

THE
NATURAL HISTORY
OF
BRITISH SHELLS,

INCLUDING
FIGURES AND DESCRIPTIONS
OF ALL THE
SPECIES HITHERTO DISCOVERED IN GREAT BRITAIN,

SYSTEMATICALLY ARRANGED
IN THE LINNEAN MANNER,
WITH
SCIENTIFIC AND GENERAL OBSERVATIONS ON EACH.

VOL. V.

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BRITISH BIRDS, INSECTS, &c. &c.

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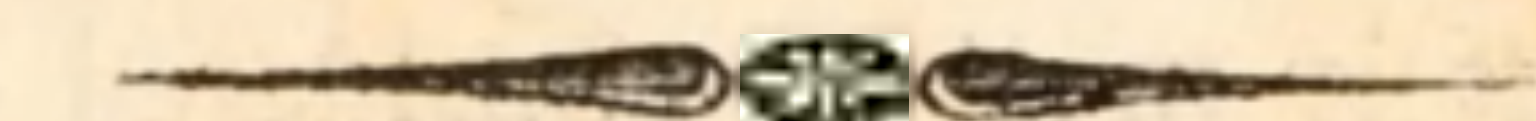


PLATE CXLV.

TEREDO NAVALIS.

SHIP WORM.

GENERIC CHARACTER.

Animal Terebella, with two calcareous hemisphærical valves cut off before, and two lanceolate ones. Shell roundish, flexuous, and capable of penetrating into wood.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell very thin, cylindrical and smooth.

TEREDO NAVALIS: testa tenuissima cylindrica lævi. *Gmel.* p. 3747.

334. *sp.* 1.

TEREDO, *Linn. Syst. Nat.* 12. 2. p. 1267. n. 1.

PLATE CXLV.

Dentalium testa membranacea cylindracea, ligno inserta. *Linn. Fn.*

Suec. 1. p. 380. No. 1329.

Serpula testa cylindracea flexuosa, lignum perforans. *Teredo. Da*

Costa. Brit. Conch. p. 21. sp. 11.

Sellius Hist. Nat. Tered. Baster, Phil. trans. 61.

TEREDO NAVALIS. SHIP-WORM. *Penn. Brit. Zool. 4. No. 160.*

This destructive creature is supposed to have been originally a native of the East-Indies, and from thence introduced into the European seas: at present it may be considered with propriety as a naturalized British species; and it is a fortunate circumstance that it does not thrive so well with us as in warmer climates.

The animal, a soft and almost shapeless gelatinous body, is furnished with a calcareous process, or augur, at the head, with which it bores with the utmost facility into the stoutest oaken plank, as it lies in the water; and where a number of them attack the same piece of wood, will in a few days entirely destroy it: hence the ravages of these animals in the bottoms of ships are fraught with the greatest danger; and notwithstanding all the precaution of sheathing the bottoms of ships with copper, they insinuate themselves through the smallest cavities, and lodge themselves securely in the timbers. Where the work of the animal first commences, the shell is obtusely rounded and closed, and as it proceeds it continues to lengthen its shell till, as Gmelin says, it becomes from four to six inches in length;—we have seen one of them whose progress through the solid plank had not been interrupted, that had grown nearly to the length of eighteen inches. It is said that sheets of paper dipped in tar, and applied to the ship's bottom, will prove a more effectual preservative

PLATE CXLV.

of the timber than the usual sheathing of copper, and an extensive manufactory has been of late established for the preparation of this article: how far it may prove ultimately successful we cannot presume to imagine, but perhaps both the paper and the copper might be employed together with greater advantage than either of those articles separately.

For a more complete history of the *Teredo* than we might have otherwise possessed, we are indebted to a remarkable circumstance that occurred about sixty years since: the piles on the coast of Holland were found to be injured to a very alarming degree, by the ravages of this creature; and beside several other ingenious tracts upon their history and the calamity they had occasioned, *Sellius* published an account of it, under the title of *Historia Naturalis Teredines, seu, Xylophagi Marini*, in 1733; in this book the anatomy of the animal is illustrated with Plates, and upon the whole his observations deserve the attention of the curious reader. Another account was also written by *Baster*, and published in the *Transactions of the Royal Society of London*, in vol. 61, as quoted above.

In our specimens, the apertures, or mouths of the shells, are very perfect, and exhibit the same appearance as *Kæmmer* and *Gmelin* seem to think peculiar to the species *Utriculus*; namely, an oval aperture divided by a partition in the middle. The shell is extremely delicate, or thin, and very brittle.



PLATE CXLVI.

PATELLA INTORTA.

INCLINING PATELLA, OR LIMPET.

GENERIC CHARACTER.

Animal Limax. Shell univalve subconic and without spire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell entire, ovate, furrowed: ribs slightly imbricated, vertex somewhat reflexed and obtuse.

PATELLA INTORTA: testa integris ovata, sulcata: costis sub-imbricatis, vertice sub-reflexo obtuso.

PATELLA INTORTA, *inclining*: with an elevated shell, slightly striated; the vertex bending, but not hooked.
Penn. Brit. Zool.

This shell is described by Pennant, who acquaints us it “inhabits Anglesea, found on the shores.” It is a very rare shell, but has been taken also on the western coast, and communicated by J. Laskey, Esq. of Crediton, Devonshire.

The figure of *Patella intorta*, in the British Zoology, is certainly very indifferent: but having examined the shell Mr. Pennant de-

PLATE CXLVI.

scribes, we have no hesitation in saying that it is not the *Patella mammillaris* of Gmelin, as some conchologists imagine. Specimens of the latter we are likewise in possession of, but they are not certainly known to be natives of this country.—In *Lister Conch. t. 537. fig. 17*; and in *Martini. Conch. 1. t. 7. f. 58, 59*. *P. mammillaris* is very accurately figured; and a slight comparison of either of them, with the shell figured in the annexed plate, will prove very clearly that they cannot be of the same species.



PLATE CXLVII.

PATELLA LACUSTRIS.

LAKE LIMPET.

GENERIC CHARACTER.

Animal Limax. Shell univalve, subconic, without spire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell very entire, oval, membranaceous: crown pointed and reflected.

PATELLA LACUSTRIS: testa integerrima ovali membranacea: vertice mucronato reflexo. *Fn. suec.* 2200.—*Gmel. Syst. Nat. T.* 1. p. 6.

Patella fluviatilis, fusca, vertice mucronato, incurvo, inflexoque. *Gualt. Ind. Conch. tab.* 4. fig. B.

Patella fluviatilis, exigua, subflava, vertice mucronato, inflexoque. *List. Hist. Conch. tab.* 141. fig. 39.
Morton Northamp. p. 417.

PATELLA LACUSTRIS, *Penn. Brit. Zool.* 4. No. 149.

PATELLA integra, exigua, fusca, fragilis, vertice inflexo. *Da Costa. Brit. Conch.* 1. tab. 2. fig. 8. 8.

This is a thin and brittle shell, of a pale brown, or whitish colour, that is found on aquatic plants, in most ponds and rivers in

PLATE CXLVII.

Europe : in England it is very common in some places. The animal, as Gmelin describes it, has two truncated and concealed tentacula, each of which is furnished with an eye at the inner angle.

Dr. Lister informs us, that they couple in September, and fix their spawn plentifully on stones and other bodies in the water : this spawn consists of little gelatinous globules, in each of which it is said many small shells may be distinguished.—The shell is shewn of the natural size in the annexed plate.



PLATE CXLVIII.

LEPAS TINTINNABULUM.

BELL ACORN SHELL.

GENERIC CHARACTER.

Animal Triton. Shell of many valves, affixed by a stem or broad base.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell conic, obtuse, rugged and fixed.

LEPAS TINTINNABULUM : testa, conica, obtusa, rugosa fixa. *Mus.*

Lud. Ulr. 466. n. 3.

Balanus major angustus purpurascens, capitis apertura valde patente.

List. H. Conch. tab. 433. *fig.* 285.

Balanus major. The conic centre shell. *Grew. Mus.* p. 148.

Balanus maximus ore patulo. *Mus. Petiv.* p. 82. No. 803.

B. tintinnabuliformis et B. calyciformis orientalis. *Phil. Trans.*

1758. p. 11. *tab.* 34. *fig.* 8, 9.

B. ore hiantе magnus. *Borlase. Corn.* p. 27.

Gland de Mer clochette, *D'Avila Cab.* p. 404. No. 922.

BALANUS TINTINNABULUM BELL. B. major purpurascens, conicus, angustus tintinnabuliformis, apertura valde patente. *Da Costa Brit. Conch.* p. 250. sp. 70.

BALANUS TINTINNABULUM BELL. *Penn. Brit. Zool. T.* 4. No. 8,

PLATE CXLVIII.

This kind of Balanus is found affixed in large clusters to the bottoms of ships in our seas, but the general opinion is that it originates in warmer climates, and should not be considered an indigenous British species. A supposed variety of it of a dirty whitish colour, is said to be found in the North seas, by Chemnitz.

Balanus Tintinnabulum is admitted among the testaceous productions of our seas by Borlase, Pennant and Da Costa, and this we must confess is the best apology we have to offer for inserting it in the present Work.

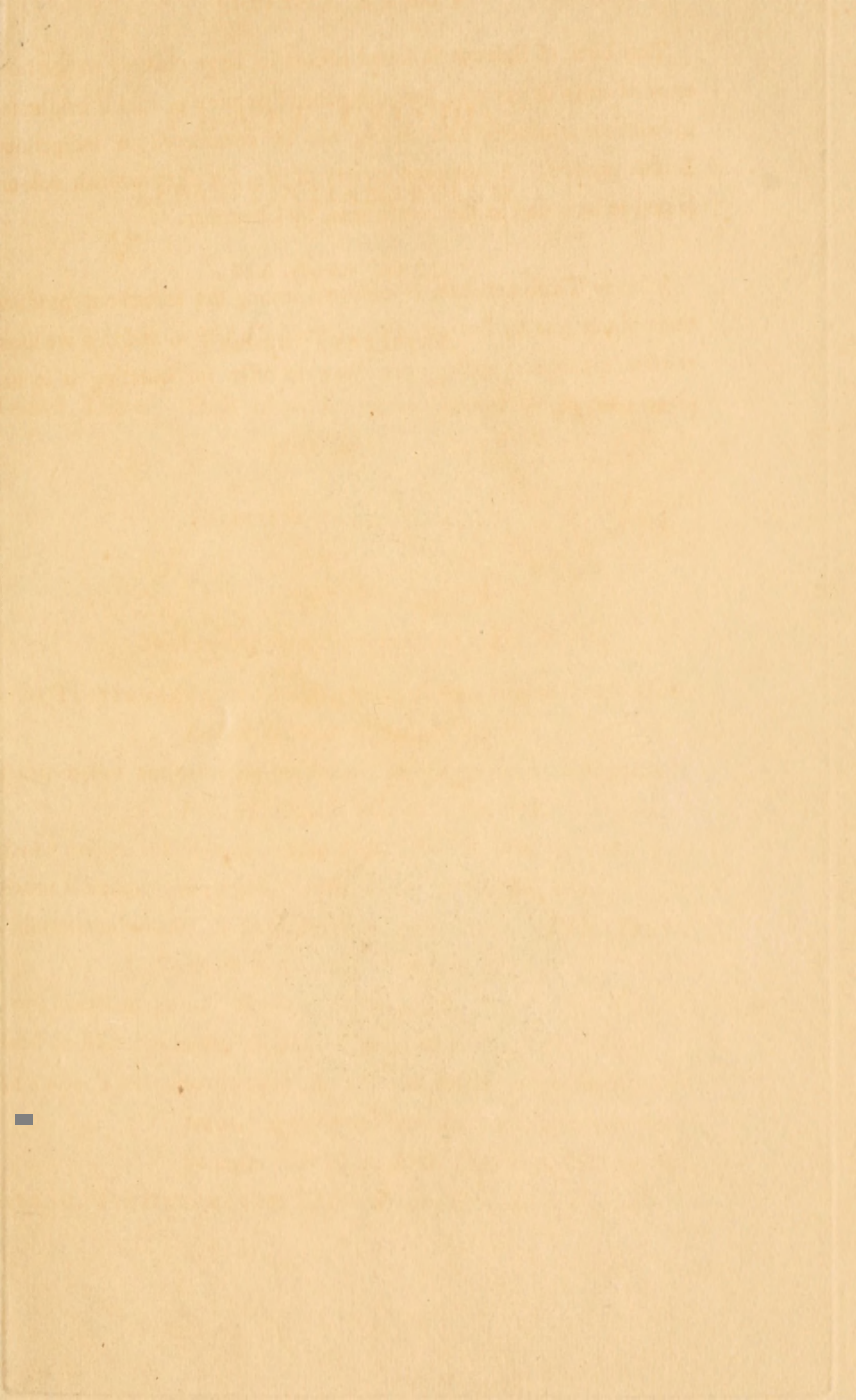




PLATE CXLIX.

VENUS LACTEA.

MILKY VENUS SHELL.

GENERIC CHARACTER.

Bivalve. Hinge furnished with three teeth ; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER.

Shell lentiform, somewhat compressed, with thick, elevated, obtuse concentric striæ, and slightly truncated anteriorly.

VENUS LACTEA : testa lentiformi sub-compressa : striis concentricis crassis elevatis obtusis, antrosum subtruncata.

This appears to be a new and undescribed British species of Venus, approaching, in some particulars, to others of the same genus found on our coast, although differing in having the concentric striæ or ridges large, elevated, and obtusely rounded. The striæ, for example, in *V. borealis*, and *V. cancellata* rise in a thin membranaceous ridge to an acute edge ; and the former of these seems at first sight to bear a strong analogy to our shell : *Venus lactea* is also a much thicker and heavier shell than any other resembling it, with which we are acquainted. *V. Exoleta* has thick, but minute striæ.

Our present species, we are informed, is found on the western coast.



PLATE CL.

PATELLA OBLONGA.

OBLONG FRESH WATER PATELLA, OR LIMPET.

GENERIC CHARACTER.

Animal Limax. Shell univalve, sub-conic, and without spire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell very entire, oblong, compressed, membranaceous: vertex pointed and reflected obliquely, or to one side.

PATELLA OBLONGA: testa ingerrima oblonga compressa membranacea, vertice mucronato reflexo oblique. *Lightfoot. Phil. Trans. V. 76. p. 167.*

This species was first described in the transactions of the Royal Society of London, by the Rev. Mr. Lightfoot, chaplain to the late Duchess of Portland. He says it was found adhering to the leaves of the *Iris Pseudacorus*, in waters near Beaconsfield in Buckinghamshire, by Mr. Agneu, the Duchess of Portland's Gardener. It has been since found on plants in the river Stour, by the Rev. Thomas Rackett.

PLATE CL.

It is evidently distinct from the *Patella lacustris* of Linnæus, in being of an oblong instead of ovate form ; and in having the pointed vertex bending obliquely or to one side, instead of being central and reflected back. The colour is variable, in some it is greenish, and in others of a pale brown. It is represented on our plate both of the natural size and magnified.

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PLATE CLI.

FIG. I.

HELIX HISPIDA.

BRISTLY SNAIL.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, diaphanous, fragile. Aperture contracted semilunar, or roundish.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell umbilicated, convex, hairy, diaphanous ; whorls five : aperture roundish-lunated.

HELIX HISPIDA : testa umbilicata convexa hispida diaphana : anfractibus quinis, apertura subrotundo-lunata. *Linn.*

Fn. Suec. 2182.—*Gmel. Syst. Nat.* 3625.

Helix sub-globosa umbilicata, cornea, diaphana, hispida. *Hispida*,
Helix. *Da Costa. Brit. Conch. p.* 58.

This shell is not unfrequently found at the bottoms of trees among the moss, in woods and wet shady places. It is glossy, very thin,

PLATE CLI.

brittle, and of a brown horny colour. When the animal is alive in the shell it is of a dark red colour approaching to black, and is very elegantly set all over with minute, short, white bristles, or hairs, which easily rub or fall off when the animal dies.

In the plate the upper and underside are represented, together with a magnified figure, which is distinguished by a star, and is intended to shew the hispid appearance of the shell while the animal is alive.

FIG. II.

HELIX ERICETORUM.

HEATH SNAIL.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell umbilicated, depressed and yellowish, with one or more fuscous bands.

HELIX ERICETORUM: testa umbilicata depressa lutescente: fascia una vel pluribus fuscis. *Müll. Hist. Verm.* 2. p. 33. n. 236.—*Gmel. Linn. Syst. Nat.* p. 3632.
Cochlea cinerea albidave, faciata, ericetorum. *List. H. An. Angl.* p. 126. tit. 13. tab. 2. f. 13.—Cochlea compressa, umbilicata fasciata campestris. *List. H. Conch. tab.* 78. fig. 78.

PLATE CLI.

HELIX ALBELLA, *Penn. Brit. Zool. Vol. 4. tab. 85. fig. 122.*

HELIX cinerea albidave, fasciata, ericetorum Erica. *Da Costa. Brit. Conch. p. 53. Sp. 30.*

This species of Helix, as its name implies, is found on heaths and sandy soils, and is very common both in this country and other parts of Europe. When full grown, this shell is three quarters of an inch in breadth, and one-third of its breadth in height : the spires flat : the outermost wreath very convex beneath, with a large and deep central umbilicus ; and circular mouth or aperture.

The young shells are quite plain, and of a horny colour, or whitish and semitransparent. When full grown they are opaque, dull, white or yellowish, and usually fasciated with one or more brown circular bands, according to the involutions of the wreaths. The order, size, and number of these brown bands, as Da Costa says, vary extremely, though commonly there is one band in the middle or near the bottom of each wreath, and often other fainter and narrower bands accompany it. Gmelin speaks of five distinct varieties, which differ in size, in colour, and number of the bands. Sometimes they are quite white, or marked with a single spiral band ; and sometimes these bands amount to eight or nine on each shell.

Dead shells of this kind are found in vast numbers intermixed with the sand on heaths, and are always observed in great plenty with the others.

THE BELL

THE BELL

THE BELL

THE BELL

THE BELL

The species of this as the name is, is found in the
 and it is very common. When full grown, it is
 and one third of the height of the tree. The
 which are covered with a large and beautiful
 and other insects or animals.

The young of this are found in the
 and are very common. When full grown, it is
 and usually found in the same place as the
 and according to the number of the tree. The
 number of these is as follows: The tree is
 though commonly there is one to the tree. The
 of each tree, and other insects, are found
 and the species of the tree is as follows: The
 in color, and the number of the tree is as follows:
 or more of the tree is as follows: The tree is
 known to exist in the same place.

The species of this tree is as follows: The tree is
 and the number of the tree is as follows: The tree is

THE BELL





PLATE CLII.

PINNA LÆVIS.

SMOOTH PINNA, OR HAM SHELL. -

GENERIC CHARACTER.

Animal Limax. Shell sub-bivalve, fragile, erect, gaping at one end, and furnished with a byssus or beard: hinge toothless, and uniting the valves into one.

SPECIFIC CHARACTER.

Shell nearly triangular, horn-colour, smooth: valves rugose on the posterior part.

PINNA LÆVIS: testa sub-triangulari cornea lævi: valvis posterius rugosis.

This species of Pinna which differs from any that has been before described as a British shell; and if we are not mistaken, from either of the Linnæan or Gmelinian species of the genus also; was received by A. M'Leay, Esq. among other curious shells that were dredged up on the coast of Shetland.

The difference between this and the other analogous kinds, seems to consist in its being of a more triangular form, and in not having

PLATE CLII.

the least trace of spines or murication : from the beak descend some very obsolete longitudinal striæ, but the surface is in general perfectly smooth and glossy, notwithstanding the specimen before us has at first sight a rugged aspect ; the shell having been greatly bruised or mutilated in its growth, and afterwards uncouthly repaired by the animal inhabitant.



PLATE CLIII.

SOLENIPELLUCIDUS.

PELLUCID RAZOR SHELL.

GENERIC CHARACTER.

Bivalve, with equal valves, oblong, open at both ends ; at the hinge a subulated tooth turned back, often double ; not inserted in the opposite shell. Animal an ascidia.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell suboval, somewhat arcuated, fragile, pellucid : hinge with an acute bidentated tooth on one side.

SOLENIPELLUCIDUS : testa subovali subarcuata fragile pellucida cardine altero acute bidentato.

SOLENIPELLUCIDUS, *Penn. Brit. Zool. T. 4. p. 1. p. 84. sp. 23.*

A very rare species, and described only by Mr. Pennant, who says it inhabits Red Wharf, Anglesea.



PLATE CLIV.

BUCCINUM GLACIALE.

NORTHERN WHELK.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, gibbous. Aperture ovate, ending in a short canal or gutter, inclining to the right: tail or beak retuse: inner lip expanded.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell smooth, somewhat striated, ovate-oblong; lower whorl slightly carinated.

BUCCINUM GLACIALE: testa lævi substriata ovato-oblonga: anfractu infimo subcarinato. *Linn. Faun. Suec.* 2162.—*Gmel. Syst. Nat.* 4. 3491. *sp.* 92.

Chemn. Conch. 10 t. 152. 1446, 1447.

TRITONIUM GLACIALE, *O. Fabr. Faun. Grænl.* No. 397.

As a native of the North Seas, this shell was well known to Linnæus, by whom it was most accurately and minutely described in his

PLATE CLIV.

Fauna Suecica *, but we have no other authority for believing it to be an inhabitant of our own seas, than that of Mr. Agneu, gardener to the late dutchess of Portland, by whom it was discovered among the Orkney Islands, and, in consequence, admitted into the collection of British shells in the Portland Museum.

One of the most striking characters of this shell, is a single carinated ridge that surrounds the first or largest wreath of the shell, and does not afterwards appear on either of the rest. This it may be proper to notice, since the circumstance has been strictly mentioned both by Linnæus, Fabricius, (*Faun. Groen.*) and Chemitz, but it is not certainly a constant criterion of the species: there was a variety of this kind in the collection of the late Dr. Fordyce, at present in that of the Earl of Tankerville, in which the carinated ridge distinctly traverses the whole shell in a spiral course, from the first wreath nearly to the apex.—The latter was from Newfoundland.

* *Buccinum glaciale*; testa crassa magnitudine extimi articuli pollices, pallida, secundum anfractus obsolete striata, acuminata superne conica. Anfractus infimus seu maximus subcarinatus est, sed hæc carina in reliquis superioribus anfractibus evanescit, cum sutura anfractuum evadat, quæ attenuata. Basis gibba emarginata. Apertura ovata. Labium exterius crassum patulum, striis incumbentibus. Linn. Fn. Succ.

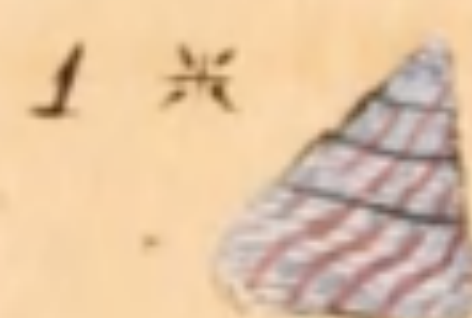


PLATE CLV.

FIG. I. I.

TROCHUS CONICUS.

CONIC TROCHUS, OR TOP SHELL.

GENERIC CHARACTER.

Animal a Slug. Shell conic : aperture nearly triangular.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell conic, smooth, whitish, obliquely lineated with brown, whorls flattish, and finely striated.

TROCHUS CONICUS : testa conica lævi, albida oblique fusco lineata : anfractibus planiusculis subtiliter striatis.

A small shell bearing some affinity with *Trochus Conulus*, from which it is notwithstanding perfectly distinct ; as a British shell we believe it is altogether new ; nor does it seem to be described by any foreign author. Four of these shells were picked up on the sea coast of Devonshire by J. Laskey, Esq. from whom we received the specimens represented in our Plate. It has been since communicated also from the Mediterranean sea.

PLATE CLV.

FIG. II. II.

TROCHUS CINEREUS.

ASHEN TOP SHELL.

SPECIFIC CHARACTER.

Shell pyramidal, umbilical, cinereous ; marked with narrow blackish lines.

TROCHUS CINEREUS : pyramidalis umbilicatus, cinereus, lineis angustis nigrescentibus notatus. *Da Costa. Brit. Conch. p. 42. sp. 23. tab. 3. fig. 9. 10.*

Trochus pyram, parvus, ex viridi sive subcæruleo variegatus, insigniter umbilicatus. *List. H. Conch. tab. 633. fig. 21.*

This shell is described and figured by Da Costa from the specimen at present in our possession ; the only inducement we have for inserting it, for though this writer observes that it is a common shell on several of our coasts, we must acknowledge it has never occurred to us as a British shell. Exotic specimens we have, but these are said to have been brought from the South Seas. Da Costa, we have a strong suspicion was mistaken concerning this shell ; his reference to Lister is correct ; the rest of his synonyms, namely, those of *Dale*, *Wallis*, &c. are erroneous, since those writers meant a very different shell. The following is the minute description Da Costa gives of this kind :

“ The shell is thick and strong, of the size of a cherry ; shape obtusely pyramidal, or not quite tapering to a point.

PLATE CLV.

“ The base is very concave, with some circular furrows; the mouth roundish and capacious, *within* fine mother-of-pearl; the *outer lip* smooth and even; the inner or *pillar lip* has two jags or slight teeth, and two furrows crossing it transversely; from hence it widens, runs oblique, and forms a spacious cavity, at the bottom of which lies the *umbilicus*, deep, cylindric, and so hollow as to admit the head of a large pin. All this part is of a dark ash, greatly variegated with blackish lines, or streaks, which run lengthways and across; but the beginning of the umbilicus is generally pearly, and of a fine light greenish colour.

“ The body and turban have five bellied, or swelled wreaths, or whorls, separated by a very depressed line; they are circularly striated, but faintly, and the colours are exactly the same as at the base.”



PLATE CLVI.

MUREX ANGULATUS.

ANGULATED MUREX.

GENERIC CHARACTER.

Animal Limax. Shell spiral, rough : aperture ending in a straight, and somewhat produced gutter or canaliculation.

SPECIFIC CHARACTER.

Shell oblong, whorls depressed, angulated, transversely striated, sulcated longitudinally ; aperture toothless.

MUREX ANGULATUS : testa oblonga : anfractibus depressis angulatis transversim striatis longitudinaliter sulcatis, apertura edentula.

A neat shell of interesting figure, that has been found, though rarely, on the English coasts. The specimens figured in our Plate were discovered on the sands at Brighton by Mr. Munn, who kindly communicated them to us. We have received it since from the coast of Weymouth.

This is doubtless an undescribed species.

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PLATE CLVII.

FIG. I. I.

HELIX RUFESCENS.

REDDISH SNAIL.

GENERIC CHARACTER.

Animal *Limax*. Shell univalve, spiral, diaphanous, fragile. Aperture semilunar, or roundish.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell umbilicated, and streaked with pale reddish.

HELIX RUFESCENS: testa umbilicata, et striata dilute rufescens.

Cochlea umbilicata, et striata dilute rufescens. RUFESCENS Da Costa.
Brit. conch. p. 80. sp. 43.

Cochlea dilute rufescens, aut subalbida, sinu ad umbilicum exiguo, circinata. List. H. An. Angl. p. 125. tit. 12. tab. 2. fig. 12.

Cochlea terrestris depressa & umbilicata mellei coloris, labio candido repando, sinu ad umbilicum exiguo circinato.
Gualt. 1. Conch. tab. 3. fig. N

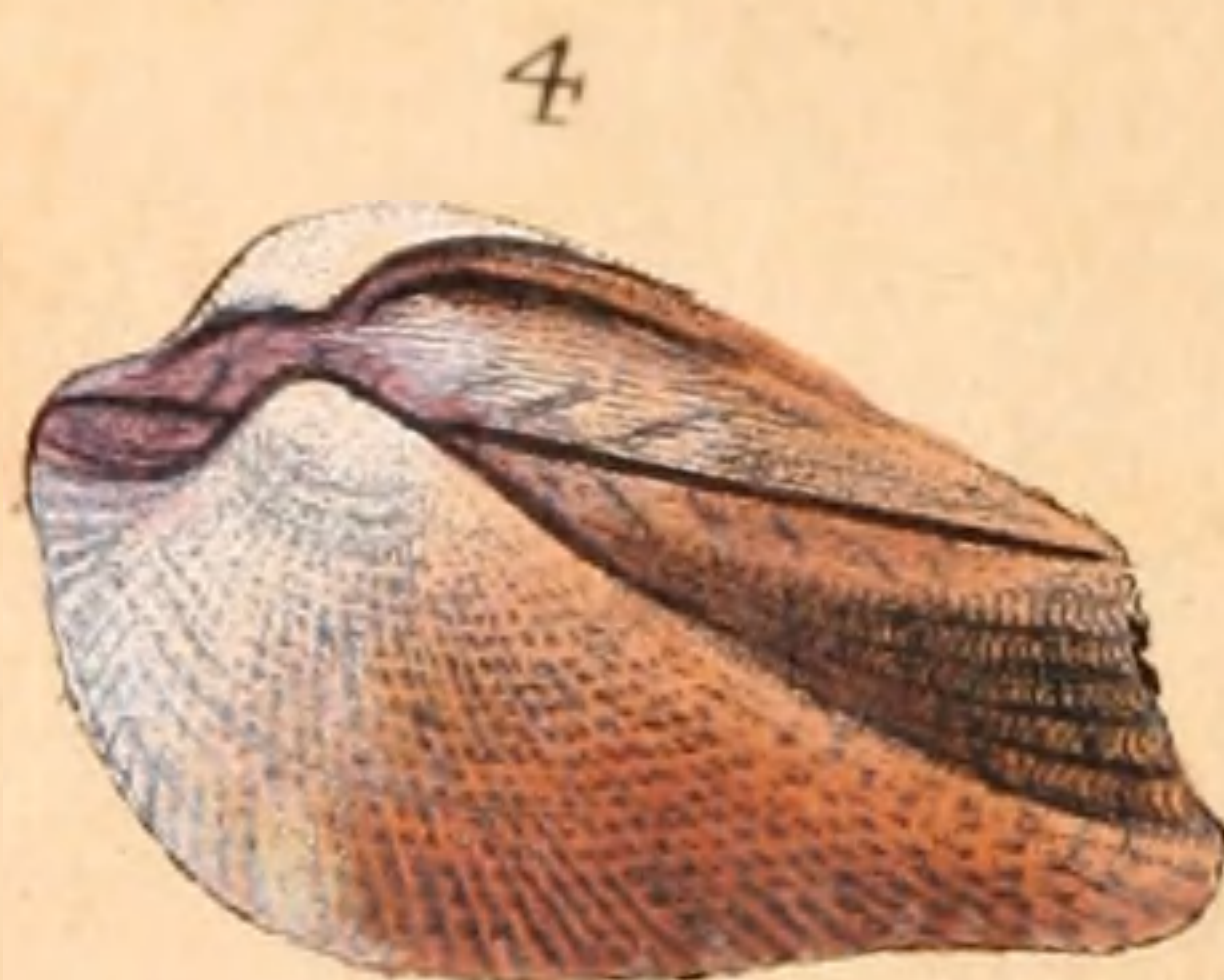


PLATE CLVIII.

FIG. I. II.

ARCA NOAE.

NOAH'S ARK SHELL.

GENERIC CHARACTER.

Shell bivalve, valves equal: teeth at the hinge numerous, acute, and inserted between each other.

SPECIFIC CHARACTER.

Shell oblong, striated, at the apex emarginated: beaks very remote: margin gaping.

ARCA NOAE: testa oblonga striata apice emarginata, natibus remotissimis, margine hiantes. *Linn. Gmel. Syst. Nat. T. 1. p. 6. p. 3306. sp. 2.*

Musculus Matthioli. *List. t. 368.*

Concha rhomboides, *Rondel. 99. 2. p. 27.*

Bonanu. recr. 2. f. 32.

Miss Pocock, whose liberal communication of British shells collected by herself, we have had such frequent occasion to mention in the progress of this publication, has obliged us with a small specimen of the Arca Noae found on the shores of Cornwall; the smallest shell figured in the upper part of our Plate.

PLATE CLVIII.

It has been presumed before that this shell was a native of our coasts : that Borlase had met with it ; and that the *Arca tortuosa* * of Pennant, (which he says inhabits Cornwall, and has been found near Weymouth,) was no other than the *Arca Noae* of Linnæus. But this still remained a matter of much uncertainty among Conchologists, and with ourselves, till we received the specimen from the lady above-mentioned, which proves beyond dispute that it is a British shell, and perfectly similar to those of the same species found in the Mediterranean sea. This being a young shell, is not of course covered with the rude brown epidermis, as in the old or full grown Mediterranean shell, figured with it, in order to elucidate the species with more precision. Since the publication of the Plate we have also had the satisfaction of receiving another specimen of the shell nearly thrice the size of the small one figured, in a parcel of shells collected on Slapton sands, Devonshire, last summer.

At the same time that Miss Pocock discovered this small specimen of *Arca Noae*, several worn valves of an *Arca*, confessedly of a different kind, occurred likewise. Both the internal and external view of these are represented in the lower part of the plate, fig. 3, together with that of the perfect specimen of a foreign shell, fig. 4, which may prove hereafter to be of the same species. The mutilated valves we have little hesitation in believing it to be precisely those of the shell figured by Lister, *t.* 367. *n.* 207. *Balanus Bellonij tenuiter striata* ; though from their imperfect condition it might be improper to offer any positive opinion concerning them. At a future period we may be enabled, by receiving better specimens, to ascertain this point, and as it may then appear, our conjectures were not unfounded

* No. 57, Penn. Brit. Zool.

PLATE CLVIII.

We should further add, that this species, though observed by Lister, has been overlooked by Linnæus; and that from a Ms. note in one of the copies of Lister's work, in the library of Sir Joseph Banks, we find the late Dr. Solander intended to have named it specifically *fusca*, had he lived to publish his new arrangement of Conchology.



PLATE CLIX.

TURBO RETICULATUS.

RETICULATED TURBO.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER.

Shell tapering, reticulated with granules, testaceous, whorl reversed; aperture straitened.

TURBO RETICULATUS; testa turrita reticulata granulata testacea, anfractibus coarctata.

This is a remarkably neat, or rather elegant shell, and equally distinguished for its rarity. It was found in the sands on the coast of Cornwall, by Miss Pocock, to whose polite attention we are exclusively indebted for the specimen now figured.

That this small species of Turbo is undescribed either as a British or a foreign shell, we have little reason to dispute, unless the following, described by Mr. Walker, should prove to be the same: "Turbo, Turritus perversus novem anfractibus punctatis apertura coarctata; the reversed taper Turbo of nine dotted whorls and straitened aperture.

PLATE CLIX.

A shell found at Sandwich."—The description does not strictly correspond with our shell, the figure is yet more remote. Some degree of ambiguity arises from this particular circumstance; in our shell the wreaths are uniformly lineated spirally, with three prominent rows of tubercles, or more correctly speaking, granulations, except on the first wreath, where they are more numerous, and the intermediate series on every wreath, consists of smaller granulations than those on either side of it. The term *punctatis*, on the contrary, which Mr. Walker has adopted, must rather imply a dot depressed: in the engraving also, by which his description is elucidated, the dots appear to be disposed in three distinct series upon each wreath, as the granulations are in the shell before us, but each dot is apparently depressed, and situated in the center of a quadrangular compartment: at the same time also it must be remarked, that the intermediate series of these dots on every wreath, are of an equal magnitude with the others. The aperture, whatever might be the shell designed, is miserably expressed, as are indeed the figures both of the natural size, and magnified. We suspect upon the whole, they are intended for our shell, and were it not for the objections stated, should insert a reference to his figure, plate 3. No. 48. as a synonym.

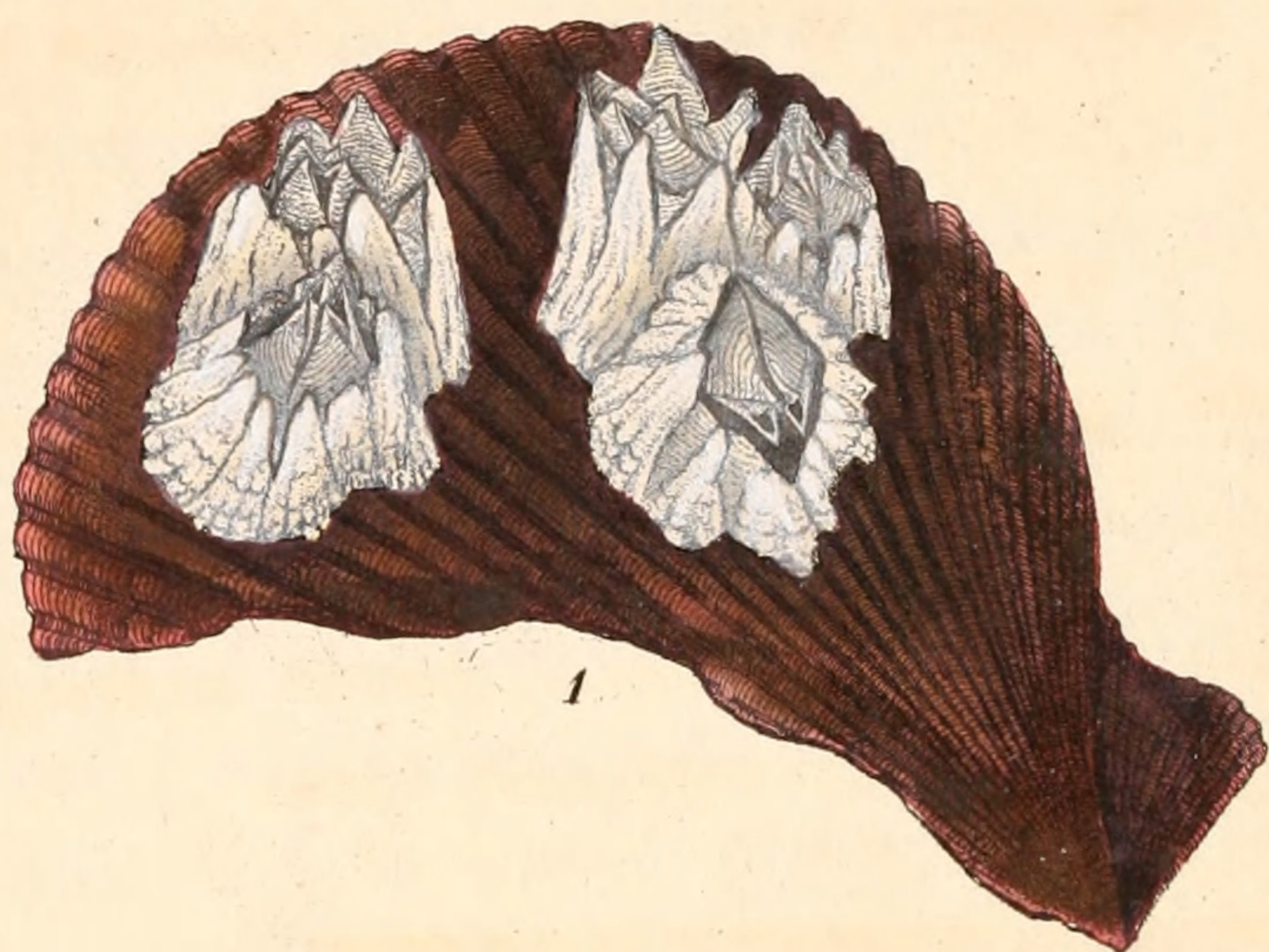


PLATE CLX.

LEPAS BOREALIS.

NORTHERN ACORN SHELL.

GENERIC CHARACTER.

Animal Triton. Shell affixed at the base; multivalve; the valves unequal.

SPECIFIC CHARACTER.

Shell erect, subconic, aperture quadrangular, operculum or lid acute, and striated transversely.

LEPAS BOREALIS; testa erecta subconica, apertura quadrangulari operculis acutis transversim striatis.

A few small clusters, with some single specimens of this curious species of Lepas, were discovered about three years since, attached to the bottom of the Warspight ship of war, when taken into dock to be repaired, after lying in the harbour of Portsmouth for a great length of time. Mr. James Hay, of Portsmouth, has since found two or three shells of the same kind, by dredging in Portsmouth harbour; so that though probably not indigenous, it has now become a naturalised species.

This was first communicated by J. Laskey, Esq. We have since received it from Newfoundland, affixed to the valve of

PLATE CLX.

a northern *ostrea*; and learning that it is undoubtedly a native of the north seas, we venture to assign it the specific name of *borealis*.—The clusters of these shells, when pressed together, (which rarely happens) take an elongated form, as is expressed in the upper figure.—We are certainly to consider this as a rare species.

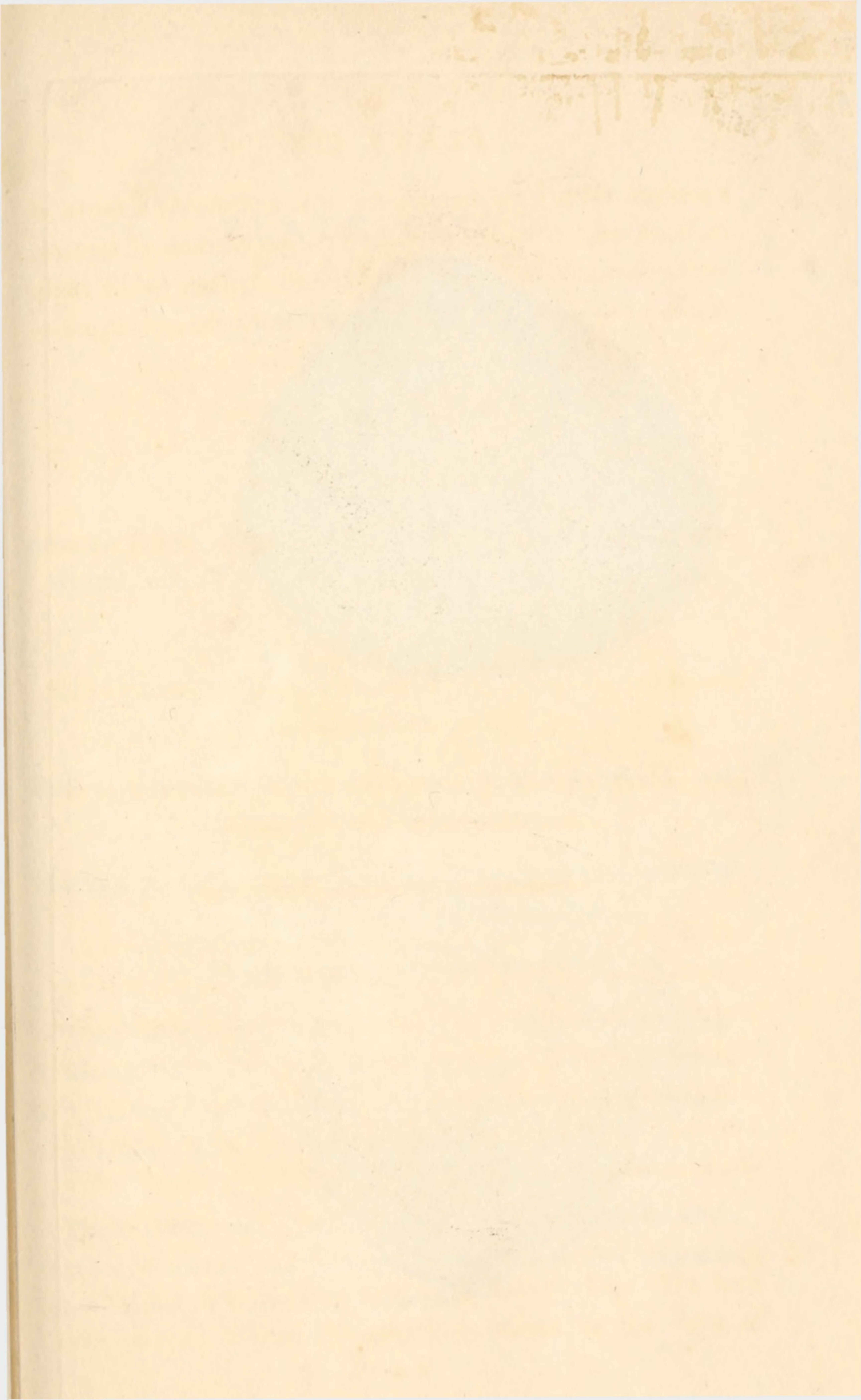




PLATE CLXI.

MACTRA RADIATA.

RADIATED MACTRA.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve, sides unequal. Middle tooth complicated, with a little groove on each side; lateral tooth remote.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell thin, fragile, somewhat triangular, compressed, whitish, and finely striated with testaceous rays.

MACTRA RADIATA: testa tenui fragili subtriangulari compressa albida subtilissime striata testaceo radiata.

Several valves of this shell were found upon Langston beach, near Portsmouth, after a severe storm that happened in the year 1800, by J. Laskey, Esq. of Crediton; from whom we received the specimens figured in the annexed plate.

This is a thin, brittle shell, of a large size; colour sordid white, tinged with reddish, and faintly marked with rays of a testaceous colour, beneath a brown filmy epidermis.

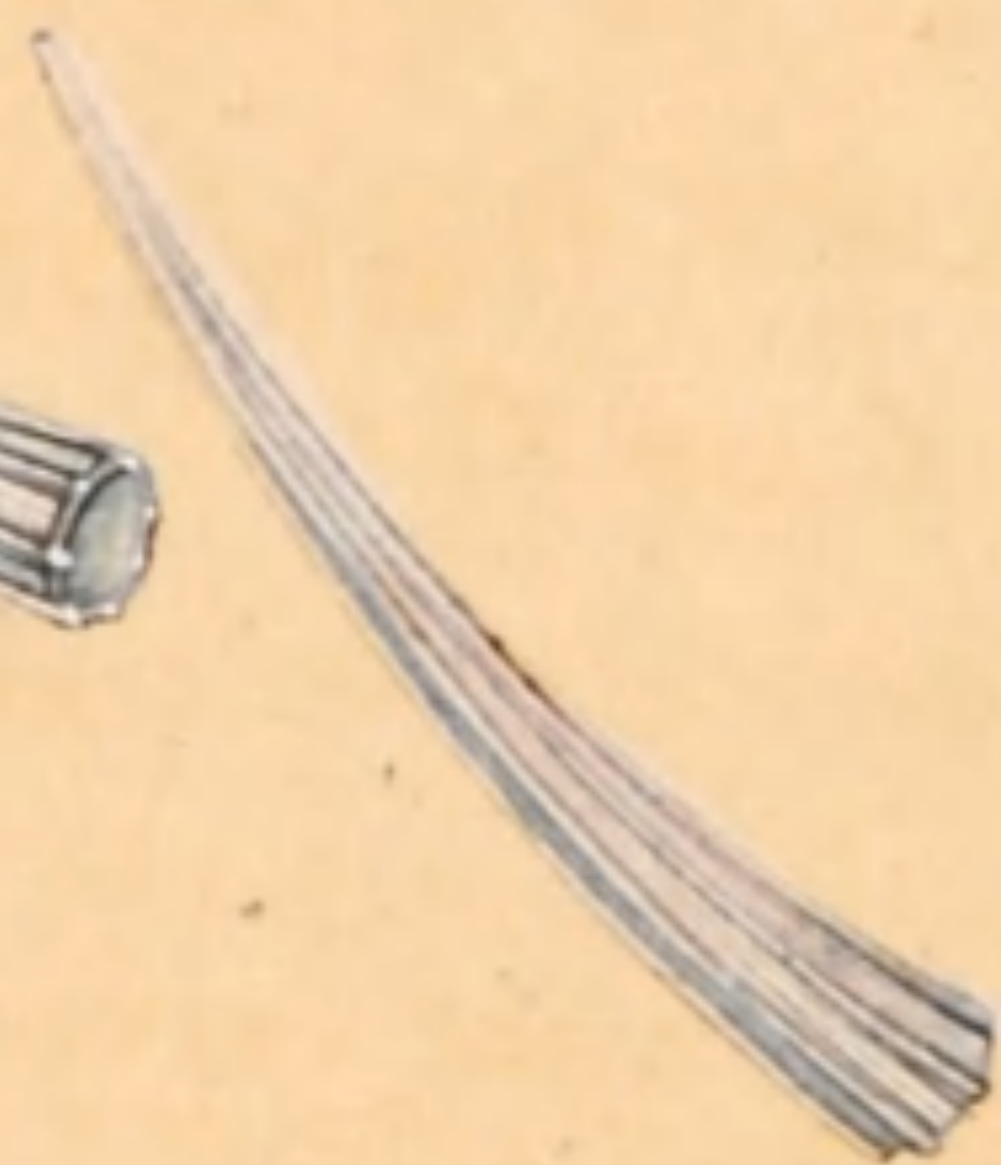


PLATE CLXII.

DENTALIUM OCTANGULATUM.

EIGHT-RIDGED TOOTH-SHELL.

GENERIC CHARACTER.

Animal a Terebella. Shell univalve, tubular, straight or slightly curved, with an undivided cavity open at both ends.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell white, somewhat curved, with eight ribs or angles, and three intermediate striæ.

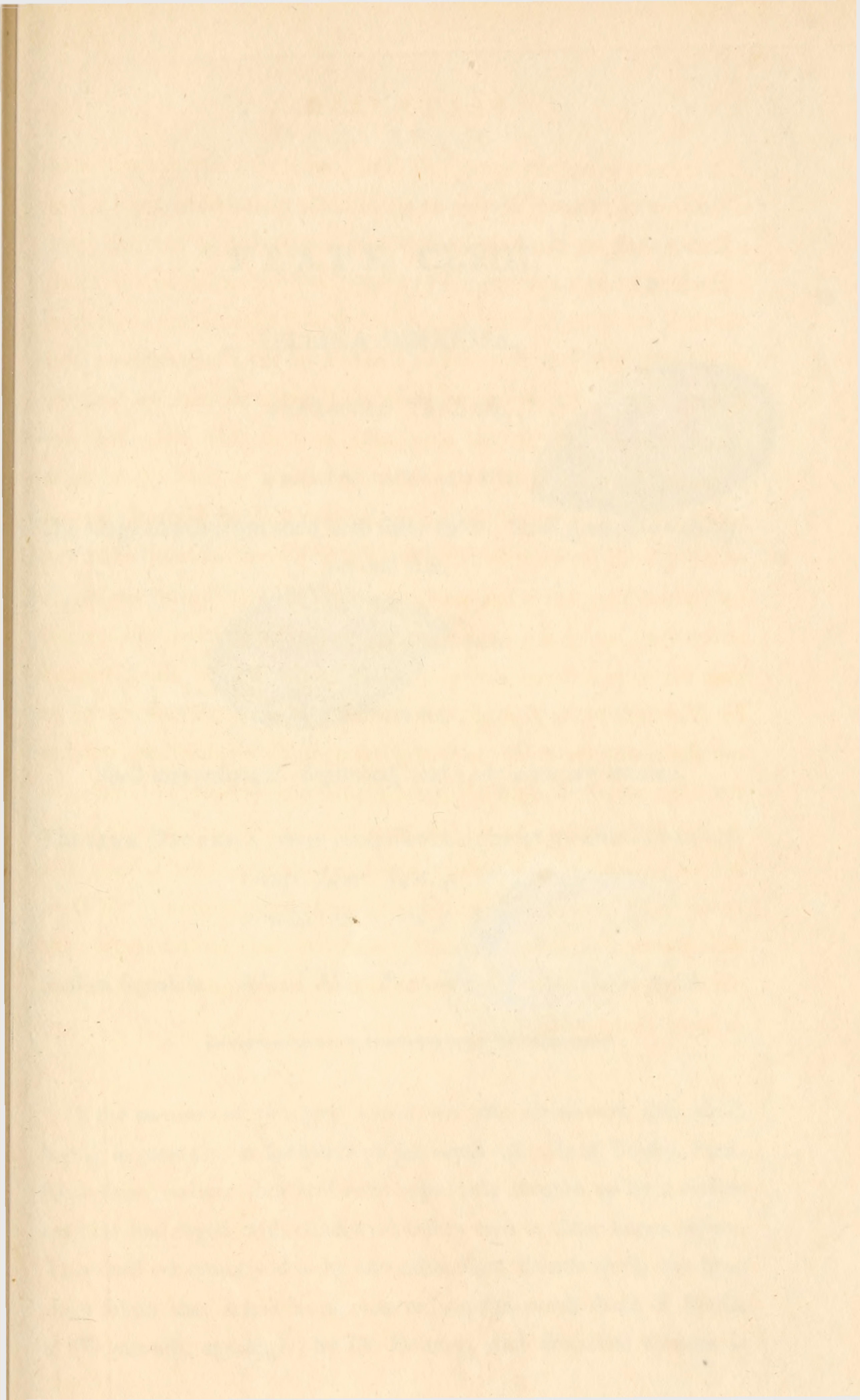
DENTALIUM OCTANGULATUM: testa alba subarcuata octangulata: interstitius tri-striatis.

DENTALIUM STRIATULUM: *Gmel. Syst. Nat.* 3738. sp. 13 ?

For the discovery of this elegantly striated tooth-shell, as a native of the British coasts, we have once again to acknowledge our obligation to a lady, mentioned on other similar occasions in the progress of this work, Miss Pocock; several shells of this kind were found by her on the sandy coasts of Cornwall, near Lelant, in the year 1802.

PLATE CLXII.

It remains to express some little doubt, whether every circumstance will allow us to consider this as an hitherto undescribed species; as a British shell we can have no hesitation in saying it has not been mentioned by any author. We were rather inclined at first to think our shell could be no other than a variety of the *Dentalium striatulum* of Gmelin, which is described as a native of the Mediterranean and Sicilian seas. The synonyms given by Gmelin to that species, we found however to be less expressive of our shell than his description; Lister's shell, to which he refers, *t.* 547. *f.* 1. *b.* is much larger than our shell, as is likewise that of Martini, quoted with it; both are described to be of a fine green colour, with the tip only white, but it has uniformly eight distinct ribs or angles, as in our shell, which is a much more important characteristic of a species, than the mere difference of colour.—There is another shell, figured by *Martini*, *pl.* 1. *f.* 4. *B.* that seems to approach much nearer to our shell, and the colour is white, but as in *D. elephantium*, this has ten ribs instead of eight; it is the *Dentalium aprinum* of Gmelin.—As our shell, upon the whole, does not strictly accord with those species noticed, nor any others which we are acquainted with, a new name and character will tend at least to obviate confusion. Of *Dentalium striatulum* it may prove to be a variety, but that is doubtful; and there is scarcely any reason to dispute its being undescribed, unless it be of that species.



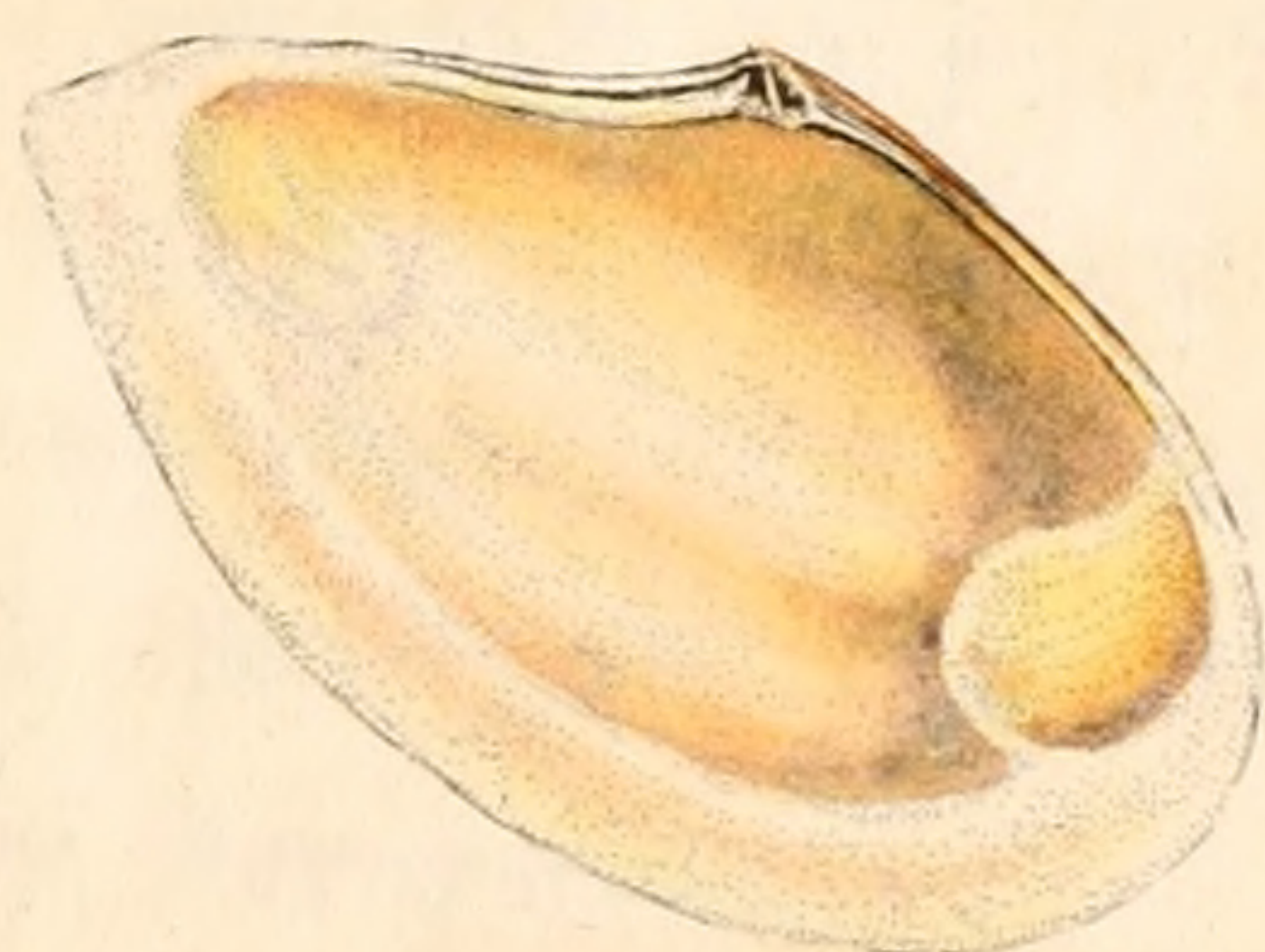
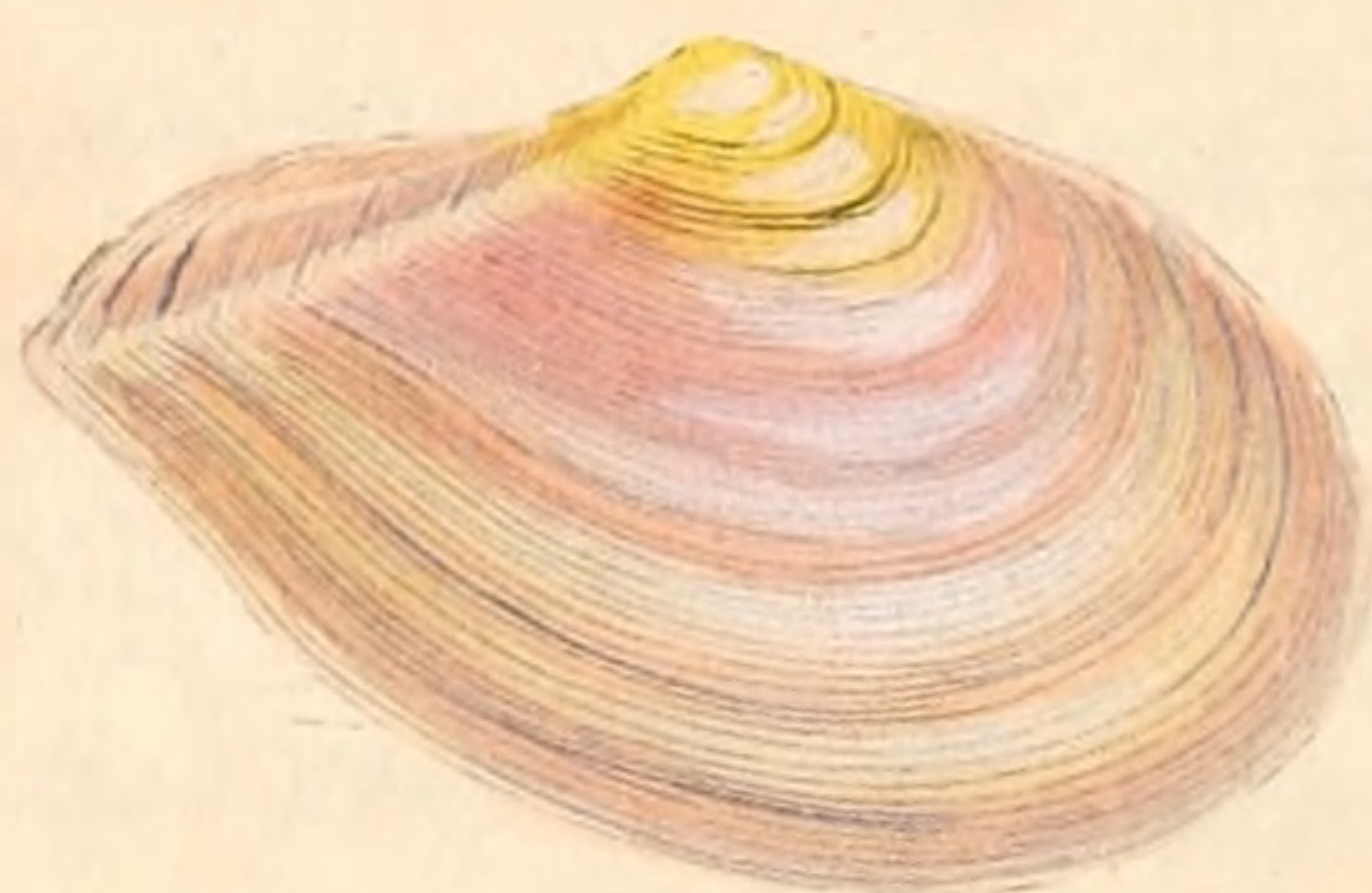
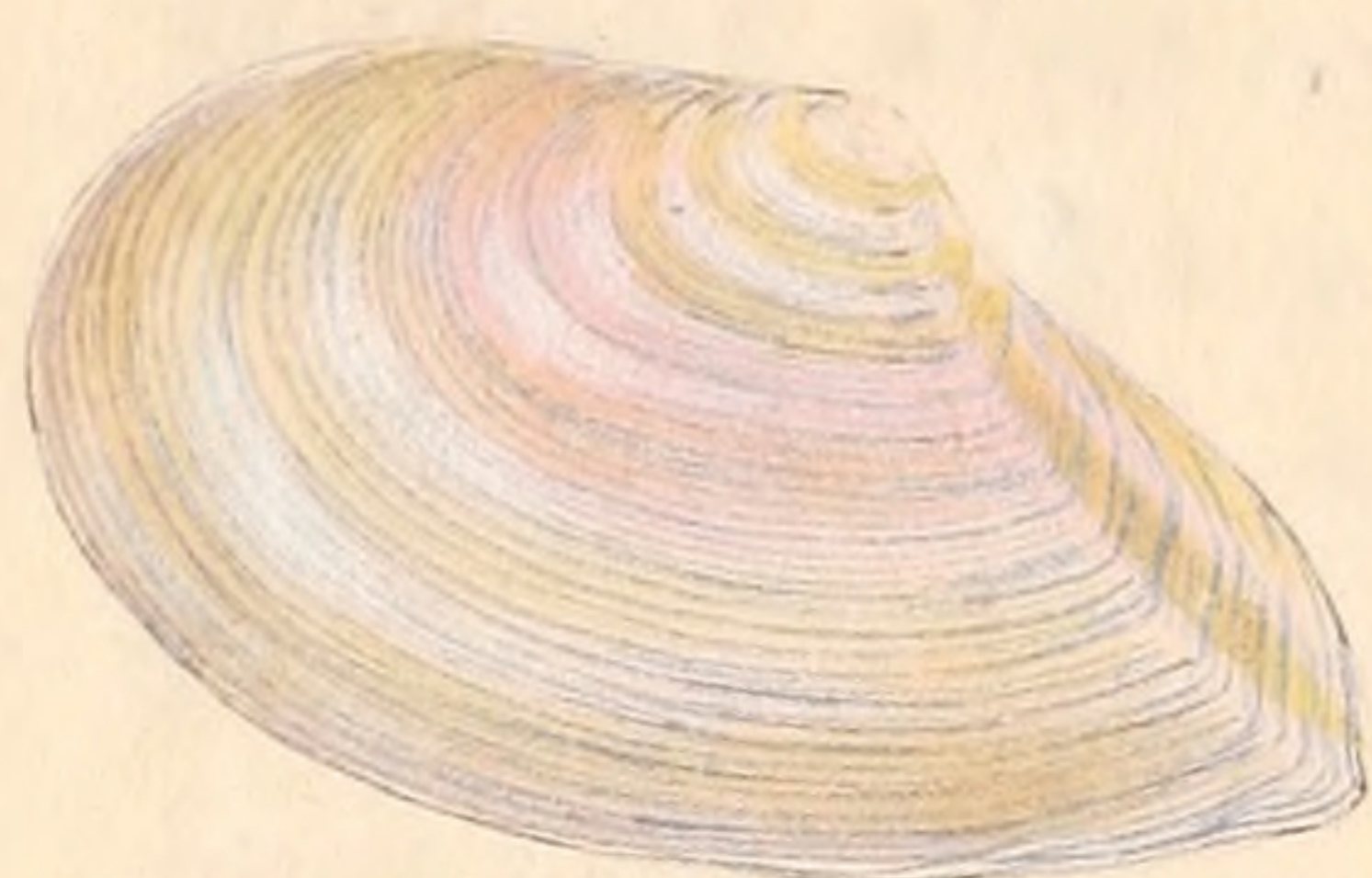


PLATE CLXIII.

TELLINA DEPRESSA.

DEPRESSED TELLEN.

GENERIC CHARACTER.

The hinge usually furnished with three teeth. Shell generally sloping on one side.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell inæquilateral, depressed, and very minutely striated.

TELLINA DEPRESSA : testa inæquilatera depressa minutissime striata.

Gmel. Linn. Syst. p. 3238. sp. 55.

Gualt. test. t. 88. f. L.

Tellina Squalida. *Soland Mus. Port.—Pult. Cat. Dors. p. 29.*

In the summer of the year 1800, we first discovered this shell, laying in plenty upon the sands on the south east side of Tenby, Pembrokeshire; where they had been apparently thrown up by a violent sea that had raged with considerable fury two or three hours before. This shell we conceived to be an undescribed British shell, but have since found that it had been observed on the north shore of Poole, at Weymouth, sparingly, by Dr. Pultney, and described by him in

PLATE CLXIII.

Hutchin's History of Dorsetshire, under the specific name of *Squalida*. This conchologist admit it to be *Tellina squalida* of Solander, *Mus. Port.* and *Tellina depressa* of Gmelin.

The only synonym given by Gmelin for his *T. depressa*, (whose *habitat* he is even unacquainted with,) is a reference to Gualtieri, f. H. I. L. The two first are small, and perhaps not of the same species, those represented at letter L and M, we believe to be the true shell of which we offer a figure as the *Tellina depressa* of Gmelin; Gualtieri thus describes his shell: "*Tellina inæquilatera satis depressa, minutissime striata, vel candida, vel purpurascens, vel subrosea.*"

The figures in the annexed plate represent the natural size of our largest specimens: the colours are variable, more or less, of a fine pale orange, yellow, and tinged with rosy. It is certainly rare.



PLATE CLXIV.

LEPAS DILATA.

DILATED LEPAS.

GENERIC CHARACTER.

Animal Triton. Shell affixed at the base: multivalve; the valves unequal.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell compressed, five valved, thin, dorsal valve dilated at the base with an acute angle; and seated on a peduncle.

LEPAS DILATA: testa compressa quinquevalvi tenui, valvula dorsali basi dilata angulo acuto, pedunculo insidente.

LEPAS FASCICULARIS: testa quinquevalvi lævi corpus tegente, valvula dorsali basi dilata angulo acuto prominente, stipite nudo. *Ellis. Zooph. pl. 15. f. 6. p. 167.*

LEPAS SIGILLATUM, *Mus. Portl?*

The first, and only account we have of this kind of Lepas, is that given by the late Mr. Ellis in his Natural History of Zoophytes. In addition to the character he assigns to this shell, quoted as a synonym, this writer acquaints us only that it is “from St. George’s Channel.” We have never met with it either on the coast of that

channel, or any other, nor have we received it from any of our friends, at the same time that we have no reason to distrust the information of that author, and only infer from the attention we have by chance bestowed particularly to the marine productions of that sea, that it must be rare.

A specimen of this shell, one which we are inclined to think, on pretty good authority, to be the same, or one of them at least, that was sent by the late Mr. Ellis to the Dutchess of Portland, is at this time in our Cabinet; the late Dr. Fordyce became first possessed of this specimen, and at his death we obtained it, under the title of *Lepas sigillatum* of Solander. Unlike *Lepas anatifera*, or *anserifera*, the valves of this shell are uncommonly thin, brittle, in a certain degree corneous, with the largest lateral valves rather crumpled in the usual course of the striæ, and marked transversely with obsolete rays: the shell is likewise covered with a fine pale brown skin, or epidermis: is larger than *anatifera*, and has a singular acute prominent dilation at the base of the back valve.



PLATE CLXV.

VOLUTA LÆVIS.

SMOOTH VOLUTE.

GENERIC CHARACTER.

Animal a Limax. Shell with one cell, spiral; aperture without a tail or beak, and somewhat effuse. Columella plaited; generally without lips or umbilicus.

SPECIFIC CHARACTER.

Shell rather ovate, very smooth; spire obtuse; two plaits on the pillar lip; lip gibbous, and slightly denticulated.

VOLUTA LÆVIS: testa obovata lævissima, spira obtusa, columella biplicata, labro gibbo subdenticulato.

VOLUTA EDENTULA. *Mus. Portl.*

As a British species, this extremely rare little shell was first noticed on the coast of Weymouth, being dredged up in deep water by some fishermen, and consigned to the cabinet of the late Dutchess of Portland. The specimens we have figured, are two of those originally in the possession of her Grace.

PLATE CLXV.

Dr. Solander, who, it is well known to the scientific conchologist, intended to have published a catalogue of that Museum, it appears, on a reference to his posthumous papers, called this species *edentula* ; a name which, without detracting from the merit of that able naturalist, it must be allowed is by no means applicable. So far from its being destitute of teeth, the series of denticulations are sufficiently visible on the *columella* ; those on the lip are yet more prominent, and can by no means justify the appellation of *edentula*.

Voluta Lævis, for such we have presumed to name this shell, is remarkably glossy, free in a perfect degree from any kind of striæ, whitish, and most delicately tinged with pale blushes of red, and yellowish or straw colour.—It has much the habit of a *cypræa*, and might without any impropriety be arranged under that genus.



PLATE CLXVI.

FIG. I.

LEPAS SCALPELLUM.

GENERIC CHARACTER.

Animal Triton. Shell affixed at the base, multivalve; the valves unequal.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell compressed. Valves thirteen, smooth, and seated on a scaly peduncle.

LEPAS SCALPELLUM: testa compressa tredecim valvi læviuscula pedunculo squamosa insidente. *Linn. Fn. Suec.* 2121.—*Gmel. Syst. Nat.* 3210. *Sp.* 11. *Ellis Phil. Trans.* 1758. *t.* 34. *f.* 4. page 849.

Lepas Scalpellum, a very rare and curious species, has been found attached to some sea weeds, dredged up on the coast of Weymouth; a specimen of it affixed to the branches of a coralline that was dis-

PLATE CLXVI.

covered here, after passing through the collections of the late Dutchess of Portland, and Dr. Fordyce, is at present in our possession.

There are several interesting remarks upon this singular genus in a paper written by the late Mr. John Ellis; which is inserted in the transactions of the Royal Society, for the year 1758: the letter is addressed to Mr. Isaac Romilly, a member of the society, and contains in particular, the following observation upon *Lepas Scapellum*. “Fig. 2,” he says, referring to his illustrative plate, “is the next animal of this class: this is not yet described. I found several of them sticking to the warted Norway Sea Fan, which Dr. Pantopidan, the Bishop of North Bergen, sent you: from its appearance, I have called it the Norway Sea Fan Penknife. The stem of this is covered with little testaceous scales. The upper part of the animal is enclosed in thirteen distinct shells, six on each side, besides the hinge-shell, which is common to both sides: these are connected together by a membrane that lines the whole inside.

Gmelin speaks of it as a native of the Norway seas.

FIG. II.

LEPAS ANSERIFERA.

SPECIFIC CHARACTER

AND

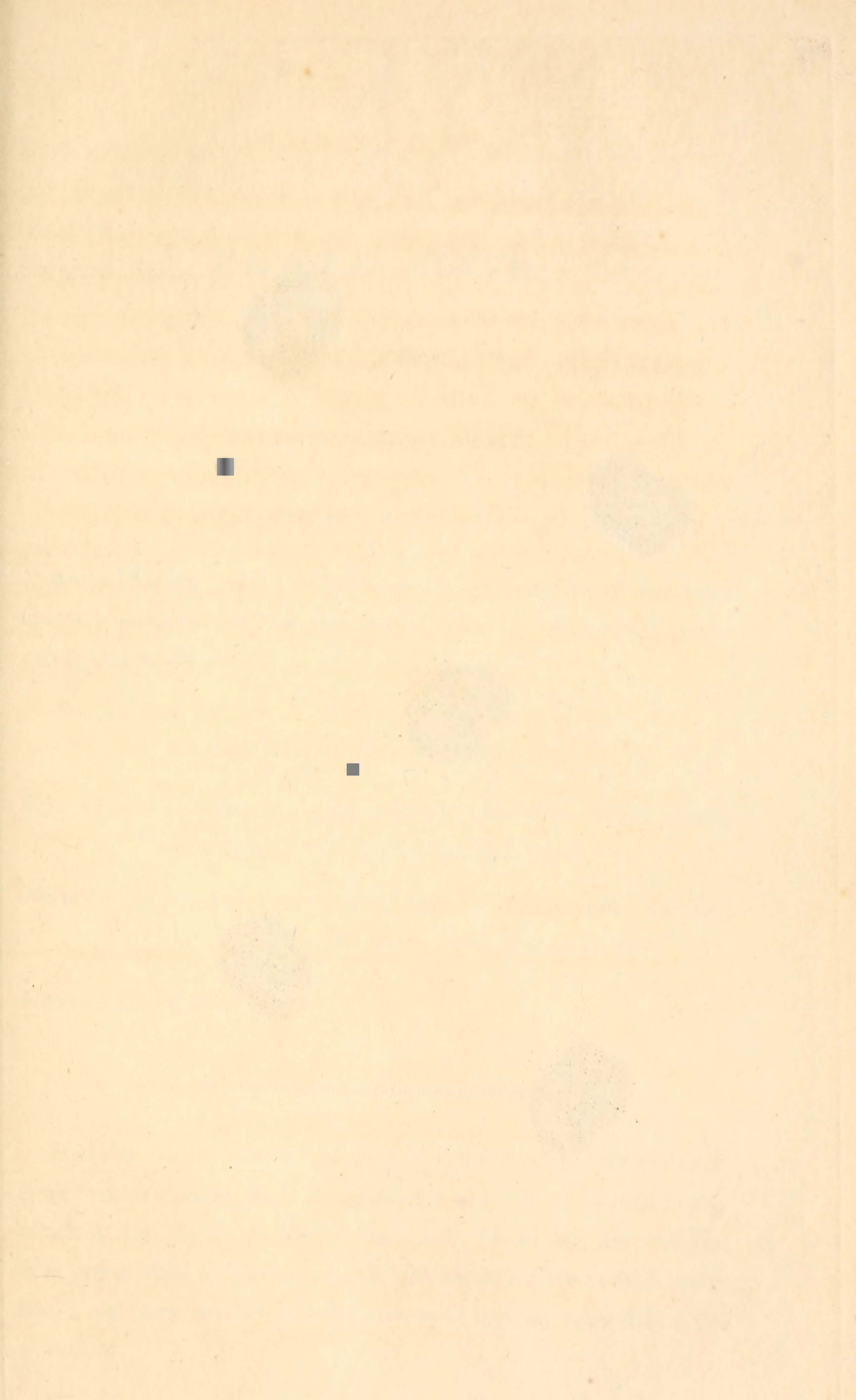
SYNONYMS.

Shell compressed, quinquevalve, striated, and seated on a peduncle.

LEPAS ANSERIFERA: testa compressa quinquevalvi, striata, pedunculo insidente. *Gmel. Linn. Syst. p. 3210.*
Sp. 12.

PLATE CLXVI.

Chiefly distinguished from *Lepas Anatifera*, described at the commencement of this work, by having the valves striated with elevated lines; the valves in the former being perfectly smooth. *Lepas anatifera* has been heretofore considered as a native of the American and Atlantic seas; but that it has been likewise found upon the English coast, there is no reason to dispute, the shell with the living animal has been dredged up at Weymouth, as well as the preceding species. We have the valves of this shell likewise in the collection of Da Costa, as an English species.



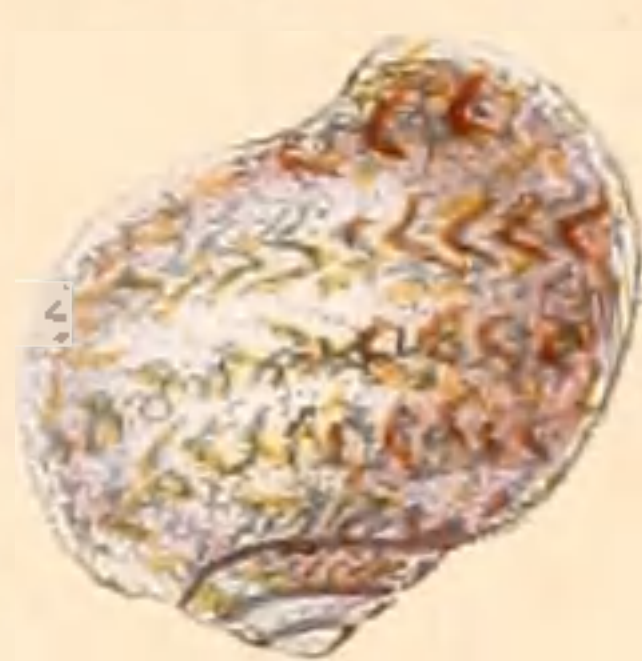


PLATE CLXVII.

NERITA INTRICATA.

INTRICATE-LINED NERIT.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, gibbous, flattish beneath : aperture semiorbicular, or semilunar ; pillar lip, transversely truncated, and flattish.

SPECIFIC CHARACTER.

Shell smooth : spire somewhat pointed : umbilicus large, nearly heart shaped, with a small carinated lobe.

NERITA INTRICATA : testa lævi : spira submucronata, umbilico magno subcordato ; lobo parvo carinato.

NERITA CANRENA *var* ?

That this shell is not the young of Nerita Glauca, as some have suspected, is evident from the depth and structure of the umbilicus, which in the former is almost completely closed by the pillar lip. It is rather allied to Nerita Canrena, which has a gibbous bifid umbilicus ; and may possibly indeed prove to be nothing more than a va-

PLATE CLXVII.

riety of that shell. The varieties of *N. Canrena*, enumerated by Gmelin, amount to twenty-five, neither of which accords exactly with our shell, and that writer describes them only as natives of India, Africa, and America, but it is not unlikely it may be also an European shell.

Our specimens are from Weymouth.



PLATE CLXVIII.

FIG. I.

HELIX PUTRIS.

MUD SNAIL.

GENERIC CHARACTER.

Aperture of the mouth contracted and lunulated.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell imperforate, obtuse, ovate, yellow: aperture ovate.

HELIX PUTRIS: testa imperforata, ovata obtusa flava: apertura,
ovata. *Linn. Fn. Suec.* 2189.

Gualt. t. 5. f. H.

Chem. Conch. 9. t. 135. f. 1248.

List. Conch. t. 123. f. 23 ?

PLATE CLXVIII.

Helix (succinea) testa oblonga fulva diaphana, anfractibus tribus, apertura ovata. Mull. Zool. dan. prodr. 2912.

Turbo subflavus pellucidus imperforata, testa prætenui fragili, trium spirarum. TRIANFRACTUS, THREE SPIRED. Da Costa, p. 92. sp. 51. Pl. 5. fig. 13.

The two Linnean species of fresh water helices, *putris*, and *limosa* are so closely allied, that authors have, not unfrequently, confounded one with the other. Dr. Pultney considers our shell with some doubt, as the *Helix limosa* of Linnæus, in which particular we think, he must be mistaken. The figure given by Gualtieri is the only one referred to by Linnæus, in the *Systema Naturæ*, for *Putris*, and that is most exactly the same as our shell, although the design is taken from a minute specimen. Pennant's *Helix Putris*, t. 86. f. 137. is apparently the *H. limosa*. Both the species in question are well figured by Chemnitz, on the same plate.

This shell is very common in ditches, ponds, and other watery places, and especially in those overgrown with weeds.

FIG. II.

HELIX BULLAOIDES.

SPECIFIC CHARACTER.

Shell ovate, smooth, glossy, horny, brittle, whorls reversed, spire short.

PLATE CLXVIII.

HELIX BULLAOIDES: testa ovata lævi nitida cornea fragili, an-
fractibus contrariis, spira brevi.

Received from Lincolnshire by the late Duchess of Portland, from
whose collection the specimen at this time in our possession was
obtained.

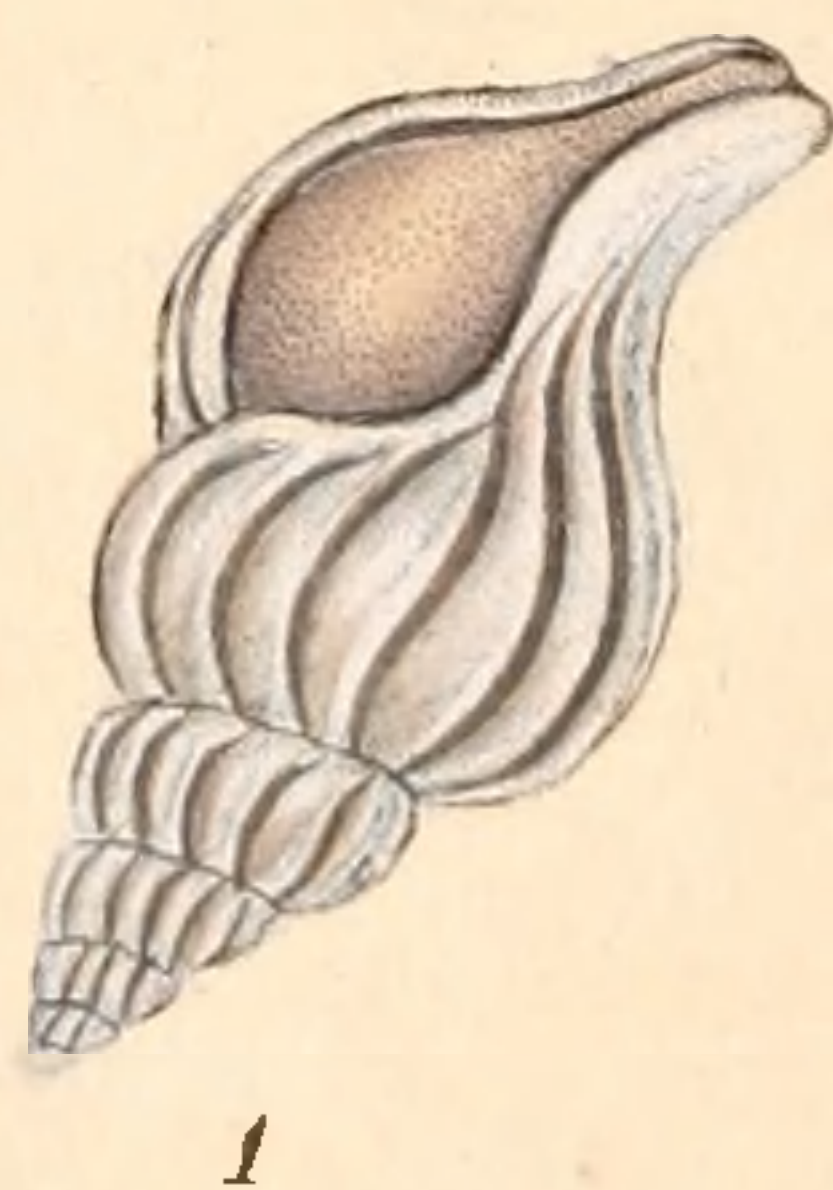


PLATE CLXIX.

FIG. I.

MUREX BAMFFIUS.

BAMFF WHITE MUREX.

GENERIC CHARACTER.

Spiral, rough. The aperture ending in a strait, and somewhat produced gutter, or canaliculation.

SPECIFIC CHARACTER.

Shell ventricose, white, ribbed longitudinally, with acute plaits.

MUREX BAMFFIUS : testa ventricosa alba costis longitudinalibus acutis plicatis.

A nondescript species, discovered by Mr. Cordiner, on the coast of Bamffshire, Scotland; and communicated by him to the late Duchess of Portland. The smallest figure is only of the young shell, we have it of the exact size of the largest figure, numbered 1, in the annexed plate. Uncommonly rare.

PLATE CLXIX.

FIG. II.

MUREX EMARGINATUS.

NOTCHED-LIP PALE MUREX.

SPECIFIC CHARACTER.

Shell somewhat elongated, pale, with a white band: wreaths striated, with longitudinal undulations: on the posterior part of the lip a single notch.

MUREX EMARGINATUS: testa sub-elongata pallida fusca alba: anfractibus striatis longitudinaliter undulatis labio postice emarginato.

The notch in the posterior part of the lip of this shell is singular. By this mark the species may be immediately distinguished in a collection of British Shells, being perhaps the only one of the kind found on our coast. This notch, it should however be added, is to be considered rather as the distinctive feature of a natural family of shells, than as the character of the individual species now before us, the very same appearance being observable on several of the extra-european shells of the Murex Genus.

Our specimens of this scarce, and, as we believe, undescribed species, were found on the western coast.



PLATE CLXX.

VENUS FASCIATA.

FASCIATED VENUS SHELL.

GENERIC CHARACTER.

Hinge furnished, with three teeth, two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell somewhat heart-shaped, white, fasciated with brown: ridges large, broad, depressed, of regular thickness at both extremities.

VENUS FASCIATA: testa subcordata alba fusco-fasciata sulcis crassis latis depressis regularibus continuis.

Pectunculus parvus, planior, crassus dense fasciatus. Fasciated: *Da Costa, p. 188. sp. 25. Tab. 13. fig. 3.*

This elegant shell occurs very rarely on the coasts of this country; we have observed it sparingly distributed on the sands near Tenby, in Pembrokeshire. Da Costa says, he was informed that it is found near Bangor, among the rocks from Bangor Ferry to Anglesea, in

PLATE CLXX.

Wales, by which he could only mean that the species is an inhabitant of the Menai, the arm of Beaumaris bay, communicating with the St. George's channel which divides Caernarvonshire from the island of Anglesea. The same writer notes it likewise from Cornwall. Dr. Pultney describes it as a scarce shell, which he had found at Weymouth.

Having Da Costa's specimens of this shell, and also that of his *Pectunculus Vetula* before us, we should not refrain from observing, that the opinion of Dr. Pultney respecting these shells is incorrect; they are not merely transitions in growth, or varieties of the same kind, the difference between the two is obvious, and fully authorize us to consider them as distinct species. It should be understood in advancing this remark, that the shell which Da Costa figures and describes, for *Pectunculus Vetula* is clearly the Linnæan *Venus Paphia*, a shell well known as a native of the West Indies, and never found to our knowledge in any of the European seas. Da Costa was aware, after his work had been published, that he had erroneously confounded the variety of *Fasciatus*, Fig. 1, 1, in our Plate, with the West Indian shell; he had conceived the latter to be the same shell in a more perfect condition, and caused it to be engraved accordingly.

Dr. Pultney, in the passage wherein these shells of Da Costa are noticed (in his catalogue of the shells found on the coast of Dorsetshire,) describes the *Pectunculus Fasciatus* as nothing more than a variety of *Venus Paphia* (*Linn.*) in which respect he is assuredly mistaken. One of the most striking characters, by means of which the two species are to be discriminated, in our opinion, may be observed in the structure of the concentric ridges on the outside of the shell: these in the true Linnæan *Paphia* are remarkably thick, and

PLATE CLXX.

prominent in the middle, but in approaching each extremity become suddenly obtuse, and are then continued in an attenuated ridge, particularly as they extend towards the front of the shell, and thus exactly corresponding with the definition of Linnæus, “*rugis incrassatis, pube rugis attenuatis.*” On the contrary, in our shell the ridges are nearly of an uniform thickness throughout, sloping gradually with the depression of the shell behind, and only terminating abruptly at the edge of the front, or fore part of the shell where the valves appear obtuse: the outline of the shell is also very different from *Venus Paphia*, the latter being more produced on each side than our *Venus Fasciata*.



PLATE CLXXI.

PATELLA MILITARIS.

HOOKED LIMPET.

GENERIC CHARACTER.

Animal a Limax : shell univalve, sub-conic without spire.

SPECIFIC CHARACTER.

Shell entire, conic, pointed, striated, with the tip hooked, or recurved on one side.

PATELLA MILITARIS: testa integra conica acuminata striata, vertice hamoso lateraliter recurvo. *Linn. Mant.* 552.

List. Conch. 544.

Pult. Cat. p. 51.

When Linnæus described this shell in the Appendix to his *Mantissa Plantarum*, its native country was unknown to him. It is a Mediterranean species, and is sometimes, though rarely, met with on the British coast. We have it from Cornwall through the favour of Miss Pocock, and lately from Devonshire. Dr. Pultney acquaints us, that Mr. Bryer found this species on the sands near Weymouth Castle, Dorsetshire.

PLATE CLXXI.

Gmelin, in his edition of the *Systema Naturæ*, neglects to insert this species, for what reason we are at a loss to conceive. The specimens we possess of this rare shell, from the warmer parts of Europe, are larger than those found on our coast. In different specimens we observe that the striæ are liable to vary both in form and number, some shells appearing much more strongly reticulated than others.



PLATE CLXXII.

TURBO SUBULATUS.

SUBULATE WREATH SHELL.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, or of a taper form.

Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell subulate, tapering, pale flesh-colour, glossy, fasciated with testaceous-brown. Aperture oval.

TURBO SUBULATUS: testa subulato-turrita pallide-carnea nitida testaceo fasciata, apertura ovali.

STROMBIFORMIS parvus corneus glaber. Smooth. *Da Costa*,
Brit. conch. p. 117. sp. 69. Turbo lævis.
Smooth. *Penn. Brit. Zool. No. 115. tab. 79.*
upper figure ?

Our best specimens of this rare shell were dredged up on the coast of Weymouth. Da Costa received it from Exmouth, in Devonshire; he also adds, that three were found in the stomach of a Five Finger, or common *Stella Marina*. The *Turbo lævis*

PLATE CLXXII.

of Pennant is from the coast of Anglesea, but it is altogether uncertain whether he means this species or not.—It is an elegant shell, of a taper form, thin, and semitransparent ; when very perfect, of a pale flesh-colour, spirally wreathed with whitish lines, and others of an ochreous or brownish hue ; the stripes are not uniformly disposed alike in all specimens. Da Costa thinks the species may be well distinguished by the spiral white lines.

The smallest figures in the plate denote the natural size of this shell.



PLATE CLXXIII.

TURBO MAMMILLATUS.

MAMMILLATED TURBO.

GENERIC CHARACTER.

Animal Limax : shell univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER.

Shell imperforate, subovate, whorls striated with raised dots, and slightly angulated by a few of the striæ, the dots of which are larger.

TURBO MAMMILLATUS : testa imperforata subovata anfractibus striatis punctis eminentibus striis aliquot majoribus subangulatus.

This remarkable shell is introduced among the British species of the Turbo genus, only on the authority of a posthumous memorandum in the hand writing of Da Costa, which we find in the collection of that Conchologist affixed to one of the specimens figured in the annexed Plate. From this it appears the shell had been picked up by Mr. Platt on the Scilly rocks, at the western extremity of Cornwall, and communicated by him to Da Costa.



PLATE CLXXIV.

MYA PICTORUM.

PAINTER'S MUSCLE.

GENERIC CHARACTER.

Animal Ascidia. Shell bivalve, gaping at one end. The hinge for the most part furnished with a thick, strong, broad tooth, not inserted into the opposite valve.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell oblong, rounded at both ends; a single crenulated tooth in one valve, and two in the other.

MYA PICTORUM: testa oblonga antice posticeque rotundata, cardinis dente primario crenulato, alterius duplicato.

MYA PICTORUM. *Linn. Fn. Suec.* 2129.

Mya pictorum, Moule des Peintres. *Chemn. Conch.* 6. t. 1. f. 6.
Belg. verf houder.—*Dan.* Maler miegen,—
Maler Skiael, *ibid.*

Two, or perhaps no less than three different kinds of the fresh water *Myæ* have been confounded with the *M. pictorum* of Linnæus, as it has been already intimated in the description of the *Mya*

PLATE CLXXIV.

Ovalis, Plate 89, of this work, a shell considered by Da Costa as the true *M. pictorum*. The present species, which we have little hesitation in believing to be the shell Linnæus means, is more of an oblong form than *M. ovalis*, rounded at both extremities, thin, semi-transparent, and of a pale colour, beneath the epidermis, which is of a faint green, or brownish hue ; within the shell is pearly.

The only synonyms we can venture to adopt with certainty, are those above quoted. There can be no doubt that the figure given by Chemnitz for the *M. pictorum* of the continental writers, is the same as that now before us, but the extensive list of references to other works, added by that writer, we are induced to reject as being at least in many respects ambiguous. Our specimens of this shell were obtained from Mr. George Humphrey, who assures us, that although he never had met with it himself alive in this country, he was told some years ago by the late — Seymour, Esq. that this very species had been fished up in the river Stour.



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2



2

PLATE CLXXV.

FIG. I.

HELIX FRAGILIS.

BRITTLE RIVER SNAIL.

GENERIC CHARACTER.

Aperture of the mouth contracted, and lunulated.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell imperforate, ovate, tapering, round, pellucid: aperture oblong-
ovate.

HELIX FRAGILIS: testa imperforata ovato-subulata tereti pellucida:
apertura ovata-oblonga. *Linn. Faun. Suec.*
2187.—*Gmel. Linn. Syst. Nat.* 3658. *Sp.* 129.
Penn. Pl. 86.

Brown River Snail. *Pult. Cat.* p. 48.

Helix fragilis is distinguished from Helix stagnalis, and one or two other very analogous species of river snail by a number of slight ridges which spirally traverse the whole shell, and are in particular

PLATE CLXXV.

obvious on the first wreath. The shell is likewise more uniformly elongated than *H. stagnalis*, the first wreath being less swollen, or ventricose, and the remainder more so, than in that shell.—*Helix fragilis* we have found on plants growing in rivulets about Greenwich. Dr. Pultney says, it is common on plants in the river Stour.

FIG. II.

HELIX FONTINALIS.

SMOOTH FRESH WATER SNAIL.

SPECIFIC CHARACTER.

Shell imperforate, ovate, and pointed, glabrous, horny; volutions five, the first and second ventricose.

HELIX FONTINALIS: testa imperforata ovato-acuminata glabra cornea anfractibus quinque, primo secundoque ventricosis.

Common in some of the rivulets in Devonshire. Communicated by J. Laskey, Esq.

Fig. 2, are those of the common sort; a reversed variety of the same species is distinguished by a star.

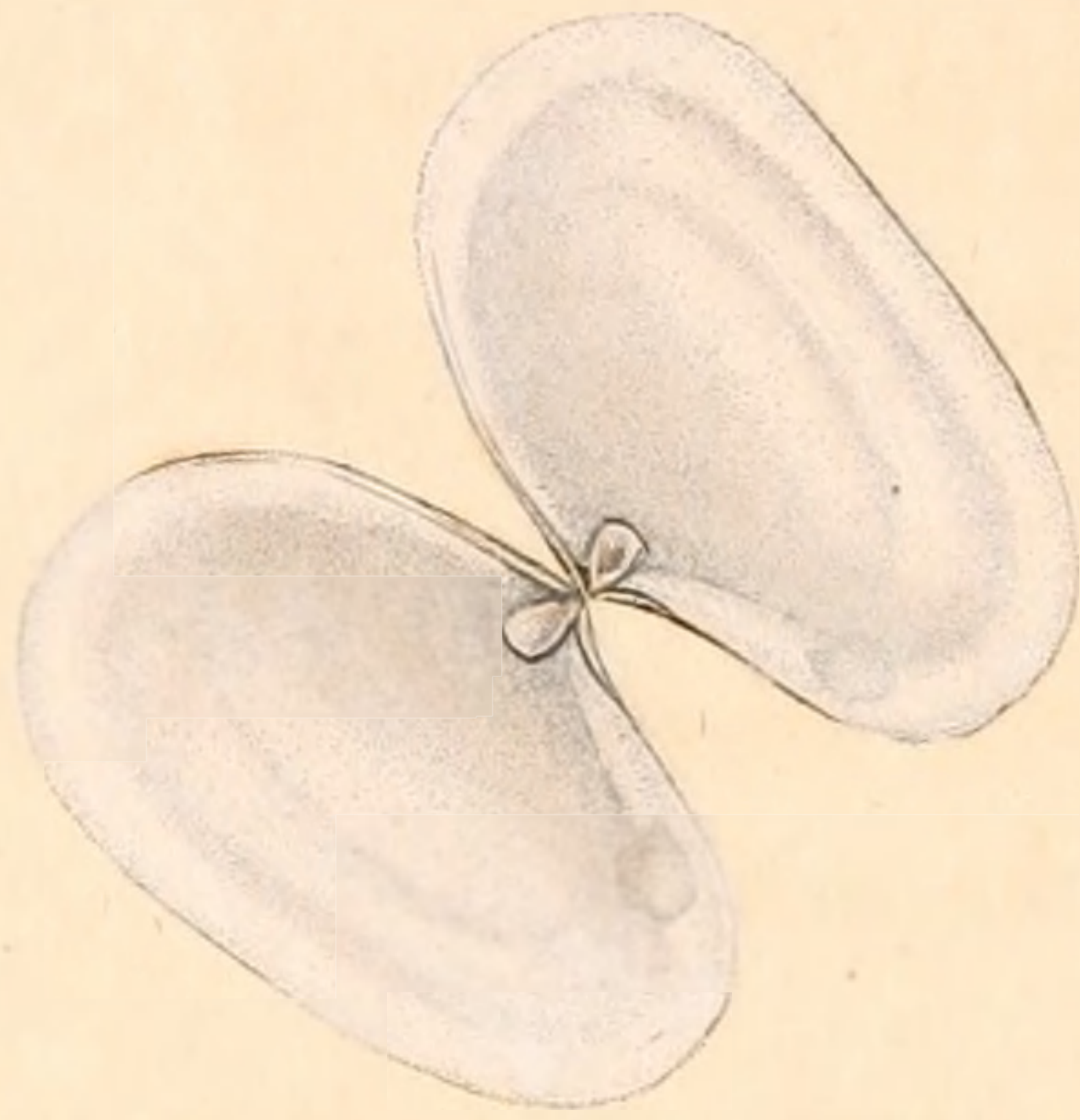


PLATE CLXXVI.

MYA PRÆTENUIS.

THIN WHITE SPOONHINGE GAPER.

GENERIC CHARACTER.

Animal an Ascidia. Shell bivalve, gaping at one end. The hinge for the most part furnished with a thick, strong, and broad tooth, not inserted into the opposite valve.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell ovate, subpellucid, fragile, white; tooth in both valves at the hinge oval, and patulous.

MYA PRÆTENUIS: testa ovata subpellucida fragili alba, cardinis dente ovali patulo.

MYA PRÆTENUIS: testa ovata subpellucida fragili alba subumbonali pubescente, cardinis dente ovali patulo. *Pult. Cat. p. 28.*

CHAMA *prætenuis* cardine cochleato porrectiore. *Petiv. Gaz. t. 94. 4.*

This delicate shell was first observed by us on the sandy coast of Caermarthenshire. We have since received the same kind from the shores of Cornwall, where it was found by Miss Pocock. Petiver

PLATE CLXXVI:

describes his shell as being found at Poole, in Dorsetshire: where Dr. Pultney also met with it on the sands in the harbour; likewise on the north shore near Brownsea Isle, and once with a few valves on the shore between Weymouth and Portland.

Mya prætenuis, as the specific name implies, is a remarkably thin shell, very brittle, of a whitish colour, and distinguished by having an oval process or tooth resembling the bowl of a spoon in each valve at the hinge.

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PLATE CLXXVII.

TURBO ALBUS.

WHITE WREATH SHELL.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell tapering, glossy, and white.

TURBO ALBUS: testa turrita nitida alba.

Strombiformis parvus albissimus lævis, white. *Da Costa Brit. Conch. p. 116. Sp. 68.*

Turbo minimus lævis albus. Milk white smooth whelke. *Borlase Cornw. p. 277.*

Turbo albus. *Penn. Brit. Zool. N° 114, tab. 79?*

We have never met with this shell on any of the British sea coasts, although we are told it is found not very unfrequently on several of

PLATE CLXXVII.

those to which our researches have been directed. Da Costa says, the species is found on the shores of Cornwall, about Fowey, Whitsand Bay, the Land's End, &c. and also in Devonshire. Pennant's Turbo Albus is from Anglesea.

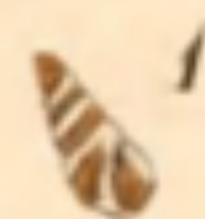
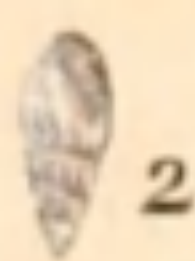
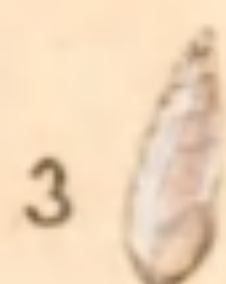


PLATE CLXXVIII.

FIG. I.

TURBO VITTATUS.

RIBBON-WREATH SHELL.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, or of a taper form.

Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell smooth, taper, whitish, whorls subobsolete ; on the first,
three chesnut bands, one on the rest

TURBO VITTATUS : testa turrita albida anfractibus subobsoletis,
primo faciis tribus castaneis reliquis unica.

This, and the following species of Turbo, we discovered in the
Menai, between Caernarvonshire and the island of Anglesea.
Turbo Vittatus, we have likewise been favoured with from Corn-
wall, by Miss Pocock, and from Devonshire, by J. Laskey, Esq.

PLATE CLXXVIII.

There is some reason for believing this to be the *Turbo Trifasciatus* of Adams's description of minute British Shells, discovered on the coast of Tenby, South Wales, which is inserted in the fifth volume of the Transactions of the Linnæan Society. The account he gives does not exactly agree with our Shell; he speaks of only two red bands on the first spire, instead of three; and the single spiral line arising from the posterior band, terminates in his Shell after encircling the second volution, whereas, in all our specimens this line is continued on every wreath to the apex. Should his *T. trifasciatus* be intended for our Shell, the outline also is very badly expressed.—The smallest figure in the annexed plate shews the natural size of this shell.

FIG. II.

TURBO INTERRUPTUS.

INTERRUPTED-STRIPE WREATH SHELL.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell smooth, taper, whitish, fasciated, with an interrupted ochreous band.

TURBO INTERRUPTUS: testa lævi turrita albida fascia interrupta ochrea.

TURBO INTERRUPTUS: testa quinque anfractibus subobtusis, apertura subrotunda. *Adams. Linn. Trans. V. 5.*

sp. 3 ?

PLATE CLXXVIII.

We feel a much slighter degree of hesitation in admitting this to be the Shell meant by Mr. Adams, in the paper above quoted, than the preceding species; notwithstanding that our Shell has a greater number of whorls; the outline of his figure is rude, and far from characteristic of the shell.—Our specimens are from Anglesea, as before mentioned. It is represented both of the natural size and magnified, in the plate.

FIG. III.

TURBO COSTATUS.

RIBBED WREATH SHELL.

SPECIFIC CHARACTER.

Shell taper, snowy white, with numerous obtuse longitudinal ribs.

TURBO COSTATUS: testa turrita nivea costis longitudinalibus numerosis obtusis.

Specimens of this elegant shell were found at Margate. The smallest figure denotes the natural size.

FIG. IV.

TURBO PALLIDUS.

PALE WREATH SHELL.

SPECIFIC CHARACTER.

Shell somewhat taper, pale; whorls very slightly bicarinated.

PLATE CLXXVIII.

TURBO PALLIDUS : testa subturrita pallida anfractibus obsoletissime
bicarinatus.

Found on the western coast : a Shell of very plain appearance,
brownish colour, and rather flattened on the wreath, so as to form
two slight spiral ridges or obtuse angles, especially on the first or
largest volution.

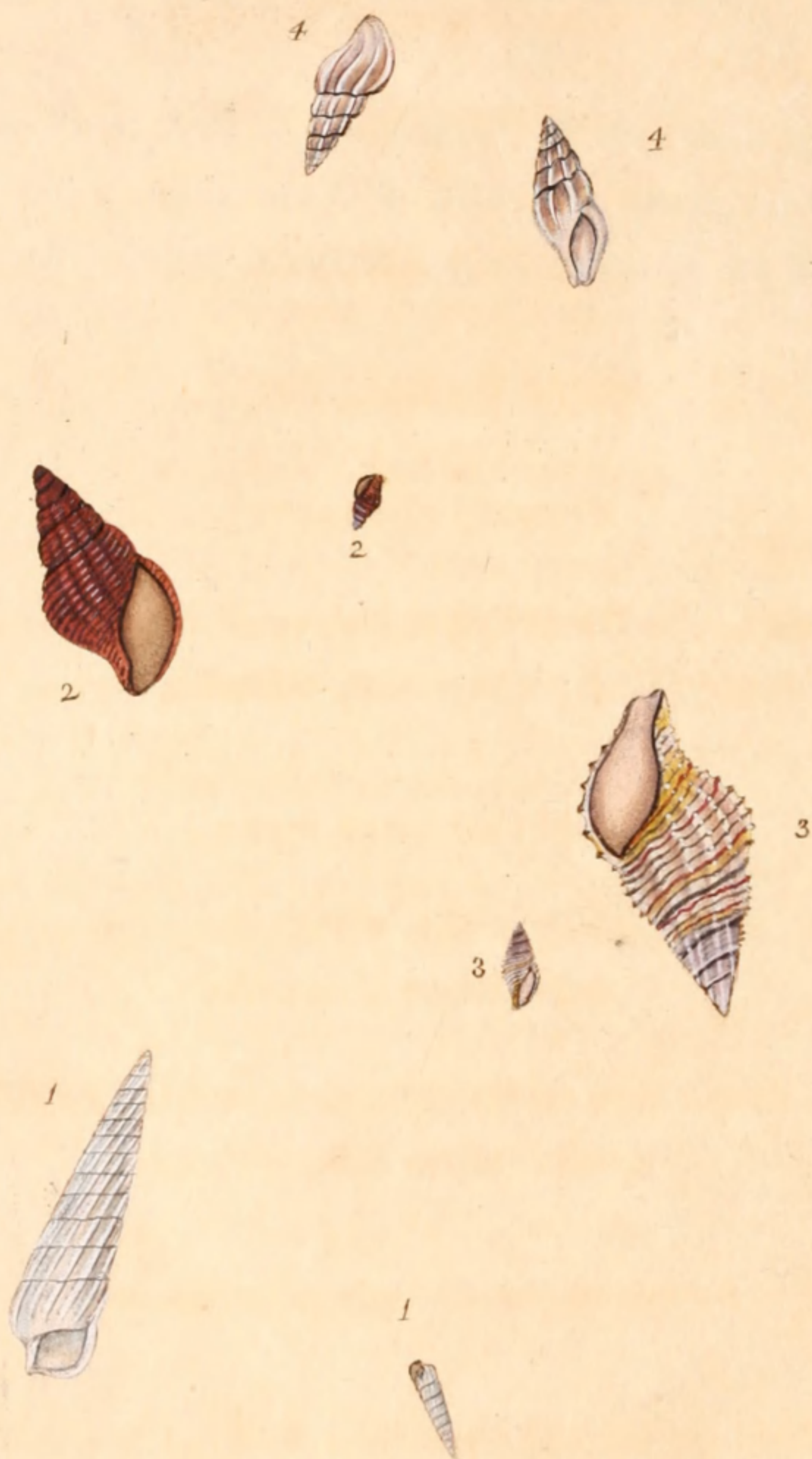


PLATE CLXXIX.

FIG. I.

TURBO ACUTUS.

ACUTE WREATH SHELL.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER.

Shell taper, acute, snowy white, whorls about twelve with numerous oblique obtuse ribs.

TURBO ACUTUS : testa turrita acuta nivea, anfractibus subduodecim costis confertis obliquis obtusis.

A mutilated specimen of this curious Shell has been sent to us from the coast of Cornwall: we believe it has been also found at Weymouth; but our perfect shell of this species is from Guernsey.—The smallest figure is of the natural size.

PLATE CLXXIX.

FIG. II.

BUCCINUM BRUNNEUM.

LITTLE BROWN WHELK.

GENERIC CHARACTER.

Aperture oval, ending in a short canal.

SPECIFIC CHARACTER.

Shell taper, brown, whorls transversely striated, and longitudinally undulated. Aperture toothless.

BUCCINUM BRUNNEUM: testa turrita brunnea anfractibus transversim striatis longitudinaliter undulatis apertura edentula.

Found on the coast of Cornwall:—A rare, and, as it is presumed, an undescribed species.

FIG. III.

MUREX ELEGANS.

ELEGANT MUREX.

GENERIC CHARACTER.

Spiral, rough, aperture ending in a strait, and somewhat produced gutter or canaliculation.

PLATE CLXXIX.

SPECIFIC CHARACTER.

Shell yellowish, banded with ochreous, tip violet: whorls longitudinally ribbed, and finely striated transversely.

MUREX ELEGANS: testa ovata flavescens ochreo-fasciata apice violacea anfractibus longitudinaliter costatis transversim minutissime striatis.

A very beautiful little shell, discovered by Miss Pocock on the coast of Cornwall.

FIG. IV.

MUREX SEPTEM-ANGULATUS.

SEVEN-ANGLED.

SPECIFIC CHARACTER.

Shell oblong, acute, pale, with seven longitudinal angles.

MUREX SEPTEM-ANGULATUS: testa oblonga acuta pallida longitudinaliter septem-angulata.

This kind rarely occurs on our coasts. The specimens in our possession are from Weymouth. It bears a strong affinity to *Murex costatus*, plate XCIV. of this work, although it is certainly distinct. *Murex costatus* is much more linear in the outline, and has the ribs less prominent and acute than our *Murex septem-angulatus*.

ARTICLE

ARTICLE

Shell yellowish, but with a brownish tip at the apex.

is usually noted, and may be found in the same.

It is a very common form, and is found in the same.

It is a very common form, and is found in the same.

It is a very common form, and is found in the same.

A very common form, and is found in the same.

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MUREX

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It is a very common form, and is found in the same.



PLATE CLXXX.

MUREX DESPECTUS.

DESPISED MUREX.

GENERIC CHARACTER.

Spiral, rough. The aperture ending in a strait, and somewhat produced gutter, or canaliculation.

SPECIFIC CHARACTER

AND

SYNONYMS.

Tail patulous : shell oblong ; whorls eight, with two elevated lines.

MUREX DESPECTUS : testa patulo-subcaudata oblonga : anfractibus octo lineis duabus elevatis. *Linn. It. Wgoth.* 200. *tab.* 5. *f.* 8.

The present shell, it must be tacitly acknowledged, is inserted among the rarer shells of this country on very slight authority ; namely, that of a friend, who believes he once saw a few specimens of this *Murex* that were fished up in the sea at a short distance to the north of the Orknies.—On this suspicion only we

PLATE CLXXX.

could not have presumed to insert the species in this work, were it not to avail ourselves of the opportunity afforded by that means to correct an error very generally admitted concerning the true *Murex despectus* of Linnæus, the shell at this time under consideration.

To the English conchologist it need be scarcely said, that another shell, somewhat similar to the present, although specifically different, has been hitherto received as the *Murex despectus* of Linnæus by every writer in this country who has had occasion to speak of that shell. The origin of this mistake, it will be perceived from the following particulars, rests in a great measure, if not entirely, with Linnæus himself. The *Murex despectus* of this writer is noticed, for the first time, in the account of his Travels through part of Sweden: a small octavo volume written in the Swedish language, with notes, relative to Natural History in Latin. At page 200, he describes this shell in these words, “*cochlea spiris octo oblonga utrinque producta lineis duabus elevatis*,” referring to plate 8. fig. 5. of the same work for a delineation of the shell; the figure quoted in every respect agrees with our specimen, not only in the general outline, but most exactly in having the slight carinated ridges that pass spirally round the whorls, a character not observable on the *Murex despectus* of English authors. So far therefore we are convinced that the present shell is the *Murex despectus* of the Linnæan *Iter Westrogothicum*.

The work above mentioned appeared in 1746, the year in which Linnæus likewise published the first edition of his *Fauna Suecica*. In the latter, *Murex despectus* is again described with a reference to his *Iter W. goth.* and in addition to that synonym, a shell figured by Lister is also quoted for the same species. This is the source of that very confusion which has since arisen concerning the Linnæan

P L A T E C L X X X .

Despectus, and should be fully stated.—*Lister's Angl. t. 3. f. 1.* is the reference given by Linnæus. Adverting to this we find the following definition of the shell given by Lister, “*Buccinum album læve maximum septem spirarum.*”—He further adds, in the general description, “*Testæ pars exterior ex tota lævis est, i. e. sine striis quamvis sæpius vel rugis quibusdam vel aliis rebus extrinsecus adnatis exasperetur.*” From this account, and from the figure he has given of the shell, there is not the smallest reason to dispute that Lister means the shell which English writers have heretofore considered as the *Murex Despectus**; but it is not less certain that Linnæus was wrong in quoting Lister's figure for his Swedish shell, since they are not the same. However, on the authority of this reference to Lister, which afterwards appeared in the *Systema Naturæ*, this shell has continued to be considered as the species meant by Linnæus.

Nor was this the only oversight which appears to have been committed by that eminent Naturalist; by continuing to refer, in the *Systema Naturæ*, to Lister's figure for his species *Despectus*, no one scarcely could imagine that Lister's shell should be the *M. Antiquus* of Linnæus, instead of his *Despectus*, and yet we are persuaded, after attentively comparing his description of the shells with his synonyms, that such is the fact: the description agrees with it, and the figure given by *Gualteri* is surely of the same kind as that which Lister speaks of.

The Linnæan shell, *M. Despectus*, is well described, and the figure in his *Iter. W. Goth.* is expressive: the two elevated spiral lines, together with the rotundity of the wreaths, are strikingly

* In Lister's Plate the shell is reversed by mistake, most likely, of the engraver.

PLATE CLXXX.

characteristic of this species. At the first glance this shell appears to be an intermediate kind between Lister's shell and the *Murex Carinatus* of Pennant, and ourselves: indeed the principal difference we perceive between the true *M. Despectus* and Lister's shell is, that the former has the whorls of the spire rather more ventricose, and distinctly marked with two slightly elevated spiral lines; from *Murex Carinatus* it differs principally in the very prominent angulations of the *anfractibus*, where the ridges appear, and more particularly in the strong depression between the upper ridge, and the suture of the whorls.

The *Murex despectus*, at present under consideration, is certainly very rare, except in the North of Europe, where we are led to suppose, from what Linnæus says, it is not uncommon.

The only specimens we have ever seen of this kind are from Greenland.

HAVING thus ascertained, as we may reasonably believe, the true Linnæan *Murex Despectus*, it remains in this place to propose the following emendations and additions to the description of two Shells figured in the course of this work, namely, *Murex Despectus*, Plate XXXI. and *Antiquus*, Plate CXIX. which, in common with other testaceological writers, we had misconceived.

PLATE XIX.
MUREX DESPECTUS,

read

MUREX ANTIQUUS.

ANTIQUATED MUREX.

Testa patulo-caudata oblonga : anfractibus octo teretibus. *Linn.*

Fn. Suec. 2165.

PLATE CXIX.
MUREX ANTIQUUS,

read

MUREX DUPLICATUS.

TUBERCULATED MUREX.

Dele reference to Linn. Fn. Suec. et Gmel. Syst. Nat.

and

add for the

SPECIFIC CHARACTER

Shell patulous, tailed, oblong : whorls eight, tuberculated, striated,
with two raised ridges.

MUREX DUPLICATUS : testa patulo caudata oblonga : anfractibus
octo striatis duplicato carinatis : carinis tubercu-
latis.

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* TERRESTRES. LAND.

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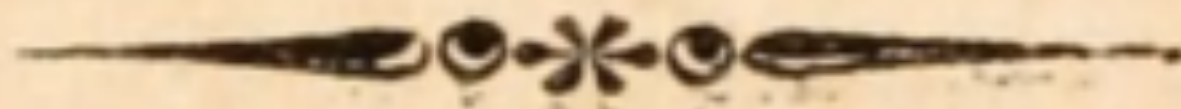
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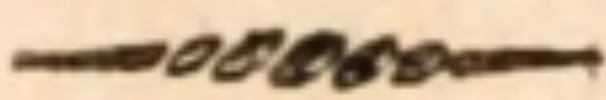
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1804.

NATURAL HISTORY

BUTTERFLY

THEORY AND PRACTICE

OF THE ART OF BREEDING

IN THE ART OF BREEDING

SCIENTIFIC AND GENERAL

IN FIVE VOLUMES

J. R. DONOVAN

LONDON

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1841

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THE present work is submitted with the utmost deference to the Reader as a general and very copious elucidation of all the larger kinds of Shells found in this country.

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In this estimate, which the Author at first conceived would be completely adequate to every purpose of his design, he afterwards perceived himself in some degree mistaken. During the course of publication he has in various instances been kindly favoured with British Shells not before described: neither are the acquisitions which he has himself discovered in several remote parts of the country altogether unworthy of attention. Many of the species thus obtained were deemed too interesting to be omitted in a work of this nature, and it was therefore thought advisable to exclude those, which, from their extreme minuteness, are usually denominated Microscopic Shells, in order to admit the most important of them. The omission of the more diminutive species, for the sake of inserting Shells of conspicuous figure, that had not been before described as English, the Author trusts will rather be considered as an advantage, than detriment to this work. Nothing of material consequence, either in the collection of the Author, or the cabinets of his friends, to which he has access, has been neglected in this selection; and he could not feel himself completely justified in extending the work beyond the limits originally prescribed for no other purpose than to introduce the Microscopic Shells.

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