbilicus from above; *umbilicus* with a profound sulcus or duplication.

Greatest length about two inches. Greatest breadth rather more.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

Very numerous upon almost the whole extent of our coast. The spire in some specimens is much more elevated than in others, and the duplication within the umbilicus, is sometimes partially concealed by the projecting callous.

In the collection of the Academy of Natural Sciences, is a species from Candia, presented by Mr. S. Hazard, which very much resembles this, but it differs in being destitute of the black line, and in having the umbilicus partially covered from the side, leaving only a linear, semicircular, lateral opening. Another specimen from India strongly resembles it, and is

also marked with the black line, but there is only a circumscribed callous extending laterally, leaving a large umbilicus, and marked transversely by a groove.

I formerly referred this species to *N. rugosa*, but it appears to be a much larger species, as Dillwyn states the *rugosa* to be only ten lines long. It is probably the same species as that represented by Lister on plates 562 and 563, but I do not find those figures referred to at all by Dillwyn.

2. *N. *heros*. Shell suboval, thick, rufo-cinereous; within whitish; columella incrassated; callous not continued over the upper part of the umbilicus, hardly extending beyond a line drawn from the base of the columella to the superior angle of the labrum; umbilicus free, simple.

Length about two inches and a half.

Inhabits the coast of New Jersey.

I have two specimens from Great Egg Harbour. It differs from the preceding species in being less dilated, destitute of the black line of the apex, and of the much incrassated projection from the columella so conspicuous in that shell. This is our largest species. I have a specimen more than three inches in length.

I formerly considered this to be the *N. rufa*, Gmel. but that species is said by Dillwyn to be only half an inch or an inch long, and he refers to Born. t. 17, f. 3, and 4, and also to Lister, Conch. t. 506, f. 3, neither of which figures resemble our species.

[TO BE CONTINUED.]

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[CONTINUED FROM PAGE 248.]

3. **pusilla*. Shell thin, suboval, cinereous or rufous, with sometimes one or two obsolete, dilated, revolving bands; *columella* callous; *callus* pressed laterally into the umbilicus, whitish; *umbilicus* nearly closed and consisting only of an arquated, linear, vertical aperture.

Length about a quarter of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

A small species, generally mistaken for the young of one of the preceding species.

THEODOXUS, *Montf.*

SPECIES.

N. **reclivatus*. Shell thick, strong, globose-oval, greenish-olive, with numerous, approximate, parallel, irregularly undulated green lines across the volutions; *volutions* about three, the exterior one occupying nearly the whole shell; *spire* very short, obtuse at the apex, and frequently eroded to a level with the superior edge of the body whirl; *mouth* within bluish-white; *labrum* acutely edged; *labium* callous, minutely crenated on the edge, and with a very small tooth near the middle.

Greatest diameter nineteen-twentieths of an inch, greatest transverse diameter four-fifths of an inch.

Inhabits East Florida.

Cabinet of the Academy and Philadelphia Museum.

ANIMAL—pale, more or less distinctly lineated, or clouded with black; *foot* rounded, almost orbicular, hardly as long as the shell is broad; above with four more or less distinct, black, parallel lines; *rostrum* dilated, truncated, tip with four black lines, a black band connecting the eyes; *eyes* prominent, appearing to be placed on a tubercle at the outer base of the tentacula, black with a white orbit; *tentacula* with darker or black lines, setaceous, and longer than the breadth of the rostrum; *beneath* immaculate.

I found this species in great plenty, inhabiting St. John's river in East Florida, from its mouth to Fort Picolata, a distance of one hundred miles, where the water was potable. It seemed to exist equally well, where the water was as salt as that of the ocean, and where the intermixture of that condiment, could not be detected by the taste. Its movements are remarkably slow.

CLASS,

CONCHIFERA.

OSTREA, *Lin. Lam.*

O. **semicylindrica*. *Shell* elongated, semicylindric, white, covered with a fuscous epidermis; sides parallel; base and tip rounded, equally obtuse; *inferior* valve very convex; *superior* valve flat; *within* white, somewhat perlaceous; *muscular impression* large, white.

Length seven-twentieths of an inch.

Inhabits the coast of Georgia and Florida, imbedded in sponges.

Cabinet of the Academy and Philadelphia Museum.

This species has the habit and manners of the genus *Vulcella*, but differs from it in having very unequal valves and beaks, and at the same time it differs from the *Ostreas* in being unattached. I found several specimens imbedded in sponges, or interposed between a large *Ascidia* and our common *Thethya*, Lam.

PECTEN, Lam.

1. P. **concentricus*. Shell suborbicular, with from eighteen to twenty elevated, rounded ribs, and very numerous simple transverse wrinkles; longitudinal striæ, none; one valve somewhat ventricose, pale-yellow, fasciated concentrically with reddish-fuscous or blackish; the other valve convex, brownish-cinereous; *auricles* subequal; *hinge margin* rectilinear in each valve; *within* white.

Length two inches and nine-tenths.

Breadth three inches and one-tenth.

Inhabits the coast of New Jersey.

Var. a. Somewhat more compressed, variegated.

Cabinet of the Academy and Philadelphia Museum, and Mr. Hyde's collection.

Although this shell is a large species, and is one of our most common shells, yet I cannot perceive that

it has been either figured or described distinctly in any work to which I can refer. The inner margin, particularly between the ribs, is sometimes of a dirty reddish-brown colour. I have not seen this species on the southern coast.

The variety occurs on the coast of New England, and several specimens are preserved in Mr. William Hyde's cabinet. One specimen is of a fine bright orange-colour, and on one of the valves only, are the concentric bands of blackish; the margins, which decline from the beaks, are transversely mottled with white. Another has one valve blackish-brown, with about a dozen rather large white spots on the disk, longitudinally disposed, and white transverse variations on the umbones and beaks; the margins, which decline from the beaks in both valves, are similarly coloured, and varied with transverse white marks; the opposite valve is yellowish-white, with the usual bands. It must, however, be observed, that the epidermis of both these specimens was removed by muriatic acid. It is probable that the examination of numerous specimens, will prove this to be a distinct species, if so, it may be distinguished by the name of *P. borealis*.

2. *P. *dislocatus*. Shell suborbicular, with twenty or twenty-two elevated rounded ribs, and very numerous concentric wrinkles; longitudinal striæ none; whitish tinged with yellow or reddish, with a few narrow, transverse, interrupted, and dislocated, sanguineous, undulated lines, and five or six pale-

reddish, almost obsolete spots, on the margin, at the base of the auricles; *auricles* subequal; *hinge margin* rectilinear in each valve.

Length one inch and a half.

Breadth one inch and three-fifths.

My Cabinet.

This is a very pretty species, and seems to be confined to the southern coast, where it is rare. It is very different in its coloured markings from the preceding species, which, however, it much resembles in form. I have a young specimen, on which the red lines are numerous, but are dilated, pale, and tinted with dull purplish.

PANDORA, *Brug.*

SPECIES.

*P. *trilineata.* *Shell* white, subpellucid, concentrically wrinkled; *hinge* placed at the posterior slope, which is very abrupt, and forming a very considerably obtuse angle with the hinge margin; *hinge margin* concavely much arquated, the surface flattened, and bounded on its edges by two elevated approximate lines, originating at the beak and continued to the tip, which is rostrated; rostrum ascending; a distinct slightly impressed line originates at the beaks, and passes to the middle of the basal margin; *right valve* a little convex; *left valve* flat.

Length nine-twentieths of an inch.

Greatest breadth nineteen-twentieths of an inch.

Inhabits the American coast.

Cabinet of the Academy and Philadelphia Museum.

I first discovered a single valve of this curious shell several years ago at Great Egg Harbour, on the shores of New Jersey; since which, I have found two or three others on the coast of Georgia and East Florida, so that it may be said to inhabit our whole southern and middle coast. The inner edge of the hinge margin of one valve, closes over that of the other. This species is very different from the *P. inæquivalvis*, particularly in having the hinge placed much further back, and consisting of a mere angle, not prominent; the rostrum also has a direction more upward.

AVICULA, Brug.

SPECIES.

A. hirudo. Var. Shell perlaceous; epidermis reddish-brown, with very numerous undulated wrinkles, which are disposed in radi, and rendered more conspicuous by a white longitudinal line at the junction of each series of wrinkles with its contiguous one.

Width about three-fourths of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

It appears to be rare. I have found but a single entire specimen, which is young. In its radiating

series of wrinkles, it approximates to *A. morio* of Leach, but differs from it in magnitude, and in being radiated with whitish lines. I have a specimen from the West Indies, which corresponds very well with this, but as it is a much older shell, it is of a much darker colour, and the radi are interrupted into abbreviated lines.

A valve of an adult shell, also occurred on the southern coast, but so much worn by attrition, that its superficial characters are destroyed.

MYTILLUS, *Lin. Lam.*

SPECIES.

1. *M. *cubitus*. *Shell* oblong, striated with elevated, subglabrous lines, which are smaller on the anterior side; *anterior edge* linear, or slightly concave; *posterior edge* ascending from the base in a right line to a prominent angle, which is rather behind the middle of the shell, from which it descends by a concave line to the obliquely and very obtusely rounded tip; *colour* yellowish, polished and somewhat fasciated with green or brownish, which disappear on the anterior margin.

Length one and one-fifth of an inch.

Breadth half an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This species, seems to be most closely allied to

M. demissus and *exustus*; from the former it is distinguished, by not having the angle on the posterior side obtusely rounded, and not placed considerably before the middle; and the line of the edge before this angle, is not convex as in that shell. It does not at all correspond with the figures in the Encyc. Method. which are quoted for *exustus*; but it agrees very well, and is probably specifically the same, with the species represented on plate 365 of Lister's conch. which the author thus defines "*musculus parvus, subluteus, leviter striatus.*"

2. *M. *lateralis.* Shell transversely suboval, inflated, subpellucid, with numerous concentric wrinkles, anterior and posterior margins, longitudinally ribbed with alternate large and small lines, which crenate the basal margin; intermediate area destitute of longitudinal lines; most prominent part of the shell extending from the beak to the tip of the anterior margin, and bounded on its posterior side by an indented line; *epidermis* pale-brownish.

Length three-tenths of an inch.

Breadth eleven-twentieths of an inch.

Thickness seven-twentieths of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

Found imbedded in the large *Tethya* of our coast. This shell is closely allied to *Mytillus discors* of Montague.

3. *M. *hamatus*. Shell very much contracted and incurved at the base, which is acute; valves striated on every part of the exterior with longitudinal, elevated lines, which are bifid and sometimes trifid towards the tip; colour dark fuscous; within dark purpurescent, with a whitish margin.

Length one and one-fifth of an inch.

Breadth nearly four-fifths of an inch.

Inhabits the Gulf of Mexico.

Cabinet of the Academy and Philadelphia Museum.

A common species in the Gulf of Mexico, and is frequently carried to market at New Orleans, attached to the common oyster. It is remarkably distinct from *M. demissus* by the great incurvature of the beaks, by its inferiority in magnitude, and by having the striæ extending over every part of the surface of the shell.

I cannot refer it to *strialulus*, with which it seems to have some affinity, as that species is described to be nearly diaphanous. It seems to have some affinity with the *M. decussatus* Lam. but is much smaller, and the transverse striæ are not very prominent.

MODIOLA, Lam.

SPECIES.

1. *M. Americana*. Var. Shell oblong, hinge margin elevated in a right line, from the beak to the

alated angle, from which it declines also in a right line, nearly to an equal distance; alated projection rounded; *anterior margin* short and small; *basal margin* with a dilated but slightly impressed contraction in the middle; *epidermis* transversely wrinkled, light-brown, the raised oblique portion of the shell yellowish-white; *cortex* with membranous scales and filaments, and covering all the anterior portion of the shell to the beak.

Modiola Americana, Leach Zool. Misc. vol. 2. pl. 72. fig. 1. *Var.*

Inhabits the southern coast.

Length, from the tip of the angle to the middle of the base, three-fifths of an inch nearly.

Breadth one and one-fifth of an inch.

Thickness half an inch.

Cabinet of the Academy and Philadelphia Museum.

This variety differs from that figured by Dr. Leach, in being always destitute of oblique coloured radii.

2. M. **castanea*. *Shell* transversely oblong sub-oval; *hinge margin* elevated in a right line from the beak to the alated angle, from which it declines in a line slightly arquated; alated angle rounded; *anterior margin* rounded at the tip; *posterior margin* rather large; *base* with a dilated but slightly impressed contraction before the middle; *epidermis* concentrically wrinkled, castaneous; *cortex* not continued behind the middle of the shell; *within* bluish.

Inhabits the southern coast.

Length, from the tip of the angle to the middle of the base, three-fifths of an inch.

Breadth one and one-tenth of an inch.

Thickness nearly half an inch.

Cabinet of the Academy and Philadelphia Museum.

This species, like the preceding, is furnished with a membranaceous expansion over a portion of the epidermis, giving rise to a number of filamentous processes, by means of which the shell is attached to various marine bodies.

ARCA, *Lin. Lam.*

1. A. **ponderosa*. *Shell* somewhat oblique, very thick and ponderous, with from twenty-five to twenty-eight ribs, each marked by an impressed line; interstitial spaces equal to the width of the ribs; *umbones* very prominent; *apices* remote from each other, and opposite to the middle of the hinge, spaces between them with longitudinal lines as prominent as their corresponding teeth; *anterior margin* cordate, flattened, distinguished from the disk by an abrupt angular ridge; *posterior edge* rounded, very short; *inferior edge* nearly rectilinear, or contracted in the middle.

Length two inches and one-eighth.

Greatest breadth two inches and a half nearly.

Inhabits the southern coast.

My cabinet.

A remarkable species and readily recognised.

2. A. **pexata*. *Shell* covered with a hairy epidermis, transversely subovate, with from thirty-two to thirty-six ribs, placed nearer to each other than the length of their own diameters; *umbones* moderate; *apices* approximate, placed far backward, very near the posterior termination of the hinge; *posterior edge* rounded, destitute of an angle; *anterior edge* rounded, with an angle at the termination of the hinge; *inferior edge* regularly rounded.

Length one inch and seven-tenths.

Breadth two inches and three-tenths.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

A common species, distinguished by the name of the *bloody clam*. It is covered with a hairy epidermis, and when violently opened, an effusion of a red sanies proceeds from the animal. In the young shell, an angle is perceptible on the posterior edge, at the termination of the hinge margin, but this disappears with age.

3. A. **incongrua*. *Shell* somewhat rhomboidal, with from twenty-six to twenty-eight ribs, placed nearer to each other than the length of their own diameters, and crossed by elevated, obtuse, equal, and equidistant lines, which are altogether wanting on ten rays of the disk of the left valve; *apices* opposite to the middle of the hinge, distant from each other, with a lanceolate space between them, of which the breadth is about one-third of its length; extremities

of the hinge margin angulated ; *posterior edge* rounded ; *inferior edge* rounded, that of the light valve extended a little beyond the regular curve in the middle ; *anterior margin* cordate, flattened ; *anterior edge* nearly rectilinear.

Length two inches.

Breadth rather more than two inches.

Inhabits the estuaries of the United States.

Cabinet of the Academy and Philadelphia Museum.

This species, which is very abundant on our coast, strongly resembles *A. rhombea*, but, agreeably to the figure in the Encyc. Meth., it differs in the width of the space on the hinge margin, in the width of the spaces between the ribs, and in its more rectilinear anterior edge.

4. *A. *transversa.* *Shell* transversely oblong, rhomboidal, with from thirty-two to thirty-five ribs, placed at nearly the length of their own diameters distant from each other ; *apices* separated by a long narrow space, and situate at the termination of the posterior third of the length of the hinge margin ; extremities of the hinge margin angulated ; *anterior edge*, superior moiety rectilinear ; *posterior edge* rounded ; *inferior edge* nearly rectilinear, or very obtusely rounded ; on the hinge space one or two angulated lines are drawn from the apex, diverging to the hinge edge.

Length less than seven-twentieths of an inch.

Breadth one inch and one-fifth.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This species, which is abundant in some districts, is remarkable by its transverse form, and may be known among the foregoing species, by the apex being situate opposite to one-third of the distance from the posterior termination of the hinge margin.

NUCULA, *Lam.*

SPECIES.

*N. *proxima.* Shell subtriangular, oblique, concentrically wrinkled, and longitudinally marked with numerous, hardly perceptible striæ; *posterior margin* very short and very obtusely rounded, a submarginal impressed line; *anterior margin* very oblique, and but slightly arquated; *umbo* placed far back; *within* perlaceous, polished, edge strongly crenated; *teeth* of the hinge robust, the posterior series very distinct and regular.

Greatest length, parallel with the posterior margin, three-tenths of an inch.

Breadth less than two-fifths of an inch.

Inhabits the southern coast.

Cabinet of the Academy.

Very much resembles *N. nucleus*, but is proportionally wider, and the posterior series of teeth is more regular and distinct. It may possibly prove to be only a variety, when numerous specimens are carefully examined and compared.

VENUS, *L. Lam.*

1. *V. *notata.* Shell obtusely rounded before, and with a slight undulation on the anterior margin; *disk* nearly destitute of the elevated concentric striæ which mark the borders of the shell, and distinguished by rufous zigzag transverse lines; *within* yellowish-white.

Breadth about three inches.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum, and Mr. Wm. Hyde's collection.

A rare species called the *lettered clam*. I obtained one specimen at Great Egg Harbour, and another on the coast of Georgia. Mr. Hyde received his specimen from New England; it has the rufous lines very much dilated, but they still preserve the zigzag form.

2. *V. *præparca.* Shell subovate, with numerous, elevated, subacute, parallel, concentric lines, which subside into mere wrinkles near the suture of the ligature slope, interstitial spaces plain; *ligament slope* flattened, margined by an acute line; *anterior margin* with an obsolete, longitudinal, very obtuse undulation, which gives the tip of this margin a slightly truncated appearance; *areola* cordate, elevated at the suture; *within* white or yellowish; *inferior* and *posterior* margins within crenulated, the crenulæ extending along the edge of the areola to the beak; in

advance of the anterior termination of the ligament groove of the left valve, is another distinct groove which receives the edge of the corresponding margin of the other valve.

Width two inches and one-fourth.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This species bears considerable resemblance to *V. Casina*, but that shell is regularly arquated on the anterior margin in Maton and Rackett's figure (v. Trans. Lin. Soc. Lond. 8. pl. 2. fig. 1.) It also approaches *V. rigida*, but is distinct by its cordate areola, &c.

3. **elevata*. Shell subcordate, longitudinally sulcated, sulci equal, numerous, dense, on the anterior submargin sparse; concentric elevated, remote, lamellar bands; *anterior margin* subangulated at tip; *within*, margin crenated, crenæ obsolete on the anterior margin, and near the hinge on the posterior margin.

Length four-fifths of an inch.

Breadth nine-tenths of an inch.

Inhabits the southern coast.

Cabinet of the Academy.

I obtained but a single bleached valve of this species. It certainly approaches very near to *V. cancellata*, but it is distinguished by being much less obtuse before, and by having the longitudinal striæ more numerous. The concentric lamellar bands were eleven in number on this specimen.

4. V. **inequalis*. *Shell* subcordate, longitudinally sulcated, lines numerous, obsolete on the anterior margin, behind the middle bifid and alternating with smaller single ones; concentric, distant, lamellar bands, but little more elevated than the longitudinal lines; *anterior margin* subangulated: *within*, margin crenate, crenæ obsolete on the anterior margin and rear; the hinge on the posterior margin.

Length one inch.

Breadth one inch and one-fifth.

Inhabits the coast of the middle states.

Cabinet of the Academy and Philadelphia Museum.

Very similar in form to the preceding, but it is distinguishable by the much less elevated and more numerous bands, and by the bifid, unequal and less numerous longitudinal lines. I have only found them on the coasts of New Jersey and Maryland.

5. V. **castanea*. *Shell* thick and ponderous, suborbicular, or subtriangular, with prominent and nearly central beaks; *lunule* excavated, lanceolate; *cartilage slope* rectilinear, indented; *valves* with minute concentric wrinkles, and larger waves; *epidermis* chesnut-brown, with darker or paler zones; *within* white, the margin very regularly crenulated.

Length one inch.

Breadth one inch nearly.

Inhabits the coast of New Jersey.

Cabinet of the Academy and Philadelphia Museum.

A very thick shell, not unfrequent on the coast at Great Egg Harbour. The surface is often sculptured with very slightly elevated, obtuse lines, which are sometimes elevated and acute; it very closely approximates to *Venus sulcata* as figured by Maton and Rackett, Trans. Lin. Soc. Lond. vol. 8. pl. 2.

CYTHEREA, Lam.

C. **occulta*. Shell suborbicular, or subtriangular, thick, with very numerous approximate, obtuse, transverse and longitudinal, elevated lines, which are nearer to each other than the length of their own diameters, the longitudinal ones not being visible to the unassisted eye; *lunule* destitute of the longitudinal lines; *colour* yellowish-white with a few large brown spots, *lunule* and *ligament slope* transversely spotted with reddish-brown; *margin within* entire; *anterior cardinal tooth* simple.

Length and breadth half an inch.

Inhabits the southern shores.

Cabinet of the Academy and Philadelphia Museum.

This shell is very rare, and is not to be mistaken for any other shell which I have seen on our coast. The aid of a magnifier is necessary to discover the longitudinal lines.

TELLINA, *Lin.*

SPECIES.

1. T. **alternata*. Shell compressed, oblong, narrowed and angulated before, white; numerous parallel, equal, equidistant, impressed concentric lines, which on the anterior margin are alternately obsolete; interstitial spaces flat; *within* tinged with yellow, a callous line, which is sometimes obsolete, passes from behind the hinge to the inner margin of the posterior cicatrix, and another from before the hinge to the inner margin of the anterior cicatrix; anterior hinge tooth emarginate; posterior lamellar tooth very near the cardinal teeth, so as to appear like a primary tooth, that of the right valve wanting; anterior lamellar tooth at the extremity of the ligament; *anterior hinge slope* declining in a somewhat concave line to an obliquely truncated tip.

Length one inch and one-fourth.

Width two inches and one-fifth.

Thickness two-fifths of an inch.

Inhabits the coast of Georgia and East Florida.

Cabinet of the Academy and Philadelphia Museum.

Rather a common shell, beautifully and very regularly striated. When cast upon the beach, one of the valves is very commonly perforated near the hinge; this operation, it would seem, is most frequently performed upon the left valve, as, of ten

specimens thus mutilated, I have but two with the perforation upon the right valve. It varies in being destitute of the yellow colour within. It is probably allied to *T. punicea*, but I have never found it so far north as the coast of New Jersey. It is much more elongated than the latter, the striæ are far more distinct, and it is entirely and always destitute of the rose-coloured bands, and lines, such as are represented in Born's figure of that shell. It cannot be the *T. angulosa* of Gmel., as that species is described to be suborbicular, and to have the lateral teeth remote, whereas the *alternata* has but one of the lateral teeth remote.

2. *T. *polita*. *Shell* transversely subtriangular, minutely wrinkled concentrically, white, immaculate; *anterior* margin rather shorter than the posterior one, the hinge slope declining, in a very slightly arquated line, to a subacute termination; *basal margin* nearly rectilinear from behind the middle to the anterior termination; a lateral tooth behind the primary teeth.

Length two-fifths of an inch.

Breadth thirteen-twentieths of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

Not unfrequent on the beach of South Carolina and East Florida.

The crystals are translucent in a great degree, approaching to transparent, and of a bluish-white colour. The size of the crystals is large. I have seen fragments belonging to crystals, which must have been from four to five inches, belonging to the subvariety *trapezienne elargie*.

The surface of the faces *o o* are usually dull, of a more opaque milky-white than the remainder of the faces, which have a remarkably fine lustre; the faces corresponding with those of the primitive rhomboidal prism, as *P* and *M* display a fine iridescent colour.



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3. T. **Iris*. Shell very thin and fragile, pellucid, compressed, transversely oblong-suboval, iridescent, white, with generally a rosaceous disk and one or two anterior rays, with numerous minute concentric wrinkles, and minute, oblique, acutely impressed, equidistant striæ crossing them; striæ abbreviated before and not attaining the anterior margin, which is narrowed and subacute; *basal edge* rectilinear opposite to the beaks.

Length more than three-tenths of an inch.

Breadth more than eleven-twentieths of an inch.

Inhabits the southern shores.

Cabinet of the Academy and Philadelphia Museum.

A beautiful little species, very remarkable by the oblique course of the striæ. It is rather common.

4. T. **flexuosa*. *Shell* suborbicular, white; anterior margin longer than the posterior one, and less obtusely rounded; *beak* placed behind the middle, not prominent; *surface* obliquely sculptured with very regular, parallel, impressed lines, which, on the anterior margin, are four or five times refracted and infracted alternately; longitudinal striæ none; transverse wrinkles minute.

Length nine-twentieths of an inch.

Breadth rather more.

Thickness one-fourth of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

The fold on the anterior margin is very slight, but perceptible, and is rendered remarkable by the zig-zag course of the oblique striæ over it.

5. T. **tenera*. *Shell* very thin and fragile, pellucid, compressed, transversely oblong-suboval, whitish, iridescent, concentrically wrinkled; *basal edge* arquated, not rectilinear opposite to the beaks; *hinge* teeth two, larger one emarginate; *posterior tooth* but little elevated; *anterior tooth* obsolete; *beak* placed behind the middle.

Length three-tenths of an inch nearly.

Breadth half an inch.

Inhabits the coast of New Jersey.

Cabinet of the Academy.

Very much resembles *T. iris*, but is destitute of the oblique striæ which are so ornamental to that species, from which it also differs in being arquated on the whole length of the basal edge. It was discovered by my brother Mr. Benjamin Say, near Great Egg Harbour.

PSAMMOBIA? *Lam.*

SPECIES.

*P. *lusoria.* Shell transversely, oblong-suboval, bluish-white, with minute transverse wrinkles; apex rather nearer the anterior end; anterior margin narrowed, inclining to the left at the end and gaping; cartilage slope rectilinear, with an obtuse, obsolete, convex line on the left valve.

Length three-fifths of an inch.

Breadth one inch.

Inhabits the southern states.

Cabinet of the Academy and Philadelphia Museum.

This shell does not appear to be very common. It seems to vary in having often two teeth on each valve, as in *Sanguinolaria*.

DONAX, Lin.**SPECIES.**

1. **D. *variabilis.** *Shell* triangular; *anterior margin* obliquely truncated, cordate, suture a little convex; *posterior hinge margin* nearly rectilinear, suture indented; *base* a little prominent, beyond a regular curve, near the middle; *valves* longitudinally striated with numerous, equal, parallel, regular, impressed lines, hardly visible to the unassisted eye, and obsolete on the posterior margin; basal edge within crenate.

Length half an inch.

Width nine-tenths of an inch.

Thickness seven-twentieths of an inch.

Inhabits the coasts of Georgia and East Florida.

Cabinet of the Academy and Philadelphia Museum.

Varies very much in colour and is a very pretty shell. Its usual varieties are red, white, yellow, or elegantly radiated with dilated reddish-brown lines, upon a white or yellow ground; lines are purpurescent within the shell. A very common shell; I found it more particularly numerous on the beach of Cumberland island, where, in favourable situations, at the recess of the tide, it may be taken up in handfuls, without any intermixture of sand. It is very distinct from *D. rugosa*, but approaches much nearer to *D. trunculus*, from which it is distinguished by being

more abruptly truncated before, smaller, and the longitudinal lines are more indented. I have no doubt but this species has been regarded, by authors, as the same with *trunculus*, if so, judging by an individual of that species in the collection of the Academy, at least two distinct species have been confounded together under that common name.

2. D. **fossor*. Shell subtriangular; anterior margin short and rounded; posterior hinge slope rectilinear; base very slightly prominent beyond a regular curve at the middle; valves longitudinally striated with numerous, equal, parallel, regular impressed lines, not visible to the unassisted eye, and obsolete on the posterior margin; basal edge within crenate; colour pale-livid, with two longitudinal whitish rays before the middle, both within and without.

Var. a. Whitish. Var. b. Yellowish.

Breadth from half an inch to three-fifths.

Inhabits the coasts of New Jersey and Maryland.

Cabinet of the Academy and Philadelphia Museum.

Very numerous under the surface of the sand, which is exposed at the recess of the tide. A wave by removing the surface of the sand, exposes a great many individuals to view, at its reflux, these immediately penetrate the sand, and before the recurrence of the surge they are concealed.

They are preyed upon by several shore birds and fish; the drum (*Sciæna chromis*) and sheep's-head, (*Sparus ovicephalus*) are sometimes caught in the

surf in considerable numbers, whilst in pursuit of them.

AMPHIDESMA, Lam.

SPECIES.

1. A. **orbiculata*. Shell orbicular, somewhat compressed; *beak* nearly central, and a little prominent; *posterior slope* a little concave near the beak; *lunule* small; *valves* slightly wrinkled transversely; *anterior submargin* with an obsolete very obtuse undulation, and with a few longitudinal obsolete lines; *colour* dirty white; *hinge* with two lamellar teeth, the posterior one placed near to the primary tooth, and shorter than the anterior one; *interior ligament cavity* profound, fusiform, parallel with the anterior slope, originating at the extreme tip of the beak, and terminating nearly opposite to the middle of the anterior lamellar tooth.

Length one inch and one-tenth.

Breadth one inch and one-tenth.

Inhabits the coast of Georgia.

Cabinet of the Academy and Philadelphia Museum.

Appears to be a rare species; the largest I have seen is one inch and two-fifths in breadth.

2. A. **æqualis*. Shell orbicular, slightly oblique, polished, white, with very minute and numerous concentric wrinkles near the margin, which are obsolete

on the disk and umbo ; *lateral teeth* none ; *primary teeth* two in the left valve and one in the other ; *interior ligament cavity* subfusiform, as long as the exterior ligament.

Length two-fifths of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

A small species, not very commonly found.

3. A. **punctata*. *Shell* orbicular, white, with very minute, numerous, concentric wrinkles, and very minute, numerous punctures ; *lateral teeth* none ; *primary teeth* two in each valve, of which one has a deep groove, which gives it a bifid appearance ; groove of the interior cartilage not very distinct ; *within* a small projecting rim or elevated line near the edge, extends from the hinge to the basal margin.

Length about seven-twentieths of an inch.

Breadth much the same.

Inhabits the southern shores.

Cabinet of the Academy.

This shell bears a strong resemblance to the preceding, on an exterior and transient view of its valves ; but on examination it will be perceived to be more orbicular and less oblique, and that the surface is less polished. By the aid of a magnifier, the surface will be observed to exhibit a remarkable punctured appearance.

MACTRA, *Lam.*

SPECIES.

1. *M. *similis.* Shell subtrigonal, smooth, or very slightly wrinkled, white on the disk or upon the umbones, and dirty light brownish colour on the margin; umbones nearly central; lateral teeth strongly and regularly crenated on the side next the recipient cavity.

Length one inch and three-twentieths, nearly.

Width one inch and two-fifths.

Inhabits the coast of the United States.

Cabinet of the Academy.

The specimens which I obtained from the coast of New Jersey seem closely allied to *Var. a.* of *M. solida* as presented on pl. 258, fig. 1. of the *Encyc. Method.*, the proportions of the different parts of the shell nearly corresponding with those of that figure. But upon comparing it with several specimens of *M. solida* sent to the Academy by Mr. O'Kelly of Ireland, I find its proportions to be altogether different, being longer and not so wide.

2. *M. *lateralis.* Shell triangular, very convex, of a smooth appearance, but with very minute, transverse wrinkles; lateral margins flattened, cordate, with a rectilinear, sometimes concave profile, one margin rounded at the tip, the other longer and less obtuse; umbo nearly central, prominent.

Length half an inch.

Breadth thirteen-twentieths of an inch.

Thickness seven-twentieths of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

A very common shell on almost all parts of our coast.

3. *M. *oblonga.* Shell transverse, oblong-oval; very slightly wrinkled, excepting upon the margin; *umbo* hardly prominent; two strong distant lines or folds drawn from the apex to the anterior extremity of the shell; *colour* dull whitish, hardly polished, *umbo* slightly tinged with ferruginous, within white, highly polished.

Length nine-twentieths of an inch.

Breadth one inch and nine-tenths.

Inhabits the coast of Georgia.

Cabinet of the Academy and Philadelphia Museum.

Of this species I found but three valves, on one of the sea islands of Georgia.

LUTRARIA, Lam.

SPECIES.

1. *L. *lineata.* Shell transversely suboval, thin, white, tinged with ferruginous; posterior hiatus patulous, anterior one linear and commencing below

the hinge slope; *hinge slope* with a rectilinear profile, and flattened, oblong-subcordate surface; *valves* unequally wrinkled; *posterior margin* rounded, short, with a reflected edge, and submarginal carinated line; *within* undulated, anterior margin glabrous, and with an indented submarginal line corresponding with the exterior carinated one.

Length one inch and nine-tenths.

Width two inches and seven-tenths.

Thickness one inch and one-twentieth.

Inhabits the coasts of Georgia and East Florida.

Cabinet of the Academy and Philadelphia Museum.

Not uncommon on the southern coast, and may be readily distinguished by the carinated line on the posterior submargin.

2. L. **canaliculata*. *Shell* transversely oval-orbicular, very thin and fragile, white, inflated; *valves* equally, concentrically, and regularly grooved, with very feint parallel lines within the grooves; *posterior margin* short, subcuneiform, compressed; a marginal, longitudinal, irregular, subimpressed line, between which and the edge, the grooves become mere wrinkles; *posterior slope* subrectilinear, hiatus considerable; *anterior margin* regularly curved, the slope convex; *within* grooved as without, anterior angle glabrous.

Greatest length two inches and one-twentieth.

Breadth two inches and a half.

Thickness one inch and one-fourth.

Occurs on the coast of Maryland and as far south as East Florida.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

Very distinct from the preceding species, and probably approaches *L. crassiplica* of Lamarck.

CORBULA, Brug.

SPECIES.

1. *C. *contracta*. *Shell* transversely subovate; valves subequal, regularly and profoundly striated transversely; *beaks* not prominent, nearly central, one side rounded and the other subacute; *basal margin* contracted near the middle, and one half of the length of the edge of one valve concealing one half of the edge of the opposite valve.

Length one-fourth of an inch.

Breadth two-fifths of an inch.

Thickness one-fifth of an inch, nearly.

Inhabits the coasts of Georgia and East Florida.

Cabinet of the Academy and Philadelphia Museum.

I found only two specimens of this shell. The striæ are precisely similar to those of the larger valve of *Mya inæquivalvis* of Montague (*C. nucleus* of Lam.)

MYA, Lam.

SPECIES.

1. *M. *acuta*. Shell oblong-subovate, narrowed behind, rather strongly wrinkled; *posterior hinge margin* and *posterior basal margin* subequally arched; tip of the posterior margin equidistant from the apex and middle of the base; *tooth* moderate, with a small, not prominent, tooth on its posterior side.

Length one inch and a half.

Breadth two inches and four-fifths.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

I have but two valves, which are old and bleached. It resembles *M. arenaria*, but is much smaller at the posterior termination than the corresponding part of that shell, as figured by Bruguiere. One of the valves alluded to, is more than four inches in breadth; it corresponds very well in the outline with Pennant's fig. of *Arenaria*. My decorticated specimens have an obsoletely radiated appearance.

2. *M. *mercenaria*. Shell subovate, convex, somewhat unequal, transversely wrinkled; *posterior hinge margin* curving abruptly downward to the tip of the posterior margin, which is much nearer to the middle of the base than to the apex; *tooth* robust, promi-

ment, very convex within, and with a small tooth on its posterior side; *within* white.

Length one and three-tenths of an inch.

Breadth two inches.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This species, as well as the preceding, is known by the name of the *Maninose* or *Piss clam*, from the circumstance of its occasionally ejecting a sudden jet of water, to a considerable height above the surface of the sand, during the reflux of the tide. This jet may be commanded, by stamping upon the sand with the foot, near the entrance of their dwelling: it is sometimes brought to our markets, and is by many persons highly esteemed as food, it is said by some to be preferable to the common clam; (*Venus mercenaria*.)

ANATINA, Lam.

SPECIES.

*A. *papyratia.* *Shell* turgid, very thin and fragile, transversely ovate, one valve very convex, and at the basal margin projecting a little beyond the edge of the other; beaks not prominent, placed near one end; surface of the valves very slightly wrinkled, white; shorter margin a little gaping, and with a longitudinal wave; *tooth* very oblique.

Inhabits the southern coast.

Length two-fifths of an inch.

Width thirteen twentieths of an inch.

Thickness one-fourth of an inch.

Cabinet of the Academy and Philadelphia Museum.

This species does not appear to be very common.

SOLENN, *Lam.*

SPECIES.

1. *S. *costatus*. *Shell* transversely elongate-oval, concentrically wrinkled, very much compressed, very thin and fragile, rounded at each end; *hinge* nearly equidistant from the posterior termination of the shell, and the middle of the hinge margin; *teeth* two, sometimes none, in each valve, the posterior one upright, the other inclining forward; a strong, broad, elevated line within, passes from the hinge towards the base and becomes obsolete near that part; *colour* pale violaceous, with about three whitish rays.

Breadth one inch and a half.

Inhabits Great Egg Harbour, New Jersey.

Cabinet of the Academy.

Rather rare, I have obtained but few and incomplete specimens. The interval costa is somewhat similar to that of *S. legumen*, but it is much more elongated, and does not incline obliquely forward, as in that shell; it probably approaches nearest to *S. minimus* of Tranquebar.

2. *S. *centralis*. *Shell* transversely oblong-oval, slightly wrinkled concentrically, compressed, fragile, rounded at each end; *hinge* central, *teeth* two in the left valve and one in the right; *epidermis* pale yellowish-brown; a broad obsolete elevated line within, passes from the hinge towards the base, and terminates beyond the middle.

Length half an inch.

Breadth one inch and three-tenths.

Inhabits the southern shores.

Cabinet of the Academy and Philadelphia Museum.

Somewhat rare. It has very much the appearance, at first sight, of the young of *S. carabæus*, but it cannot be mistaken for it, as the teeth of the hinge are invariably central, whilst those of that species are anterior to the centre, and the interior of the shell of that species has never the slightest appearance of a costa.

3. *S. *viridis*. *Shell* fragile, elongated, compressed, a little narrowed before, slightly wrinkled concentrically, the wrinkles regularly rounded towards the extremity; *hinge margin* nearly rectilinear; *basal margin* a little arquated; *anterior tip* rounded; *posterior tip* obliquely truncated, a little reflected, and rounded near the base; *hinge* terminal; *teeth* one in each valve, each having a flattened vertical surface, which turns upon that of the opposite tooth; *epidermis* pale green.

Length nine-twentieths of an inch, nearly.

Breadth two and three-twentieths of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

A common shell. The hinge is formed upon the same plan with that of the *S. vagina* and *truncatus*, but it differs from those species, in being much more rounded at each extremity, and in being narrowed at the anterior tip. I think it probable, however, that this species has been regarded as a variety of *S. truncatus*.

SOLEMYA, Lam.

SPECIES.

*S. *velum.* Shell remarkably thin and fragile, transversely-oblong, rather longer at the posterior end; hinge edentulous, placed near the anterior end, with a slightly prominent cartilage, and an interior elevated callus, which is fornicated beneath; valves radiated with about fifteen double lines, which are sparse towards the middle of the valves; epidermis pale yellowish-brown, extending much beyond the basal and lateral edges of the valves, and at the hinge margin, connecting them together nearly the whole length of the shell; within bluish-white; umbo destitute of the slightest elevation; anterior and posterior margins rounded; superior and inferior margins rectilinear, parallel.

Length seven-twentieths of an inch.

Breadth nineteen-twentieths of an inch.

Inhabits the southern coast.

Cabinet of the Academy.

Occurs sometimes, cast on shore generally in fragments, but is by no means a common shell.

SAXICAVA, *Bellevue*.

SPECIES.

*S. *distorta*. Shell thick, inequal, rugged, transversely oblong-subovate; *epidermis* pale-brownish, much wrinkled; *umbo* prominent, placed very far back; *posterior margin* rounded, generally very short; *anterior margin* often truncated, with a prominent ridge passing from its inferior angle to the beak.

Length about three-fifths of an inch.

Width about one inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

When young, it is generally more or less contracted near the middle of the basal margin, but this character decreases as the shell increases in size, until it disappears entirely in the adult state. It is in other respects variable in form and proportion, the beaks are rarely placed so far back as to be parallel with the tip of the posterior margin; it much resembles *Mytillus rugosus* of Lin. but appears to be a much thicker shell. It is generally imbedded in our large *Thethya*, Lam. and not unfrequently intervenes

between the substance of the thethya and the sides of a large *ascidia*, which also attaches itself to that animal. It is also sometimes found in a species of spongia. *Pinnotheres byssomia* of this Journal, inhabits this shell. The young shell is furnished with a prominent incrassated hinge tooth, which closes into a corresponding depression in the opposite valve; but this tooth disappears with age.

It is referrible to the genus *Pholeobia* of Leach.

PETRICOLA, Lam.

SPECIES.

*P. *fornicata.* Shell transversely elongated, posterior side very short; anterior side a little gaping; hinge and basal margins subparallel; valves longitudinally radiated with elevated lines, which, anterior to that which terminates at the middle of the base, are alternately more or less prominent, filiform, and all posterior to that line are fornicated costa; concentric wrinkles numerous, more remarkable on the anterior margin; lunule ovate-acute, simply sculptured with the concentric wrinkles; within radiated with strongly indented lines, which, on the anterior margin, are obsolete; teeth two, rarely three, on each valve, one of which is bifid at tip or grooved on the inner side, and the other usually not prominent above the margin.

Length three-fifths of an inch.

Width one inch and seven-tenths.

Thickness eleven-twentieths of an inch.

Inhabits the coast of North America.

Cabinet of the Academy and Philadelphia Museum.

This shell, which has very much the aspect of a *Pholas*, is not uncommon, but is more abundant on the southern coast. It approaches *P. pholadiformis* of Lamarck, but differs in not being "subglabrous before."

PHOLAS, *Lin. Lam.*

SPECIES.

1. *P. *oblongata*. *Shell* thin, white, transversely much elongated; basal and hinge margins nearly parallel; anterior and posterior margins rounded; *valves* transversely and longitudinally striated, the striæ muricated and elevated upon the anterior side into costæ, which are more prominently and densely muricated; *hinge callous* polished, minutely striated transversely and longitudinally, and with about twelve cells, anterior to which is a recurved margin of the shell, forming a cavity; *dentiform process* dilated, incurved, spoon-shaped, emarginate on the posterior side, and irregularly truncated at tip.

Greatest length, one inch and one-fifth.

Breadth, four inches and two-fifths.

Inhabits Georgia, Carolina, and East Florida.

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Cabinet of the Academy and Philadelphia Museum.

Very common on the southern coast, penetrating compact mud or clay. Small clods of this clay are often rolled ashore by the waves, either containing this species, or exhibiting proofs of having been its habitation, by the numerous perforations with which they are distinguished. In many places, where a bed of this mud is bared by the reflux tide, these shells may be seen in considerable numbers, with a portion of the smaller side appearing above the surface. It is proportionally broader than the shell figured by Lister, plate 423, and it seems to be allied to *P. campechensis*.

2. *P. truncata*.—*Shell* white, transversely oblong, sub-pentangular; anterior margin rostrated, obtusely cuneiform in the middle; posterior margin broadly truncated at tip; *valves* transversely wrinkled and longitudinally striated, muricated, particularly on the anterior side, with small erect scales, which are not arched beneath; posterior margin, from a line extending from the beak to the inferior angle of the truncature, destitute of the striæ and mutic; *hinge callous*, formed of the duplicature of the hinge margin, and destitute of cells, a small tooth upon the inner margin, projecting backward; *dentiform process* curved, prominent, slender, flat.

Length, three-fourths of an inch.

Breadth, one inch and seven-tenths.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

A common shell. Pennant, in his observations upon *P. parva* says, "I have a piece (of wood) filled with them, which was found near Pensacola, in West Florida." May not this have been the young of our *truncata*; or have we in reality the *parva* to add to our catalogue? Pennant's figure (volume iv. British Zool. pl. 40, fig. 13,) of that species does not represent a truncature at the posterior side of the shell; otherwise ours might be supposed to be a variety of it, although it attains to a much larger size.

3. *P. *cuneiformis*.—Shell subcuneiform; anterior margin nearly closed, transversely truncated from the hinge; the surface transversely striated in an undulated manner, with elevated, minutely crenate lines; the interstitial lines smooth; these lines partially interrupt a profoundly impressed longitudinal sulcus, which passes from the beak to near the middle of the base; the inferior portion of this margin is destitute of striæ; posterior margin attenuated by nearly rectilinear edges, to a rounded tip; surface transversely wrinkled; hinge callous, composed of the reflected margin, which forms a cavity before, and is destitute of cells; dentiform process incurved, slender, filiform; hinge plate ovate-triangular, with a short projecting angle on the anterior middle, and subacute behind; within, disk slightly contracted by an elevated line corresponding with the external sulcus.

Length nine-twentieths of an inch.

Width four-fifths of an inch.

Inhabits the southern coast.

Cabinet of the Academy and Philadelphia Museum.

Is often cast ashore in old wood, which it penetrates. It bears some resemblance in form to the shell represented in the Encyc. Method. t. 170, fig. 5, &c. Its longitudinal sulcus is very similar to that of *P. crispata*, but in many other respects it is closely allied to *P. pusillus*, and like that species, it is distinguished by two elongated lamellar plates, which cover the sutures of the posterior junctions of the valves.

TYPE AND CLASS,

ANNULOSA CIRRIPEDES.

FAMILY BALANIDEA.

*CONOPEA.

GENERIC CHARACTER.

Shell sessile, fixed, composed of two cones joined by their bases, the lines of junction carinate each side; inferior cone entire, attached by its anterior side and tip to marine bodies; superior cone formed of six united pieces, with an aperture at the summit, closed by a quadrivalved operculum.

SPECIES.

*C. *elongata.* Shell elongated before and behind into compressed processes; posterior valves of the operculum, more prominent and truncated at tip.

Inhabits the southern coasts on *Gorgonia virgulata*. Lam.

Cabinet of the Academy and Philadelphia Museum.

Anterior and posterior processes very much compressed, acutely edged above and beneath, and usually as long as the body of the shell; shell generally covered with a dirty-brown epidermis, beneath which it is white, with rufous clouds and lines; posterior valves of the operculum larger, more prominent, truncated or widely emarginate at tip.

Balanus galeatus an inhabitant of the Asiatic ocean, a species long known, and described by various authors, is congeneric with the species here described. The peculiar characters of these shells, their general appearance and their habitat, will not admit of their being referred to the genus *Balanus* in a perfectly natural arrangement. I have therefore thought it necessary to frame the present genus for their reception.

The anterior process of the *elongata* is generally acuminate and longer than the posterior one, which is more compressed, and is generally more or less elevated from the branch of the *Gorgonia*, upon

which the anterior process and the basal cone are firmly attached.

Bruguiere informs us that the *galea* is obtained from great depths in the ocean only; but I have found the *elongata* in considerable numbers in inlets of the bay of Charleston, on Gorgonia, which at the recess of the tide was visible on the surface of the water.

This species, like the *galea*, is often found coated over with the cortical envelope of the Gorgonia, and the animal destroyed, probably by its encroachment.

CORONULA, *Lam.*

SPECIES.

*C. *dentulata.* Shell depressed-conic; base oval; height equal to about one-third of the base; valves and interstices smooth, the anterior valve largest, and the posterior one smallest; operculum transversely striated, the posterior pair of valves with a submarginal impressed line, from which to the edge, are drawn three or four other impressed lines.

Found on the Clypeus of *Limulus Polyphemus*.

Collection of the Academy and Philadelphia Museum.

The posterior margins of the posterior valves of the operculum, are divided by the impressed lines, into three or four broad, flat, dentiform divisions, which, however, but simply crenate the edge.