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AN

ILLUSTRATED INTRODUCTION

TO

LAMARCK'S CONCHOLOGY;

CONTAINED IN HIS

HISTOIRE NATURELLE DES ANIMAUX SANS VERTÈBRES:

BEING

A LITERAL TRANSLATION OF THE DESCRIPTIONS

OF THE

Recent and Fossil Genera.

ACCOMPANIED BY

TWENTY-TWO HIGHLY FINISHED LITHOGRAPHIC PLATES:

IN WHICH ARE GIVEN

Instructive Views of the various Genera, and their Divisions, drawn from Nature, from characteristic and generally well known Species.

BY

EDMUND A. CROUCH, F.L.S.

LONDON:
PRINTED FOR LONGMAN, REES, ORME, BROWN, & GREEN, PATERNOSTER-ROW;
AND J. MAWE, N°. 149, STRAND.

1827.

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INTRODUCTION.

LAMARCK'S System of Conchology, which is contained in his "*Histoire Naturelle des Animaux sans Vertèbres,*" is now almost universally adopted among Naturalists; but that work being destitute of Graphic Illustrations, is rendered exceedingly difficult of comprehension to those who are not intimately acquainted with the science. The only means which are given for its attainment are written descriptions and numerous references to voluminous and expensive works: the former are frequently rendered inefficient, from the minute distinctions that characterize many of the genera; and the latter are seldom available, the works referred to being difficult of access to the student. It is the object of the present Elementary Treatise to remove these difficulties, by presenting a concise description of the various Classes, Orders, Families, and Genera composing the System, accompanied with Illustrations of characteristic and generally well known Species, drawn from nature, either from my own Cabinet or from those of obliging friends, and, where it has not been possible to meet with specimens, from the best printed authorities.

THIS work being chiefly graphic, I have purposely omitted the various classes of animals, having found it impossible to supply the requisite information; but descriptions of them will be found in Lamarck's Histoire Naturelle, before mentioned, or in Dubois' Epitome of Lamarck's Arrange-

ment of Testacea," whose Comparative and Synoptic Tables of the Systems of Linnæus and Lamarck, together with his judicious observations, will afford the greatest assistance.

Those Genera which are only to be found in the Fossil state are described in their natural arrangement, but are brought together in the last two plates, for the convenience of easy reference.

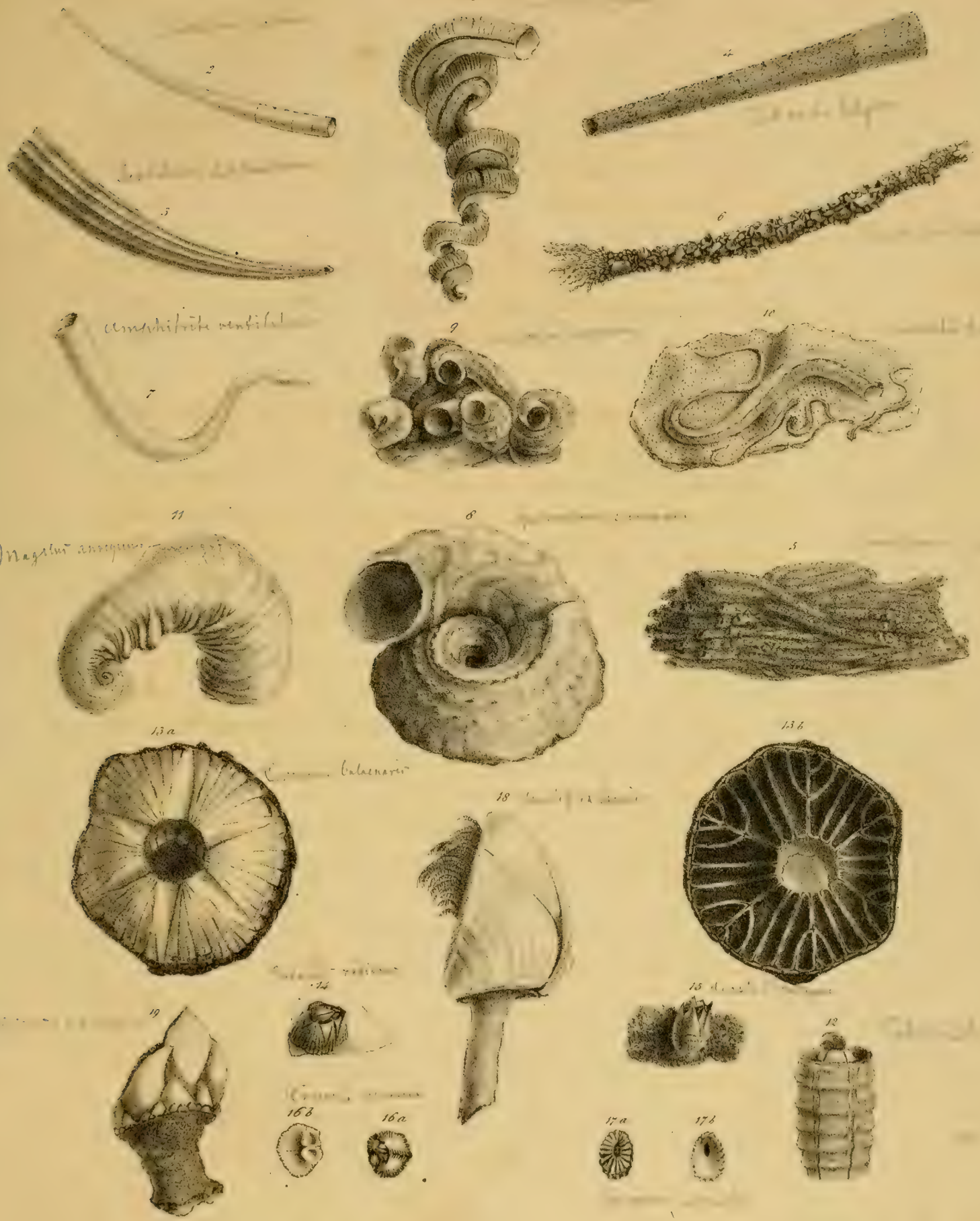
Some apology may be deemed necessary for the delay which has occurred in producing this work so long after its announcement; to those who are acquainted with the vexatious casualties of Lithographic printing, it will be unnecessary; but to those who are not, it may be proper to state, that many of the drawings, from the breaking of the stones, and other accidents, have been redrawn three or four times over; these and the delays occasionally experienced in procuring specimens of some of the rarer Genera must be my excuse.

I cannot omit this opportunity of returning my best thanks to Mrs. Mawe, Mr. G. B. Sowerby, and Mr. J. D. C. Sowerby, for their kind assistance in furnishing me with many specimens from their rich and extensive Cabinets; also to J. G. Children, Esq. for his polite attention in allowing me access to the collection of the British Museum.

To avoid repetitions in the following pages, where the authority is not mentioned, the specimens have been taken from my own Cabinet.

E. A. C.

Fig 1.



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Pub.d by J. Mawe, 149 Strand

Printed by W. Day, 59, Gt Queen St.

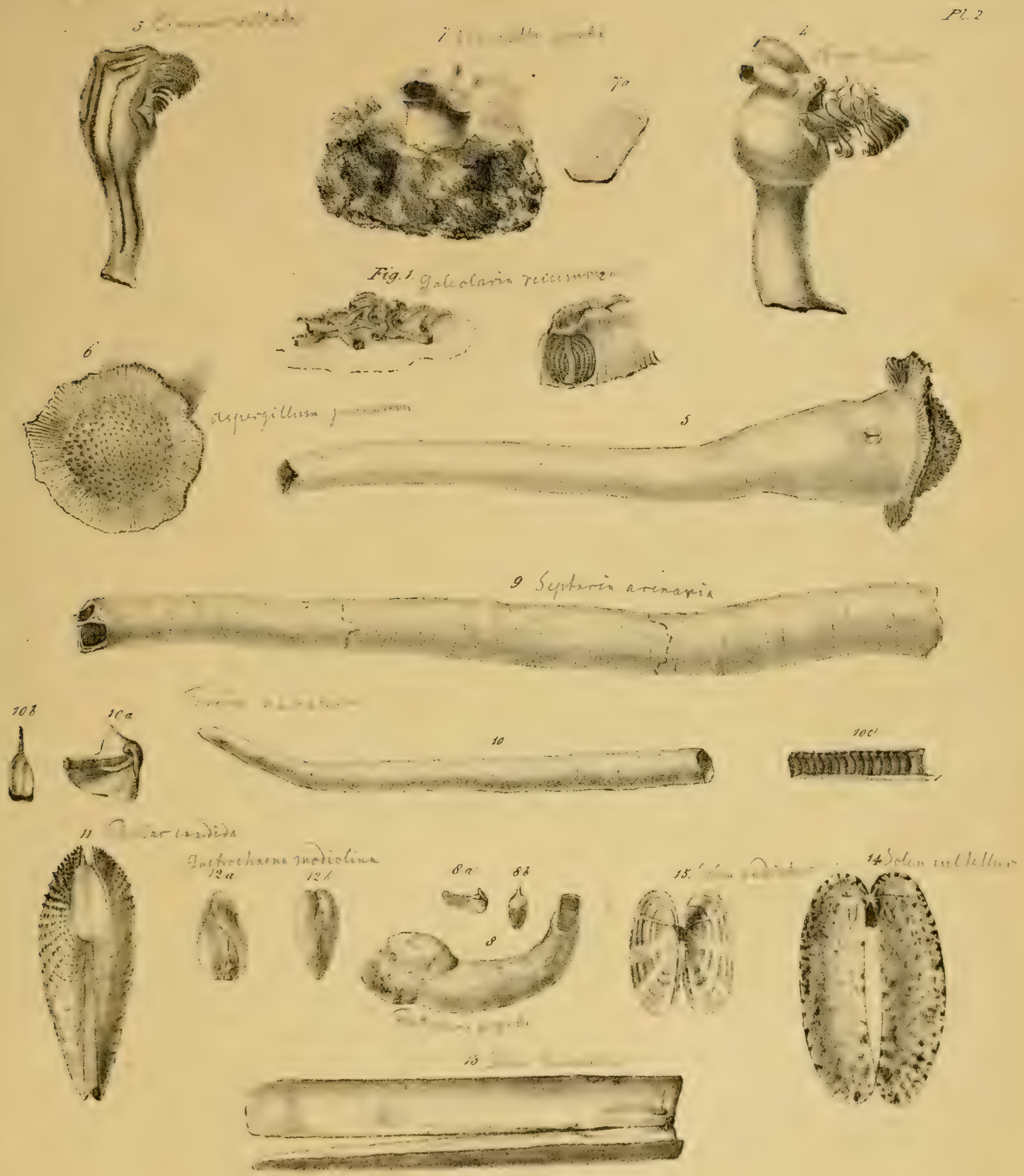

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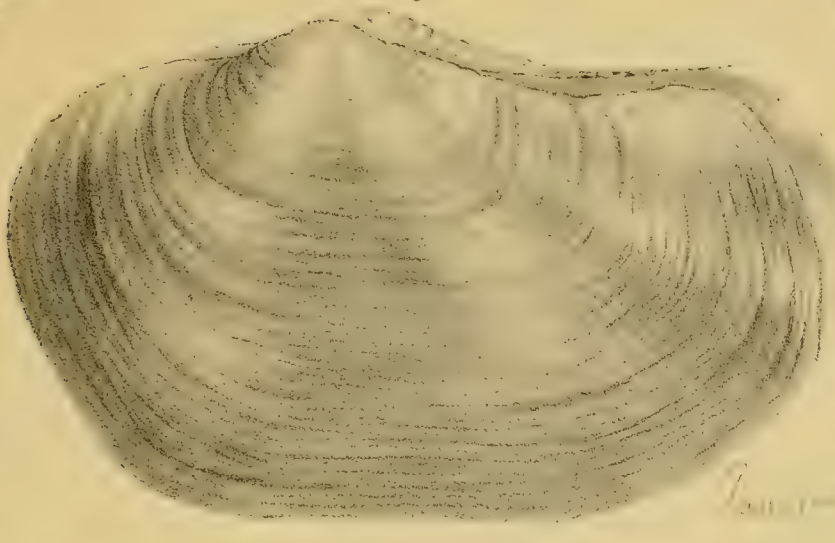
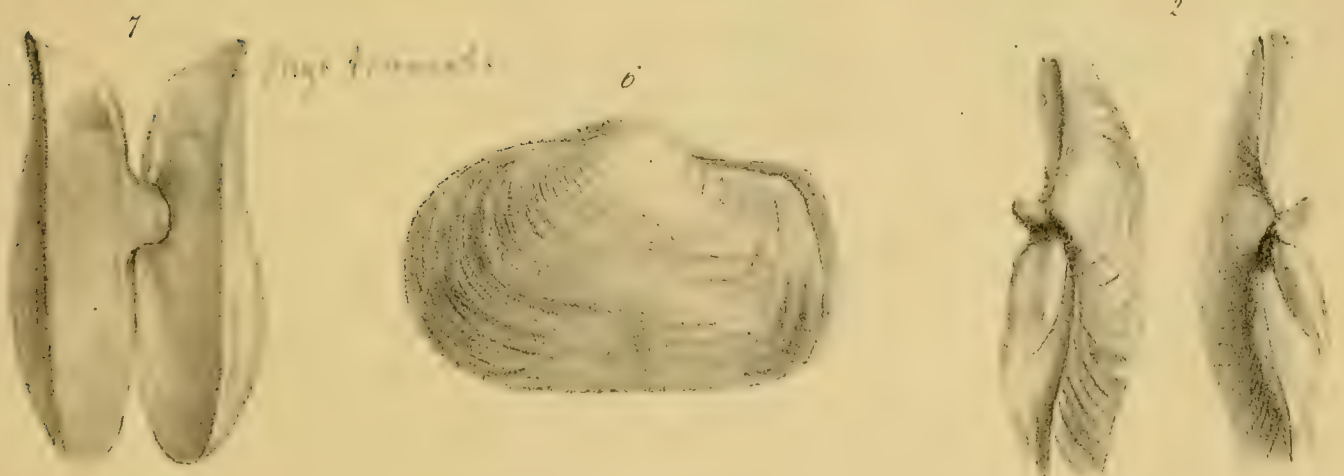
Fig 1





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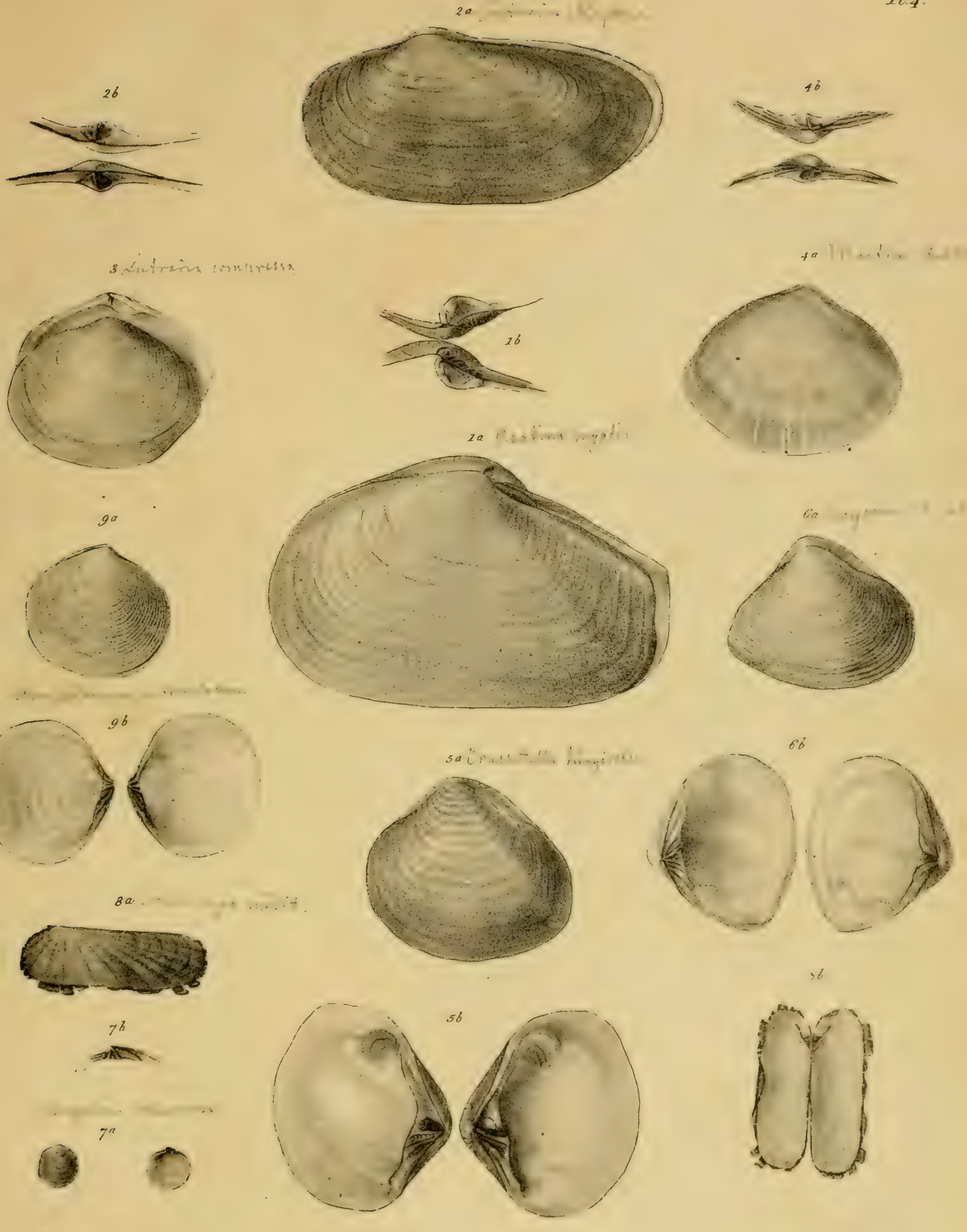

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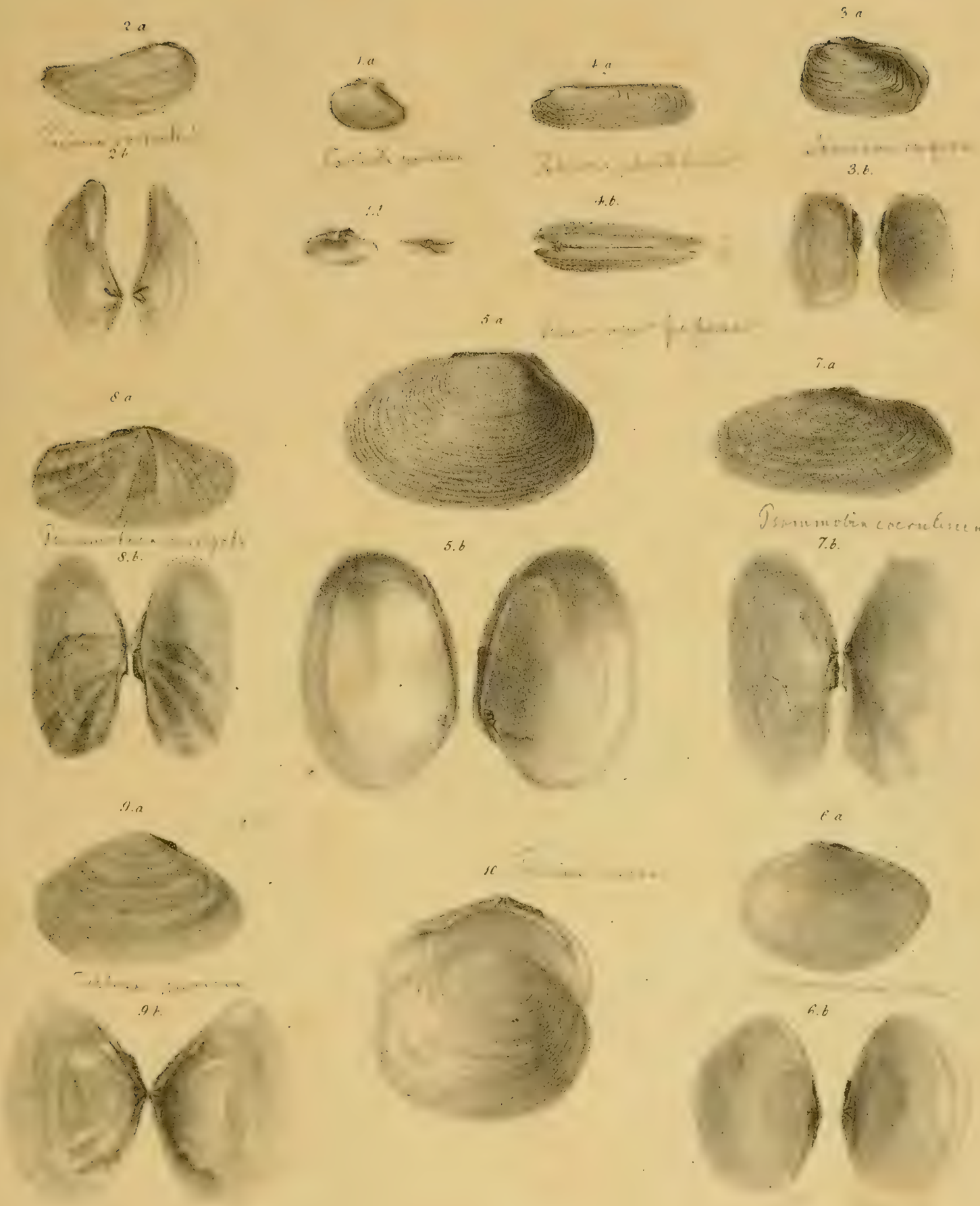

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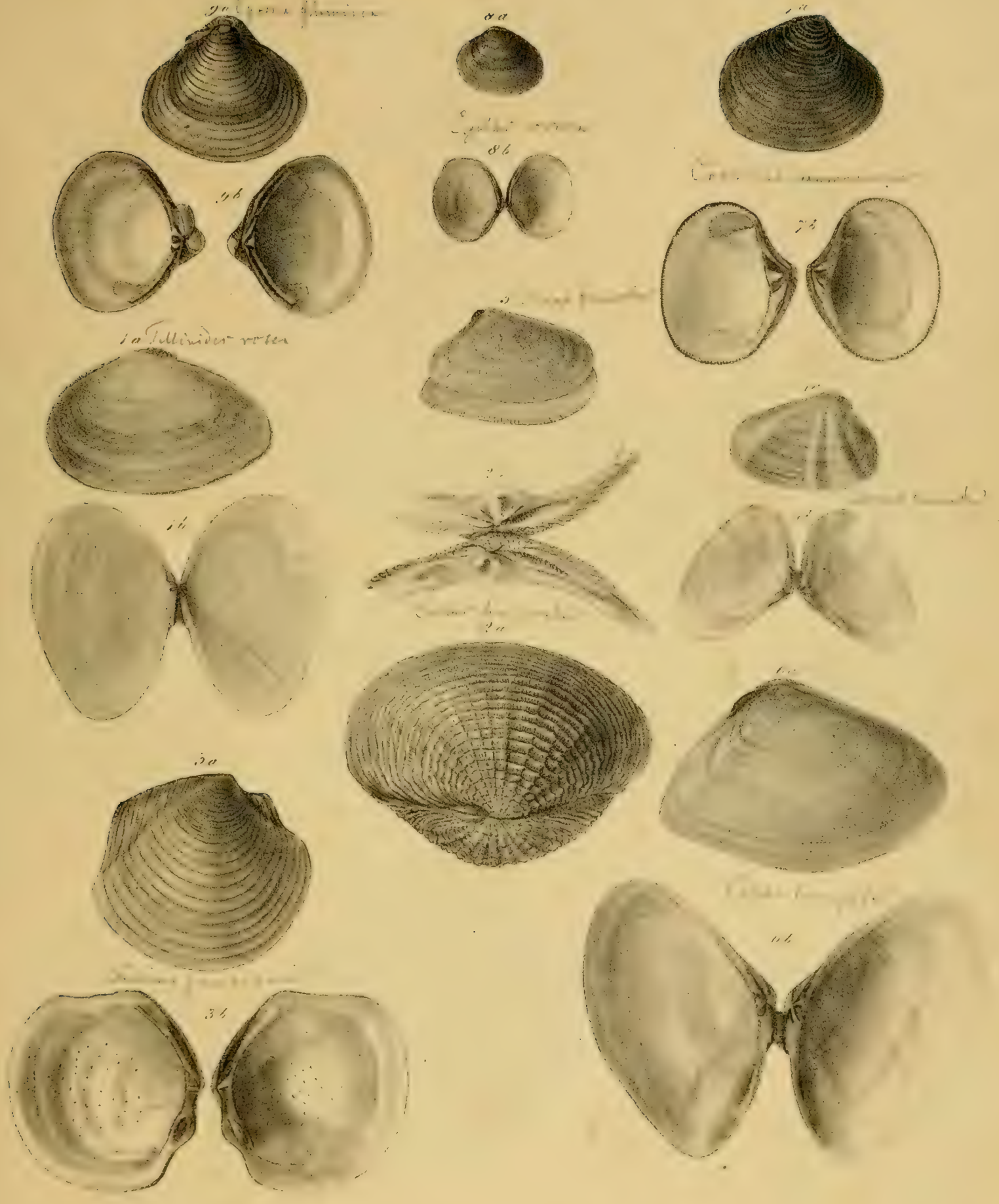

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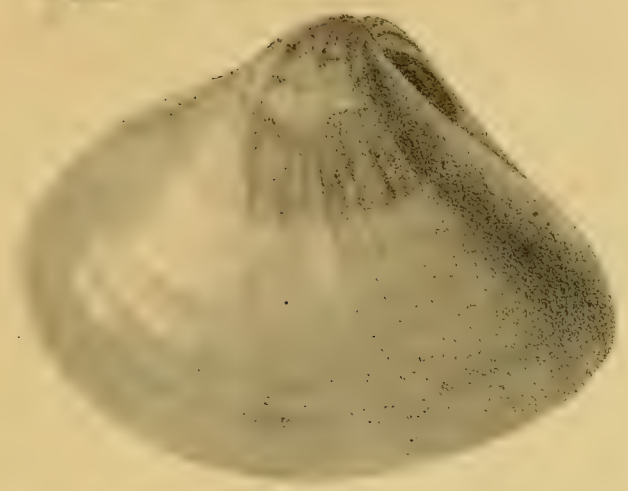

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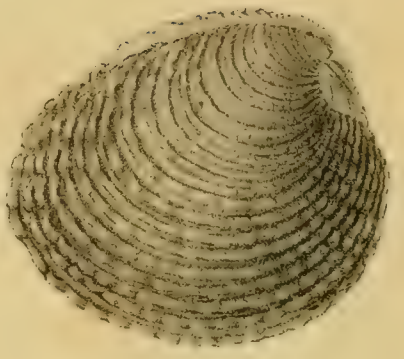

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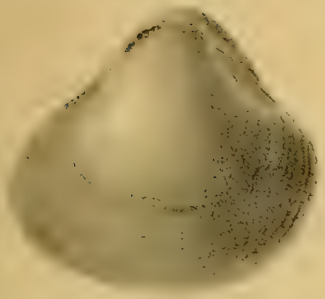

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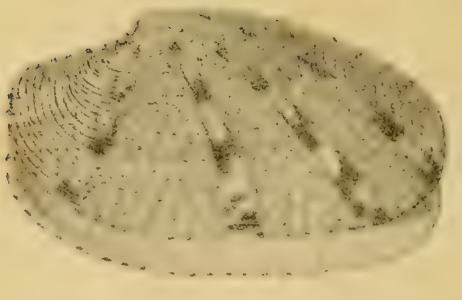

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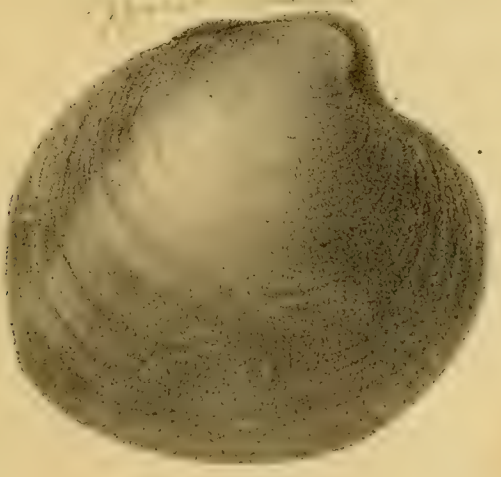

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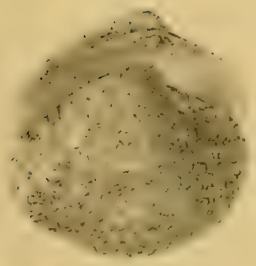

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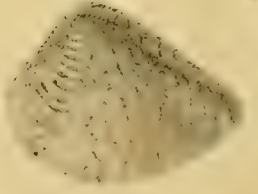

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Pl. 8.
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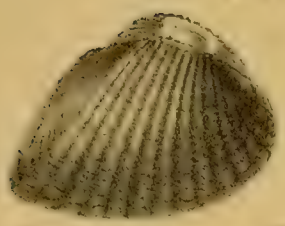
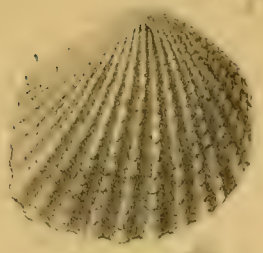
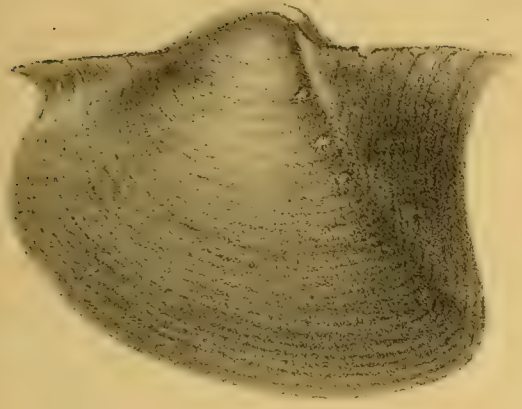
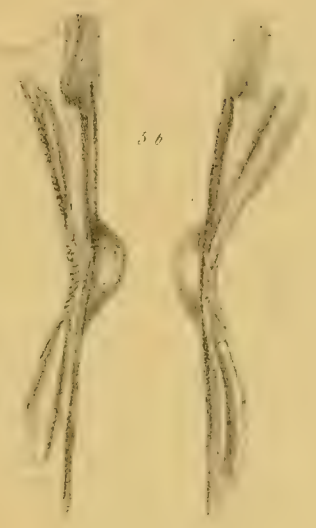
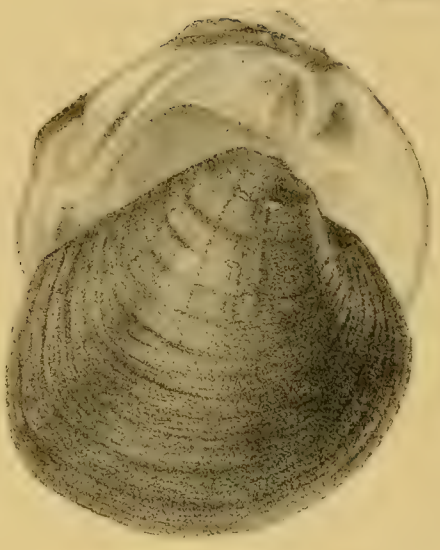
E.A.C. Lithog

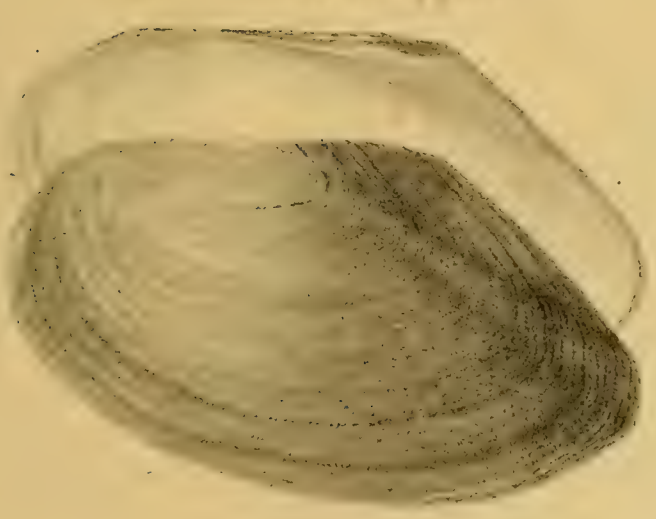












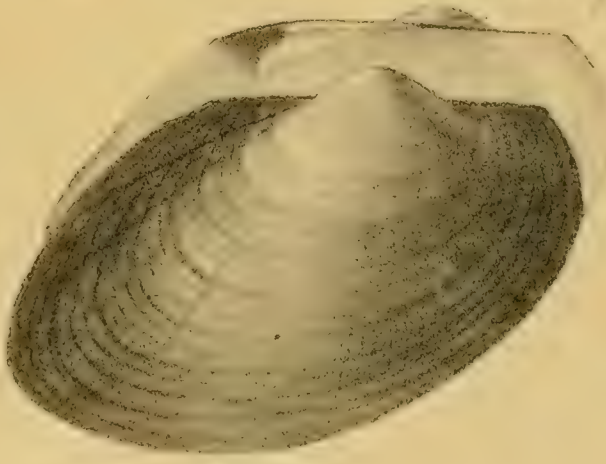


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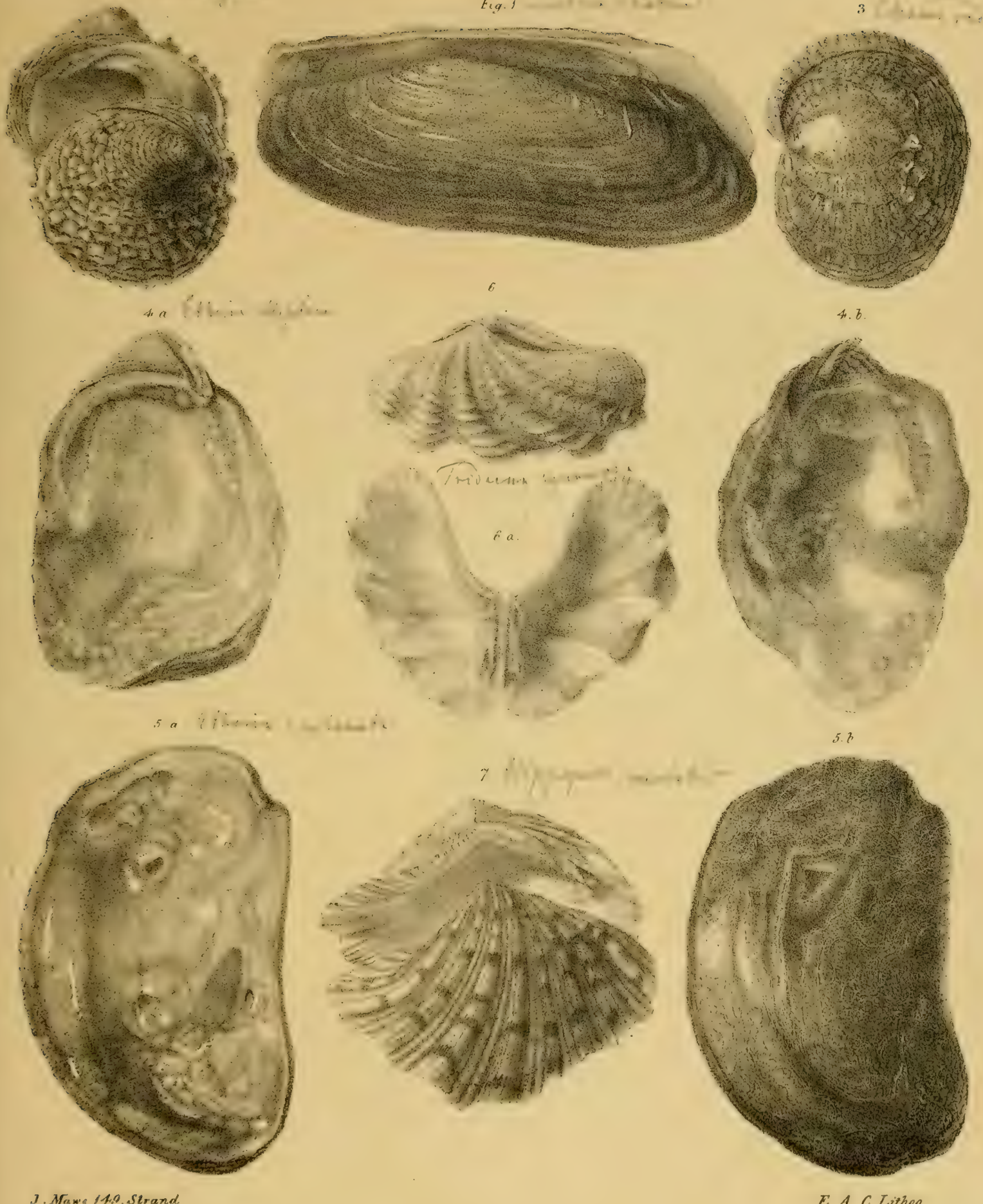
Fig. 1



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Pl. 11.

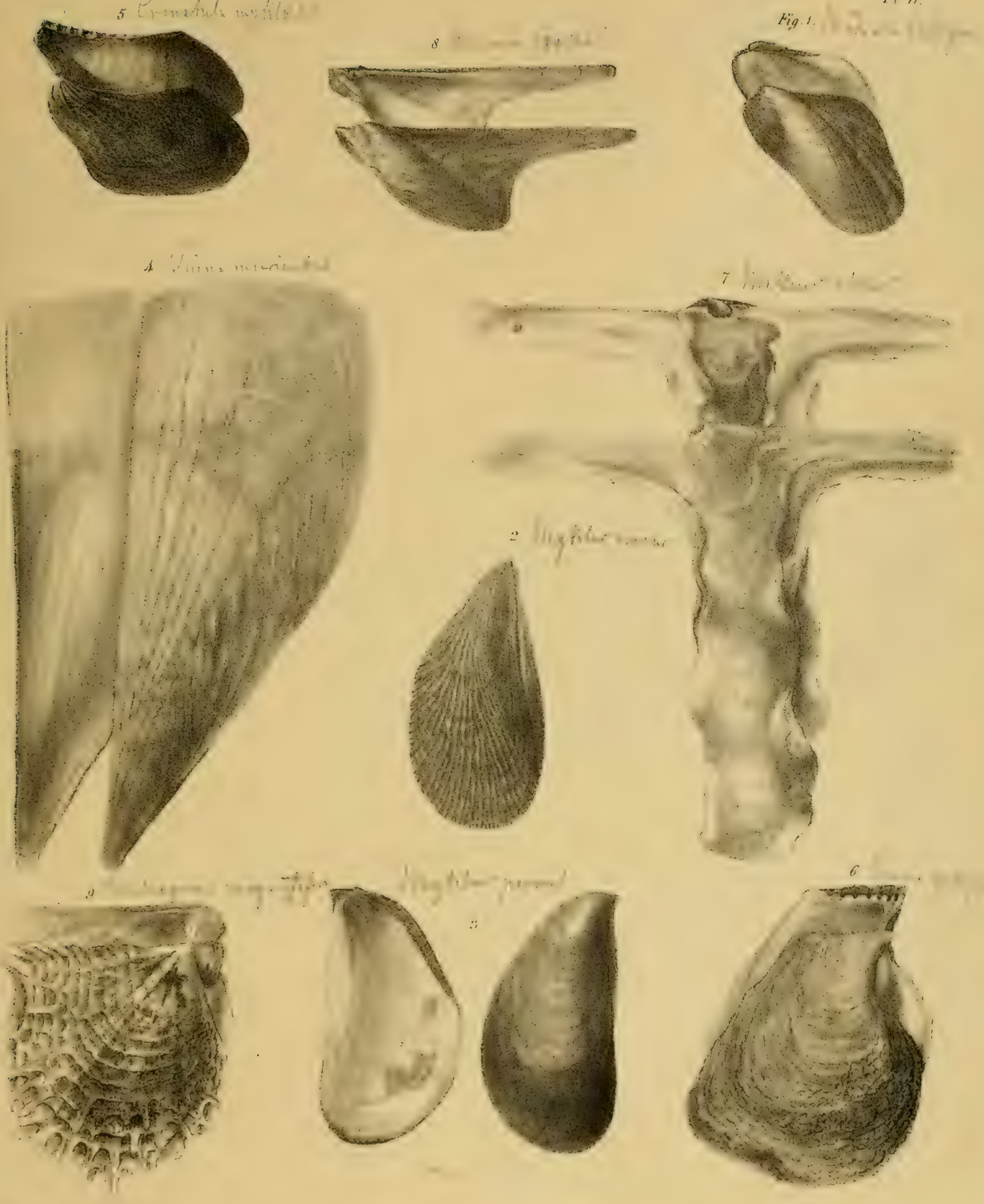

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Fig 1

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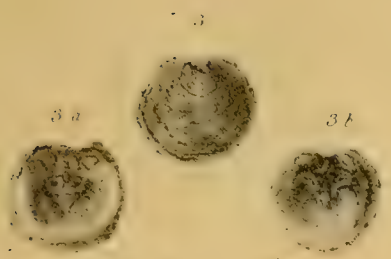
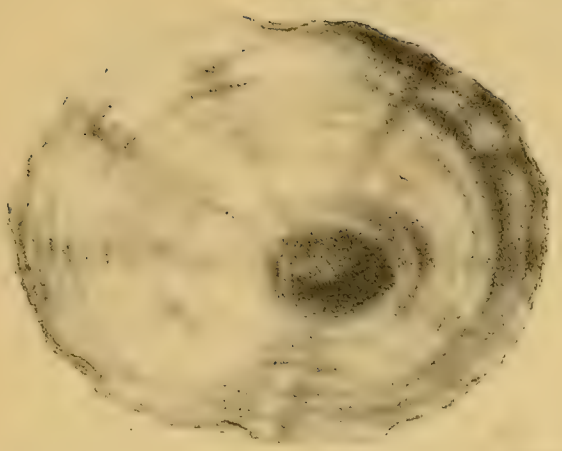
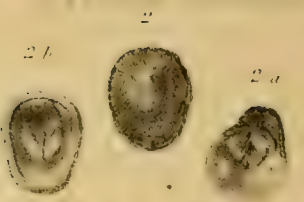
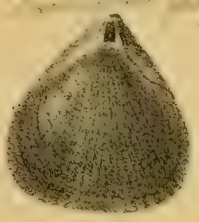
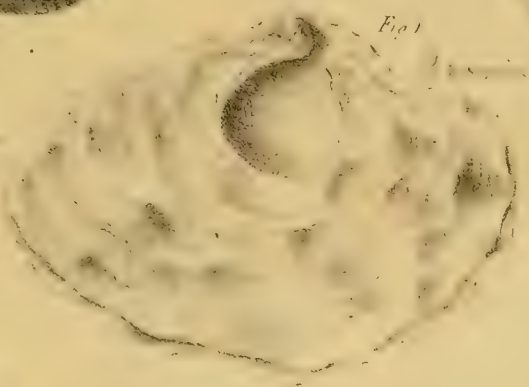
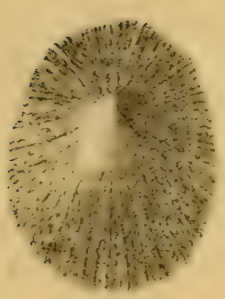


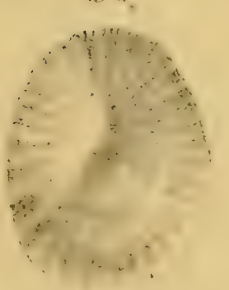


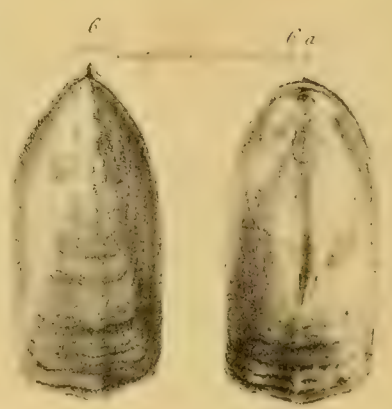


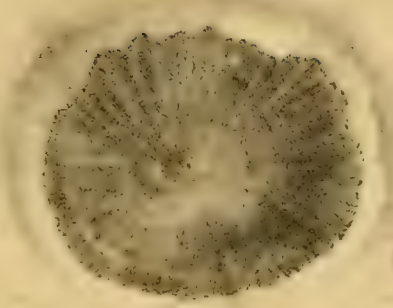








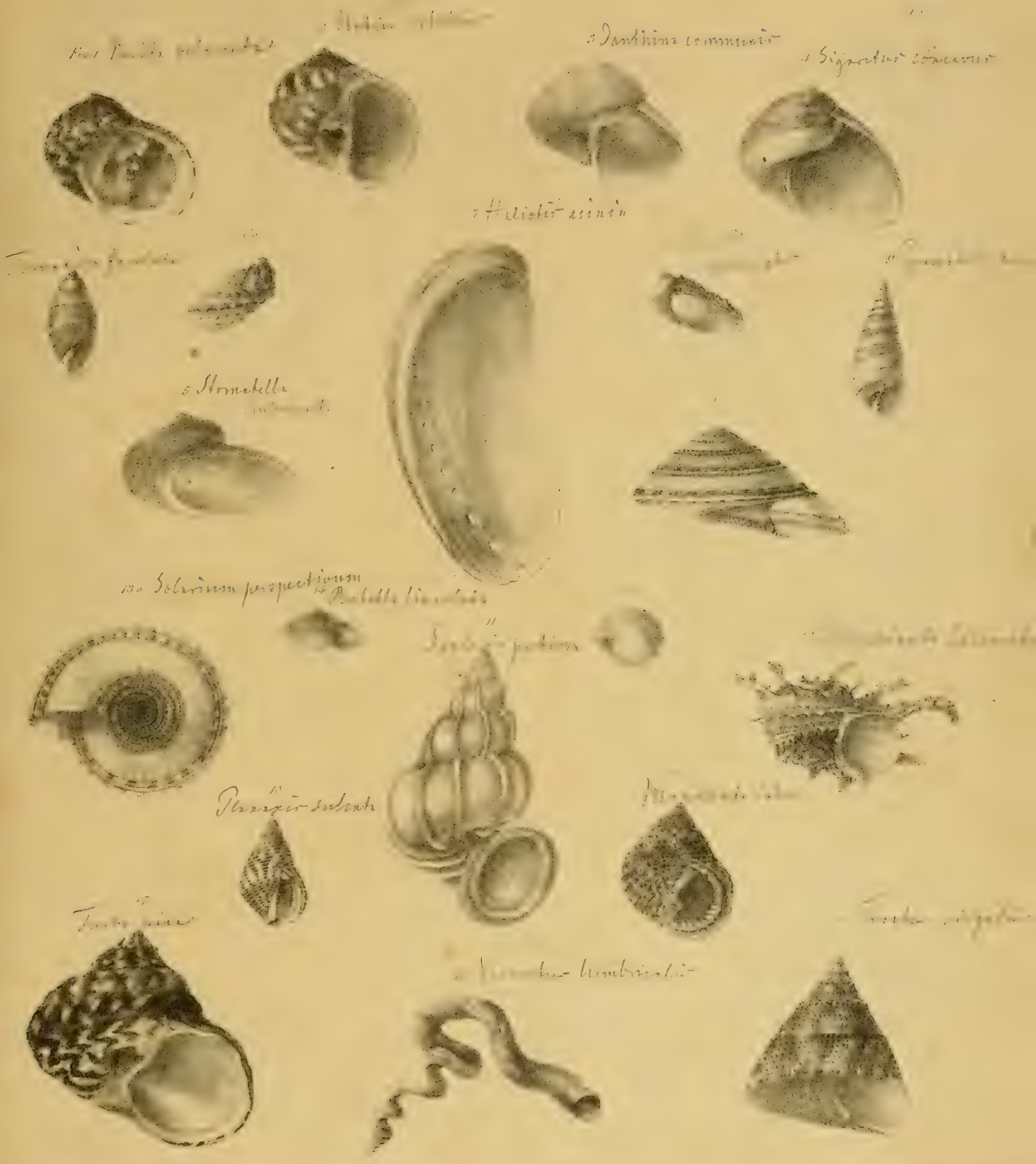




J. Mawe 149. Strand

E A C. Lithog^y

Fig. 1. Valvata major



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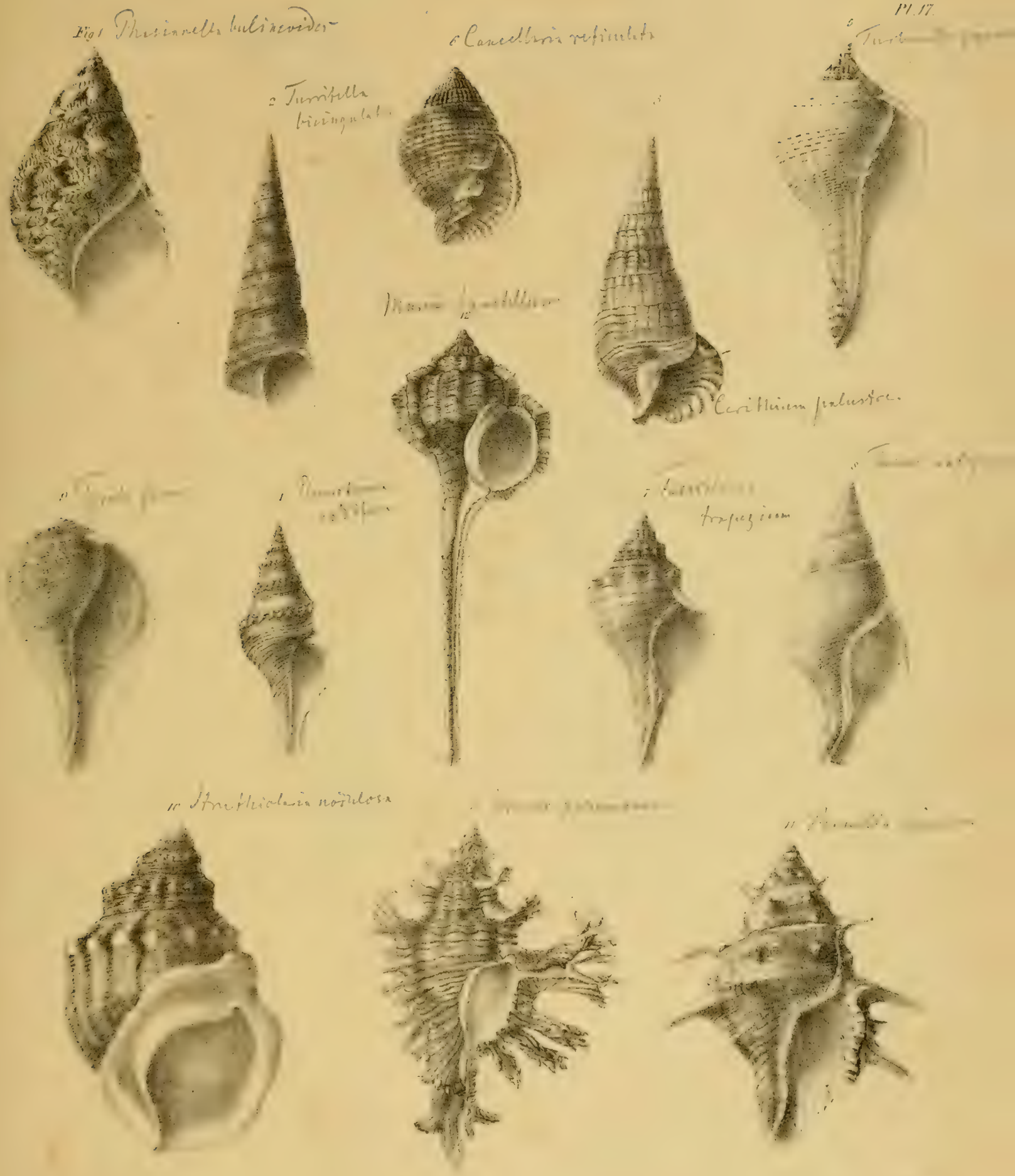

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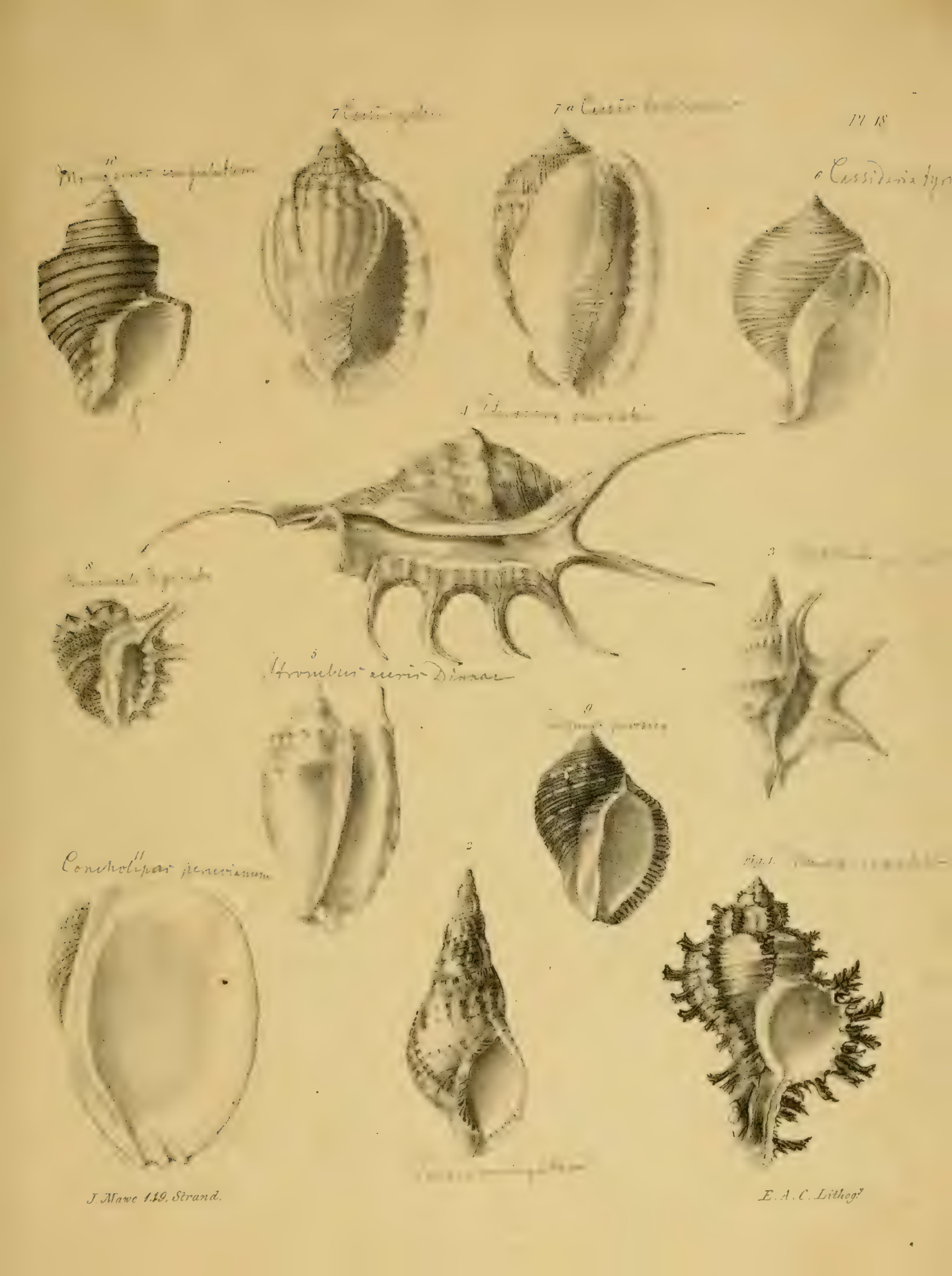
Pl. 18
Cassidaria tyr
Strombus auris Diaeae
Concholepas peruvianum
J. Mawe 149, Strand.
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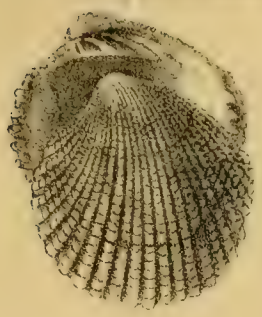

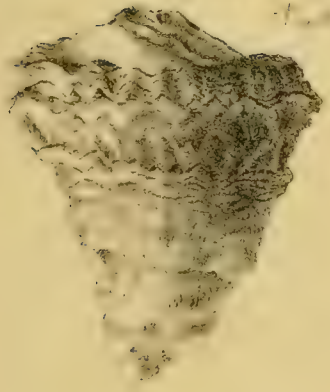

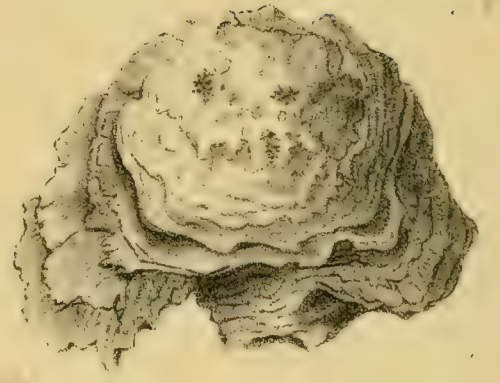

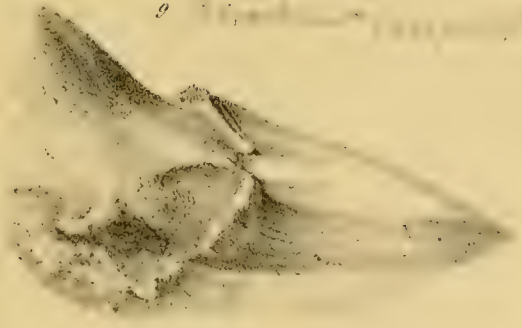

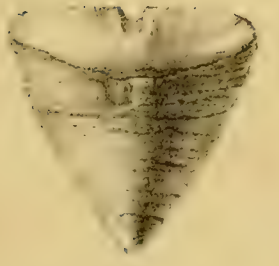

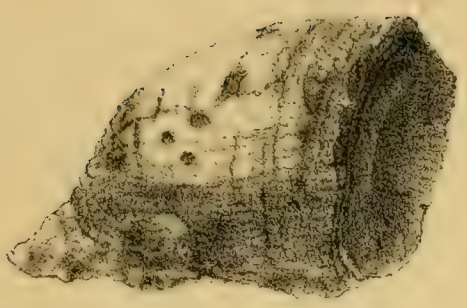

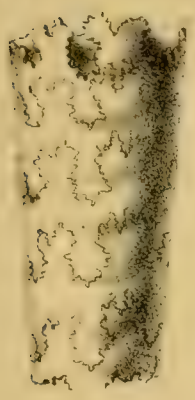

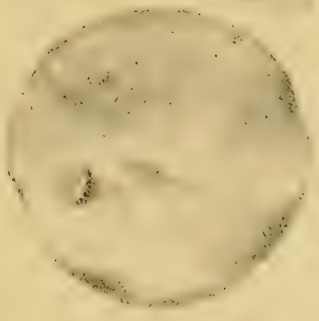

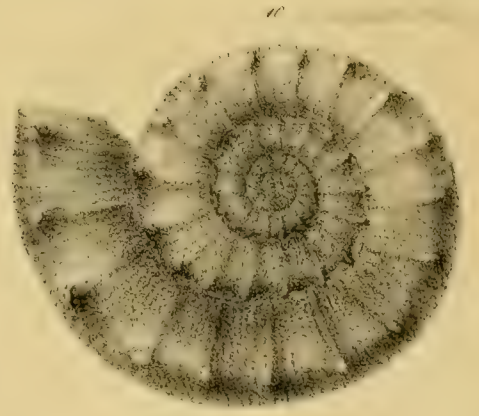

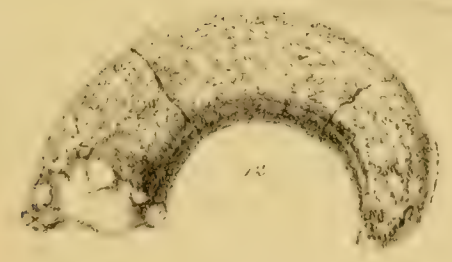

J. Mawe 149 Strand

E. A. C. Lithog

LAMARCK'S CONCHOLOGY.

ANNULATA

Forms the Ninth Class of Lamarck's Division of Animal Nature.

SEDENTARY ANNULATA

COMPOSES the Third Order of the above Class. They are usually found attached to marine substances, and inhabit membranous or horny tubes; more or less incrusted with grains of sand or fragments of shells; or are solid, calcareous, and homogeneous: and are divided into Four Families, viz.—Dorsalia, Maldania, Amphitritea, and Serpulea.

DORSALIA.—2 GENERA.

ARENICOLA.—Has no shell.

SILIQUARIA.—Shell tubular, irregularly twisted, tapering towards the posterior end, which is sometimes spiral; anterior extremity open; and a longitudinal subarticulated fissure throughout its whole length.

Plate I. Fig. 1. S. anguina. (Serpula anguina.—Linnæus.)

MALDANIA.—2 GENERA.

CLYMENE.—Tube slender, open at both ends, the exterior incrusted with sand and pieces of shells.

[I have not been able to procure a Figure of the Clymene amphistoma; of which species only the genus is composed.]

DENTALIUM.—Tube testaceous, nearly regular, slightly curved, gradually tapering towards the posterior end, open at both extremities.

(*a*) *Tube with longitudinal ribs or striæ.*

Plate I. Fig. 3. D. elephantinum, (Idem.—Linnæus.) [Mrs. Mawe's Cabinet.]

(*b*) *Tube smooth, or without ribs or striæ.*

Plate I. Fig. 2. D. politum. (Idem—Linnæus.) [Mrs. Mawe's Cabinet.]

AMPHITRITEA.—4 Genera.

Pectinaria.—Tube membranous, or papyraceous, arenaceous, in shape of a reversed cone, not fixed.

Plate I. Fig. 4. P. Belgica.

Sabellaria.—Tubes numerous, united in a common mass, composed of agglutinated fragments of shells and sand; the orifices cup-shaped.

Plate I. Fig. 5. S. crassissima.

Terebella.—Tube elongated, cylindrical, attenuated and pointed at the base; membranous, with grains of sand and fragments of shells adhering round it: open only at the apex.

Plate 1. Fig. 6. T. conchilega.

Amphitrite.—Tube elongated, cylindrical, posterior extremity attenuated, membranous or coriaceous; the exterior generally naked.

Plate I. Fig. 7. A. ventilabrum. (Sabella penicillus.—Linn.) [Icon.—Journ. Sci. XIV. pl. iii. fig. 6.]

SERPULEA.—5 Genera.

Spirorbis.—Tube testaceous, turned into an orbicular spire, discoidal; the lower surface flat, and fixed.

Plate I. Fig. 8. S. carinata.

Serpula.—Tubes solid, calcareous, irregularly twisted, grouped or solitary, fixed; the aperture terminal, round, very plain.

Plate I. Fig. 9. S. decussata. (Idem.—Linn.)

Vermilia.—Tube testaceous, cylindrical, gradually lessening to the posterior end, more or less twisted, and fixed at the base to marine substances. Aperture round, the margin armed with from one to three teeth.

Plate I. Fig. 10. V. triquetra. (Serpula triquetra.—Linn.)

Galeolaria.—Tubes testaceous, very numerous, cylindrical, rather angular, raised, wavy, crowded and matted together, fixed at the base, the upper end open. Aperture orbicular; the margin terminating in a projecting point. Operculum orbicular, galeiform, the upper part armed with from five to nine testaceous valves, which are fixed to its margin; the middle one linear, truncate, and larger than the others.

Plate II. Fig. 1. G. recumbens. Natural size. (Sowerby.)
2. Aperture and Operculum magnified.

Magilus.—The base of the shell turned into a short, oval, snail-like spire; the last four whorls contiguous, convex; the last larger than the others, and lengthening into an erect, wavy, elongated tube. Tube convex above, carinated beneath, plaited, and rather depressed at the sides; the plaits lamellated, crowded, undulated, vertical, thicker on one side of the tube than on the other.

Plate I. Fig. 11. M. antiquus. [Mr. Dubois's Cab.]

Tenth Class.

CIRRHIPEDA.

Shell sessile or elevated, on a flexible, tendinous pedicle; multivalve; sometimes moveable, sometimes fixed; the inside covered by the Mantle of the Animal.

THE CIRRHIPEDA are divided into Two Orders.——Sessile Cirrhipeda, and Pedunculated Cirrhipeda.

ORDER I.—SESSILE CIRRHIPEDA*.—6 GENERA.

THE Shells of this Order are fixed on marine bodies.

TUBICINELLA.—Shell univalve, operculated, tubular, erect, a little attenuated towards the base, bound with annular transverse ribs, truncated at both ends, open at the summit, and closed at the base with a membrane. Operculum with four obtuse valves.

Plate I. Fig. 12. T. balænarum.

CORONULA.—Shell sessile, apparently indivisible, suborbicular, conoidal or blunt-conical, the extremities truncated, the sides very thick, the inside hollowed into radiating cells. Operculum composed of four obtuse valves.

Plate I. Fig. 13. (*a*) C. balænaris. Upper-side. (Lepas balænaris.—Linn.)
(*b*) Inside.

BALANUS.—Shell sessile, fixed, conical, summit truncated, closed at the base by an adhering testaceous lamina. Aperture subtriangular, or elliptical. Operculum internal, quadrivalve, the valves moveable, inserted near the base of the inside of the shell.

Plate I. Fig. 14. B. radiatus.

ACASTA.—Shell sessile, oval, subconical, composed of separable pieces: cone formed of six unequal lateral valves united together; the base a lamina or orbicular valve, concave on the inside, resembling a patella or little cup. Operculum quadrivalve.

Plate I. Fig. 15. A. Montagui.

* Lamarck has erroneously separated this Order into Two Divisions—Operculum quadrivalve, and Operculum bivalve. Sowerby has shewn, in his Genera, that the whole are quadrivalve.

CREUSIA.—Shell sessile, fixed, orbicular, convex-conical, quadrivalve: valves unequal, united together, sutures distinct. Operculum internal, quadrivalve.

Plate I. Fig. 16. (*a*) C. verruca. Outside. (Lepas verruca.—Linn.)
(*b*) Inside.

PYRGOMA.—Shell sessile, univalve, rather globular, ventricose, convex above; apex perforated: aperture small, elliptical. Operculum quadrivalve.

Plate I. Fig. 17. (*a*) P. crenata. Outside.
(*b*) Inside.

ORDER II.—PEDUNCULATED CIRRHIPEDA.

THE body is supported by a moveable, tubular pedicle, having the base fixed on marine substances.—This Order consists of Two Divisions, viz. 1. The shell composed of contiguous pieces. 2. The shell composed of distant pieces.

DIVISION 1.—*Shell composed of Contiguous Pieces.*—2 GENERA.

ANATIFERA.—Shell compressed at the sides, composed of five valves, which are contiguous and unequal; the lower side valves the greatest.

Plate I. Fig. 18. A. lævis. (Lepas anatifera.—Linn.)

POLLICIPES.—Shell compressed at the sides, multivalve, valves rather contiguous, unequal; in number, thirteen or more: the lower side valves smallest.

Plate I. Fig. 19. P. cornucopia. (Lepas pollicipes.—Linn.)

DIVISION 2.—*Shell composed of Distant Pieces.*—2 GENERA.

CINERAS.—Shell composed of five testaceous oblong valves, separate, not covering the whole of the body: two at the sides of the aperture; the others on the back.

Plate II. Fig. 3. C. vittata. [Icon.—Wood's Conch. Tab. XII. Fig. 2.]

OTION.—Shell composed of two* testaceous small semi-lunate separate valves, adhering near the sides of the aperture.

Plate II. Fig. 4. O. Cuvieri. (Lepas aurita.—Linn.) [Icon.—Wood's Conch. Tab. XII. Fig. 4.]

* This Shell has sometimes five testaceous valves; sometimes two testaceous, and three horny valves. *Vide Sowerby's Genera.*

Eleventh Class.

CONCHIFERA.

Shell always bivalve, wholly or partly covering the Animal; sometimes free, sometimes fixed: the valves mostly joined at the margin by a hinge or ligament. The shell is sometimes enlarged by testaceous, accessory pieces, not belonging to the valves.

THIS Class is divided into Two Orders, viz. Conchifera Bimusculosa, and Conchifera Unimusculosa.

ORDER I.—CONCHIFERA BIMUSCULOSA.

THE shell presents, in the interior, two separate and lateral muscular impressions: this order is divided into Four Sections, viz. C. crassipeda, C. tenuipeda, C. lamellipeda, and C. ambigua or the Chamacea.

SECTION I.—CONCHIFERA CRASSIPEDA.

Shell gaping at the sides when shut.

THIS section contains Four Families—Tubicolaria, Pholadaria, Solenacea, and Myaria.

TUBICOLARIA.—6 GENERA.

ASPERGILLUM.—Sheath tubular, testaceous, gradually attenuating to the anterior end, which is open; the other extremity larger, and club-shaped; having two valves incrusted on one side of the club. The disk at the end of the club, convex, and perforated with sub-tubular holes, having a fissure in the centre.

Plate II. Fig. 5. A. Javanum. (Serpula penis.—Linn.) [Mrs. Mawe's Cabinet.]
6. Front view of the disk.

CLAVAGELLA.—Sheath tubular, testaceous; the anterior end attenuated and open, the posterior club-shaped, ovate, and rather compressed with spinous tubes; one valve fixed in the side of the club, the other free in the tube.

Plate II. Fig. 7 (*a*) C. aperta. (Sowerby.) [British Museum.]
(*b*) The free valve.

FISTULANA.—Sheath tubular, mostly testaceous; the posterior closed and turgid; the other end attenuated and open at the summit, inclosing a free bivalve shell; the valves of which are equal, and gape when closed.

Plate II. Fig. 8. F. gregata.
(*a*) One of the bivalves.
(*b*) One of the side valves.

SEPTARIA.—Tube testaceous and very long, gradually diminishing towards the anterior end; the interior divided by arched partitions, usually incomplete: the anterior extremity terminated by two other slender tubes, which are not divided internally.

Plate II. Fig. 9. S. arenaria. (Serpula polythalamia.—Linn.)

TEREDINA.—Sheath testaceous, tubular, cylindrical; the posterior extremity closed, shewing the two valves of the shell; the anterior end open.

Plate XXI. Fig. 1. T. personata. Fossil.

TEREDO.—Tube testaceous, cylindrical, flexuous, open at both ends, not belonging to the shell, and covering the animal. Shell bivalve, situated posteriorly on the outside of the tube.

Plate II. Fig. 10. T. navalis. The testaceous tube. (Idem.—Linn.)
(*a*) One of the bivalves.
(*b*) One of the terminating side valves.
(*c*) A section of the anterior part of the tube.

PHOLADARIA.—2 GENERA.

Shell without a tubular sheath, having accessory pieces which do not belong to the valves, and gapes anteriorly. Ligament external.

PHOLAS.—Shell bivalve, equivalve, transverse, gaping at both sides, having various accessory testaceous pieces, affixed above or below the hinge. The inferior or posterior margin of the valves reflected outwards.

Plate II. Fig. 11. P. candida. (Idem.—Linn.)

GASTROCHÆNA.—Shell bivalve, equivalve, rather wedge-shaped, gaping very much; the anterior aperture large, oval, oblique; scarcely any aperture posteriorly. Hinge linear, marginal, without teeth.

Plate II. Fig. 12. (*a*) G. modiolina. Front view.
(*b*) Back view.

SOLENACEA.—3 GENERA.

Shell without accessory pieces, and gaping only at the lateral extremities. Ligament external.

SOLEN.—Shell bivalve, equivalve, transversely elongated; gaping at both sides; beaks very small, not projecting. Cardinal teeth small, the number variable, sometimes none; rarely diverging; more rarely inserted in pits. Ligament external.

(*a*) *The cardinal teeth contiguous to the anterior end.*

Plate II. Fig. 13. S. truncatus. (Dillwyn.)

(*b*) *The cardinal teeth a little removed from the anterior end.*

Plate II. Fig. 14. S. cultellus. (Idem.—Linn.)

(*c*) *The cardinal teeth nearer the middle than the anterior end.*

Plate II. Fig. 15. S. radiatus. (Idem.—Linn.)

Panopæa.—Shell equivalve, transverse, unequally gaping at the sides: one cardinal conical tooth in each valve; and near it a short, compressed, ascending callosity, not projecting outwards. Ligament exterior, on the longest side of the shell, fixed to the callosities.

Plate III. Fig. 1. P. Aldrovandi. (Mya glycymeris.—Gmelin.) [Mrs. Mawe's Cab.]
2. Hinge of ditto.

Glycymeris.—Shell transverse, gaping much on each side; hinge callous, without teeth; nymphæ projecting outside. Ligament external.

Plate III. Fig. 3. G. siliqua. (Mya siliqua.—Chem.)
4. & 5. Inside of ditto.

MYARIA.—2 Genera.

Ligament internal; having one large spoon-shaped tooth in each valve or in one only; to the cavity of which the ligament is attached. The shell gapes at one or both sides.

Mya.—Shell bivalve, transverse, gaping at each end; having one large cardinal tooth in the left valve, broadly compressed, rather rounded, and projecting almost vertically: a cardinal pit in the other valve. Ligament internal, inserted in the prominent tooth and the corresponding pit.

Plate III. Fig. 6. M. truncata. (Idem.—Linn.)
7. Inside, shewing the hinge of ditto..

Anatina.—Shell transverse, nearly equivalve, gaping at one or both sides; one naked, broad, spoon-shaped cardinal tooth, projecting internally in each valve, and receiving the ligament. In many species, a lamina or falcated rib runs obliquely below the cardinal teeth.

Plate IV. Fig. 1. (*a*) A. myalis. (Mya declivis.—Pennant.)
(*b*) Hinge of ditto.

SECTION II.—CONCHIFERA TENUIPEDA.

The lateral gaping inconsiderable.

The shells of this section compose Four Families, which are separated into Two Divisions, viz.—1. Mactracea and Corbulea, having the ligament internal, with or without any external ligament.——And, 2, Lithophaga and Nymphacea, having the ligament always external.

Division I.—Ligament internal, with or without any external Ligament.

MACTRACEA.—7 Genera.

Shell equivalve, mostly gaping at the lateral extremities. Ligament internal, with or without any external ligament.

I.—The Ligament always internal.

(1) *Shells gaping at the sides.*

Lutraria.—Shell inequilateral, transversely oblong or rounded, lateral extremities gaping: hinge with one tooth folded in two; or two teeth, one of which is simple, with an adjoining, deltoid, oblique pit, projecting inwards; no lateral teeth. Ligament internal, affixed in the pits.

(*a*) *Shells transversely oblong.*

Plate IV. Fig. 2. (*a*) L. elliptica. (Mactra lutraria.—Gmel.)
(*b*) Hinge of ditto.

(*b*) *Shells orbicular, or subtriangular.*

Plate IV. Fig. 3. L. compressa. (Mactra Listeri.—Gmel.)

Mactra.—Shell transverse, inequilateral, subtriangular, gaping very little at the sides; beaks prominent. One compressed folded cardinal tooth in each valve, with an adjoining pit projecting inwards; two compressed entering lateral teeth, near the hinge. Ligament internal, inserted in the cardinal pits.

Plate IV. Fig. 4. (*a*) M. stultorum. (Idem.—Linn.)
(*b*) Hinge of ditto.

(2) *Shells not gaping at the sides.*

Crassatella.—Shell inequilateral, suborbicular or transverse, the valves close: two rather diverging cardinal teeth, and a pit by the side of them. Ligament internal, inserted in the pit of each valve: lateral teeth, none; or obsolete.

Plate IV. Fig. 5. (*a*) C. kingicola. [Mrs. Mawe's Cabinet.]
(*b*) Inside of ditto.

Erycina.—Shell transverse, rather inequilateral, equivalve, rarely gaping: two unequal, diverging cardinal teeth, having a pit between them; and two oblong compressed, short, entering lateral teeth. Ligament internal, fixed in the pits.

Plate IV. Fig. 6. (*a*) E. striata. (Sowerby.)
(*b*) Inside of ditto.

II.—Ligament shewing itself on the outside, or being double; has one internal the other external.

Ungulina.—Shell longitudinal or transverse, rounded on the upper part, subequilateral, valves not gaping: beaks eroded. A short, and rather bifid cardinal tooth in each

valve; with an oblong, marginal, adjoining pit, divided in two by a contraction. Ligament internal, inserted in the pits.

Plate IV. Fig. 7. (*a*) U. transversa. Natural size. [Brit. Mus.]
(*b*) Magnified view of the Hinge.

Solenimya.—Shell inequilateral, equivalve, transversely oblong, the extremities obtuse; the epidermis shining, and extending beyond the margin. Beaks not prominent, scarcely distinct. One cardinal tooth in each valve, dilated, compressed, and very oblique; rather concave above, to receive the ligament, which is partly internal, and partly external.

Plate IV. Fig. 8. (*a*) S. Mediterranea. [Mrs. Mawe's Cabinet.]
(*b*) Inside of ditto.

Amphidesma.—Shell transverse, inequilateral, subovate or rounded, sometimes gaping a little at the sides: hinge having one or two teeth, and a narrow pit for the internal ligament. Ligament double; one external, short; the other internal, fixed in the cardinal pits.

Plate IV. Fig. 9. (*a*) A. reticulatum. (Sowerby's Genera.) (Tellina reticulata.—Linn.)
(*b*) Inside of ditto.

CORBULEA.—2 Genera.

Shell inequivalve. Ligament interior.

Corbula.—Shell regular, inequivalve, inequilateral, closed, or very slightly gaping. One large conical, curved, ascending tooth in each valve, with a pit beside it: no lateral teeth. Ligament internal, inserted in the pits.

Plate V. Fig. 1. (*a*) C. porcina.
(*b*) Hinge of ditto.

Pandora.—Shell regular, inequivalve, inequilateral, transversely oblong; upper valve flat, and the lower convex. Two oblong, diverging, unequal, cardinal teeth in the upper valve; two oblong pits in the other. Ligament internal.

Plate V. Fig. 2. (*a*) P. rostrata. (Tellina inequivalvis.—Linn.)
(*b*) Inside of ditto.

LITHOPHAGA.—3 Genera.

Boring Shells, without accessory pieces or sheath, and more or less gaping at their anterior side. Ligament of the valves external.

Saxicava.—Shell bivalve, transverse, inequilateral; gaping anteriorly at the superior margin: hinge almost without teeth. Ligament external.

Plate V. Fig. 3. (*a*) S. rugosa. (Mytilus rugosa.—Linn.)
(*b*) Inside of ditto.

Petricola.—Shell bivalve, subtriangular, transverse, inequilateral; the posterior side rounded, the anterior attenuated; slightly gaping. Hinge having two teeth in each valve, or in one only.

Plate V. Fig. 4. (*a*) P. pholadiformis,
(*b*) Hinge of ditto.

Venerirupis.—Shell transverse, inequilateral; the posterior side very short, the anterior gaping slightly. Hinge with two teeth in the right valve, and three in the left; sometimes three in each: the teeth are small, approximate, parallel, and but little or not at all diverging. Ligament external.

Plate V. Fig. 5. (*a*) V. perforans. (Venus perforans.—Montagu.)
(*b*) Inside of ditto.

NYMPHACEA.—10 Genera.

Two cardinal teeth, or more, on the same valve: shell often gaping slightly at the sides. Ligament external; nymphæ, in general, projecting outside.

This family is divided into N. Solenaria, and N. Tellinaria.

NYMPHACEA SOLENARIA.

Sanguinolaria.—Shell transverse, rather elliptical, gaping slightly at the lateral extremity; the superior margin arched, not parallel to the inferior. Hinge with two approximate teeth in each valve.

Plate V. Fig. 6. (*a*) S. rosea. (Solen sanguinolentus.—Gmel.)
(*b*) Inside of ditto.

Psammobia.—Shell transverse, elliptical or oblong oval, rather flat, gaping slightly at each side; beaks rather prominent. Hinge with two teeth on the left valve, and one entering tooth in the opposite valve.

Plate V. Fig. 7 (*a*) P. cærulescens.

Psammotæa.—Shell transverse, oval or oblong oval, gaping a little at the sides; one cardinal tooth in each valve, sometimes in one valve only.

Plate V. Fig. 8. (*a*) P. variegata. (Solen variegatus.—Wood.)
(*b*) Inside of ditto.

NYMPHACEA TELLINARIA.

Is subdivided into—I. Shells having one or two lateral teeth.—And II. Those which have no lateral teeth.

I.—Having one or two lateral teeth.

Tellina.—Shell transverse or orbicular, in general rather flat; the anterior side angular, with a flexuous and irregular fold on the margin: only one or two cardinal teeth in the same valve; two lateral teeth, often remote.

(*a*) *Shell transversely oblong.*

Plate V. Fig. 9. (*a*) T. punicea. (Idem.—Gmel.)
(*b*) Inside of ditto.

(*b*) *Shell orbicular, or rounded oval.*

Plate V. Fig. 10. T. crassa. (Idem.—Lister.)

Tellinides.—Shell transverse, inequilateral, rather flat, slightly gaping at the sides; beaks small and rather depressed, without the irregular fold on the margin. Hinge with two diverging teeth in each valve. Two lateral teeth, almost obsolete; the posterior of which in one valve is near the cardinal teeth.

Plate VI. Fig. 1. (*a*) T. rosea.
(*b*) Inside of ditto.

Corbis.—Shell transverse, equivalve, without any irregular fold on the anterior margin, having the beaks opposite and curved inwards. Two cardinal teeth; two lateral teeth, the posterior of which is nearest the hinge. The muscular impressions simple.

Plate VI. Fig. 2. (*a*) C. fimbriata. (Venus fimbriata.—Linn.) [Mrs. Mawe's Cabinet.]
(*b*) Hinge of ditto.

Lucina.—Shell suborbicular, inequilateral; beaks small, pointed, and oblique; two diverging cardinal teeth, one of which is bifid, and which vary or disappear with age; two lateral teeth, sometimes obsolete, the posterior approaches nearest to the cardinal teeth; two muscular impressions, very separate, the posterior extending in the shape of a band, sometimes very long. Ligament external.

Plate VI. Fig. 3. (*a*) L. Jamaicensis. (Venus Jamaicensis.—Chem.)
(*b*) Inside of ditto.

Donax.—Shell transverse, equivalve, inequilateral, the anterior side very short and very obtuse; two cardinal teeth, either in both valves, or in one only; one or two lateral teeth, more or less distant. Ligament external, short, inserted in the place of the lunula.

(*a*) *Internal margin entire, or nearly so.*

Plate VI. Fig. 4. (*a*) D. cuneata. (Idem.—Gmel.)
(*b*) Inside of ditto.

(*b*) *Internal margin crenulated or toothed.*

Plate VI. Fig. 5. D. trunculus. (Idem.—Chem.)

II.—Having no lateral teeth.

Capsa.—Shell transverse, equivalve, close: hinge having two teeth in the right valve, and one entering bifid tooth in the other; no lateral teeth. Ligament external.

Plate VI. Fig 6. (*a*) C. lævigata. (Donax lævigata.—Chem.)
(*b*) Inside of ditto.

Crassina.—Shell suborbicular, transverse, equivalve, rather inequilateral, close: hinge with two strong diverging teeth in the right valve, and two very unequal teeth in the other. Ligament external, on the longest side.

Plate VI. Fig. 7. (*a*) C. Danmoniensis. (Venus Danmoniensis.—Montagu.)

SECTION III.—CONCHIFERA LAMELLIPEDA.

This Section is divided into Five Families, viz. Conchæ, Cardiacea, Arcacea, Trigoniana, and Naiada.

CONCHÆ.—7 Genera.

Three cardinal teeth at least in one valve, with as many, or less, in the other; sometimes with lateral teeth.

The Conchæ are divided into Fluviatiles and Marinæ.

CONCHÆ FLUVIATILES.

Cyclas.—Shell ovate-globose, transverse, equivalve, the beaks tumid; cardinal teeth very small, sometimes scarcely perceptible; occasionally two in each valve, one of them plaited in two; sometimes only one plaited or lobed tooth in one valve, and two in the other: lateral teeth transversely elongated, compressed, lamellar.—Ligament external.

Plate VI. Fig. 8. (*a*) C. cornea. (Tellina cornea.—Linn.)
(*b*) Inside of ditto.

Cyrena.—Shell rounded, triangular, turgid or ventricose, inequilateral, solid, covered with an epidermis; the beaks eroded; hinge having three teeth in each valve; the lateral teeth are nearly always two in number; one of them often near the cardinal. Ligament external, inserted in the larger side.

(*a*) *Lateral teeth serrated or denticulated.*

Plate VI. Fig. 9. (*a*) C. fluminea. (Tellina fluminea.—Gmel.)

(*b*) *Lateral teeth entire.*

[I have not been able to procure a species belonging to this division, to make a drawing from.]

Galathea*.—Shell equivalve, subtriangular, covered with a greenish epidermis: cardinal teeth sulcated; two in the right valve, approaching at their base; three in the other, the middle one advanced, and separate: lateral teeth distant. Ligament external, short, protruding, turgid; nymphæ prominent.

Plate VII. Fig. 1. (*a*) G. radiata. (Venus subviridis.—Gmel.) [Mr. G. B. Sowerby's Cabinet.]
(*b*) Hinge of ditto.

* Galathea having been appropriated to a genus of Crustacea, Bowdich has substituted Megadesma as a name for this genus.

CONCHÆ MARINÆ.

Mostly no lateral teeth; the whole shell frequently covered with an epidermis, except at the beaks.

CYPRINA.—Shell equivalve, inequilateral, obliquely cordate; the beaks obliquely curved; three unequal cardinal teeth, approximating at their base, and diverging a little above: a lateral tooth distant from the hinge, placed on the anterior side, sometimes obsolete. The callosities of the nymphæ large, arched, terminated near the beaks by a pit. Ligament external, sunk in part under the beaks.

Plate VII. Fig. 2. (*a*) C. Islandica. (Venus Islandica.—Linn.)
(*b*) Hinge of ditto.

CYTHEREA.— Shell equivalve, inequilateral, suborbicular, triangular, or transverse: four cardinal teeth in the right valve, three of which diverge and approximate at their base, and one quite insulated, situated under the lunula: three diverging cardinal teeth in the other valve, and a pit rather distant, parallel to the margin. No lateral teeth.

I.—INTERNAL MARGIN OF THE VALVES VERY ENTIRE.

(*a*) *Anterior cardinal tooth having a striated canal or dentated border.*

Plate VII. Fig. 3. (*a*) C. tripla. (Venus tripla.—Chem.)
(*b*) Hinge of ditto.

(*b*) *Anterior cardinal tooth without the striated canal or dentated border.*

Plate VII. Fig. 4. C. picta. (Venus picta.—Chem.)

II.—INTERNAL MARGIN OF THE VALVES CRENATED OR DENTATED.

Plate VII. Fig 5*. C. meroe. (Venus meroe.—Linn.)

VENUS.—Shell equivalve, inequilateral, transverse or suborbicular: three approximate cardinal teeth in each valve, the lateral ones diverging at the summit. Ligament external, covering the scutcheon.

I.—INTERNAL MARGIN OF THE VALVES CRENATED OR DENTATED.

(*a*) *Shells with lamellar striæ.*

Plate VII. Fig. 6. (*a*) V. verrucosa. (Idem.—Linn.)
(*b*) Hinge of ditto.

(*b*) *Shells without lamellar striæ.*

Plate VII. Fig 7. V. flexuosa. (Idem.—Gmel.)†

II.—THE INTERNAL MARGIN OF THE VALVES VERY ENTIRE.

Plate VII. Fig. 8. V. papilionacea. (V. rotundata.—Gmel.)

* This species is the Donax meroe of Lamarck; but, as it agrees in the hinge, and in other particulars, with the Cytherea genus, I have removed it to its present situation, where it forms, with a few others of a similar character, a very interesting group, which are distinguished by the remarkable cavity in which the ligament is situated, in addition to the crenated margin.

† Lamarck has named this species Cytherea flexuosa, but its hinge is decidedly that of a Venus.

VENERICARDIA.—Shell equivalve, inequilateral, suborbicular, mostly with longitudinal radiating ribs. Two oblique cardinal teeth, standing the same way.

Plate XXI. Fig. 2. V. imbricata.—Fossil. [Mr. G. B. Sowerby's Cabinet.]

CARDIACEA.—5 GENERA.

Cardinal teeth irregular, either in their form or in their situation; and in general accompanied by one or two lateral teeth.

CARDIUM.—Shell equivalve, rather heart-shaped; the beaks prominent; the internal margins of the valves dentated or plaited: hinge with four teeth in each valve; the two cardinal approximate and oblique, articulating cross-wise with the two in the other valve; and two rather distant entering lateral teeth.

(1) *Shell with no particular angle on the beaks, and the anterior side at least as large as the posterior.*

Plate VIII. Fig. 1. (*a*) C. rusticum. (Idem.—Chem.) [Mrs. Mawe's Cabinet.]
(*b*) Hinge of ditto.

(2) *Shell with the beaks carinated, or having an angle, and the posterior side often larger than the anterior.*

Plate VIII. Fig. 2. C. retusum. (Idem.—Linn.)

CARDITA.—Shell free, regular, equivalve, inequilateral: hinge with two unequal teeth, one short, straight, situated under the beaks; the other oblique, marginal, and extending under the corselets.

(1) *Shell subcordate, or oval, more transverse than longitudinal.*

Plate VIII. Fig. 3. (*a*) C. sulcata. (Chama antiquata.—Linn.)
(*b*) Hinge of ditto.

(2) *Shells more longitudinal than transverse.*

Plate VIII. Fig. 4. C. calyculata. (Chama calyculata.—Linn.)

CYPRICARDIA.—Shell free, equivalve, inequilateral, obliquely or transversely elongated. Three cardinal teeth under the beaks, and one lateral tooth extending under the corselet.

Plate VIII. Fig. 5. (*a*) C. Guinaica. (Chama oblonga.—Linn.)
(*b*) Inside of ditto.

HIATELLA.—Shell equivalve, very inequilateral, transverse, gaping at the superior margin: hinge with one small tooth in the right valve, and two oblique teeth, a little larger, in the left valve. Ligament external.

Plate VIII. Fig. 6. (*a*) H. arctica. (Solen minutus; Mya arctica.—Linn.)
(*b*) Inside of ditto.

ISOCARDIA.—Shell equivalve, heart-shaped, ventricose, the beaks distant, diverging, spirally turned on one side: two flat, entering, cardinal teeth, one of them curved,

and sunk under the beak; one elongated lateral tooth, situated under the corselet. Ligament external, forked on one side.

Plate VIII. Fig. 7. (*a*) I. cor. (Chama cor.—Linn.)
(*b*) Hinge of ditto.

ARCACEA.—4 Genera.

Cardinal teeth small, numerous, entering, and disposed in each valve, in a straight, arched, or broken line.

Cucullæa.—Shell equivalve, inequilateral, trapeziform, ventricose; the beaks distant, separated by the facet of the ligament; the anterior muscular impression forming a projecting angular or auricular margin: hinge linear, straight, with small transverse teeth, and having, at the extremities, from two to five ribs parallel to it.—Ligament wholly external.

Plate VIII. Fig. 8. (*a*) C. auriculifera. (Arca cucullus.—Gmel.)
(*b*) Inside of ditto.

Arca.—Shell transverse, subequivalve, inequilateral; the beaks distant, separated by the facet of the ligament: hinge in a straight line, without ribs at the extremities, and furnished with numerous serial and entering teeth. Ligament wholly external.

(1) *Shells with the superior margin not crenulated within.*

Plate VIII. Fig. 9. A. Noæ. (Idem.—Linn)

(2) *Shells with the superior margin crenulated within.*

Plate VIII. Fig 10. A. Indica. (Idem.—Gmel.)

Pectunculus.—Shell orbicular, almost lenticular, equivalve, subequilateral, close: hinge arched, furnished with numerous, serial, oblique, entering teeth; those in the middle obsolete, nearly obliterated. Ligament external.

(1) *Shells with distant longitudinal furrows, and often, besides, fine transverse or longitudinal striæ.*
Plate VIII. Fig. 11. P. glycymeris. (Arca glycymeris.—Linn.)

(2) *Shells with prominent and radiating longitudinal ribs, with or without transverse striæ.*
Plate VIII. Fig. 12. P. pectiniformis. (Arca pectunculus.—Linn.)

Nucula.—Shell transverse, ovate-triangular or oblong, equivalve, inequilateral; no facet between the beaks: hinge linear, broken, many-toothed, interrupted in the middle by an obliquely extending spoon-shaped pit; the teeth numerous, often produced as in the pectines; the beaks contiguous, curved backwards. Ligament marginal, and partly internal, inserted in the pit or spoon of the hinge.

Plate VIII. Fig. 13. (*a*) N. margaritacea. (Arca nucleus.—Linn.)
(*b*) Inside of ditto.

TRIGONIANA.—2 Genera.

Cardinal teeth lamellar, transversely striated.

Trigonia.—Shell equivalve, triangular, sometimes suborbicular; cardinal teeth oblong, laterally compressed, diverging, transversely furrowed; two in the right valve,

furrowed on each side, and four in the other, furrowed only on one side. Ligament external, marginal.

Plate IX. Fig. 1. T. pectinata.

Castalia.—Shell equivalve, inequilateral, triangular; the beaks eroded, recurved posteriorly: hinge with two lamellar teeth, transversely striated; the posterior one distant, shortened, subtrilamellar; the other anterior, elongated, lateral. Ligament external.

Plate IX. Fig. 2. (*a*) C. ambigua. [Mr. G. B. Sowerby's Cabinet.]
(*b*) Inside of ditto.

NAIADA.—4 Genera.

Fresh water shells, the hinge of which is sometimes furnished with an irregular, simple, or divided cardinal tooth, and a longitudinal one, which extends under the corselet; and sometimes no tooth; or is furnished with irregular, granular tubercles, through its whole length. Muscular impression posterior, compound; the beaks decorticated, often eroded.

Unio.—Shell transverse, equivalve, inequilateral, free; beaks decorticate, almost eroded; muscular impression posterior, compound: hinge with two teeth in each valve; one cardinal, short, irregular, simple, or divided in two, substriated; the other elongated, compressed, lateral, prolonged under the corselet. Ligament external.

(*a*) *Cardinal tooth short, thick, not crested, and substriated.*

Plate IX. Fig. 3. U. brevialis.

(*b*) *Cardinal tooth short, compressed, raised, and often crested.*

Plate IX. Fig 4. (*a*) U. pictorum. (Mya pictorum.—Linn.)
(*b*) Hinge of ditto.

Hyria.—Shell equivalve, obliquely triangular, eared; the base truncated and straight: hinge with two low teeth; the posterior or cardinal one divided into numerous diverging parts, of which the interior are the smallest; the other, anterior or lateral, very long, and lamellar. Ligament external, linear.

Plate IX. Fig. 5. (*a*) H. avicularis. (Mya syrmatophora.—Gmel.)
(*b*) Hinge of ditto

Anodon.—Shell equivalve, inequilateral, transverse: Hinge linear, without teeth; a smooth cardinal lamina, truncated, or forming a sinus at its anterior extremity, terminates the base of the shell. Two distant, lateral, subgeminal, muscular impressions. Ligament linear, external; its anterior extremity inserted in the sinus of the cardinal lamina.

(1) *Shells having no distinct angle at the posterior extremity of the cardinal line.*

Plate IX. Fig. 6. A. cygnea. (Mytilus cygneus.—Linn.)

(2) *Shells having an angle at the posterior extremity of the cardinal line.*

Plate IX. Fig. 7. A. trapezialis. [The late Earl of Tankerville's Cabinet.]

IRIDINA.—Shell equivalve, inequilateral, transverse; the beaks small, reflected, almost straight; muscular impressions similar to the genus Anodon; hinge long, linear, attenuated about the middle, tuberculated throughout the whole length, almost crenated; the tubercles unequal, frequent. Ligament external, marginal.

Plate X. Fig. 1. I. Nilotica. (Zoological Journal, vol. i. pl. 2.) [Mr. G. B. Sowerby's Cabinet.]

CHAMACEA.—3 GENERA.

Shell inequivalve, irregular, fixed; hinge with one thick tooth, or without teeth: two separate and lateral muscular impressions.

DICERAS.—Shell inequivalve, adhering; the beaks conical, very large, diverging, irregularly spiral; one large, thick, concave, subauricular, prominent tooth in the greater valve: two muscular impressions.

Plate XXI. Fig 3. D. arietina.—Fossil. [Mr. J. D. C. Sowerby's Cabinet.]

CHAMA.—Shell irregular, inequivalve, fixed; the beaks curved and unequal: hinge with one thick, oblique, subcrenate tooth, fitting in a pit in the opposite valve; two distant, lateral, muscular impressions. Ligament external, sunk.

(1) *Shells whose beaks turn from the left to the right.*

Plate X. Fig. 2. C. Lazarus. (Idem.—Linn.)

(2) *Shells whose beaks turn from the right to the left.*

Plate X. Fig. 3. C. radians.

ETHERIA.—Shell irregular, inequivalve, adhering; the beaks short, almost sunk in the base of the valves: hinge without teeth, rather sinuous, unequal; two distant, lateral, oblong muscular impressions. Ligament external, tortuous, partly penetrating the shell.

(1) *Shells having an oblong callosity in their base.*

Plate X. Fig. 4 (*a*), (*b*). E. elliptica. [British Museum.]

(2) *Shells without the callosity in their base.*

Plate X. Fig. 5. (*a*) Inside of E. semilunata. [Mr. J. D. C. Sowerby's Cabinet.]
(*b*) Outside of upper valve of ditto.

ORDER II.—CONCHIFERA UNIMUSCULOSA.

SHELL presenting internally one muscular impression, nearly in the centre. This order is divided into Three Sections.

SECTION I.

Ligament marginal, elongated on the margin, sublinear.

This section contains Three Families—Tridacnea, Mytilacea, and Mallacea.

TRIDACNEA.—2 Genera.

Shell transverse, equivalve, the muscular impression under the middle of the superior margin, and is prolonged to each side under it.

Tridacna.—Shell regular, equivalve, inequilateral, transverse, gaping at the lunula: hinge with two compressed, unequal, anterior, entering teeth. Ligament marginal, external.

Plate X. Fig. 6. T. squamosa.
(*a*) Inside of ditto.

Hippopus.—Shell equivalve, inequilateral, transverse; the lunula close: hinge with two compressed, unequal, anterior, and entering teeth. Ligament marginal, external.

Plate X. Fig. 7. H. maculatus. (Chama hippopus.—Linn.)

MYTILACEA.—3 Genera.

The ligament at the hinge subinternal, marginal, linear, very entire, occupying a great part of the anterior margin; rarely foliated.

Modiola.—Shell subtransverse, equivalve, regular, the posterior side very short; beaks nearly lateral, depressed on the short side: hinge without teeth, lateral, linear.—Ligament cardinal, almost internal, situated in a marginal canal: one sublateral muscular impression, elongated, and axe-shaped.

Plate XI. Fig. 1. M. tulipa. (Mytilus modiolus.—Linn.)

Mytilus.—Shell longitudinal, equivalve, regular, pointed at the base, fixed by a byssus; beaks almost straight, terminal, pointed: hinge lateral, mostly without teeth.—Ligament marginal, subinternal: one elongated, club-shaped, sublateral, muscular impression.

(1) *Shells with longitudinal furrows.*

Plate XI. Fig. 2. M. erosus.

(2) *Shells without longitudinal furrows.*

Plate XI. Fig. 3. M. perna.

PINNA.—Shell longitudinal, wedge-shaped, equivalve, gaping at the summit, pointed at the base, the beaks straight: hinge lateral, without teeth. Ligament marginal, linear, very long, almost internal.

Plate XI. Fig. 4. P. muricata. (Idem.—Linn.)

MALLACEA.—5 GENERA.

Ligament marginal, sublinear, either interrupted by indentations or serial teeth, or wholly simple. Shell subinequivalve, foliated.

CRENATULA.—Shell subequivalve, flat, lamellated, rather irregular; no particular opening or pit for the byssus: hinge lateral, linear, marginal, indented; indentations serial, callous, hollowed into pits, which receive the ligament.

Plate XI. Fig. 3. C. mytiloides.

PERNA.—Shell subequivalve, flattened, rather deformed, texture lamellar: hinge linear, marginal; composed of furrow-like, transverse, parallel, non-entering teeth, between which the ligament is inserted. A posterior sinus, slightly gaping, situated at the extremity of the hinge for the passage of the byssus; sides callous.

Plate XI. Fig. 6. P. ephippium. (Ostrea ephippium.—Linn.)

MALLEUS.—Shell subequivalve, rude, deformed, mostly elongated, sublobate at the base; beaks small, diverging: hinge without teeth; an elongated conical pit situated under the beaks, traversing obliquely the facet of the ligament. Ligament partly external, short, inserted in the sloping facet of each valve.

Plate XI. Fig. 7. M. albus.

AVICULA.—Shell inequivalve, fragile, rather smooth; base transverse, straight; the extremities produced, the anterior caudiform or tail-like; a sinus in the left valve: hinge linear, unidentate; a cardinal tooth in each valve under the beaks. Facet of the ligament marginal, narrow, channelled, not traversed by the byssus.

Plate XI. Fig. 8. A. crocea.

MELEAGRINA.—Shell subequivalve, rotundate, nearly square, externally squamose; the inferior cardinal margin straight, not caudate anteriorly; a sinus at the posterior base of the valves for the passage of the byssus; the left valve being at this place narrow and channelled: hinge linear, without teeth. Facet of the ligament marginal, elongated, nearly external, dilated in the middle.

Plate XI. Fig. 9. M. margaritiferus. (Mytilus margaritiferus.—Linn.)

SECTION II.

Ligament not marginal, contracted into a short space under the beaks; always visible, and not forming a tendinous cord under the shell.

This Section is divided into Two Families, viz. Pectinida and Ostracea.

PECTINIDA.—7 Genera.

Ligament internal, or demi-internal. Shell in general regular, compact, not foliated.

Pedum.—Shell inequivalve, subauriculated, lower valve gaping; beaks unequal, distant: hinge without teeth. Ligament partly external, inserted in an elongated and channelled pit, formed in the lower side of the beaks. Lower valve notched near the posterior base.

Plate XII. Fig. 1. P. spondyloideum. (Ostrea spondyloidea.—Gmel.) [Mrs. Mawe's Cabinet.]

Lima.—Shell longitudinal, subequivalve, auriculated, gaping slightly on one side between the valves; beaks distant; their internal facet inclined outwards: hinge without teeth. The cardinal pit partly external, receiving the ligament.

Plate XII. Fig. 2. L. glacialis. (Ostrea glacialis.—Gmel.)
(*a*) Inside of ditto.

Plagiostoma.—Shell subequivalve, free, subauriculated, the cardinal base transverse, straight; beaks rather distant, their inner sides expanding into transverse, flattened, external facets, one straight, the other obliquely inclined: hinge without teeth; a conical cardinal pit situated below the beaks, partly internal, opening outwards, and receiving the ligament.

Plate XXI. Fig. 4. P. spinosum. [Mr. G. B. Sowerby's Cabinet.]

Pecten.—Shell free, regular, inequivalve, auriculated; the lower margin transverse, straight; the beaks contiguous: hinge without teeth; a cardinal triangular pit, wholly internal, receiving the ligament.

(1) *Shells with ears equal, or nearly so.*

Plate XII. Fig. 3. P. maximus. (Ostrea maxima.—Linnæus.)

(2) *Shells with the ears unequal.*

Plate XII. Fig. 4. P. varius. (Ostrea varia.—Gmel.)

Plicatula.—Shell inequivalve, not auriculated, attenuated towards the base, the superior margin rounded, subplicate; the beaks unequal, and without an external facet: hinge having two strong cardinal teeth in each valve; a pit between them, receiving the ligament, which is wholly internal.

Plate XII. Fig. 5. P. ramosa. (Spondylus plicatus.—Gmel.)

Spondylus.—Shell inequivalve, adhering, auriculated, echinated or rough; the beaks unequal, the lower valve having an external, flattened, cardinal facet, divided by a channel which lengthens with age: hinge having two strong teeth in each valve, and an intermediate pit for the ligament, communicating by the base with

the external channel. Ligament internal; the remains of former ligaments are seen outside in the channel.

Plate XII. Fig. 6. S. gæderopus. (Idem.—Linn.)

Podopsis.—Shell inequivalve, subregular, adhering by the inferior beak, not auriculated, the lower valve largest, most convex, and the beak most produced: hinge without teeth. Ligament internal.

Plate XXI. Fig. 5. P. truncata. Fossil. [Icon.—Encyc. Method. Pl. 188. Fig. 6.]

OSTRACEA.—5 Genera.

Ligament internal, or demi-internal. Shell irregular, foliated, sometimes very thin.

This Family is separated into Two Divisions.

(*a*) *Ligament demi-internal. Shell foliated, and often very thick.*

Gryphæa.—Shell free, inequivalve, the lower valve large, concave, terminated by a projecting involute beak, the upper valve small, flat, and opercular: hinge without teeth; an oblong, arched cardinal pit; only one muscular impression in each valve.

Plate XII. Fig. 7. G. angulata.

Ostrea.—Shell adhering, inequivalve, irregular; beaks distant, becoming very unequal by age, and the upper valve gradually removed during the life of the animal: hinge without teeth. Ligament demi-internal, inserted in the cardinal pit of the valves; the pit of the lower valve increasing by age, sometimes to a great length.

(1) *Margin of the valves simple or wavy, not plicate.*

Plate XII. Fig. 8. O. edulis. (Idem.—Linn.)

(2) *Margin of the shells distinctly plaited.*

Plate XII. Fig. 9. O. folium. (Idem.—Linn.)

Vulsella.—Shell longitudinal, subequivalve, irregular, free; the beaks equal: hinge with a prominent callosity in each valve, depressed above, shewing an impression of a conical and obliquely arched pit for the ligament.

Plate XII. Fig. 10. V. lingulata. (Mya vulsella.—Linn.)

(*b*) *Ligament internal. Shell thin, papyraceous.*

Placuna.—Shell free, irregular, flat, subequivalve: hinge internal, having two sharp longitudinal ribs in one valve, approximate at their base, and diverging in form of a V; and, in the other valve, two impressions which correspond with the cardinal ribs; to which is attached the ligament.

Plate XII. Fig. 13. P. placenta. (Anomia placenta.—Linn.)

Anomia.—Shell inequivalve, irregular, operculated, adhering by the operculum: lower valve perforated, generally flattened, having a hole or channel at the beak; the other valve rather larger, concave, entire. Operculum small, elliptical, osseous, fixed to marine substances.

Plate XIII. Fig. 1. A. ephippium. (Idem.—Linn.)
(*a*) Operculum of ditto.

SECTION III.

Either no ligament, or none known; or represented by a tendinous cord, which supports the shell.

This Section contains Two Families—Rudista, and Brachiopoda.

RUDISTA.—6 Genera.

Ligament, hinge, and animal unknown; shell very inequivalve. No distinct beaks.

Sphærulites.—Shell inequivalve, orbicular-globose, rather depressed above, echinated externally with large, subangular, horizontal scales; upper valve smallest, rather flat, opercular; the internal surface furnished with two unequal, subconical, curved, and prominent tuberosities; lower valve largest, rather ventricose, the external margin radiated with scales; cavity obliquely conical, and forming on one side, by the folding of the internal margin, a crest, or projecting keel: internal side of the cavity transversely striated. Hinge unknown.

Plate XXI. Fig. 6. S. foliacea. Fossil. [Icon.—Encyc. Method. pl. 172. fig. 7.]

Radiolites.—Shell inequivalve, externally striated; the striæ longitudinal, radiating: lower valve turbinated, and largest; the upper, convex or depressed conical, opercular. Hinge unknown.

Plate XXI. Fig. 7. R. turbinata. [British Museum.]

Calceola.—Shell inequivalve, triangular, turbinated, flattened beneath; the larger valve hollowed or hood-shaped, obliquely truncated at the aperture; the cardinal margin straight, transverse, a small notch or indentation in the middle; the superior margin arched: the small valve flat, semi-orbicular, opercular, having a tubercle on each side of the cardinal margin, and, in the middle, a pit with a small lamina.

Plate XXI. Fig. 8. C. sandalina. [Mr. J. D. C. Sowerby's Cabinet.]

Birostrites.—Shell inequivalve, bicornute, the disk of the valves elevated conically, unequal, obliquely diverging, nearly straight, horn-shaped, the one enveloping the other at the base.

Plate XXI. Fig. 9. B. inæquiloba. [Mr. J. D. C. Sowerby's Cabinet.]

Discina.—Shell inequivalve, oval-rotundate, rather depressed, valves nearly equal, each having an orbicular disk in the centre, very distinct; disk in the upper valve not perforated, with a mammillated protuberance in the middle; that in the other valve very white, divided by a small transverse slit.

Plate XIII. Fig. 2. D. Norvegica. (Orbicula Norvegica.—Sowerby's Genera.) [Mr. G. B. Sowerby's Cabinet.]
(*a*) Lower valve of ditto.
(*b*) Upper valve of ditto.

Crania.—Shell inequivalve, suborbicular, lower valve almost flat, perforated in the internal surface by three unequal and oblique holes; the upper valve very convex, furnished interiorly with two prominent callosities.

Plate XIII. Fig. 3. C. personata. (Anomia craniolaris.—Linn.)
(*a*) Lower valve of ditto.
(*b*) Upper valve of ditto.

BRACHIOPODA.—3 Genera.

Shell bivalve, adhering to marine bodies, either directly or by a tendinous cord.

Orbicula.—Shell suborbicular, inequivalve; without any apparent hinge: lower valve very thin, flat, adhering to marine substances; the upper valve subconical, the summit more or less elevated.

[I have not been able to meet with any shell agreeing with the above description.]

Terebratula.—Shell inequivalve, regular, subtriangular, attached to marine bodies by a short tendinous pedicle; the beak of the larger valve produced, often curved, perforated at the summit by a round hole, or by a notch: hinge with two teeth; two nearly osseous, slender, elevated, forked, variously ramified branches rise from the disk of the small valve, and serve as a support to the animal.

(1) *Shell smooth, without longitudinal striæ or furrows.*

Plate XIII. Fig. 5. T. vitrea. (Anomia vitrea.—Gmel.)

(2) *Shell striated longitudinally.*

Plate XIII. Fig. 4. T. psittacea. (Anomia psittacea.—Gmel.)

Lingula.—Shell subequivalve, flattened, ovate-oblong, truncated at the summit, rather pointed at the base, elevated on a fleshy tendinous pedicle, fixed to marine bodies: hinge without teeth.

Plate XIII. Fig. 6. L. anatina. (Patella unguis.—Linn.)

(*a*) Inside of ditto.

Twelfth Class.

MOLLUSCA.

Body sometimes naked, either destitute of any solid internal parts, or inclosing a shell or other hard substance, and sometimes provided externally with a shell covering or sheathing, but is never composed of two opposite valves united by a hinge.

THIS Class is divided into Five Orders, viz. Pteropoda, Gasteropoda, Trachelipoda, Cephalopoda, and Heteropoda.

ORDER I.

PTEROPODA.—6 GENERA.

Some only are furnished with a thin, cartilaginous or corneous shell.

HYALÆA.—Shell corneous, transparent, ovate-globose; tridentated posteriorly; open at the summit, and at the two posterior sides.

Plate XIII. Fig. 7. H. tridentata. (Monoculus telemus?—Linn.)

CLIO.—This genus has no shell.

CLEODORA.—Shell gelatinous, cartilaginous, transparent, in shape of a reversed pyramid, or lanceolate, truncated and open at the summit.

Plate XIII. Fig. 8. C. pyramidata. (Clio pyramidata.—Linn.)

LIMACINA.—Shell thin, fragile, papyraceous, spiral; the whorls re-united in a discoidal manner, like the Planorbis.

Plate XIII. Fig. 9. (*a*) L. helicialis. (Clio helicina.—Gmel.) [British Museum.]

CYMBULIA.—Shell gelatinous, cartilaginous,very transparent, crystalline, oblong, in shape of a shoe, truncated at the summit; aperture lateral and anterior.

Plate XIII. Fig. 10. C. Peronii. [Icon. Encyc. Method. pl. 464. fig. 4 *b*.]

PNEUMODERMON.—This genus has no shell.

ORDER II.—GASTEROPODA.

Some are naked, others have a dorsal shell, not enveloping: again, others have a shell more or less hidden in their mantle.

THIS Order is divided into two Sections—Hydrobranchiæ and Pneumobranchiæ.

SECTION I.—HYDROBRANCHIÆ.

CONTAINS Six Families, viz. Tritoniana, Phyllidiana, Semi Phyllidiana, Calyptraciana, Bullæana, and Aplysiana.

TRITONIANA.—6 GENERA.

Without shells, either external or internal.

GLAUCUS.—No shell.

EOLIS.—Ditto.

TRITONIA.—Ditto.

SCYLLÆA.—Ditto.

TETHYS.—Ditto.

DORIS.—Ditto.

PHYLLIDIANA.—4 GENERA.

Some are without shells, either internal or external: others are wholly or partly covered by a shell, sometimes composed of one single piece, sometimes of a range of moveable and distinct pieces.

PHYLLIDIA.—Has no shell.

CHITONELLUS.—Body elongated, rather narrow, like a caterpillar, the middle of the back furnished with a multivalve shell; valves alternate, mostly longitudinal; they are nearly connected by their extremities.

Plate XIII. Fig. 11. C. striatus. [Mrs. Mawe's Cabinet.]

CHITON.—Body oval-oblong, convex, rounded at the extremities; bordered all round by a coriaceous skin; partly covered by a longitudinal series of testaceous, imbricated, transverse, moveable pieces, set in the borders of the mantle.

Plate XIII. Fig. 12. C. Magellanicus. (Idem.—Gmel.)

PATELLA.—Shell univalve, not spiral, covering the animal, shield-like, or retuse-conical; concave and simple below, without any fissure on the margin; the summit entire, and inclined anteriorly.

Plate XIII. Fig. 13. P. miniata. (P. sanguinolenta.—Gmel.)
(*a*) Inside of ditto

SEMI-PHYLLIDIANA.—2 GENERA.

PLEUROBRANCHUS.—Shell internal, dorsal, thin, flattened, often oblique-oval.

Plate XIII. Fig. 14, 14 (*a*). P. plumula. (Bulla plumula.—Montagu.)

Umbrella.—Shell external, orbicular, sub-irregular, nearly flat, slightly convex above, white, with a small apex near the middle; margin acute, internal surface rather concave, having a callous disk, coloured, depressed in the centre, surrounded by a smooth border.

Plate XIII. Fig. 15, 16. U. Indica. (Patella umbellata.—Gmel.)

CALYPTRACIANA.—7 Genera.

Shell always external, covering the animal.

Parmophorus.—Shell oblong, subparallelipipedal, slightly convex above, obtuse at the extremities, anteriorly channelled by a slight sinus, and having, towards the posterior part, a small pointed apex, inclined backwards; the lower surface slightly concave.

Plate XIV. Fig. 1. P. australis. (Patella ambigua.—Chem.)
(*a*) Under side of ditto.

Emarginula.—Shell shield-like, conical; summit inclined; the cavity simple, having a notch or hollow cut on its posterior margin.

Plate XIV. Fig. 2. E. rubra.

Fissurella.—Shell shield-like or depressed conical, concave below, perforated at the summit; without any spire; the perforation oval or oblong.

Plate XIV. Fig. 3. F. pustula. (Patella pustula.—Chem.)

Pileopsis.—Shell univalve, obliquely conical, anteriorly recurved; apex bent, almost spiral; aperture rounded-elliptical; the anterior margin shortest, acute, slightly sinuated, the posterior largest and rounded: one elongated, arched, transverse muscular impression, situated under the posterior margin.

Plate XIV. Fig 4. P. ungarica. (Patella ungarica.—Linn.)

Calyptræa.—Shell conoidal, summit vertical, imperforate, subacute; base orbicular: the cavity furnished with a convolute lamina, or a spiral diaphragm.

Plate XIV. Fig. 5. C. equestris. (Patella equestris.—Linn.)
(*a*) Under side of ditto.

Crepidula.—Shell ovate or oblong; the back almost always convex; concave underneath; the spire very much inclined towards the margin: the aperture partly closed by a horizontal lamina.

Plate XIV. Fig. 6 (*a*). C. fornicata. (Idem.—Linn.)
(*b*). Under side of ditto.

Ancylus.—Shell thin, obliquely conical, the summit pointed, inclined backwards; aperture oval; the margin very simple.

Plate XIV. Fig. 7. A. fluviatilis. (Patella fluviatilis.—Gmel.)

BULLÆANA.—3 Genera.

Acera.—This genus has no shell.

Bullæa.—Shell very thin, partially rolled and spiral on one side, without columella, and without spire; the aperture very large, dilated at the upper part.

Plate XIV. Fig. 8. B. aperta. (Bulla aperta.—Linn.)

Bulla.—Shell univalve, ovate-globular, convolute, no columella, spire not projecting: aperture the whole length of the shell; external margin sharp.

Plate XIV. Fig. 9. B. lignaria. (Idem.—Linn.)

APLYSIANA.—2 Genera.

Aplysia.—Shield dorsal, semicircular, subcartilaginous.

Plate XIV. Fig. 10. A. radiata.
(*a*) Outside of ditto.

Dolabella.—Shell oblong, slightly arched, hatchet-shaped, contracted, heavy, callous, almost spiral on one side, and larger, flatter, and thinner, on the other.

Plate XIV. Fig. 11. D. Rumphii. (Bulla dubia.)
(*a*) Under side of ditto.

SECTION II.—PNEUMOBRANCHIÆ.

This Section contains only One Family, viz. Limaciana.

LIMACIANA.—5 Genera.

Onchidium.—This genus has no shell.

Parmacella.—Lamarck has given a description of the animal of this genus, but only mentions that the scutcheon contains a shell, without describing it.

Plate XIV. Fig. 12. P. calyculata. (Sowerby's Genera.) [Mr. H. Stutchbury's Cabinet.]
(*a*) Under side of ditto.

Limax.—Lamarck merely mentions that the animal is "furnished with a coriaceous subrugose shield.

Plate XIV. Fig. 13. L. rufus. [British Museum.]

Testacella.—Shell very small, external, rather ear-shaped, slightly spiral at its summit; the aperture very large, oval, obliquely dilated; the left margin involute.

Plate XIV. Fig. 14. T. haliotidea. [Mrs. Mawe's Cabinet.]
(*a*) Under side of ditto.

Vitrina.—Shell small, very thin, depressed, terminated above by a very short spire, the last whorl very large: Aperture large, rounded-oval; the left margin arched, slightly involute.

Plate XIV. Fig. 15. V. pellucida.

ORDER III.—TRACHELIPODA.

THE shells of this Order are spirivalve, ensheathing. It is separated into Two Sections, viz. Phytiphaga and Zoophaga.

SECTION I.—TRACHELIPODA PHYTIPHAGA.

Aperture of the shell entire; base without any ascending dorsal notch or canal.

This Section contains Ten Families, viz. Colimacea, Lymnæana, Melaniana, Peristomiana, Neritacea, Janthinea, Macrostomiana, Plicacea, Scalariana, and Turbinacea.

COLIMACEA.—11 Genera.

Shell spirivalve, with no other projecting parts on the exterior than the striæ of growth; the right margin of the aperture is often recurved or reflected outwards.

Helix.—Shell orbicular, convex, or conoidal; sometimes globular, the spire rather elevated: aperture entire, transverse, very oblique, contiguous to the axis of the shell; the margins disunited by the projection of the penultimate whorl.

Plate XIV. Fig. 17. H. hæmastoma. (Idem.—Linn.)

Carocolla.—Shell orbicular, more or less convex or conoidal above; the circumference or periphery angulated or keeled: aperture transverse, contiguous to the axis of the shell; the right margin or lip subangular, often toothed or plaited beneath.

Plate XIV. Fig. 16. C. albilabris. (Helix carocolla.—Linn.)

Anostoma.—Shell orbicular, the spire convex and obtuse: aperture round, toothed within, grinning or shewing the teeth, turned upwards to the side of the spire; the margin of the lip reflected.

Plate XIV. Fig. 18, 18 (*a*). A. globulosa. [Mrs. Mawe's Cabinet.]

Helicina.—Shell subglobular, imperforate: aperture entire, demi-oval. Columella callous, transverse, rather flat, margin acute, forming an angle at the lower base of the right lip: operculum corneous.

Plate XV. Fig. 1. H. major. [Gray, in Zool. Jour. Vol. I. p. 251.]

Pupa.—Shell cylindrical, generally thick: aperture irregular, demi-oval, the lower part rounded and subangular; the margins nearly equal, reflected outwards, disunited at the upper part by an interposed columella lamina, always affixed.

Plate XV. Fig. 2. P. mumia.

Clausilia.—Shell mostly fusiform, slender, the summit rather obtuse: aperture irregular, rounded-oval; the margins united throughout, free, reflected outwards.

Plate XV. Fig. 3. C. torticollis.

Bulimus.—Shell oval, oblong, or turreted; aperture entire, longitudinal; the margins very unequal, disunited at the upper part. Columella straight, smooth, the base entire, not channelled.

Plate XV. Fig. 4. B. citrinus. (Helix perversa, Variety *b*.—Linn.) [Mrs. Mawe's Cabinet.]

Achatina.—Shell oval or oblong: aperture entire, longitudinal; the right lip sharp, never reflected. Columella smooth, truncated at the base.

(1) *Shells with the last whorl ventricose, not depressed.*

Plate XV. Fig. 5. A. virginea. (Bulla virginea.—Linn.)

(2) *Shell with the last whorl depressed, or attenuated towards the base.*

Plate XV. Fig. 5 (*a*). A. albo-lineata. (Voluta leucozonias.—Gmel.) [Mrs. Mawe's Cabinet.]

Succinea.—Shell oval or ovate-conical: aperture large, entire, longitudinal; the right lip sharp, not reflected, united at the lower part to a smooth, sharp, attenuated columella. No operculum.

Plate XV. Fig 6. S. amphibia. (Helix putris.—Linn.)

Auricula.—Shell suboval or ovate-oblong: aperture longitudinal, very entire at the base, contracted at the upper part, where the margins are disunited. Columella with one or more plaits; the lip or margin sometimes reflected outwards, sometimes simple and sharp.

(1) *Shells with the margin reflected outwards.*

Plate XV. Fig. 7. A. Judæ. (Voluta auris Judæ.—Linn.)

(2) *Shells with the margin simple and acute.*

Plate XV. Fig. 8, 8 (*a*). A. monile. (Voluta flava.—Gmel.)

Cyclostoma.—The shape of the shell variable; whorls of the spire cylindrical: aperture round, regular; the margins circularly united, or reflected by age. An operculum.

Plate XV. Fig. 9. C. volvulus. (Helix volvulus.—Linn.) [Mrs. Mawe's Cabinet.]

LYMNÆANA.—3 Genera.

Shell spirivalve, the external surface mostly smooth; the right margin of the aperture always sharp, and not reflected.

Planorbis.—Shell discoidal, spire depressed, the whole of the whorls shewn above and beneath: aperture oblong, lunate, very distant from the axis of the shell; the margin never reflected. No operculum.

Plate XV. Fig. 10. P. corneus. (Helix cornea.—Linn.)

Physa.—Shell convolute, oval or oblong; the spire prominent: aperture longitudinal, contracted at the upper part. Columella twisted: right lip very thin, sharp, partly projecting above the plane of the aperture. No operculum.

Plate XV. Fig. 11. P. rivalis. (Lymnæa rivalis.—Sowerby.)

Lymnæa.—Shell oblong, sometimes turreted; the spire prominent: aperture entire, longitudinal, outer lip sharp; the lower part ascending over the columella, forms a very oblique plait, re-entering the aperture. No operculum.

Plate XV. Fig. 12. L. stagnalis. (Helix stagnalis.—Linn.)

MELANIANA.—3 Genera.

Margins of the aperture of the shell disunited, the right always sharp.

Melania.—Shell turreted: aperture entire, oval or oblong, effuse at the base; columella smooth, incurved. Operculum horny.

Plate XV. Fig. 13. M. amarula. (Helix amarula.—Linn.) [Mrs. Mawe's Cabinet.]

Melanopsis.—Shell turreted: aperture entire, oval-oblong. Columella callous at the upper part; truncated at the base, separated from the right margin by a sinus. An operculum.

Plate XV. Fig. 14. M. lævigata.

Pirena.—Shell turreted: aperture longitudinal, right lip sharp, having a sinus at the base, and another at the summit. Base of the columella curved towards the right margin: operculum horny.

Plate XV. Fig. 15. P. terebralis. (Strombus ater.—Linn.)

PERISTOMIANA.—3 Genera.

Shell operculated, conoidal or subdiscoidal, the margins of the aperture united.

Valvata.—Shell discoidal or conoidal, the whorls cylindrical, spiral cavity complete, not modified by the penultimate whorl; aperture round, the margins united, sharp. An orbicular operculum.

Plate XV. Fig. 16. V. piscinalis.

Paludina.—Shell conoidal, the whorls rounded or convex, spiral cavity modified by the last whorl: aperture rounded-oval, oblong, angular at the summit; the two margins united, acute, never reflected outwards. Operculum orbicular and horny.

Plate XV. Fig. 17. P. vivipara. (Helix vivipara.—Linn.)

Ampullaria.—Shell globular, ventricose, umbilicated at the base, without any callosity on the left lip: aperture entire, oblong, margins united, the right not reflected. An operculum.

Plate XV. Fig 18. A. Guyanensis.

NERITACEA.—4 Genera.

Shell fluviatile, or marine, semi-globular or flattened-oval, without columella, the left margin of the aperture resembling a half partition.

(1) Fresh-water shells.

Navicella.—Shell elliptical or oblong, convex above, summit straight, depressed to the margin, concave beneath; the left lip flattened, sharp, narrow, without teeth, transverse. A solid flat operculum, having an acute and lateral tooth.

Plate XV. Fig. 19, 19 (*a*). N. elliptica. (Nerita porcellana.—Chem.)

Neritina.—Shell thin, semi-globular or oval, flattened beneath, not umbilicated: aperture semi-circular, the left margin flattened, sharp; no teeth or crenulations on the surface of the right margin. Operculum furnished with a lateral tooth.

Plate XV. Fig. 20, 20 (*a*). N. dubia. (Nerita dubia.—Chem.)

(2) Marine shells.

Nerita.—Shell solid, semi-globular, flattened beneath, not umbilicated: aperture entire, semi-circular, the left margin flat, septiform, acute, often toothed; teeth or crenulations on the inner surface of the right lip. Operculum with a projecting tooth.

Plate XVI. Fig. 1. N. peloronta. (Idem.—Linn.)

Natica.—Shell subglobular, umbilicated: aperture entire, semi-circular; left lip oblique, not toothed, callous; the callosity modifying the umbilicus, and sometimes covering it; right lip acute, always smooth inside. An operculum.

Plate XVI. Fig. 2. N. vitellus. (Nerita vitellus.—Linn.)

JANTHINEA.

Janthina.—Shell ventricose, conoidal, thin, transparent: aperture triangular; columella straight, passing beyond the base of the right lip, which has a sinus in the middle. No operculum.

Plate XVI. Fig. 3. J. communis. (Helix janthina.—Linn.)

MACROSTOMIANA.—4 Genera.

Shell ear-shaped, the aperture much dilated, the margins disunited, no columella, no operculum.

Sigaretus.—Shell sub-auriform, nearly orbicular; the left lip short and spiral: aperture entire, much dilated, rounded-oblong; the margins not united.

Plate XVI. Fig. 4. S. concavus.

Stomatella.—Shell orbicular or oblong, ear-shaped, imperforate: aperture entire, large, sub-longitudinal; right lip effuse, dilated, open.

Plate XVI. Fig. 5. S. imbricata.

Stomatia.—Shell ear-shaped, imperforate, spire prominent: aperture entire, large, oblong; right margin and columella equally raised; a transverse and tuberculated rib on the back.

Plate XVI. Fig. 6, 6 (*a*). S. phymotis. (H. imperforata.—Chem.)

Haliotis.—Shell ear-shaped, mostly flattened; the spire very short, sometimes depressed, nearly lateral: aperture very large, ovate-oblong, and entire in perfect shells; disk pierced with holes disposed in a line parallel to, and near the left margin, the last commencing with a notch.

Plate XVI. Fig. 7. H. asinina. (Idem.—Linn.)

PLICACEA.—2 Genera.

Aperture of the shell not effuse; columella plaited.

Tornatella.—Shell convolute, ovate-cylindrical, mostly striated transversely; no epidermis: aperture oblong, entire, the right lip sharp; one or more plaits on the columella.

Plate XVI. Fig. 8. T. fasciata. (Voluta tornatilis.—Linn.)

PYRAMIDELLA.—Shell turreted; no epidermis: aperture entire, demi-oval; outer lip sharp. Columella produced, subperforate at the base, and furnished with three transverse plaits.

Plate XVI. Fig. 9. P. terebellum.

SCALARIANA.—3 GENERA.

Shells without plaits on the columella; the margins of the aperture circularly united.

VERMETUS.—Shell thin, tubular, loosely spiral, adhering by the spire: aperture orbicular, the margins united. An operculum.

Plate XVI. Fig. 10. V. lumbricalis.

SCALARIA.—Shell subturreted, ornamented with longitudinal, elevated, interrupted, nearly acute ribs: aperture rounded, the margins circularly united, and terminated by a thin, recurved varix.

Plate XVI. Fig. 11. S. pretiosa. (Turbo scalaris.—Linn.)

DELPHINULA.—Shell subdiscoidal, or conical; umbilicated, solid; whorls rough or angular: aperture entire, round, sometimes triangular; the margins united, mostly fringed or ventricose.

Plate XVI. Fig. 12. D. laciniata. (Turbo delphinus.—Linn.)

TURBINACEA.—8 GENERA.

Shell turreted, or conoidal; the aperture round, or oblong, not effuse; the margins disunited.

SOLARIUM.—Shell orbicular, depressed-conical, umbilicated, crenulated or dentated on the inner margin of the whorls: aperture nearly quadrangular. No columella.

Plate XVI. Fig. 13, 13 (*a*). S. perspectivum. (Trochus perspectivus.—Linn.)

ROTELLA.—Shell orbicular, shining, no epidermis; spire very short, sub-conoidal; lower surface convex and callous: aperture semicircular.

Plate XVI. Fig. 14, 14 (*a*). R. lineolata. (Trochus vestiarius.—Linn.)

TROCHUS.—Shell conical; spire elevated, sometimes rather depressed; periphery more or less angular, often thin and sharp; aperture transversely depressed; the margins disunited at the upper part; columella arched, more or less prominent at the base. An operculum.

Plate XVI. Fig. 15. T. virgatus. (Idem.—Gmel.)

MONODONTA.—Shell oval or conoidal: aperture entire, round, the margins disunited at the upper part; columella arched, truncated at the base. An operculum.

Plate XVI. Fig. 16. M. labio. (Trochus labio.—Linn.)

TURBO.—Shell conoidal, or subturreted; the periphery never compressed: aperture entire, round, not modified by the penultimate whorl; the margins disunited at the upper part; columella arched, flattened, not truncated at the base. An operculum.

Plate XVI. Fig. 17. T. pica. (Idem.—Linn.)

Planaxis.—Shell ovate-conical, solid: aperture ovate, sublongitudinal. Columella flat and truncated at the base, separated from the right margin by a narrow sinus.—Interior surface of the right margin furrowed or lineated, and a callosity running under the summit.

Plate XVI. Fig. 18. P. sulcata. (Buccinum sulcatum.—Bruge.)

Phasianella.—Shell ovate or conical, solid: aperture entire, oval, longitudinal; the lips disunited at the upper part, the right sharp, not reflected: columella smooth, compressed, attenuated at the base: operculum calcareous, or horny.

Plate XVII. Fig. 1. P. bulimoides. (Buccinum australe.—Gmel.)

Turritella.—Shell turreted, not pearly: aperture rounded, entire; the margins disunited at the upper part: a sinus in the right lip. Operculum horny.

Plate XVII. Fig. 2. T. bicingulata.

SECTION II.

TRACHELIPODA ZOOPHAGA.

Shell spirivalve, ensheathing; aperture either canaliculated, notched, or inclined at the base.

There are Five Families in this Section, viz. Canalifera, Alata, Purpurifera, Columellaria, and Convoluta.

CANALIFERA.—11 Genera.

Shell with a canal more or less long at the base of the aperture, the right lip of which does not change its form by age.

This Family is separated into Two Divisions.

Division I.—*No constant varix on the right lip.*

Cerithium.—Shell turreted: aperture oblong, oblique, terminated at the base by a short truncated or recurved canal, never notched; a small channel at the upper extremity of the right lip. Operculum small, orbicular, and horny.

Plate XVII. Fig. 3. C. palustre. (Strombus palustris.—Linn.)

Pleurotoma.—Shell turreted or fusiform, terminated at the lower part by a straight canal, more or less elongated. A fissure or sinus in the upper part of the right lip.

Plate XVII. Fig. 4. P. nodifera. (Murex Javanus.—Gmel.)

Turbinella.—Shell turbinate, or sub-fusiform; base canaliculated, having on the columella from three to five compressed and transverse plaits.

Plate XVII. Fig 5. T. pyrum. (Voluta pyrum.—Linn.)

Cancellaria.—Shell oval or turreted: base of the aperture sub-canaliculated; little or no canal. Columella plaited; the plaits sometimes few, sometimes numerous, mostly transverse; the right lip furrowed internally.

Plate XVII. Fig. 6. C. reticulata. (Voluta reticulata.—Linn.)

Fasciolaria.—Shell sub-fusiform, base canaliculate, no varices; two or three very oblique plaits on the columella, near the canal.

Plate XVII. Fig. 7. F. trapezium. (Murex trapezium.—Linn.)

Fusus.—Shell fusiform or sub-fusiform; base canaliculate; ventricose in the middle or at the lower part; no external varices; the spire elevated and elongated. Right lip without any fissure: columella smooth; operculum horny.

Plate XVII. Fig. 8. F. antiquus. (Murex antiquus.—Linn.)

Pyrula.—Shell sub-pyriform, channelled at the base, the upper part ventricose; no external varices; spire short, sometimes flattened. Columella smooth; right lip without any fissure.

Plate XVII. Fig. 9. P. ficus. (Bulla ficus.—Linn.)

Division II.—*A constant varix on the right margin, in the whole of the species.*

Struthiolaria.—Shell oval, the spire elevated: aperture oval, sinuous, terminated at the base by a very short, straight canal, without any notch. Left lip callous, expanded; right lip sinuous, with an external varix.

Plate XVII. Fig. 10. S. nodulosa. (Murex stramineus.—Gmel.)

Ranella.—Shell oval or oblong, rather depressed; base canaliculate; two rows of varices on the exterior: aperture rounded or subovate. Varices straight, or oblique, half a whorl distant from each other, and forming a longitudinal row on each side of the shell.

Plate XVII. Fig. 11. R. spinosa. (Murex spinosus.—Dillwyn.)

Murex.—Shell oval or oblong, channelled at the base, with rough, spined, or tuberculated varices on the exterior. Three or more varices on each whorl, the lower ones uniting obliquely with the upper in a longitudinal row: operculum horny.

(1) *Shells with slender abrupt tails, always longer than the aperture.*

Plate XVII. Fig. 12. M. haustellum. (Idem.—Linn.)

(2) *Tails thick, not abrupt, more or less long.*

(*a*) *Three varices.*

Plate XVII. Fig. 13. M. palmarosæ. (Murex ramosus.—Linn.)

(*b*) *More than three varices.*

Plate XVIII. Fig. 1. M. saxatilis. (Idem.—Linn.) [Mrs. Mawe's Cabinet.]

Triton.—Shell oval or oblong, channelled at the base; varices either alternate, or rare, or nearly solitary, and never forming a longitudinal row: aperture oblong. An operculum.

Plate XVIII. Fig. 2. T. variegatum. (Murex tritonis.—Linn.)

ALATA.—3 Genera.

Shell with a more or less elongated canal at the base of the aperture, the right lip of which changes its form with age, and has a sinus at the lower part.

Rostellaria.—Shell fusiform or sub-turreted, terminated by a beak-shaped canal; right lip entire or toothed, more or less dilated with age; with a sinus contiguous to the canal.

Plate XVIII. Fig. 3. R. pes-pelicani. (Strombus pes-pelicani.—Linn.)

Pterocera.—Shell ovate-oblong, ventricose, terminated at the lower part by an elongated canal: the right lip dilated by age into a digitated wing, with a sinus towards the base. Spire short.

Plate XVIII. Fig. 4. P. aurantia.

Strombus.—Shell ventricose, terminated at the base by a short, notched, or truncated canal: right lip dilated by age into a simple wing, lobed or crenated at the upper part, with a sinus at the lower part, separate from the canal or notch of the base.

Plate XVIII. Fig. 5. S. auris Dianæ. (Idem.—Linn.)

PURPURIFERA.—11 Genera.

Shell with a short canal ascending posteriorly, or an oblique notch or demi-canal at the base of the aperture, directed towards the back.

This Family is separated into Two Divisions.

Division I.—*The canal ascending, or curved towards the back.*

Cassidaria.—Shell sub-ovate or ovate-oblong: aperture longitudinal, narrow, terminated at the base by a curved, sub-ascending canal. Right lip varicose or replicate; left lip laid over the columella, mostly rough, granulated, tuberculated, or wrinkled.

Plate XVIII. Fig. 6. C. thyrrena. (Buccinum thyrrenum.—Linn.)

Cassis.—Shell inflated: aperture longitudinal, narrow, terminated at the base by a short canal, abruptly curved towards the back of the shell: columella plaited or transversely wrinkled. Right lip mostly toothed.

(*a*) *Spire having varices.*

Plate XVIII. Fig. 7. C. zebra. (Buccinum strigatum.—Gmel.)

(*b*) *Spire without varices.*

Plate XVIII. Fig. 7. (*a*) C. testiculus. (Buccinum testiculus.—Linn.)

DIVISION II. — *An oblique notch, inclining backwards.*

RICINULA.—Shell ovate, the exterior mostly tubercular or spinous: aperture oblong, with a demi-canal at the lower part, curved towards the back, terminated by an oblique notch: unequally toothed on the columella, and on the internal margin of the right lip, usually contracting the aperture.

Plate XVIII. Fig. 8. R. digitata.

PURPURA.—Shell oval, smooth, tubercular, or angular: aperture dilated, the lower part terminating in an oblique sub-canaliculated notch. Columella flattened, pointed at the base.

Plate XVIII. Fig. 9. P. Persica. (Buccinum Persicum.—Linn.)

MONOCEROS.—Shell oval: aperture longitudinal, the lower part terminating in an oblique notch. A conical tooth on the internal base of the right margin.

Plate XVIII. Fig. 10. M. cingulatum. [Mrs. Mawe's Cabinet.]

CONCHOLEPAS.—Shell inflated-oval, semi-spiral, the summit inclining obliquely towards the left margin: aperture large, longitudinal, oblique, with a slight channel at the lower part. Two teeth at the base of the right margin: an oblong, thin, corneous operculum.

Plate XVIII. Fig. 11. C. Peruvianus. (Patella lepas.—Gmel.) [Mrs. Mawe's Cabinet.]

HARPA.—Shell oval, more or less inflated, with longitudinal, parallel, inclined, and acute ribs; spire short: aperture notched at the lower part; no canal. Columella smooth, flattened, and pointed at the base.

Plate XIX. Fig. 1. H. rosea. (Buccinum harpa, Variety.—Linn.)

DOLIUM.—Shell thin, ventricose, inflated, mostly sub-globular, rarely oblong, transversely banded; the outer lip dentated or crenated through its whole length: aperture oblong, notched at the lower part.

Plate XIX. Fig. 2. D. olearium. (Buccinum olearium.—Linn.)

BUCCINUM.—Shell oval or ovate-conical: aperture longitudinal, with a notch at the base; without a canal. Columella not flattened, swoln on the upper part.

Plate XIX. Fig. 3. B. testudineum. (Idem.—Linn.)

Columella callous, (Nassæ.)

Plate XIX. Fig. 4. B. Thersites. (Idem.—Linn.)

EBURNA.—Shell oval or elongated, the right lip very simple: aperture longitudinal, notched at the base. Columella umbilicated on the upper part, and canaliculated below the umbilicus.

Plate XIX. Fig. 5. E. glabrata. (Buccinum glabratum.—Linn.)

TEREBRA.—Shell elongated, turreted, very pointed at the summit: aperture longitudinal, many times shorter than the spire, notched at the posterior part of the base. Base of the columella twisted, or oblique.

Plate XIX. Fig. 6. T. crenulata. (Buccinum crenulatum.—Linn.)

COLUMELLARIA.—5 GENERA.

No canal at the base of the aperture, but a more or less distinct sub-dorsal notch, and plaits on the columella.

COLUMBELLA.—Shell oval, spire short, the base of the aperture more or less notched, and without a canal. Columella plaited: aperture contracted by a swelling on the inside of the right lip.

Plate XIX. Fig. 7. C. labiosa. (Sowerby's Genera.)

MITRA.—Shell turreted, sub-fusiform, the spire pointed at the summit, the base notched, without a canal. Columella plaited, plaits parallel, transverse, the lower ones smallest; columella lip thin, and formed on the pillar.

Plate XIX. Fig. 8. M. filosa. (Voluta filosa.—Gmel.)

VOLUTA.—Shell oval, more or less ventricose; the apex obtuse, or papillary; the base notched; no canal. Columella plaited, the lower plaits largest and most oblique: no columella lip.

(*a*) *Shell ventricose, inflated, (Cymbiolæ.)*

Plate XIX. Fig. 9. V. olla. (Idem.—Linn.)

(*b*) *Shell oval, spinous, or tubercular, (Muricinæ.)*

Plate XIX. Fig. 10. V. vespertilio. (Idem.—Linn.)

(*c*) *Shell oval, sub-tubercular, (Musicales.)*

Plate XIX. Fig. 11. V. musica. (Idem.—Linn.)

(*d*) *Shell elongated, ventricose, nearly fusiform, (Fusoideæ.)*

Plate XIX. Fig. 12. V. undulata. (V. fluctuata.—Solander's MSS.)

MARGINELLA.—Shell ovate-oblong, smooth, spire short; right lip externally thickened: base of the aperture scarcely notched; plaits on the columella nearly equal.

(1) *Shells with the spire prominent.*

Plate XIX. Fig. 13. M. cærulescens. (Voluta prunum.—Gmel.)

(2) *Shells with the spire not prominent.*

Plate XIX. Fig. 14. M. lineata. (Voluta persicula.—Linn.)

VOLVARIA.—Shell cylindrical, convolute; spire scarcely projecting: aperture narrow, the length of the shell. One or more folds on the lower part of the columella.

Plate XIX. Fig. 15. V. pallida. (Voluta pallida.—Linn.)

CONVOLUTA.—6 Genera.

Shell without a canal, but having the base of the aperture channelled or effuse; the whorls large, compressed, convolute, the last nearly covering the whole of the others.

Ovula.—Shell turgid, attenuated at each end, the margins turned inwards: aperture longitudinal, narrow, effuse at the extremities; without teeth on the left lip.

(1) *Right lip indented.*

Plate XIX. Fig. 16. O. oviformis. (Bulla ovum.—Linn.)

(2) *Right lip smooth, not indented.*

Plate XIX. Fig. 17. O. birostris. (Bulla birostris.—Linn.)

Cypræa.—Shell oval, or ovate oblong, convex; the lips curved inwards: aperture longitudinal, narrow, toothed on both sides, the extremities effuse. Spire very small, hardly perceptible.

Plate XIX. Fig. 18, 18 (*a*) C. talpa. (Idem.—Linn.)

Terebellum.—Shell convolute, sub-cylindrical, pointed at the summit: aperture longitudinal, narrow at the upper part, notched at the base. Columella smooth, the lower part truncated.

Plate XX. Fig. 1. T. subulatum. (Bulla terebellum.—Linn.)

Ancillaria.—Shell oblong, sub-cylindrical, spire short, not channelled at the sutures: aperture longitudinal, scarcely notched at the base, effuse. A callous and oblique varix at the base of the columella.

Plate XX. Fig. 2. A. cinnamomea.

Oliva.—Shell subcylindrical, convolute, smooth, spire short, sutures channelled: aperture longitudinal, notched at the base. Columella obliquely striated.

Plate XX. Fig. 3. O. maura. (Voluta oliva, Variety.—Linn.)

Conus.—Shell turbinated, or inversely conical, convolute: aperture longitudinal, narrow, not toothed; base effuse.

(1) *Shells coronated.*

Plate XX. Fig. 4. C. nocturnus.

(2) *Shells not coronated.*

Plate XX. Fig. 5. C. monile. (Idem.—Solander's MSS.)

ORDER IV.—CEPHALOPODA.

THIS Order is separated into Three Divisions, viz. Polythalamous Cephalopoda, Monothalamous Cephalopoda, and Naked Cephalopoda.

Division I.—POLYTHALAMOUS CEPHALOPODA.

Shell multilocular, completely or partially enveloped, situated on the posterior part of the body of the animal, often adhering.

This Division contains Seven Families—Orthocerata, Lituolata, Cristata, Sphærulata, Radiolata, Nautilacea, Ammoneata.

I.—*Shell multilocular, the septa simple, not shewing any divided sinuous sutures on the internal surface of the shell.*

ORTHOCERATA.—5 Genera.

Shells straight, or nearly so; not spiral.

Belemnites.—Shell straight, an elongated cone, formed of two distinct and separable parts. The external sheath solid, full at the upper part, with a conical cavity; the internal a conical nucleus, pointed, chambered transversely through its whole length, multilocular: the chambers perforated by a syphon in the centre.

Plate XXI. Fig. 10. B. subconicus. Fossil. (Nautilus belemnita.—Gmel.) [Brit. Mus.]

Orthocera.—Shell straight, or slightly arched, subconical, striated on the outside by numerous longitudinal ribs: chambers formed by transverse septa, perforated by a central, or marginal tube.

Plate XX. Fig. 5. O. raphanus. (Nautilus raphanus.—Gmel.)
5 (*a*) Ditto magnified.

Nodosaria.—Shell elongated, straight, or slightly curved, subconical, nodular; nodules globular, very smooth. Chambers formed by transverse septa, perforated in the centre, or near the margin.

Plate XX. Fig. 6. N. radicula. (Nautilus radicula.—Gmel.) [Icon.—Enc. Method. Pl. 465, fig. 4 *b*.]
6 (*a*) Ditto magnified.

Hippurites.—Shell cylindrical, conical, straight, or rather curved, multilocular, septa transverse. An internal lateral channel, formed by two longitudinal, parallel, obtuse and converging ledges; the last chamber furnished with an operculum.

Plate XXII. Fig. 1. H. curva. Fossil. [Mr. J. D. C. Sowerby's Cabinet.]

Conilites.—Shell conical, straight, slightly bent; sheath thin, distinct from the nucleus, which it contains. Nucleus sub-separable, multilocular, transversely divided by septa.

Plate XXII. Fig. 2. C. pyramidata. Fossil. [Mr. J. D. C. Sowerby's Cabinet.]

LITUOLATA.—3 Genera.

Shells partly spiral, the last whorl continuing in a straight line.

Spirula.—Shell cylindrical, thin, nearly transparent, multilocular, partly turned into a discoidal-spiral form; the whorls distant from each other, the last produced in a straight line: septa transverse, equally distant, externally concave; syphon lateral, interrupted: aperture orbicular.

Plate XX. Fig. 7. S. Peronii. (Nautilus spirula.—Linn.)

Spirolina.—Shell multilocular, partly discoidal-spiral, the whorls contiguous, the last terminating in a straight line: septa transverse, perforated by a tube.

Plate XX. Fig. 8. S. clavata.

Lituolites—Shell multilocular, partly turned into a discoidal-spiral form; the whorls contiguous, the last terminating in a straight line: chambers irregular, septa transverse and simple, (without a syphon), the last perforated with from three to six holes.

Plate XXII. Fig 3. L. nautiloidea. Fossil. [Icon.—Enc. Method. Pl. 465, fig. 6.]

CRISTATA.—3 Genera.

Shell semi-discoidal, spire eccentric.

Renulites.—Shell reniform, flat, sulcated, multilocular; chambers linear, contiguous, curved about a marginal axis, the most distant from the axis the longest.

Plate XXII. Fig. 4. R. opercularis. Fossil. [Icon.—Enc. Method. Pl. 465, fig. 8.]

Cristellaria.—Shell semi-discoidal, multilocular; whorls contiguous, simple, progressively enlarging; spire eccentric, sublateral: septa imperforate.

Plate XX. Fig. 9. C. squammula. (Nautilus planatus.—Fichtel.)
9 (*a*) Ditto magnified.

Orbiculina.—Shell sub-discoidal, multilocular; whorls contiguous and compound; spire eccentric; chambers short, very numerous; septa imperforate.

Plate XX. Fig. 10. O. uncinata. (Nautilus aduncus.—Fichtel.)
10 (*a*) Ditto magnified.

SPHÆRULATA.—3 Genera.

Shell globular, spheroidal, or oval; whorls of the spire covering, or the chambers united under one envelope.

Miliola.—Shell transverse, ovate-globular, or elongated, multilocular; the chambers transverse, surrounding the axis, alternately covering one another; aperture very small, situated at the base of the last whorl, either orbicular or oblong.

Plate XX. Fig. 11. M. ovata.

GYROGONITES.—This genus has been formed from the seed of a species of *Chara* in a fossil state.

MELONITES.—Shell sub-spherical; spire central; whorls contiguous, convolute, tuniciform; chambers narrow and numerous; septa imperforate.

Plate XX. Fig. 12. M. sphæroidea. [Icon.—Enc. Method. Pl. 469, fig. *g. h.*]
12. (*a*) Ditto magnified.

RADIOLATA.—3 GENERA.

Shell discoidal, spire central, chambers elongated, radiated, extending from the centre to the circumference.

ROTALITES.—Shell orbicular, spiral, convex or conoidal above, flattened, radiated, and tuberculated beneath, multilocular: aperture marginal, triangular.

Plate XXII. Fig. 5. R. trochidiformis. Fossil. [Icon.—Enc. Method. Pl. 466, fig. 8.]

LENTICULITES.—Shell sub-lenticular, spiral, multilocular; the external margin of the whorls folded in two, extending above and below, even with the centre of the shell: septa entire, curved, the two sides prolonged in form of rays: aperture narrow, projecting over the penultimate whorl.

Plate XXII. Fig. 6. L. rotulata. Fossil. [Icon.—Enc. Method. Pl. 466, fig. 5.]

PLACENTULA.—Shell orbicular, convex above and beneath, multilocular: aperture oblong, narrow, formed like a ray on the lower, or on both disks

Plate XX. Fig. 13. P. asterisans. [Icon.—Enc. Method. Pl. 466, fig. 10, *b.*]
13. (*a*) Ditto magnified.

NAUTILACEA.—6 GENERA.

Shell discoidal, spire central, the chambers short, not extending from the centre to the circumference.

DISCORBITES.—Shell discoidal, spiral, multilocular, sides simple: the whole of the whorls apparent, naked, and contiguous to one another; septa transverse, frequent, not perforated.

Plate XXII. Fig. 7. D. vesicularis. Fossil. [Icon.—Enc. Method. Pl. 466, fig. 7, *a.*]

SIDEROLITES.—Shell multilocular, discoidal; whorls contiguous, not apparent outside; disk convex on both sides, and studded with tubercles, with unequal and radiated lobes on the periphery: septa transverse and imperforate; aperture distinct, sublateral.

Plate XXII. Fig 8. S. calcitrapoides. Fossil. [Icon.—Enc. Method. Pl. 470, fig. 4, *a. b.*]
8. (*a*) Ditto magnified.

POLYSTOMELLA.—Shell discoidal, multilocular; whorls contiguous, not visible externally; the exterior radiated by transverse furrows or ribs: aperture composed of many holes variously disposed.

Plate XX. Fig. 14. P. crispa.
14. (*a*) Ditto magnified.

Vorticialis.—Shell discoidal, spiral, multilocular; whorls contiguous, not apparent outwardly; septa transverse, imperforate, not extending from the centre to the periphery: aperture marginal.

Plate XX. Fig. 15. V. strigilata. [Icon.—Enc. Method. Pl. 470, fig. 2, *a. b.*]
15. (*a*) Ditto magnified.

Nummulites.—Shell lenticular, thin towards the margins; spire internal, discoidal, multilocular, covered by many thin plates; exterior margin of the whorls folded in two, extending from each side of the shell to the centre, and uniting: chambers very numerous, small, alternate; septa transverse, imperforate.

Plate XXII. Fig. 9. N. complanata. Fossil. [Mr. J. D. C. Sowerby's Cabinet.]

Nautilus.—Shell discoidal, spiral, multilocular, sides simple; whorls contiguous, the last covering the others. Chambers numerous; septa transverse, concave from the side of the aperture; disk perforated by a tube; and the margins very simple.

Plate XX. Fig. 16. N. umbilicatus.

II.—*Shell multilocular, the septa indented at the borders.*

AMMONEATA.—5 Genera.

Septa sinuous, lobed, and indented at the circumference, united at the inner surface of the shell, and articulating with it by means of indented sutures.

Ammonites.—Shell discoidal, spiral; the whorls contiguous, and the whole of them apparent; the internal partitions articulated by sinuous sutures: septa transverse, lobed and indented at the circumference, their diskswithout a syphon, but pierced by a sort of marginal tube.

Plate XXII. Fig. 10. A. armatus. Fossil. (Sowerby's Min. Conch.) [Mr. G. B. Sowerby's Cabinet.]

Orbulites.—Shell sub-discoidal, spiral; the whorls contiguous, the last covering the others, and the internal partitions articulated by sinuous sutures: septa transverse, lobed at the circumference, and perforated by a marginal tube.

Plate XXII. Fig. 11. O. striata. Fossil. [British Museum.]

Ammoniceratites.—Shell corniform, arched, semicircular; partitions articulated by sinuous, ramose, indented sutures: septa transverse, sinuous, lobed and indented at the circumference. Tube or syphon marginal, not piercing the septa.

Plate XXII. Fig 12. A. glossoidea. Fossil. [Icon.—Bowdich's Elements of Conc.]

Turrilites.—Shell spiral, turreted, multilocular; the whorls contiguous, and the whole apparent; the partitions articulated by sinuous sutures: septa transverse, lobed, and indented at the circumference. Aperture rounded.

Plate XXII. Fig. 13. T. costulata. Fossil. [Mr. G. B. Sowerby's Cabinet.]

Baculites.—Shell straight, cylindrical, sometimes rather compressed, slightly conical; the partitions articulated by sinuous sutures: septa transverse, a little distant; the disk imperforated, lobed, and indented at the circumference.

Plate XXII. Fig. 14. B. Faujasii. Fossil. [Mr. G. B. Sowerby's Cabinet.]

Division II.—MONOTHALAMOUS CEPHALOPODA.

Shell unilocular, wholly external, and enveloping the animal.

Argonauta.—Shell univalve, unilocular, involute, very thin; spire bicarinated, tubercular, turning into the aperture.

Plate XX. Fig. 17. A. nitida.

Division III.—NAKED CEPHALOPODA.—4 Genera.

No shell either internal or external. A solid, free, cretaceous, or horny substance, is found in the inside of most of these animals.

Octopus.—No internal solid substance.

Loligopsis.—No internal solid substance.

Loligo.—An elongated, thin, transparent, and horny lamina, inclosed in the interior of the body, near the back.

Plate XX. Fig. 20. Lamina of L. vulgaris.

Sepia.—A free, cretaceous, spongy, and opake bone, inclosed in the interior of the body, towards the back.

Plate XX. Fig. 18. S. officinalis.

ORDER V.

HETEROPODA.—3 Genera.

Carinaria.—Shell univalve, conical, flattened at the sides, unilocular, very thin, hyaline; the summit spirally turned, and the back sometimes furnished with an indented keel: aperture oblong, entire.

Plate XX. Fig. 19. C. fragilis. [Icon.—Enc. Method. Pl. 464, fig. 3.]

Pterotrachea.—This genus has no shell.

Phyllirroe.—This genus has no shell.

The following Species are figured in the accompanying Plates, and, I believe, have not been hitherto described.

TELLINIDES ROSEA.—Shell ovate, thin, finely striated transversely, rose-coloured, with a yellowish tint at the umbones, sometimes nearly white; the anterior side rather angular, the posterior rounded; two whitish slightly raised ribs in each valve extend from the hinge nearly to the superior margin.

Locality unknown, supposed to be from the Indian Ocean.

APLYSIA RADIATA.—Shield or cartilage sub-elliptical, smooth, of a pale green, and rayed with a deeper tint of the same colour; very thin at the rounded side, and a small curved callosity at the other.

Locality unknown.

SPIROLINA CLAVATA.—Shell club-shaped, sub-cylindrical; chambers numerous and finely striated longitudinally.

Inhabits the coast of the Adriatic.

MILIOLA OVATA.—Shell ovate, white, smooth, rather flat; margins acute.

Inhabits the British coast, on *fuci*, &c.

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