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MISSOURI
BOTANICAL
GARDEN.

CONTENTS.

I. *Observations on the Perigynous Insertion of the Stamina of Plants. By* Richard Anthony Salisbury, *Esq. F.R.S. V.P.L.S.* - - - - p. 1

II. *A Descriptive Catalogue of the British Testacea. By* William George Maton, *M.D. V.P.L.S., &c. and the Reverend* Thomas Rackett, *M.A. F.L.S., &c.* p. 17

III. *Some Account of the Pitch-lake in the Island of Trinidad, in two Letters: The first from* Samuel Span, *Esq. to* James Tobin, *Esq. F.L.S.; and the other from Mr.* Tobin *to* Charles Hatchett, *Esq. F.R.S. and L.S.; with Observations by Mr.* Hatchett - - p. 251

IV. *Description of a New Species of Lichen. By* Dawson Turner, *Esq. F.R.S. A.S. and L.S.* - - p. 260

V. *Account*

V. *Account of crystallized Oxalic Acid produced from the Boletus sulphureus.* *By* Robert Scott, *M.D. of Dublin. Communicated by* Dawson Turner, *Esq. F.R.S. A.S. and L.S.* - - - - - p. 262

VI. *Observations respecting a Species of Phalarope, and some other rare British Birds.* *By Mr.* T. W. Simmonds. *Communicated by* Adrian Hardy Haworth, *Esq. F.L.S.* - - - - - p. 264

VII. *An Account of some remarkable Shells, found in Cavities of a calcareous Stone called by the Stone-masons Plymouth-rag.* *By* William George Maton, *M.D. V.P.L.S. &c., and the Rev.* Thomas Rackett, *A.M. F.L.S. &c. With some additional Observations relative to the Mytilus lithophagus, by Mr.* James Sowerby, *F.L.S.* p. 270

VIII. *Account of the Bromus triflorus of Linnæus, in a Letter to* Alexander M'Leay, *Esq. Sec. L.S.* *By* James Edward Smith, *M.D. F.R.S. P.L.S.* - - p. 276

IX. *Description of a Species of Jerboa found in the upper Provinces of Hindustan, between Benares and Hurdwar.* *By Lieut. Col.* Thomas Hardwicke, *F.L.S.* - p. 279

X. *Characters of Three New Species of Boronia.* *By* James Edward Smith, *M.D. F.R.S. P.L.S.* - p. 282

XI. *An*

XI. *An Account of a Storm of Salt, which fell in January,* 1803. *By* Richard Anthony Salisbury, *Esq. F.R.S. and L.S.* - - - - - p. 286

XII. *Description of Seven New Species of Plants from New Holland.* *By* Edward Rudge, *Esq. F.R.S. and L.S.* - - - - - p. 291

XIII. *Observations on the Genera of Trollius, Eranthis, Helleborus, Coptis, and Isopyrum.* *By* Richard Anthony Salisbury, *Esq. F.R.S. and L.S.* - - p. 300

XIV. *The Characters of several Genera in the Natural Order of Coniferæ: with Remarks on their Stigmata and Cotyledons.* *By* Richard Anthony Salisbury, *Esq. F.R.S. and L.S.* - - - - p. 308

XV. *Description of a New Species of Macropus from New Holland.* *By* Aylmer Bourke Lambert, *Esq. F.R.S. V.P.L.S.* - - - - - p. 318

XVI. *Experiments upon a Substance called Dapéche from South America.* *By* William Allen, *Esq. F.L.S.* p. 320

XVII. *Account of a New British Species of Caltha.* *By* Thomas Furly Forster, *Esq. F.L.S.* - - p. 323

XVIII. *Description of a New Genus in the Natural Order of Rubiaceæ, called Rudgea.* *By* Richard Anthony Salisbury, *Esq. F.R.S. and L.S.* - - p. 325

XIX. *A New*

XIX. *A New Arrangement of the Plants of the Monandrian Class usually called Scitamineæ. By William Roscoe, Esq. M.P. F.L.S.* - - - - - p. 330

XX. *Extracts from the Minute-Book of the Linnean Society of London* - - - - - p. 358

Catalogue of the Library of the Linnean Society, continued from Page 313 *of Vol. VII. of the Society's Transactions* - - - - - p. 360

List of Donors to the Library of the Linnean Society p. 363

TRANS-

TRANSACTIONS

OF THE

LINNEAN SOCIETY.

I. *Observations on the Perigynous Insertion of the Stamina of Plants. By Richard Anthony Salisbury, Esq. F.R.S. V.P.L.S.*

Read March 15, 1803.

THE following Observations have been hastily committed to paper, to excite the attention of those Botanists, whom I might have the honour of addressing this evening, to a very important branch of their favourite science; namely, that insertion of the Stamina which the celebrated *Jussieu* has denominated *Perigynous:* for I lament that as yet I have not met with one of our own countrymen, who had ever thought about the subject at all. I presume that this *perigynous* insertion is entirely factitious, or in other words, which you will all comprehend whether you have read *Jussieu's* book or not, that there is no instance whatever in the whole Vegetable Kingdom, of Stamina being inserted in the Calyx. Nor is this mere logomachia, or a cavil respecting terms: for, if my ideas be true, the difficulty of distinguishing Calyx from Corolla will rarely occur, and the designation of each of those parts correspond more exactly with its real office and importance in the Vegetable Economy.

Who would not be astonished to find among Quadrupeds, any Genus with Testiculi originating in the Præputium! Yet among Vegetables, Stamina proceeding from the Calyx appear to me equally unnatural. The first ideas which we gain on any subject, whether correct or incorrect, attach with such force, that it is no easy business to dismiss them afterwards: moreover, very few will be at the trouble of examining for themselves, or so unpopular as not to adopt the fashions of the day. For, unfortunately, there are fashions in science, as well as in dress: but the Laws of Nature, founded by Infinite Wisdom, I believe like Truth itself to be immutable, and the Motto which we have lately adopted who belong to this Society, will not allow us to deceive ourselves or others respecting them. By exposing this pretended *perigynous insertion* indeed, many of the *Classes*, and some of the *Orders* in the French arrangement must be given up; but the Genera themselves will come in more conformably to their Natural Affinities, and often as *Jussieu* himself hints in his Notes. I was anxious to have gone to *Paris* in the autumn, to have stated this, and many other botanical dubia, with the greatest deference to that great man: "*Lubuit enim integros adire fontes atque haurire:*" but Time flies rapidly unless seized by the forelock, and I know not when I can spare a month again. Till so wished-for an occasion, therefore, presents itself, I must be content with such assistance as I can gain at home. That comet-like genius *Correa de Serres*, who is now in the perihelion of *Paris*, long ago told me that *Corolla regularis* and *irregularis* would be found in every Natural Family, and I have reason to think the same may be said of *Germen inferum* and *superum*. Having examined a great many flowers to verify that supposition, I could not avoid attending also to the insertion of their several parts: this I have constantly found to be in one common point, more or less conspicuous

spicuous indeed, yet generally so distinct as to merit, both from its appearance and the dignity of its office, a particular name: for, in this common point I suspect all the necessary changes in the vessels to produce the various parts of the flower and fruit first begin. I have long called it *Torus*, to distinguish it from the *Receptaculum* of *Aggregate* and *Syngenesious* flowers: the real structure of the latter I have yet to learn, but *Aggregate* flowers appear to me nothing more than a close mode of Inflorescentia. *Adanson* has the merit of having first described this common point of insertion by the name of *Diske*. The period at which he published his book, was particularly unfavourable to the study of Natural Families, few having been then learned enough in Botany to understand it, and those few who might have understood it, disgusted by the uncouth spelling, barbarous names, and sharp attacks on the *Sexual System* then shining forth in all its glory. I am also ashamed to own, that for many years I never looked into the *Familles des Plantes*, regarding them with the same contempt as our *President* has thrown upon them in his preliminary Discourse printed in the first volume of our Transactions. The solid information they contain, however, has since taught me to think very differently; and the honest and patient labourer in the mine of Natural History, may always have this satisfaction, that the value of what he discovers, will, at one period or another, be fully appreciated and understood. In hopes of meeting with something respecting this common Point of Insertion, I have just read *Mirbel's Traité d'Anatomie et de Physiologie Végétale*; but he says little more than that it is a part of the Calyx, and is totally silent as to its connecting the different parts of the flower: this is the more wonderful, as he must have dissected many of the flowers which I shall presently have occasion to mention.

In distinguishing the Calyx and Corolla, he is far more explicit,

and very clearly proves the inconsistency of the notion, that in the whole tribe of *Monocotyledones*, what we vulgarly call the Flower is a true Calyx: indeed I nearly agree with *Mirbel* respecting these two parts, though my conclusions are drawn from very different premises.

As the insertion of the Stamina appears to me of so much consequence in putting an end to all our doubts, previously to mentioning the most striking instances I have met with, I must trespass upon your time and attention, while I briefly state the opinions that have hitherto prevailed respecting Calyx and Corolla. With the immortal *Linné's* doctrine, that the Calyx is a continuation of the outer, and the Corolla of the inner bark, we are here all perfectly acquainted; and that in some plants which have only one of the above-mentioned integuments, he thought it of so little moment, by which of those titles the part was described, that he says "*Corolla* (vel si mavis) *Calyx*." In his golden legacy, the *Philosophia Botanica*, he observes, "*Limites* "*inter calycem et corollam absolutos, naturam non posuisse, patet ex* "*Daphnide, ubi connata ambo et margine unita veluti folium Buxi.*" This however is not the case in all the species of that genus: stronger instances of one running gradually into the other, may be seen in *Delphinium*, *Ranunculus*, *Nymphæa*, *Castalia*, and *Magnolia*; notwithstanding which I have not the smallest doubt of their being perfectly distinct organs, and performing totally different functions. For, similar arguments might be produced to confound all the other parts of the flower: in some species of *Erica*, the upper leaves change insensibly into Bracteæ: in the common *Holly*, the Pedunculus itself becomes soft and of a fine scarlet colour like the fruit: in *Cratægus* the Calyx is frequently persistent and pulpy like the Pericarpium: in *Illicium Floridanum*, the Petals insensibly grow narrower and so like the filaments, that they

they can only be distinguished by having no Antheræ: nay in *Canna*, we have even an instance of the male parts of the flower passing into the female, where the innermost lacinia of the Corolla to which the Anthera is attached, always coalesces more or less, so as to form one and the same lamina with the dilated petaloid Style. *Jussieu* adopts the Linnæan definitions of Calyx and Corolla somewhat amplified; but in his practice, if I may use a vulgar expression, he does not stick to his text. He says, "*Calyx integumentum floris exterius, est corticosa pedunculi floralis* "*productio. Corolla, interius tegumen, pedunculi libro non epider-* "*midi continuum, non persistens, sed cum staminibus plerumque deci-* "*duum fructum involvit aut coronat, nunquam cum ipso concrescens,* "*et suas partes cum staminibus numero æqualibus sæpius alternans.*" He then quotes *Narcissus* as an example of an integument, which growing to the fruit with stamina opposed to its divisions, must consequently be a true Calyx. Here I think that consummate Botanist mistaken: for, the Spatha appears to me the first expansion of what has been hitherto erroneously called *Epidermis*, and to supply the place of a more perfect Calyx in that Natural Family: nor can I see that the integument is joined to the Pericarpium in a different way from that of many other truly epigynous flowers among the *Dicotyledones*: lastly, what weighs with me more than every other consideration is the affinity of the part in question to the Stamina, a character the importance of which *Jussieu* owns in strong terms; "*Corollæ magna cum staminibus cognatio*" is his expression. I was glad to find these sentiments corroborated by *Mirbel*, who runs into the other extreme however; for he says, that as the Calyx is a continuation of the bark, and that many of the *Monocotyledones* have no bark at all, in those genera which have only a single integument it must necessarily be Corolla. He also proposes that the integument of all flowers, whether

whether it be one or two, should in future be described by the common name of Perianthium, including both Calyx and Corolla under that appellation. *Ventenat* in the *Magasin Encycl.* 1*re année*, *tome* xi. gives as an essential characteristic of the Corolla its *Tracheæ* or *spiral vessels*: but to say nothing of the practical difficulties attending such a distinction, they have since been found not only in some true and legitimate Calyces, but even in the Bracteæ of *Strelitzia* by Mr. *Bauer*; from whose observation as well as my own I am quite convinced that they are not the common tubular vessels of the plant in a state of decay, as *Mirbel* supposes. *Adanson* noticed these *Tracheæ* in his *Familles des Plantes* long before *Ventenat*, quoting the original observer, *Saussure*. I believe I have now mentioned all the opinions hitherto promulgated on this subject, none of which have ever appeared quite satisfactory to me: for, the overpowering similarity between many *Monocotyledonous* and *Dicotyledonous* flowers forcibly withholds me from distinguishing them into two sorts with *Jussieu*, whilst the widely different organization of their Stems totally overturns the *Linnæan* hypothesis of the Corolla being invariably a continuation of the *Liber* or *inner bark*. In this difficulty I have no guide but analogy to lead my dim and imperfect researches after the truth: yet it is from pure analogy, that we dare to entertain some of the most sublime opinions; for, what astronomer doubts of the numerous stars before him being inhabited? I therefore consider all the different parts of the flower as proceeding from one common point, just as the *Genitalia* of animals have one common origin under the *Venter*. Of these parts, the Calyx, or outer cover, answers pretty nearly to the *Præputium* and *Labia Pudendi*, being like them continuous with the exterior muscles of the whole individual: the Corolla, or inner cover, seems to have no less analogy with the two next important

parts

parts in animals, the *Glans Penis* and *Clitoris*, being like them flaccid and evanescent when the business of impregnation is over: for from above 500 experiments, made by carefully taking away the Corolla while the flower was very young, I have found its presence to be of more importance than has been usually supposed. The remaining similarities are so obvious, and so emphatically described by our great master in his *Sponsalia Plantarum*, that I need not recall them to your memory. I would therefore define the Calyx, *Involucrum floris exterius, herbæ plerumque colore et substantiâ consimile, toro insertum, staminibus semper discretum:* and the Corolla, *Involucrum floris interius, herbæ plerumque colore et substantiâ dispar, toro insertum, staminibus vel conjunctum vel in eodem puncto ortum.* In the last definition I have entirely omitted the situation of the Stamina as being alternate with the divisions of the Corolla, this distinction proving too inconstant for a primary character; a far more certain one is obtained by referring to their conjunction with it and joint termination. The Calyx being thus reduced within its natural limits, and the Receptacle brought forward to its long-neglected rights and honours among the other parts of the flower, the difficult and ambiguous Insertions, which *Jussieu* has stated with so much candour and integrity, vanish; and all the Natural Orders which agree in that respect may be arranged in one continued series. Moreover, when only one Involucrum is present, and the common analogies of colour, figure and consistence fail, far less, if any, difficulty will occur in determining it: thus in *Proteæ*, which have the Stamina inserted near the top of the Involucrum, it is indubitably a true Corolla; while in *Atriplices* which have the stamina inserted in the receptacle, it is as surely a true Calyx, exactly corresponding with that of *Amaranthi*; in fact, *Atriplices* and *Amaranthi* are only divisions of one and the same Natural Order. It now only remains

remains for me this evening to go through the *Perigynous* Genera of *Jussieu*, pointing out what I conceive to be their real insertion: but as English Botanists may be too justly reproached with neglecting the study of his Orders, on some future occasion I hope to lay before you the result of my meditations on the *Monocotyledones*, to which I devoted the evenings of last winter: the *Dicotyledones* being far more numerous, and containing between two and three hundred genera, that I have never yet even looked at, will take me a much longer time.

The *Palms* are the first Perigynous Order: of these I have examined three genera living, and from the different dried specimens in *Sir Joseph Banks's* Herbarium, and the excellent drawings in the *Coromandel Plants*, I have no doubt that the Stamina of the whole Order are inserted in a distinct hypogynous receptacle. *Jussieu* indeed hesitates and says after "*imis laciniis calycinis, (an potius glanduloso corpori hypogyno?*") From their affinity with Grasses, especially *Juncus*, one would at first conclude their Involucrum to be a Calyx; but their Spathæ and Bracteæ are the parts analogous to the Glumæ of *Grasses*, and some genera have evidently a true monopetalous Corolla. The *Palms* come nearer to the *Aroideæ* than *Asparagi* in a Natural Series, and may now be placed next to them: no one who compares the figures of *Borassus* and *Cocos* in the *Coromandel Plants*, with *Aponogeton* and *Pothos*, will doubt about this; and the germination of the last genus, which I have repeatedly raised from seeds, still further confirms it. *Asparagi*, the second Perigynous Order, have their stamina likewise inserted either in the Corolla, or a distinct hypogynous receptacle: the fragrant *Lily of the Valley* and *Alstroemeria*, which certainly belongs to this Order, are examples I would offer for your examination. *Junci*, the third Perigynous Order, will in all probability be greatly altered in the next edition of *Jussieu's* Genera.

Genera. *Eriocaulon*, the first genus, I yet know little about; but when Mr. *Brown* returns, he will inform us. I guess it is allied to *Scirpus* and *Schœnus*, or perhaps comes still nearer to *Typha*. *Restio* and *Juncus* have no affinity at all with the other genera of this section: their Stamina are completely hypogynous, and they must be placed after their near relations the Grasses. *Xyris* is a very curious genus, and possibly a true *Iridēa*, though not for the Reason which *Jussieu* gives, its being triandrous: but the Filaments are inserted in the same part of the Corolla, which twists up when it decays as in some of the *Iridēæ*, so that it merely differs in having Germen superum. Before I could reconcile myself to Germen superum and inferum being found in the same Family, I had placed it near *Tradescantia*. *Aphyllanthes* has given me more trouble than any genus in all the *Monocotyledones*: the Stamina are inserted in the Corolla, and I believe it will come in at the end of *Bromelēæ*. *Rapatea* (*Mnasium* of *Schreber*) must certainly join the same order after *Tillandsia*. *Mayaca* (*Syena* of *Schreber*) belongs to a distinct order which I would call, after the largest and most known genus in it, *Tradescantēæ*; making the termination always in *ēæ* long, rather than the hated and pompous *oidĕæ*: thus all confusion, either in writing or speaking of the genus which gives a name to the Order, in the plural number, is avoided: this Order of *Tradescantēæ* will contain *Pontederia*, *Hapalanthus*, *Commelina*, *Callisia*, *Tradescantia*, and *Conda* of the *Hindoos*, all which genera have stamina hypogyna. *Pollia* must migrate to the *Asparagi*, as *Jussieu* supposes. The third section of *Junci* constitutes another very natural assemblage, which we all know well, the *Tripetaloideæ* of *Linnè*: in these the Stamina are so very evidently placed on a large hypogynous receptacle, that I am totally at a loss to account for *Jussieu's* making them perigynous. Of the genera in the fourth section of *Junci*, *Cabomba*

(*Nectris* of *Schreber*) belongs also to the *Tripetaloideæ*: *Scheuchzeria* and *Triglochin*, in natural affinity, must I believe join *Zannichellia*, *Potamogeton*, *Ruppia*, and *Zostera*, after the *Arums*; and the remainder are a separate order of themselves, the *Veratrēæ*. In this order of *Veratrēæ*, the Stamina are inserted in the Corolla: it will include besides *Colchicum*, which has not the least immediate affinity to *Crocus*, *Bulbocodium*, *Tulipa*, *Melanthium*, *Bathuna*, and *Wurmbea*. *Lilia*, the fourth perigynous order, as they now stand, contains *Tulipa* just mentioned, then *Erythronium*, *Gloriosa*, and *Uvularia*, which all belong to *Asparagēæ*; and lastly *Fritillaria*, *Imperialis*, *Lilium*, and *Yucca*. As many of these genera will soon be in flower, my opinion that their Stamina are inserted in a true legitimate corolla, exactly analogous to the most perfect among the *Dicotyledones*, can be easily examined. In all the remaining Perigynous Orders, *Bromeleæ*, *Asphodeli*, *Narcissi*, and *Irides*, the Insertion of the stamina is likewise so very plain, that it is only necessary to refer you to the plants themselves: indeed they have only been placed in this Class by *Jussieu*, because he considers the Involucrum of all Monocotyledones, as a Calyx and not a Corolla. The affinities of some few of the genera, however, may perhaps be deemed worthy of arresting your attention for a few moments longer. *Phormium*, the *New Zealand Flax plant*, I have little doubt, belongs to *Bromelēæ*: as it is now in most of our collections, and has produced flowers in this country, I trust ere long to see them brought to this table: from *Miller's* figure they appear similar to those of *Pitcairnia*; but its tough rigid leaves, and peculiar meally pubescence, first gave me the idea of its real place in the great chain of nature. *Gethyllis* has not the Habit of *Crocus* when more carefully inspected, but rather that of *Curculigo* and *Hypoxis*, with which it must be placed. *Tulbaghia* used to be

common

common in our collections, and I wish that any Botanist who meets with it would attend to it: I place it now after *Allium*, but for no good reason; the stamina are inserted in the Corolla, which has a double Limbus. *Tacca* puzzles me extremely: is it really monocotyledonous? if so, it comes nearer to *Dioscorea* than any genus I know. *Polyanthes*, I think, belongs to the same order with *Hemerocallis cordifolia* and *cærulea* of our gardens, which are no *Hemerocallides*, but a distinct genus: shall we name them *Saussurea?* for their spiral vessels are very beautiful. *Xiphidium* appears to me very near, if not the very same genus with *Wachendorfia:* I remember seeing it at *Sion House:* it is particularly tender, and in this country flowers imperfectly about Christmas: this plant, with *Dilatris*, *Hæmodorum* of our *President*, *Argolasia*, *Anigozanthus* of *Billardiere*, *Philydrum*, and *Wachendorfia*, form an easy and distinct order, which should be placed before the *Veratrēæ*.

The fifth and sixth classes of *Jussieu* introduce the *Dicotyledones:* the latter of these is entirely composed of what he thinks *Apetalous* Plants, and consequently, whenever the Stamina are inserted in the Involucrum, he calls them *Perigynous*. I have already observed, however, that if there be a great similarity in the substance of the Involucrum and the Filaments, it should rather be considered a Corolla: and we shall find that this is not only the case in all the genera of this class, but that some of them have both a Calyx and Corolla, of which *Quinchamalium* the second genus of the first order is a remarkable instance. *Hippophae* among the *Eleagni*, seems to me to be a real *Diclinis*, and I should guess it ought rather to go near to the *Atriplices:* I have not yet examined the fruit, but according to *Gærtner* it has germen superum. *Daphne Laureola* is now in flower; and though the Involucrum in this species is green, the Filaments run down it,

and it falls off soon, without any of the usual characters of a Calyx: the *Torus* in this species is very conspicuous, for which reason I mention it. The third Order contains the *Proteæ*, which, as has been said before, have undoubtedly a true corolla: there are about eight Genera in this Order not yet distinguished by *Jussieu*. *Laurus* in the fourth Order appears to me also to have a legitimate corolla: the stamina at any rate are inserted in the Torus, so that it must be placed among the Hypogynous genera. The fifth Perigynous Order of *Polygonēæ* is so common in all gardens, fields, and road sides, that it will be a very easy business for any one to satisfy himself that their stamina are not inserted in the Involucrum; and therefore whether it be a calyx or corolla is no matter, they must be hypogynous. The same holds good with the sixth Order of *Atriplices*, only that the *Torus* is often so much larger, that there cannot remain the least shadow of doubt respecting the Insertion: in *Rivina Dodecandra* particularly, the Stamina are ranged upon the receptacle in three different rows, one above the other. The ninth Class contains genera with *Perigynous Corollas*, not *Stamina*; that is, the Corolla inserted in the Calyx: the same powerful objection remains to be brought against this distinction, namely that it is not founded in Truth, the Corolla being really inserted in the receptacle; nay in most of the Genera, it is quite separate at the base both from the Calyx and Stamina, as in *Kalmia*, *Rhododendron*, *Azalea*, *Ledum*, *Itea*, *Erica*, *Calluna*, *Salaxis*, *Andromeda*, *Vaccinium*, *Menziesia*, *Clethra*, *Pyrola*: this order I have particularly studied, and here again we have an instance of Germen superum and inferum in the same Family. The fourth order of *Campanulēæ* closes this class, and in every species I have yet examined there is a flat receptacle covering the disk of the germen, in which both Calyx and Corolla originate. We come now to the fourteenth

fourteenth class of *Jussieu*, containing no less than thirteen large Orders; and among them the *Calycanthemi* of *Linnè*, which have ever been considered by all Botanists as *perigynous*. It is with no little diffidence, therefore, that I venture publicly to contradict this generally received opinion, the absurdities and inconsistencies of which however are so glaring, that I think, when they are demonstrated, it will be given up. Nor is it very wonderful that so false a conception, which I imagine first originated from *Tournefort's* quaint expression of "*Calyx in fructum abiens*," should have been held universally: for till *Jussieu's* book actually forced Botanists to open their eyes a little wider than they had been accustomed, nobody ever thought of scrutinizing the connection of the different parts of the flower any further than was necessary to find its place in the *Linnæan* System. Most commonly the part taken by authors for Calyx is in fact a very magnificent receptacle, upon which the real Calyx as well as all the other parts of the flower are inserted: and this whether the Pericarpium be inferum as in *Pyrus*, apparently inferum as in *Rosa*, or superum as in *Prunus*. The best and shortest way of explaining my sentiments will be to describe the Insertion in one genus of each Order. *Sempervivum* stands first, and whoever will give himself the trouble of looking at it, will find the Calyx, Corolla, and Stamina all inserted on a shallow cotyliform body, which is likewise covered with Honey: that this receptacle is completely distinct from the Calyx, appears from its remaining in full vigour after the Calyx, Corolla, and Filaments are withered. *Saxifraga* in the next Order is a very useful genus to study on this head, for in some species the Germen is inferum, in others only semi-inferum, in others again quite superum; yet in every species, the Calyx, Corolla, and Stamina proceed from a thick callous margin, which is persistent. *Cactus* in the third Order

has

has a flower which we all know very well; but so far from allowing this to be *Perigynous*, I cannot find that it has any Calyx at all: its Stamina are exceedingly numerous, and gradually coalesce with the Petals into a thick Neck (I would hardly call it Tube) just as in *Camellia*. *Ribes* placed in this Order at present surely belongs to *Saxifragæ*: compare the flowers of the common *Currant* with *Chrysosplenium* or *Adoxa*: but the serratures and callosities of the Herba in the *Gooseberry* first indicated to me its affinity. *Portulaca* in the fourth Order has only a 2-phyllous Calyx, in which there is not the smallest room for the five Petals to be crammed: the whole Pedunculus in this genus might with equal propriety be termed Calyx as its Torus. *Mesembryanthemum* in the fifth Order as to insertion exactly resembles Cactus, but this genus has a regular quinquefid Calyx. *Oenothera* and *Epilobium* are very common examples of the 6th Order: their receptaculum is so very long and remarkable, that it never fails to strike a beginner in Botany: at least many of my young friends have not only hesitated but thought it impossible that a Master in the science could call this part Calyx: nor are the objections of a sensible Scholar always to be despised, for he comes unprejudiced on the subject, and sees the Works of Nature as they really are. The beautiful *Myrti* constitute the seventh assemblage of Perigynous Corollas: in no order is their real insertion more necessary to be understood than this; for the essential characters of the Genera often depend upon it solely. *Leptospermum* and *Philadelphus* are two instances which I shall not easily forget: when the former genus was first discovered in *New Zealand* by Sir *Joseph Banks* and Dr. *Solander*, they had no doubt from its habitus, that it was a new genus; but upon comparing it with the Linnæan characters of *Philadelphus*, it answered so exactly that they hesitated. *Forster* afterwards was less scrupulous,

lous, but he only cut the Knot, for his character is good for nothing. Some time after the publication of his work, Sir *Joseph Banks* brought me specimens of *Leptospermum* and *Philadelphus* in fruit from *Kew*, desiring me to show him any difference: this I could not do. Being well persuaded, however, that two such dissimilar plants could not belong to one genus, the following spring I forced the dwarf variety of *Philadelphus*, and compared them when in flower: all difficulty immediately ceased; for I saw that in *Leptospermum* the Calyx and the Corolla were alternately inserted by a very short Unguis in the same line of the Receptaculum; but in *Philadelphus* the Calyx has a broad dilated base, so as completely to include the Corolla, which is inserted in a separate line nearer the Pistillum: these differences, now that we know them, may always be observed, even in the fruit; for the scars where the Calyx and Corolla were attached remain, affording another proof that the part underneath cannot possibly be a Calyx. *Melastoma* in the eighth Order perhaps alone constitutes a Natural Family; but as it is a *Tropical* genus, we can scarcely expect to see it well divided in our days: in one species from *Jamaica*, which flowered with me at *Chapel-Allerton*, there was no Calyx whatever, but in place of it, a very narrow line similar to what is left in *Eucalyptus* after its Involucrum falls off. *Lagerstræmia* in the ninth Order has a very peculiar Insertion, like nothing I now recollect but that of *Sophora tetraptera*: in both these genera the receptacle is very large and hollow, and the scars of all the various parts inserted in it remain very deep and conspicuous. The tenth Perigynous Order contains under the name of *Rosaceæ* eight sections: in the first, our common *Cherry* and *Apple Blossom*, though generally passed over by Botanists, afford incontrovertible proofs of the presence of a receptacle distinct from the Calyx, as well as *Fragaria*, *Potentilla*, *Comarum*,

Comarum, *Geum*, and *Rubus*: *Rosa* of all others stands conspicuous in this respect, its receptacle, vulgarly called *Hip* with us, being very similar to that of *Ficus*. In the eleventh Order of *Leguminosæ*, this part is again of primary importance, and in no genus more so, than the vast *Mimosa*, which will, I suspect, be most naturally subdivided by attending to its receptacle: I know three species at least, in each of which its structure is very different. In *Cassia* the Receptacle is remarkable and persistent, whereas the real Calyx is deciduous. In *Trifolium* it varies most beautifully, and the numerous *Papilionaceæ*, from *Port Jackson*, will possibly be better discriminated by it.

In the two last Orders of *Perigynous Corollas*, *Terebintaceæ* and *Rhamni*, I scarcely yet know a genus except *Cneorum*: this has most clearly both Petala and Stamina hypogyna quite separate from the Calyx. *Ilex* has its Petals equally distinct from the Calyx, and cohering slightly at the base with each other. *Phylica* I think belongs to a very different order: its whole fructification is singular, and I know no genus that approaches it but *Penæa*: in both I suspect the real Calyx is inferus and 2-phyllous.

I have thus, Gentlemen, endeavoured to point out, what I conceive to be a false notion which has misled the very first Botanist now living, respecting the insertion of the Stamina in so great a number of Natural Families. I fear that I have tired you, "*ornari enim res ipsa negat:*" but I see many around me whose abilities to decide upon far more abstruse and difficult points in Botany are unquestionable, and, if my remarks have allured only one of you to investigate the subject, or to study the Affinities of Plants, I shall feel very proud.

II. *A Descriptive Catalogue of the British Testacea.*

By William George Maton, M.D. V.P.L.S., &c. and the Reverend Thomas Rackett, M.A. F.L.S., &c.

Read January 17, 1804.

Before we proceed to the more immediate objects of this paper, it may be proper to advert to the plan by which we have been guided in endeavouring to render it acceptable to the scientific naturalist.

After the sentiments which we expressed on a former occasion *, it is almost unnecessary here to remark, that we have closely adhered to the Linnæan system and mode of description, all the species which it falls within our province to enumerate appearing to be reducible under Linnæus's *genera*, as constituted in the twelfth edition of the *Systema Naturæ*, and retained by Professor Gmelin.

We are aware that some late writers of repute have divided the genus *Lepas*, forming out of it another which they have called *Balanus*; and that they have separated from *Ostrea* all the pectinated species, affixing to them different characters, under the generic denomination of *Pecten*. A modern author, by whose researches we have been largely assisted, and to whom British testaceologists in general are eminently indebted, has in like manner divided the genus *Serpula* into two†. To our minds, however, there are reasons why the original *genera* should remain unal-

* Linn. Trans. vol. vi. p. 178.

† *Testacea Britannica*, vol. ii. p. 517.

 tered,

tered, and we have ventured to state those reasons in the proper places. With regard to some of the *terms* employed by Linnæus (especially in the description of the genus *Venus*) alterations seem necessary, on the grounds adverted to at some length in a former paper*.

In the synonyms, and references, it has been our most sedulous endeavour not to mislead, either by transcribing upon trust from other authors, or by quoting such as are ambiguous, or imperfect. The excellent descriptions given by Linnæus, in his *Museum Ludovicæ Ulricæ Reginæ*, we have, in most instances, extracted entire; and these extracts, it is hoped, will be the more useful, as that work, on account of its scarcity, cannot very generally be had recourse to, in England. We have also availed ourselves of the concise, but illustrative observations, given by the same author in his *Fauna Suecica* and *Systema Naturæ*. Wherever such helps have failed us, we have subjoined to the essential characters of each species short descriptions of our own, noting most commonly the ordinary size of the shell at its full period of growth (in the British Islands), as one of the most ready guidances towards identifying a specimen under examination. It was our wish to have investigated, with our own eyes, every species before we admitted it into our catalogue; but in some instances this was not practicable, and, under such circumstances, we have contented ourselves with adducing the most respectable authorities. To have omitted a species asserted to be British by writers of repute, merely because we had not been so fortunate as to have seen specimens ourselves, would have indicated a very unbecoming degree of suspiciousness; and it would also have been inconsistent with the design of this paper,

* Linn. Trans. vol. vi. p. 181.

which

which is to lay before the student a descriptive catalogue of *all* our British *Testacea.* Such notices as are not indispensably necessary to the discrimination of a species, or relate to what may be called its *history*, we have usually given in English; and it may here be remarked, that we have been particularly attentive to point out the discoverer, or first describer, of every shell (wherever it was possible to arrive at certainty), retaining the trivial name originally attached to it, in preference to any other, provided it was not pre-occupied, or at variance with the specific characters, or with the Linnæan principles of nomenclature. Had naturalists in general been more strict in this respect, and less fond of novelty of denomination, the science would have been much less confused in every department, than it is at present. The use of trivial names in natural history certainly does not consist in their being *descriptive* of the subjects to which they are annexed, but in their being permanent designations, which, as discovery seems to have no limits, the more arbitrary they may be, the better perhaps they will answer the purpose for which they are calculated.

Every person must be fully aware of the great utility of figures, as auxiliaries of description, which sometimes, from the nicety of the variations of subjects, cannot possibly be rendered all-sufficient for the student's instruction. Fortunately we have been preceded by many British testaceologists, whose works in this respect afford very ample advantages; but wherever a figure was wanting, (provided the species had fallen under our notice,) or where the figures that had been given were grossly incorrect, we have endeavoured to remedy the defect, by referring to engravings annexed to this paper. We judged it would be useful also, on some occasions, to figure closely-allied

 species

species by the side of each other, in order that their relative characters might be more accurately impressed on the mind than it came within the compass of language, simply, to accomplish.

CHITON.

Linn. Syst. Nat. n. 300.

1.

crinitus. Ch. testa septemvalvi, pilis brevibus dense obsita. *Linn. Gm. p.* 3206.

Pennant Brit. Zool. 4. *t.* 36. *f.* 1.

Montagu Test. Brit. p. 4.

Habitat in mari.

Testa $\frac{1}{8}$ poll. longa. (*Pennant.*)

An vere distincta à *Ch. cinereo?*

We give this species on the authority of Pennant, who mentions having found it near Aberdeen; and Mr. Boys is said to have found it at Sandwich; but it has never fallen under our notice.

2.

discors. Ch. testa septemvalvi dorsata, margine lato leviter reticulato. *Montagu Test. Brit. p.* 3.

Habitat in mari.

Testa oblonga $\frac{1}{2}$ poll. longa, valvulis extremis rufescente-brunneis: valvulæ 5 mediæ transversim divisæ, postice sagrinatæ, antice læves vel leviter transversim striatæ. (*Montagu.*)

A new and rare species discovered in Salcombe Bay, Devon, by Mr. Montagu, by whom it is described under the trivial name of *septemvalvis*, which appeared to us objectionable, as it conveys an idea that no other species of this genus has that number of valves.

3. *fasci-*

3.
fasciu-laris. Ch. testa octovalvi, corpore ad valvulas utrinque fasciculato. *Linn. Syst. Nat. n.* 4. *p.* 1106. *Linn. Gmel. p.* 3202.
t. 1. *f.* 1.
Chemn. Conch. 10. *t.* 173. *f.* 1688.
Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 1.
Encyclop. Method. t. 163. *f.* 15.
Montagu Test. Brit. p. 5.
Habitat in mari, testaceis, saxis adhærens.
Testæ cinereæ leviter carinatæ, ad latera fasciculis pilorum albidis confertæ.

4.
margina-tus. Ch. testa octovalvi, margine serrato reflexo lævi. *Linn. Gmel. p.* 3206.
t. 1. *f.* 2. *Pennant Brit. Zool.* 4. *t.* 36. *f.* 2.
Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 2.
Montagu Test. Brit. p. 1.
Habitat in mari, testaceis adhærens.
Testa magnitudine unguis pollicis extimi, carinata, lævis, oculo armato quasi sagrinata visa, rufescente-brunnea.

First discovered at Scarborough, in Yorkshire, by Pennant. Not uncommon.

5.
lævis. Ch. testa octovalvi glaberrima, dorso elevato.
Pennant Brit. Zool. 4. *t.* 36. *f.* 3.
Linn. Gm. p. 3206.
Montagu Test. Brit. p. 2.
Habitat in mari.
Testa $\frac{1}{6}$ poll. longa, $\frac{1}{4}$ poll. lata, rufescente-brunnea, interdum maculis flavescentibus. Margo latus, reticulatus.

Found at Loch-Broom, on the western coast of Rossshire, by Pennant; in Salcombe Bay, Devon, by Mr. Montagu.

6. *cinereus.* *t.* 1. *f.* 3. Ch. testa octovalvi lævi carinata, corpore rubicundo, limbo subciliato. *Linn. Syst. Nat. n.* 9. *p.* 1107. *Linn. Gmel. p.* 3204.

Born. Mus. t. 1. *f.* 3.

Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 4.

Montagu Test. Brit. p. 3.

Habitat in mari, testaceis, saxis adhærens.

Testa vix cimice major, planiuscula, cinerea, ovata, postice paulo latior, parum carinata. (*Linn.*)

First found by Dr. Pulteney, on oysters from Weymouth and Poole.

7. *albus.* *t.* 1. *f.* 4. Ch. testa octovalvi lævi dorsata, corpore albo. *Linn. Syst. Nat. n.* 8. *p.* 1107. *Linn. Gmel. p.* 3204.

Chemn. Conch. 8. *t.* 96. *f.* 817.

Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 3.

Montagu Test. Brit. p. 4.

Habitat in mari, testaceis, ulvis adhærens.

Tetsa magnitudine grani tritici, ovalis, minus carinata. (*Linn.*)

First noticed as British by Dr. Pulteney, who found it at Poole, Dorset.

LEPAS.

Linn. Syst. Nat. n. 301.

Differently from the method pursued by some modern authors, who have followed Dr. Solander's original suggestion, we prefer retaining the Linnæan genus *Lepas* undivided. The gradation from the conic to the compressed species appears to us so natural, as not to admit of their being separated, without violation of the general principles of the system. To those who notice the structure of *Lepas Mitella*, which beautifully unites these two divisions, the circumstance we have mentioned cannot fail to

to be obvious; and, even if a difference in the contained animals should be objected, we cannot agree to that particular being made a ground of distinction, since it is not the exclusive consideration on which Linnæus professes to found his arrangement.

1.

Balanus. L. testa conica sulcata, operculis acuminatis. *Linn. Syst. Nat. n.* 10. *p.* 1107. *Fauna Suecica, n.* 2122. *Linn. Gmel. p.* 3207.

Ellis in Act. Angl. 1758. *t.* 34. *f.* 17.

Pennant Brit. Zool. t. 37. *f.* 4.

Da Costa Brit. Conch. p. 249. Bal. porcatus.

Donovan Nat. Hist. of Shells, t. 30. *f.* 1.

Chemn. Conch. 8. *t.* 97. *f.* 820.

Pulteney in Hutch. Dorset. p. 25. *t.* 2. *f.* 12. Bal. communis.

Montagu Test. Brit. p. 6.

Habitat frequens in mari, saxis, rupibus adhærens.

Testa conica, truncata, valvulis pluribus conniventibus, extus inæqualiter sulcata, interjectis rugis compressis.

Operculum valvulis quatuor obliquis, acuminatis, superioribus duabus latioribus brevioribus transversè striatis, inferioribus 2 angustioribus longioribus. (*Linn. Mus. Lud. Ulr. p.* 466.)

2.

Balanoides. L. testa conica truncata lævi, operculis obtusis. *Linn. Fauna Suecica, n.* 2123. *Syst. Nat. n.* 11. *p.* 1108. *Linn. Gmel. p.* 3207.

Lister An. Angl. t. 5. *f.* 41.

——*Conch. t.* 444. *f.* 287.

D'Argenv. Conch. t. 30. *f.* C.

Pennant Brit. Zool. 4. *t.* 37. *f.* 5.

Da Costa Brit. Conch. p. 248. *t.* 17. *f.* 7. Bal. vulgaris.

Pulteney

Pulteney in Hutch. Dorset. p. 25. *t.* 2. *f.* 7. Bal. vulgaris.

Donovan Nat. Hist. of Shells, t. 36. *f.* 2.

Montagu Test. Brit. p. 7.

Habitat in mari frequens, saxis, conchis affixa.

Testa depressa, valvulis sex.

Operculum valvulis quatuor, superioribus duabus leviter transversim striatis, inferioribus lævibus. (*Linn. Mus. Lud. Ulr. p.* 466.)

This species was first noticed by Lister.

3.

punctata. L. testa conica truncata punctata, operculis obtusis.

Pennant Brit. Zool. t. 37. *f.* 6. Lepas Cornubiensis?

Chemn. Conch. 8. *t.* 97. *f.* 826.

Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 10.

Montagu Test. Brit. p. 8. *t.* 1. *f.* 5. Bal. punctatus.

Habitat in mari, saxis et testaceis adhærens.

Testa diametro ¼ poll. rugosa, colore fusco.

Operculum valvulis apice coadunatis, emarginatis, se invicem excipientibus.

Found at Poole, Dorset, by Dr. Pulteney; and on the south coast of Devon, by Mr. Montagu.

4.

conoides. L. testa conica valvulis acuminatis, apertura angustissima.

Donovan Nat. Hist. of Shells, t. 30. *f.* 3.

Montagu Test. Brit. p. 12.

Habitat in mari.

Testa ¼ poll. longa et lata. Valvulæ striis numerosis linea exaratis.

Discovered by Mr. Bryer, of Weymouth; affixed to *Lepas anatifera.*

5.

costata. L. testa subconica, operculis acutis.

Donovan Nat. Hist. of Shells, t. 30. *f.* 2.

Montagu Test. Brit. p. 11. Bal. costatus.

Habitat

Habitat in mari, saxis adhærens.

Testa diametro vix $\frac{1}{8}$ poll. candida. Valvulæ indistinctæ, costis elevatis ab apertura divergentibus, instar radiorum.

This species was discovered by the late Mr. Adams, on the coast of Pembrokeshire.

6.
Tintinnabulum. L. testa conica obtusa rugosa. *Linn. Syst. Nat. n.* 12. *p.* 1108. *Linn. Gmel. p.* 3208.
Lister Conch. t. 443. *f.* 285.
Grew Mus. p. 148.
Ellis in Act. Angl. 1758. *t.* 34. *f.* 8.
Rumph. Mus. t. 41. *f.* A.
Gualt. Test. t. 106. *f.* E. H.
D'Argenv. Conch. t. 26. *f.* A B.
Pennant Brit. Zool. p. 73.
Da Costa Brit. Conch. p. 250.
Chemn. Conch. 8. *t.* 97. *f.* 828—830.
Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 5.
Donovan Brit. Shells, t. 148.
Montagu Test. Brit. p. 10.

Habitat in mari, navium carinis (acervatim sæpius) adhærens.

Testa conico-gibba, extus sulcata, sulcis obtusis, areis valvularum interjectis senis transversim striatis. (*Linn. Mus. Lud. Ulr. p.* 466.)

Given as British by Da Costa, but is probably a native of the warmer climates, being brought hither on the bottoms of ships.

7.
rugosa. L. testa subcylindrica, operculis acutissimis.
t. 1. *f.* 5. *Chemn. Conch.* 8. *t.* 97. *f.* 824.
Pulteney in Hutch. Dorset. p. 25. *t.* 2. *f.* 10. Bal. rugosus.
Montagu Test. Brit. p. 8. B. rugosus.

Donovan Brit. Shells. t. 160. L. borealis.
Habitat in mari, saxis, testaceis adhærens.
Testa ¾ poll. longa, apertura ampla.
Operculum valvulis distinctis, angulatis, erectis.
First found on the Dorsetshire coast by Dr. Pulteney.

8.
elongata. L. testa cylindrica elongata, operculis obtusis. *Linn. Gmel. p.* 3213.
Pennant Brit. Zool. 4. *t.* 37. *f.* A. 5.
Chemn. Conch. 8. *t.* 98. *f.* 838.
Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 6. Bal. clavatus.
Encyclop. Method. t. 164. *f.* 7. 8.
Montagu Test. Brit. p. 10. Bal. clavatus.
Habitat in pelago.
Testa nivea, valvulis sex, alternis angustioribus. Apertura dilatata.
We are informed by Dr. Pulteney, that this species was discovered by Sir Joseph Banks. It has been found at Weymouth.
We have received some clusters of elongated shells of *L. Balanoides*, which strongly resemble the figures of this species.

9.
intertexta. L. testa depressiuscula, operculis indistinctis, valvulis intertextis, striatis.
Pennant Brit. Zool. 4. *t.* 38. *f.* 7. L. striata.
Da Costa Brit. Conch. p. 250. B. striatus.
Chemn. Conch. 8. *t.* 98. *f.* 834.
Walker Test. Min. rar. f. 87.
Pulteney in Hutch. Dorset. p. 25. *t.* 1. *f.* 9. Balanus intertextus.
Donovan Nat. Hist. of Shells, t. 36. *f.* 1.

Encyclop.

Encyclop. Method. t. 164. *f.* 16, 17.
Montagu Test. Brit. p. 12. **Balanus striatus.**
Habitat in mari, testaceis, crustaceis, radicibus fucorum adhærens.
Testa diametro ¼ poll. alba.

This species was first noticed, as English, by Pennant. Not uncommon.

10.

Diadema. L. testa subrotunda, sexlobata, sulcata. *Linn. Syst. Nat. n.* 13. *p.* 1108. *Linn. Gmel. p.* 3208.
Act. Angl. vol. 5. *t.* 17. *f.* 2; *& vol.* 50. *t.* 34. *f.* 1. *&* 7.
Lister Conch. t. 445. *f.* 288.
Gualt. Test. t. 106. *f.* Q.
Walch Naturf. 8. *t.* 4. *f.* a. b. c.
Da Costa Brit. Conch. p. 251. *t.* 17. *f.* 2. Bal. Balæna.
Chemn. Conch. 8. *t.* 99. *f.* 843, 4.
Encyclop. Method. t. 165. *f.* 13, 14.
Donovan Brit. Shells, t. 56. *f.* 1, 2.
Montagu Test. Brit. p. 13. B. Diadema.
Habitat in mari.
Testa figura echini absque radiis, sordide alba, apertura superiori infundibuliformi, dimidiam reliquæ testæ diametrum æquante, areis externis 12 triangulis, quarum 6 excavatæ, striis subtilibus transversis exaratæ, sex alteræ elevatæ 4-5-6 prominentiis arcte sibi accumbentibus, et striis transversis crenatis exaratis constant. (*Gmel. p.* 3208.)

Common on the Northern Shores.

11.

Scalpellum. L. testa compressa tredecimvalvi læviuscula, pedunculo squamoso insidente. *Linn. Fauna Suecica, p.* 2121. *Syst. Nat. n.* 46. *p.* 1109. *Linn. Gmel. p.* 3210.
Lister Conch. t. 439. *f.* 281?
D'Argenv. Conch. t. 26. *f.* F. G.
Gualt. Test. t. 106. *f.* C.
Ellis in Act. Angl. 1758. *t.* 34. *f.* 4.
Chemn. Conch. 8. *vign.* 17. *f.* a. A.

Montagu Test. Brit. p. 18. *t.* 1. *f.* 3.
Donovan Brit. Shells, t. 166.
Pulteney in Hutch. Dorset. t. 2. *f.* 8.
Habitat rarior in mari, *Gorgoniis* adhærens.
Testa $\frac{1}{8}$ poll. longa, $\frac{1}{8}$ poll. lata, valvulis squamarum æmulis, subcrinitis, valvula longa curvata reliquas complectente, pedunculo rugoso-annulato.

First found by Mr. Boys, at Sandwich, in Kent. Mr. Montagu has received specimens from Plymouth.

12. *anserifera.* L. testa compressa quinquevalvi striata, pedunculo insidente. *Linn. Syst. Nat. n.* 17. *p.* 1109. *Linn. Gmel. p.* 3210.
Lister Conch. t. 440. *f.* 283.
Gualt. Test. t. 106. *f.* 2. 3.
Chemn. Conch. 8. *t.* 100. *f.* 856.
Montagu Test. Brit. p. 16.
Donovan Brit. Shells, t. 166.
Habitat in mari, lignis adhærens.
Testa structura omnino *L. anatiferæ*, sed valvulis sulcatis, excepta prima; sulci hi distincti, elevati. (*Linn.*)

Found on drifted wood on the south coast of Devonshire, by Mr. Montagu.

13. *anatifera.* L. testa subtriangulari quinquevalvi lævi. *Linn. Fauna Suecica. n.* 2120. *Mus. Lud. Ulr.* 468. *n.* 6. *Syst. Nat. n.* 18. *p.* 1109. *Linn. Gmel. p.* 3211.
Aldrov. Orn. c. 20. *f.* 548.
Gerard Herb. p. 1587.
Bonann. Recr. 2. *f.* 2.
Imperat. Hist. Nat. 904.
Bauhin. Pin. 513.
Stalpart Obs. 2. *p.* 458. *t.* 15.

Barth.

Barth. Cent. 6. *p.* 271.
Worm. Mus. 256.
Marcgr. Bras. 188.
Grew Mus. 148.
Sibb. Mus. 170. *n.* 2.
Lob. It. 2. *p.* 250.
Ellis in Act. Angl. vol. 50. *t.* 34. *f.* 5.
Lister Conch. t. 439. *f.* 282.
Gualt. Test. t. 106. *f.* A D.
D'Argenv. Conch. t. 26. *f.* E.
Planc. Conch. t. 5. *f.* 4. *& f.* XI.
Column. Phytol. 110. *t.* 30.
Seba Mus. 3. *t.* 16. *f.* 1, 2.
Needham Microsc. t. 7. *f.* 1, 2.
Knorr Vergn. 2. *t.* 30. *f.* 4, 5.
Murr. Fund. Test. t. 2. *f.* 2.
Pennant Brit. Zool. t. 38. *f.* 39.
Chemn. Conch. 8. *t.* 100. *f.* 853.
Pulteney in Hutch. Dorset. p. 26. *t.* 2. *f.* 3.
Donovan Brit. Shells, t. 7.
Montagu Test. Brit. p. 15.

Habitat in mari, lignis, carinis navium adhærens.

Testa compressa valvulis duabus majoribus subtriangularibus conniventibus, singulis acutis, latere altero versus apicem valvula oblonga, valvula insuper quarta lanceolata cymbiformi loco carinæ.

Basis cylindrica membranacea intestiniformis. (*Linn. Mus. Lud. Ulr. p.* 468.)

14. *sulcata.* L. testa subtriangulari quinquevalvi sulcata.
Montagu Test. Brit. p. 17. *t.* 1. *f.* 6.

Habitat in mari, *Gorgoniis* adhærens.

Testa ¼ poll. longa, colore albido. *Valvulæ* inferiores 15. costis elevatis;

tis; valvulæ superiores in apicem desinunt, costis 7 vel 8, intermediis minoribus, a margine posteriore divergentibus. Valvula dorsalis compressa, longitudinaliter striata.

A new species, found by Mr. Montagu on the Dorset coast, near Portland.

15.
fascicularis. L. testa quinquevalvi lævi, valvula dorsali basi dilatata angulo acuto prominente.

Ellis Zooph. p. 167. *t.* 15. *f.* 6.
Montagu Test. Brit. p. 557.
Donovan Brit. Shells, t. 144. Lepas dilata.
Habitat in mari.
Testa tenuis compressa, valvulis superioribus ad apicem acutis retrorsum inclinatis.

First noticed and figured by Ellis.

PHOLAS.

Linn. Syst. Nat. n. 302.

1.
Dactylus. Ph. testa oblonga hinc reticulato-striata. *Linn. Fauna Suecica, n.* 2124. *Syst. Nat. n.* 20. *p.* 1110. *Linn. Gmel. p.* 3214.
Rond. Test. t. 23. *f.* 2.
Lister Anim. Angl. App. t. 2. *f.* 3.
—— *Conch. t.* 433. *f.* 276.
Petiver Gaz. t. 79. *f.* 10.
Gualt. Test. t. 105. *f.* D. *et f.* E. *post.*
Seba Mus. 3. *t.* 16. *f.* 6. a—b.
Planc. Conch. p. 33. *n.* 3.
Borlase Cornw. t. 28. *f.* 31.
Da Costa Brit. Conch. p. 144. *t.* 16. *f.* 2. Pholas muricatus.

Chemn.

Chemn. Conch. 8. *t.* 101. *f.* 859.
Murr. Fund. Test. t. 2. *f.* 3.
Pennant Brit. Zool. 4. *t.* 39. *f.* 10. P. Dactylus.
Pulteney in Hutch. Dorset. p. 26. *t.* 3. *f.* 2. P. hians.
Donovan Brit. Shells, t. 118. er.
Montagu Test. Brit. p. 20.
Habitat intra scopulos, perterebratis saxis, noctu lucens. (*Linn.*)
Testa ad 5 pollices longa, alba, tenuis, fragilis, striis subspinosis antrorsum sensim minoribus, tandem evanescentibus.

2.
candida. Ph. testa oblonga, undique striis decussatis muricata.
Linn. Syst. Nat. p. 1111. *n.* 22. *Linn. Gmel. p.* 3215.
Lister Anim. Angl. t. 5. *f.* 39.
——— *App. t.* 2. *f.* 4. *&* 6.
——— *Conch. t.* 278. *f.* 435.
Gualt. Test. t. 105. *f.* E.
Pennant Brit. Zool. 4. *t.* 39. *f.* 11. Ph. candidus.
Da Costa Brit. Conch. p. 246. Ph. candidus.
Pulteney in Hutch. Dorset. p. 26. *t.* 1. *f.* 12. Ph. candida.
Donovan Brit. Shells, t. 132.
Montagu Test. Brit. p. 25. Ph. candida.
Habitat rarior in mari.
Testa vix digiti minoris longitudine, ovato-oblonga, alba diaphana supra fere tota transverse et longitudinaliter elevato-striata decussationibus mucronatis, unde scabra.
Intus decussatim excavato-striata decussationibus impressis. Cardo ex lacinula lævi, arcte reflexa. (*Linn. Mus. Lud. Ulr. p.* 469.)

First noticed by Dr. Lister at the mouth of the Tees, Durham; found on the N. Shore, Poole, Dorset, by Dr. Pulteney, and at Salcombe, in Devonshire, by Mr. Montagu.

3. *striata.*

3.

striata. Ph. testa ovata multifariam striata. *Linn. Syst. Nat. n.* 21. *p.* 1111. *Linn. Gmel. p.* 3215.

Parsons in Act. Angl. 55. *t.* 1. *f.* 1, 2, 3, 4. Ph. conoides.

Gualt. Test. t. 105. *f.* F.

Chemn. Conch. 8. *t.* 102. *f.* 864—6.

Pulteney in Hutch. Dorset. p. 27. *t.* 1. *f.* 7. Ph. nanus.

Donov. Brit. Shells, t. 117.

Montagu Test. Brit. p. 26.

Habitat in mari, navium carinas perterebrans.

Testa rudis opaca alba. Sulcus transversus obsoletus in duas partes valvulas dividit; altera pars acutior minus striata, altera obtusissima imbricato-striata. Area triangularis margini propinqua, lævis.

First described by Dr. Parsons, in the Philosophical Transactions.

It is uncertain whether the animal is bred on our shores, or is only brought hither in the bottoms of ships.

4.

crispata. Ph. testa ovali hinc obtusiore crispato-striata, cardinis dente curvo. *Linn. Fauna Suecica, n.* 2125. *Syst. Nat. n.* 25. *p.* 1111. *Linn. Gmel. p.* 3216.

Lister Anim. Angl. t. 5. *f.* 38.

—— *App. t.* 2. *f.* 7.

—— *Conch. t.* 279. *f.* 436.

Petiver Gaz. t. 79. *f.* 13.

Pennant Brit. Zool. t. 40. *f.* 12.

Olafs. Isl. t. 11. *f.* 4. 6.

Da Costa Brit. Conch. p. 242. *t.* 15. *f.* 4. P. bifrons.

Pulteney in Hutch. Dorset. p. 27. *t.* 3. *f.* 4.

Chemn.

Chemn. Conch. 8. *t.* 102. *f.* 872—4.
Linn. Gmel. p. 3228. Solen crispus.
Encyclop. Method. t. 169. *f.* 5, 6, 7.
Donovan Brit. Shells, t. 62. *& t.* 69. testa junior.
Montagu Test. Brit. p. 23.
Habitat in mari, saxis excavatis.
Testa 1½ vel 2 pollices longa, 2¼ vel 3 lata, rudis, coloris albidi, vel ferruginei, utraque extremitate hiante. Sulcus transversus in duas partes valvulas dividens; altera pars obtusissima vix striata, altera verò acutior striis imbricatis subserratis rugosa.
Cardo reflexus lævis, at vero intus dente lineari incurvo sub umbonibus posito. (*Linn. Mus. Lud. Ulr. p.* 469.)

First figured by Lister. Found on various parts of the British coast.

5. *parva.* Ph. testa ovali hinc reticulato-striata, cardinis dente ex tuberculo orto.
Pennant Brit. Zool. t. 4. *f.* 13.
Montagu Test. Brit. p. 22. *t.* 1. *f.* 78.
Habitat in mari, lignum perterebrans.
Testa ½ poll. longa, 1 poll. lata, margine recurvo absque cellulis, sulco longitudinali nullo.

First described by Pennant. Found at Salcombe, South Devon, by Mr. Montagu.

MYA.

Linn. Syst. Nat. n. 303.

1. *dubia.* M. testa subovali hiante, cardinis dente obsoleto.
Pennant Brit. Zool. 4. *t.* 44. *f.* 19.
Da Costa Brit. Conch. p. 234. Chama parva.
Pulteney in Hutch. Dorset. p. 27. *t.* 1. *f.* 11. Pholas Faba.

Donovan Brit. Shells, t. 132.
Montagu Test. Brit. p. 28. M. Pholadia.
Habitat in mari, rupes calcareas perterebrans.
Testa magnitudine fabæ equinæ, rudis, tenera, subtilissime striata, albescens, vel rufescente-brunnea, hiatu ovali instar Pholadum, utraque extremitate connivens.

First noticed from Weymouth by Pennant. Found on the Dorset coast by Dr. Pulteney also; and on the Devonshire coast by Mr. Montagu.

With the habits and appearance of a *Pholas*, this shell wants the essential characters of that genus, *viz.* the accessory valves. It must necessarily, therefore, be placed among the *Myæ*.

2.
Glycimeris. M. testa utrinque hiante, crassissima, lamellata, oblongo-ovata, transverse striato-rugosa; cardinis dente primario crassissimo. *Linn. Gmel. p.* 3222.
Aldrov. Test. p. 473, 474.
Lister Conch. t. 414. *f.* 258.
Gualt. Test. t. 90. *f.* A.
Born Mus. t. 1. *f.* 8.
Chemn. Conch. 6. *t.* 3. *f.* 25.
Donovan Brit. Shells, t. 142.
Habitat in mari.
Testa ad 5 poll. longa, et 10 lata, ochroleuca, intus cretacea. *Dens primarius* crassissimus fere longitudinem ligamenti æquat; posticus minor subjacet apicibus incurvatis, pone quos series plicarum extenditur.

Mr. Donovan has figured this species, but observes that it is "admitted with some doubt as a British "shell; it is a kind, however, acknowledged as such by "collectors of English natural history in general, and "is said to have been undoubtedly fished up in the

" deep waters between the Dogger-Bank and the East-
" ern coast of England."

3.

truncata. M. testa ovata posterius truncata; cardinis dente antrorsum porrecto obtusissimo. *Linn. F. Suec. n.* 2126. *Syst. Nat. p.* 111. *n.* 26. *Linn. Gmel. p.* 3217.
Linn. It. Wgoth. t. 5. *f.* 3.
Lister Anim. Angl. t. 5. *f.* 36.
—— *Conch. t.* 428. *f.* 269.
Petiver Gaz. t. 79. *f.* 12.
Gualt. Test. t. 91. *f.* D.
Olafs Isl. t. 11. *f.* 7.
Pennant Brit. Zool. 4. *t.* 41. *f.* 14.
Da Costa Br. Conch. p. 233. *t.* 15. *f.* 1. Ch. truncata.
O. Fabr. Fn. Groenl. p. 404. *n.* 406.
Chemn. Conch. 6. *t.* 1. *f.* 1, 2.
Encyclop. Method. t. 229. *f.* 2. a. b.
Pulteney in Hutch. Dorset. p. 27. *t.* 3. *f.* 1.
Donovan Brit. Shells, t. 92.
Montagu Test. Brit. p. 32.
Habitat ad littora maris, sub arena.
Testa crassa sordide alba, 1½ vel 2 pollices longa, 3 vel 3½ lata, striis vel rugis transversis exarata, anterius convexa rotundata, posterius angustata truncata hiante.
Cardo constat lobo erecto, ut in sequente. (*Linn.*)

4.

arenaria. M. testa ovata posterius rotundata; cardinis dente antrorsum porrecto rotundato denticuloque laterali. *Linn. Fauna Suecica, n.* 2125. *Syst. Nat. p.* 1112. *n.* 27. *Linn. Gmel. p.* 3218.
Linn. It. Wgoth. p. 187.

Lister Conch. t. 419. *f.* 263?
Baster Opusc. Subs. t. 7. *f.* 1. 3.
Lesser Testaceoth. f. 106.
Pennant Brit. Zool. 4. *t.* 42. *f.* 16.
Da Costa Brit. Conch. p. 232. Chama arenaria.
O. Fabr. Fn. Groenl. p. 405. *n.* 407.
Chemn. Conch. 6. *p.* 3. *vign. & t.* 1. *f.* 3, 4.
Pulteney in Hutch. Dorset. t. 4. *f.* 8.
Encyclop. Method. t. 229. *f.* 1. a. b.
Donovan Brit. Shells, t. 35.
Montagu Test. Brit. p. 30.

Habitat rarior in mari, sub arena, ex duobus foraminibus in fundo obviis investiganda.

Testa magnitudine ovi anseris, lata crassa ovata, transversè rugosa, coloris castanei, intus alba, posterius hiante.

Cardo valvulæ alterius constat lobo rotundato, cum denticulo laterali postico, alterius ex cavitate subtus elevata. (*Linn.*)

First noticed as British by Pennant. It has been found in Kent and the Isle of Wight, and on the shores of Southampton river.

5.

declivis. M. testa ovata compressiuscula anticè subtruncata, cardinis dente crasso.

Pennant Brit. Zool. 4. *n.* 15.
Pulteney in Hutch. Dorset. 27. *t.* 4. *f.* 6. M. pubescens.
Donovan Brit. Shells, t. 82.
Montagu Test. Brit. p. 40. M. pubescens.

Habitat in mari.

Testa subdiaphana tenuis fragilis pubescente-scabra.

Dens valvulæ alterutræ semiovalis, cum denticulo convexo.

First dredged up for the Duchess of Portland at Weymouth. (*Pennant.*)

Mr.

Mr. Montagu informs us that small specimens of the above are not uncommon in Falmouth Harbour, Cornwall; and larger on the Devonshire coast. Mr. Donovan first figured this species.

6.
prætenuis. M. testa ovata planiuscula; cardinis dente cochleariformi.

Petiver Gaz. t. 94. *f.* 4. Chama prætenuis.
Pulteney in Hutch. Dorset. p. 28. *t.* 4. *f.* 7.
Montagu Test. Brit. p. 41. *t.* 1. *f.* 2.
Donovan Brit. Shells, t. 176.
Habitat in mari.
Testa alba subpellucida fragilis vix 1 poll. longa, 2 lata.
Umbones acutiusculi, ad medium testæ. *Valvulæ* posticè hiantes.

First noticed by Petiver, from Poole. Found on the Dorset coast by Dr. Pulteney.—Not uncommon in Falmouth Harbour, and on the south coast of Devon (Mr. Montagu).

7.
distorta. M. testa subovali, valvulis difformibus, tumidioribus, cardinis dente crasso.

Montagu Test. Brit. p. 42. *t.* 1. *f.* 1.
Habitat in mari, saxis calcareis innidulans.
Testa alba fragilis pellucida, $\frac{3}{4}$ poll. longa, 1 poll. lata. *Valvulæ* distortæ rugosæ sinuosæ neque subtruncatæ ut in præcedente.
Dens latus subtriangularis in singulis valvulis.

Discovered by Mr. Montagu, lodged in limestone at Plymouth, and on the shores of South Devon.

8.
Batava. M. testa subovali, utraque extremitate rotundata.

Ginanni Op. Post. t. 4. *f.* 17.
Schröt. Flussconch. t. 3. *f.* 2, 4, & 5.
Chemn. Conch. 6. *t.* 1. *f.* 6.

Encyclop. Method. t. 248. *f.* 3.
Montagu Test. Brit. p. 36.
Donovan Brit. Shells, t. 174. M. Pictorum.
Habitat in fluviis, rarissima.
Testa 1 poll. longa, 1¾ lata, colore olivaceo. Cardo ut in *M. Pictorum.*

Found in the river Kennet, near Newbury, Berks, by Mr. Montagu.

This species has been considered by some authors as *Mya Pictorum*, probably from being made use of by the Dutch to contain gold and silver leaf, ground for painters. It seems to be common in Holland, but is seldom found here. On an accurate examination of Linnæus's description and references, it is evident that the following species, termed *Mya ovalis* by Dr. Solander and others, is the true *M. Pictorum* of the *Systema Naturæ*, since it exactly corresponds with the figures given by Bonanni and Lister. Linnæus appears also to have adopted his trivial name from Bonanni, who says, "Concha *Pictorum* dicta non e colore, "sed ab usu *Pictorum* qui colores, argenti aurique "pigmenta ut plurimum in ea reponunt."

9.
Pictorum. M. testa ovata, cardinis dente primario crenulato, laterali longitudinali, alterius duplicato. *Linn. Fauna Suecica, n.* 2129. *Syst. Nat.* 1112. *n.* 28. *Gmel. p.* 3218.
Bonanni Recr. 2. *f.* 40.
Lister Anim. Angl. t. 2. *f.* 30.
——————— *Append. t.* 1. *f.* 4.
—— *Conch. t.* 146. *f.* 1. 147. *f.* 3.
Petiver Gaz. t. 93. *f.* 9.
Valentyn Mus. t. 14. *f.* 15.
Ginann. Op. Post. t. 4. *f.* 16.

Murray

Murray in Amæn. Acad. 8. *t.* 2. *f.* 6.
Schröter Flussconch. t. 3. *f.* 3. *& t.* 4. *f.* 6.
Pennant Brit. Zool. 4. *t.* 43. *f.* 17.
Da Costa Brit. Conch. p. 228. *t.* 15. *f.* 4.
Encyclop. Method. t. 248. *f.* 4.
Pulteney in Hutch. Dorset. p. 27. *t.* 12. *f.* 4. M. ovalis.
Donovan Brit. Shells, t. 89. M. ovalis.
Montagu Test. Brit. p. 31. M. ovalis.

Habitat in fluviis, frequens.

Testa 1¼ vel 2 poll. longa, 3 vel 4 lata, epidermide viridescente, oblongo-ovata, magis elongata quam *M. Batava*.

First described and figured as an English species by Lister.

10. *ovata.* M. testa ovata, antrorsum angustata.

Lister Anim. Angl. App. f. 6.
—— *Conch. t.* 147. *f.* 2.
Montagu Test. Brit. p. 31. *& p.* 563.
Donovan Brit. Shells, t. 122. *f.* 1, 3.
β *Donovan Brit. Shells, t.* 101. *& t.* 122. *f.* 2. M. depressa.

Habitat in fluviis.

Testa 1¾ poll. longa, 3¼ lata, viridescente-brunnea, interdum obsolete radiata, crassiuscula, tumida. Cardo ut in *M. Pictorum*, sed prope extremitatem posteriorem. Extremitas altera acutior, ferè rostrata.

β medio depressa.

First described and figured by Lister.

The difference between this species and *Mya Pictorum* was first pointed out by Lister, by whom both are accurately figured in the same plate, and who observes that they are both found in the same rivers (Ouse, Fosse, and Nid, in Yorkshire), a circumstance which tends to confirm our opinion of their being perfectly distinct

distinct species, as their dissimilarity in shape cannot therefore be imputed to a difference in place of abode. They are also found in the rivers Froome and Avon, Somersetshire, and the New River, near London.

11. *margaritifera.* M. testa ovata antice coarctata, cardinis dente primario conico; umbonibus decorticatis. *Linn. Fauna Suecica*, 2130. *Syst. Nat. p.* 1112. *n.* 29. *Linn. Gmel. p.* 3219.

Lister Anim. Angl. App. t. 1. *f.* 1.

—— *Conch. t.* 149. *f.* 4.

Knorr. Vergn. 4. *t.* 25. *f.* 2.

Schröt. Flussconch. t. 4. *f.* 1.

Pennant Brit. Zool. 4. *t.* 43. *f.* 18.

Da Costa Brit. Conch. p. 225. *t.* 15. *f.* 3.

Donovan Brit. Shells, t. 73.

Montagu Test. Brit. p. 33.

Habitat in fluviis.

Testa ovali-oblonga, ponderosa, antice retuso-compressa, extus rudis nigricans, 2 vel $2\frac{1}{2}$ pollices longa ad $5\frac{1}{2}$ lata, umbonibus valde decorticatis. Intus testa albida, matricem perlarum exhibens cicatricibus duabus pro insertione musculorum, valvulis clausis nec hiantibus.

Cardinis dens conicus obtusus porrectus in alterius valvulæ dentem latum fissum. (*Linn. Fn. Suec.*)

First described and figured by Lister. Found in rapid rivers and rocky torrents in the North, in Wales, and in Devonshire.

12. *inæquivalvis.* M. testa subtriangulari; umbonibus incurvatis gibbis. *Walker Test. Min. Rar. t.* 3. *f.* 85. *t.* 1. *f.* 6. *Encyclop. Method. t.* 230. *f.* 4. a.

Montagu Test. Brit. p. 38.

Habitat in mari.

Testa

Testa vix magnitudine fabæ equinæ, crassa, rudis, sordide alba, transversim striata et rugis antiquata, extremitate altera productiore subtruncata. *Epidermis* subfusca. *Valvulæ* inæquales, superior minor. *Cardinis dens* unicus crassus triangularis in alterius testæ foveola excipitur. *Dentes laterales* nulli.

This shell is but indifferently figured by Walker in his *Testacea minuta rariora.* It has been found at Sandwich by Mr. Boys, and on the coasts of Cornwall and Devonshire by Mr. Montagu.

13. *bidentata.* M. testa subovali compressa, cardinis dentibus antrorsum porrectis, obliquis.

Montagu Test. Brit. p. 44.

Habitat in mari, testas perforans.

Testa minuta diametro $\frac{1}{8}$ poll. tenuis, sordide alba, lævis. *Cardo* alterius valvulæ dentibus duobus latis lamellatis divergentibus, alterius nullis.

Found in Salcombe Bay, Devon (burrowed in old oyster-shells) by Mr. Montagu.

14. *suborbicularis.* M. testa suborbiculari, valvulæ alterius dente primario solitario, alterius duplicato, dentibus lateralibus lamellatis.

Montagu Test. Brit. p. 39.

Habitat in mari, rupes calcareas excavans. Animal *Tethys.*

Testa $\frac{3}{8}$ poll. longa vel paulo major, $\frac{1}{4}$ poll. lata, facie *T. corneæ,* sub epidermide brunnea, flavescente-alba, glabra, transversim substriata, intus margaritacea. *Dens lateralis* remotior in valvula alterutra.

A new species discovered by Mr. Montagu in hard limestone, at Plymouth.

SOLEN.

Linn. Syst. Nat. n. 304.

1.

Vagina. S. testa lineari recta, extremitate altera marginata, cardinibus unidentatis. *Linn. Syst. Nat. p.* 1113. *n.* 33.
Linn. Gmel. p. 3223.
Rumph. Mus. t. 45. *f.* M.
Gualt. Test. t. 95. *f.* D.
D'Argenv. Conch. t. 24. *f.* K.
Lesser Testaceoth. f. 120.
Favanne Conch. t. 55. *f.* B. 1.
Pennant Brit. Zool. 4. *t.* 46. *f.* 21.
Chemn. Conch. 6. *t.* 4. *f.* 26—28.
Encyclop. Method. t. 222. *f.* 1.
Pult. in Hutch. Dorset. p. 28. *t.* 4. *f.* 8. S. marginatus.
Donovan Brit. Shells, t. 110. S. marginatus.
Montagu Test. Brit. p. 48.
Habitat in mari, sub arena.
Testa linearis glabra convexa, striis obsoletis ab extremitate truncata longitudinaliter ductis, sed versus rotundatam extremitatem curvatis, desinentibus in suturam cardinis. *Superficies externa* epidermide decidua tecta, interne glabra magisque rufescens. *Extremitas* postica crassior, oblique extrorsum truncata; antice vero rotundata. *Cardo* versus angulum posticum dente unico erecto semiovato. (*Linn. Mus. Lud. Ulr. p.* 472.)

This shell, the *Solen marginatus* of the Portland Museum, appears (as Dr. Pulteney has remarked) to be a variety of the *S. Vagina*, but can scarcely be considered as a distinct species. *Solen Vagina* has the margin not so broad, hardly discernible on the outside, and is rather longer in proportion to its width; the colour

lour also inclines more to red than ours, which is yellowish.

First noticed by Pennant, from Anglesea. Found at Weymouth by Dr. Pulteney, and near Llaugharne, Caermarthenshire, by Mr. Montagu, but rare.

2.

Siliqua. S. testa lineari recta, cardine altero bidentato. *Linn. Fauna Suecica, n.* 2131. *Syst. Nat. p.* 1113. *n.* 34. *Linn. Gmel. p.* 3223.

Lister An. Angl. t. 5. *f.* 37. *Conch. t.* 409. *f.* 255.

Planc. Conch. t. 3. *f.* 6.

Gualt. Test. t. 95. *f.* C.

Knorr Vergn. 6. *t.* 7. *f.* 1.

Pennant Brit. Zool. 4. *t.* 45. *f.* 20.

Da Costa Brit. Conch. p. 235. *t.* 17. *f.* 3.

Chemn. Conch. 6. *t.* 4. *f.* 29.

Encyclop. Method. f. 2.

Pulteney in Hutch. Dorset. p. 28. *t.* 2. *f.* 5.

Donovan Brit. Shells, t. 45.

Montagu Test. Brit. p. 46.

β *Lister Conch. t.* 413. *f.* inf.

Habitat ad littora sub arenâ.

Testa linearis, extremitate utraque truncata hiante, 6, 7, 8, pollices lata, 1¼ pollicis longa, glabra convexa; extus linea ab angulo baseos ad exteriorem angulum apicis ducta: area exteriore livida, longitudinaliter substriata, posteriore pallida, transversim substriata. *Extremitas* utraque truncato-rotundata: postica crassior. *Cardo*, ad angulum posticum: *Dente* unico subulato in altera testa, in altera vero dentibus duobus subulatis parallelis, approximatis, qui inter se excipiunt oppositum dentem. (*Linn. Mus. Lud. Ulr. p.* 473.)

β incurvata.

First noticed by Lister. Common.

3.

Novacula. S. testa lineari recta, cardinibus unidentatis.

Montagu Test. Brit. p. 47.

Habitat in mari.

Testa præcedenti affinis, nec distingui potest nisi cardinis dentibus, qui se invicem complectuntur.

Found near Llaugharne, Caermarthenshire, by Mr. Montagu.

4.

Ensis, S. testa lineari subarcuata bidentata. *Linn. Syst. Nat. p.* 1114. *n.* 35. *Linn. Gmel. p.* 3224.

Lister Anim. Angl. App. t. 2. *f.* 9. —— *Conch. t.* 411. *f.* 257.

D'Argenv. Conch. t. 24. L.

Favanne Conch. t. 55. *f.* A. 3.

Pennant Brit. Zool. t. 45. *f.* 22.

Da Costa Brit. Conch. p. 237.

Chemn. Conch. 6. *t.* 4. *f.* 30. *&* e.

Encyclop. Method. t. 223. *f.* 2.

Pulteney in Hutch. Dorset. p. 28. *t.* 4. *f.* 3

Donovan Brit. Shells, t. 50.

Montagu Test. Brit. p. 48.

Habitat in mari.

Testa ½ poll. longa, 4½ lata, utraque extremitate truncata linearis, parum admodum recurvata versus suturam posticam, tecta extus epidermide decidua, glabra, convexa, in medio transversim, ad latera vero longitudinaliter striata, ita tamen ut area anterior versus basin latior evadat. *Intus* pallida est. *Extremitas* utraque rotundata, postica crassiore. *Cardo* dentibus ut in *S. Siliqua.* (*Linn. Mus. Lud. Ulr. p.* 473.)

First figured and described by Lister.

5.

pellucidus. S. testa lineari subarcuato, dente alterius valvulæ bifido.

Pennant Brit. Zool. 4. *t.* 46. *f.* 23.

Donovan

Donovan Brit. Shells, t. 153.
Montagu Test. Brit. p. 49.
Habitat in mari.
Testa ¼ poll. longa, 1 poll. lata, tenuis, fragilis. *Epidermis* viridescens.
Cardo paululum remotior ab extremitate quam in præcedente, *dente* unico bifido in altera testa, in altera vero dentibus duobus divergentibus, qui inter se recipiunt oppositum dentem.

First described by Pennant, from Anglesea. Found on the Kentish coast; in Cornwall; and abundantly at Torcross, Devon, by Mr. Montagu.

6.

Legumen. S. testa lineari ovali recta, cardinibus mediis bidentatis, alterius bifido. *Linn. Syst. Nat. p.* 1114. *n.* 35.
Linn. Gmel. p. 3224.
Lister Conch. t. 420. *f.* 264.
Planc. Conch. t. 3. *f.* 5.
Gualt. Test. t. 91. *f.* A.
Adans. Seneg. t. 19. *f.* 3.
Born Mus. t. 2. *f.* 1. 2.
Pennant Brit. Zool. t. 46. *f.* 24.
Da Costa Brit. Conch. p. 238.
Chemn. Conch. 6. *t.* 5. *f.* 32—34.
Encyclop. Method. t. 225. *f.* 3.
Pulteney in Hutch. Dorset. t. 4. *f.* 4.
Donovan Brit. Shells, t. 53.
Montagu Test. Brit. p. 50.
Habitat in mari.
Testa ¾ poll. longa, 2¼ lata, tenuis, fragilis, alba, sub epidermide lutescente, obsolete striata, utrâque extremitate rotundata hiante, alterâ paululum angustata. *Cardo* versus medium testæ.

First figured by Lister. Found (sparingly) on the Hampshire coast, according to Da Costa; at Llaugh-

arne,

arne, Caermarthenshire, by the Rev. T. Rackett; and plentifully in Biddeford Bay, Devon, by Mr. Montagu.

7. *antiquatus.* S. testa ovali-oblonga utrinque rotundata, cardine medio nunc unidentato nunc bidentato.

Adans. Seneg. t. 19. *f.* 3.
Pennant Brit. Zool. 4. *t.* 46. *f.* 25.
Da Costa Brit. Conch. p. 238.
Schröter Flussconch. t. 9. *f.* 17.
Chemn. Conch. 6. *t.* 6. *f.* 45?
Linn. Gmel. p. 3227. S. coarctatus?
Pult. in Hutch. Dorset. p. 28. *t.* 4. *f.* 5. *ibid.* S. fragilis.
Donovan Brit. Shells, t. 114.
Montagu Test. Brit. p. 52. *& p.* 51. Solen fragilis.

Habitat in mari.

Testa 1 poll. longa, 2 lata, tenuis, subpellucida, albida, sub epidermide flavescente-brunnea, levissime transversaliter substriata, a cardine ad marginem paululum depressa. *Cardo* ad medium testæ. *Valvula* altera dente unico subulato, altera dentibus duobus dissimilibus recurvis.

First noticed by Pennant, who mistook it for *Solen Cultellus* of Linnæus. Perhaps it is *Solen coarctatus* of Gmelin, but of this we are doubtful. Recent observations of Mr. Montagu have determined *Solen fragilis* described by Dr. Pulteney to be *Solen antiquatus* in a different stage of growth.

Found at Weymouth (*Pennant*) by Mr. Bryer. Received from the Hampshire coast by Da Costa. Mr. Montagu has obtained it at Looe, in Cornwall.

8. *vespertinus.*

8. *vespertinus.* S. testa ovali-oblonga compressiuscula, cardinis sinistræ valvæ dente solitario, duplici alterius inserto. *Linn. Gmel. p.* 3228.

Pennant Brit. Zool. 4. *t.* 47. *f.* 27. Tellina depressa.

Chemn. Conch. 6. *t.* 7. *f.* 5980. a. b.

Encyclop. Method. t. 228. *f.* 2.

Pulteney in Hutch. Dorset. p. 29. *t.* 5. *f.* 1. T. variabilis.

Donovan Brit. Shells, t. 41. *f.* 2. T. variabilis.

Montagu Test. Brit. p. 54.

Habitat in mari.

Testa ad 1¼ poll. longa, fere 2¼ lata, alba radiis roseis vel purpurascentibus a cardine ad marginem divergentibus, transversim striata, intus purpurascens, crassiuscula, lævis.

First figured by Pennant. Found on the Dorset and Devon coasts.

9. *minutus.* S. testa ovali, valvularum angulis utrisque serratis. *Linn. Syst. Nat. p.* 1115. *n.* 42. *Linn. Gmel. p.* 3226.

Montagu Test. Brit. p. 53. *t.* 1. *f.* 4.

Habitat intra rupes marinas calcareas.

Testa ¼ poll. longa, ⅛ poll. lata, ovalis, striata, apice truncata. *Carinæ* a cardine versus apicem divergentes, acutæ, serrato-dentatæ. (*Linn.*)

First noticed as British by Mr. Montagu, who found it burrowed in limestone at Plymouth.

Otho Fabricius, in his *Fauna Groenlandica*, supposes the *Solen minutus* and *Mya arctica* of Linnæus to be the same shell; but he describes the latter as adhering to the roots of *Algæ*, which does not correspond with the habits of the former. The figures in *Chemn. Conch.* 6. *t.* 6. *f.* 51. 52. & *Lister Conch. t.* 426. *f.* 267. represent a larger specimen than ours.

10. *squamosus.*

10. *squamosus.* S. testa suborbiculari, cardinis dentibus duobus bifidis, ab umbone divergentibus.

Montagu Test. Brit. p. 565.

Habitat in mari.

Testa $\frac{3}{8}$ poll. longa, $\frac{1}{2}$ lata, tenuis, plana, pellucida, alba, rugis obsoletis concentricis, minutissime punctata, quasi sagrinata; *intus* alba, lævis glaberrima; striis nonnullis obsoletis ab umbone radiantibus. *Umbo* parvus centralis. *Dentes* erecti, sulco in duas laminas divisi. (*Montagu.*)

This species has been found only by Mr. Montagu, in Salcombe Bay, Devon.

11. *Pinna.* S. testa depresso-subovata, valvulis ad cardinem rectis.

Montagu Test. Brit. p. 566. *t.* 15. *f.* 3.

Habitat in mari.

Testa $\frac{3}{8}$ poll. longa, $\frac{3}{4}$ lata, tenuis, fragilis, pellucida, alba, depressa, rugis densis concentricis. *Valvula* altera paululùm concava, altera convexior. *Umbo* parvus prope extremitatem. *Margo* semicircularis. *Cardinis dens* valvulæ utriusque obtusus.

A new species, discovered by Mr. Montagu at Torcross, Devon.

TELLINA.

Linn. Syst. Nat. n. 305.

* Ovatæ *crassiusculæ.*

1. *maculata.* T. testa subovata crassiuscula, decussatim striata, maculis irregularibus. *Adams in Act. Soc. Linn.* 3. *p.*252.

Found at Tenby, South Wales.

The above species is inserted in our British catalogue on the authority of the late Mr. Adams; but it has never fallen under our own notice.

2. *Ferröensis.*

2. *Ferröensis.*

T. testa oblongo-ovata, subtiliter transversim striata, cardinis dentibus lateralibus nullis. *Linn. Gm. p.* 3235.
Lister Anim. Angl. App. t. 1. *f.* 8. *Conch. t.* 394. *f.* 241.
Petiver Gaz. t. 94. *f.* 9.
Pennant Brit. Zool. t. 47. *f.* 31.
Da Costa Brit. Conch. 209. *t.* 14. *f.* 1. T. radiata.
Born. Mus. t. 2. *f.* 5. T. angulata.
Chemn. Conch. 6. *t.* 10. *f.* 91.
Linn. Gmel. p. 3231. T. Bornii.
Encyclop. Method. t. 227. *f.* 5?
Pulteney in Hutch. Dorset. p. 29. *t.* 6. *f.* 1.
Donovan Brit. Shells, t. 60. T. trifasciata.
Montagu Test. Brit. p. 55.

Habitat in mari, rarior.

Testa ¾ poll. longa, 1⅛ lata, albescens, radiis rubris fasciculatis a cardine ad marginem, anticè productior oblique truncata. *Valvulæ* a cardine leviter carinatæ, striis transversis versus marginem anteriorem in angulum deflexis. *Cardinis Dentes* duo obliqui in valvulis ambabus.

Testa *T. Gari* maximè affinis.

First figured by Lister, who found it at Scarborough, in Yorkshire. Found also on the western coast.

We may here observe, that Lister's figure and description in the *App. An. Angl.* are referred to by Linnæus, both in his *Fauna Suecica* and *Systema Naturæ*, for *T. trifasciata*, and also *T. incarnata*; but Lister's shell does not accord with the specific characters of either. Gmelin has retained Linnæus's errors, and makes a distinct species of Born's *T. angulata*, under the name of *T. Bornii.* It is not *T. angulata* of Linnæus, but is evidently the same with *T. Ferröensis*, above described.

MISSOURI
BOTANICAL
GARDEN.

3. *inæquivalvis.* T. testa oblongo-rostrata, valvula altera plana. *Linn. Syst. Nat. p.* 1118. *n.* 56. *Linn. Gmel. p.* 3233. *Chemn. Conch.* 6. *t.* 11. *f.* 106. a. b. c. d?
Donovan Brit. Shells, t. 41. *f.* 1.
Montagu Test. Brit. p. 73.
Habitat in mari.
Testa ½ poll. longa, 1 poll. lata, lactea, lævis, pellucida. *Sutura dorsalis* recta, excurrens in rostrum obtusum patulum. *Valvula* altera plana, altera convexa. *Cardo* dentibus duobus, absque lateralibus.

First described as British by Mr. Donovan. Small ones are found on the Kentish coast.

4. *donacina. t.* 1. *f.* 7. T. testa ovata, compresso-planiuscula, læviuscula, anterius obtusissima. *Linn. Syst. Nat. p.* 1118. *n.* 59. *Linn. Gmel. p.* 3234.
Gualt. Test. t. 88. *f.* N.
Pennant Brit. Zool. n. 33?
Pulteney in Hutch. Dorset. p. 29. *t.* 12. *f.* 3. b.
Montagu Test. Brit. p. 58.
Habitat in mari.
Testa ¼ poll. longa, vel paululum major, 1 poll. lata, lævis, glabra, semipellucida, colore albo-lutescente, radiis plurimis rubris, ab umbonibus ad marginem, minutissime transversim striata, sulcis vel rugis 2 vel 3 obsoletis: facie *Donacis*. *Cardo* versus extremitatem, in altera valvula dentibus duobus, primario bifido; in altera dente unico.

First found near Sandwich, in Kent, by Mr. Boys. It has since been observed at Weymouth by Dr. Pulteney, and on the Cornish and Devonshire coasts by Mr. Montagu.

5. *punicea.* T. testa ovali-plana, æquilatera, densissime transversim striata. *Linn. Gmel. p.* 3239.

Born Mus. t. 2. *f.* 8.
Pulteney in Hutch. Dorset. p. 29. *t.* 7. *f.* 5. T. læta.
Donovan Brit. Shells, t. 123. T. inæquistriata.
Montagu Test. Brit. p. 57. T. læta.
Habitat in mari, rarior.
Testa ¾ poll. longa, 1¼ lata, depressa, delicatissime striata, colore rosaceo vel flavescente-albo, fasciis candidis, intus glaberrima punicea. *Umbones* acuti. *Cardo* in medio testæ. *Dentes* tres; lateralis remotior obsoletus.

First described as British by Dr. Pulteney. Found between Weymouth and Portland, Dorset, by Mr. Bryer.

We have substituted Gmelin's name of *T. punicea* for Dr. Pulteney's *T. læta*, as his edition of the *Systema Naturæ* is in general use, and was prior to the publication of the Dorsetshire Catalogue. This rule we have generally observed in the following pages. The name of *T. læta* was first given to this species by Dr. Solander, in a description of *Testacea* in the Portland Museum, but which he left unfinished, and which was never printed.

6.
depressa. T. testa inæquilatera, depressa, minutissime striata. *Linn. Gmel. p.* 3238.
Gualt. Test. t. 88. *f.* L.
Chemn. Conch. 6. *t.* 10. *f.* 96.
Pulteney in Hutch. Dorset. p. 29. *t.* 5. *f.* 2. T. squalida.
Montagu Test. Brit. p. 56. T. squalida.
Donovan Brit. Shells, t. 163.
Habitat in mari, rarior.
Testa 1 poll. longa, 1¼ lata, tenuis, subdiaphana, subflava seu rubescens, anterius productior, angulata, acutiuscula; posterius rotundata, sub-

tilissimè transversim striata. *Umbones* acuti. *Cardinis dentes* in valvula altera duo, in altera tres; unus remotior.

First noticed as British by Dr. Pulteney, who found it sparingly on the North shore, near Poole, and at Weymouth, Dorset. Found in Cornwall and Devonshire, by Mr. Montagu; and at Tenby, Pembrokeshire, by Mr. Donovan.

This species, called by Dr. Solander *T. squalida*, and commonly known to British collectors by that name, is evidently *T. depressa* of Gmelin, which appellation we have retained for the reasons before stated.

7.

Fabula. T. testa ovata compressa inflexa, anterius substriata, valva altera lævi, altera oblique substriata, striis reflexis. *Linn. Gmel. p.* 3239.

Gronov. Zooph. t. 18. *f.* 9.

Pulteney in Hutch. Dorset. p. 54. *t.* 12. *f.* 3. *& f.* 3. a. T. discors.

Donovan Brit. Shells, t. 97.

Montagu Test. Brit. p. 61.

Habitat in mari, rarior.

Testa $\frac{4}{10}$ poll. longa, $\frac{6}{10}$ lata, tenuis, glabra, alba seu subflava. *Tellinæ depressæ* simillima, sed vix dimidiam magnitudinem æquans, striis in valvulam sinistram vix nisi oculo armato aspiciendis. *Cardinis dentes* tres in valvula sinistra, duo in altera.

First noticed by Mr. Boys, who found it at Sandwich. It has been seen also near Tenby, S. Wales, and at Kingsbridge, Devon, by Mr. Montagu; and on Studland beach, I. of Purbeck, Dorset, by the Rev. T. Rackett.

8.

tenuis. T. testa subtriangulari-planiuscula tenerrima.

Lister Conch.. t. 404. *f.* 251.

Petiver

Petiver Gaz. t. 94. *f.* 5.
Pennant Brit. Zool. 4. *t.* 48. *f.* 29. T. planata.
Da Costa Brit. Conch. p. 210.
Chemn. Conch. 6. *t.* 11. *f.* 101?
Pulteney in Hutch. Dorset. p. 29. *t.* 5. *f.* 3. T. polita.
Donovan Brit. Shells, t. 19. fig. tres inf.
Montagu Test. Brit. p. 59.
Habitat in mari, frequens.
Testa $\frac{1}{2}$ poll. longa, $\frac{3}{4}$ lata, tenuis, fragillima, depressa, glabra, subtilissimè transversim striata, anterius subangulata, colore rubro, vel incarnato, albo vel flavo, fasciis pallidioribus concentricis variegata. *Cardo* dente unico laterali, valvulæ alterius.

First figured by Lister. Common on most of our shores.

9. *striata.* T. testa inæquilatera utrinque rotundata ex roseo-alba pellucida. *Linn. Gmel. p.* 3238.
Gualt. test. t. 89. *f.* C.
Chemn. Conch. 6. *t.* 12. *f.* 117.
Montagu Test. Brit. p. 60.
Habitat in mari.
Testa 1 poll. longa, $\frac{1}{3}$ lata, glabra, striis minutissimis concentricis, intus rosacea. *Cardinis dentes* duo, cum lateralibus remotis lamellatis. Noscitur a *T. tenui* striis transversis regularibus, et dentibus crassis lateralibus. (*Montagu.*)

Found only by Mr. Bryer, between Weymouth and Portland, Dorset.

* * * suborbiculatæ.

10. *fausta.* *t.* 1. *f.* 8. T. testa suborbiculata, striis transversis minutissimis obsoletis.
Lister Conch. t. 266. *f.* 102?
Born Mus. t. 2. *f.* 11.

Chemn.

Chemn. Conch. 6. *t.* 12. *f.* 112. bene.
Pulteney in Hutch. Dorset. p. 29. *t.* 5. *f.* 5.
Montagu Test. Brit. p. 64.
Donovan Brit. Shells, t. 98.
Habitat in mari.
Testa 1 poll. longa, $1\frac{6}{8}$ lata, crassiuscula, lactea, subdiaphana, lævis, depressior, marginibus utrinque rotundatis, intus glaberrima flavescens. *Umbones* acutiusculi. *Cardinis dens* primarius bifidus; dens lateralis valvulæ dextræ remotior et solidior.

First described as British by Dr. Pulteney, who says it is found at Weymouth, Dorset.

Gmelin has referred to the above figures in Born and Chemnitz for *T. Remies* of Linnæus; but our shell does not sufficiently agree with his description, as it cannot be said to be *rugose*.

11.
reticulata. T. testa lentiformi compressa reticulata. *Linn. Syst. t.* 1. *f.* 9. *Nat. p.* 1119. *n.* 63. *Linn. Gmel. p.* 3240.
Rumph. Mus. t. 43. *f.* E.
Chemn. Conch. 6. *t.* 12. *f.* 118. bene.
Pulteney in Hutch. Dorset. p. 29. *t.* 5. *f.* 4. T. proficua.
Montagu Test. Brit. p. 67. T. proficua.
Habitat in mari, rarissima.
Testa diametro 1 poll. vel magis, alba, compressa, striis transversis elatioribus, minus approximatis, interstitiis numerosissime longitudinaliter striatis, striis lynceis tantum oculis conspiciendis; intus flavescens. *Cardo* fossula magna lineari juxta dentes laterales.

First described as British by Dr. Pulteney, who found it on the N. Shore, Poole, and at Weymouth, Dorset.

12.
Radula. T. testa lentiformi, convexa, transversim striata, margine anteriore juxta cardinem rectiuscula.
Petiver Gaz. t. 93. *f.* 18. benè.

Favanne

Favanne Conch. t. 48. *f.* 3.
Donovan Brit. Shells, t. 130. benè. V. borealis.
Montagu Test. Brit. p. 68. *t.* 2. *f.* 1, 2. benè.
Habitat in mari.
Testa diametro $1\frac{1}{2}$ poll. ferè orbicularis, alba, vix pellucida, striis concentricis numerosis distinctissimis elatioribus recurvis, intus cretacea. *Margo* integerrimus, intus striis membranaceis longitudinalibus confertis. *Umbones* acuti, paululum prominentes. Differt a *T. reticulata* quod magis orbicularis et caret striis longitudinalibus.

First figured by Petiver, who calls it "Thread-girdled White Cockle." It has been found plentifully in Cornwall and Devonshire; and less frequently at Llaugharne, Caermarthenshire, by Mr. Montagu.

13. *crassa.* T. testa subrotunda depressa, sulcis transversalibus numerosissimis.
Lister Conch. t. 299. *f.* 136.
Pennant Brit. Zool. 4. *t.* 48. *f.* 28.
Da Costa Brit. Conch. p. 194. *t.* 13. *f.* 4. dextra. Pect. depressior.
Linn. Gmel. p. 3288. Venus crassa.
Pulteney in Hutch. Dorset. p. 30. *t.* 7. *f.* 4. T. rigida.
Montagu Test. Brit. p. 65.
Donovan Brit. Shells, t. 103. T. rigida.
Habitat in mari.
Testa $1\frac{1}{8}$ poll. longa, 2 lata, colore subalbido, interdum fasciis rosaceis, sulcis delicatissimis exarata. *Cardo* utriusque valvulæ dentibus duobus (altero bifido); valvula altera convexior, dentibus lateralibus duobus.

First figured and described by Pennant. Found on the Cornish coast, by Da Costa; at Weymouth, Dorset, by Dr. Pulteney; and on the Devonshire coast, by Mr. Montagu.

Gmelin.

Gmelin (who appears to have described too many species merely from figures) has placed this shell as a *Venus*,—an error to which he was led by indulging a *conjecture* only on Lister's plate, where the hinge is not represented.

14.
lactea. T. testa lentiformi gibba alba pellucida lævi. *Linn. Syst. Nat. p.* 1119. *n.* 69. *Linn. Gmel. p.* 3240.
Gualt. Test. t. 71. *f.* D.
Chemn. Conch. 6. *t.* 13. *f.* 125.
Pulteney in Hutch. Dorset. p. 30. *t.* 5. *f.* 9.
Montagu Test. Brit. p. 70. *t.* 2. *f.* 4.
Habitat in mari, rarior.
Testa diametro ¾ poll., alba, convexa, obsolete transversim striata, rugis nonnullis antiquata. *Cardo* in altera valvula constat dentibus duobus, in altera dente unico. Distinguitur a cæteris quod sulcus ab umbone versus suturam decurrit.

First described by Dr. Pulteney. It is found on various parts of the coast, but not common.

15.
rotunda-ta. T. testa subconvexa orbiculari, valvulis bidentatis, dente altero bifido, altero divergente.
Pulteney in Hutch. Dorset. p. 30. *t.* 5. *f.* 8. T. undata.
Montagu Test. Brit. p. 71. *t.* 2. *f.* 3.
Habitat in mari.
Testa interdum diametro 1 poll., subdiaphana, candida, striis transversis ferè obsoletis; intus glaberrima, candida, cicatrice nulla. *Umbones* recurvi, prominuli. Testa *V. undatæ* affinis, umbone vero minus producto, et dentibus duobus tantum.

Found at Poole, Dorset; and on the Cornish and Devonshire coasts.

16.
flexuosa. T. testa subgloboso-tenerrima, sinu ab umbone ad marginem decurrente.

Donovan Brit. Shells, t. 42. *f.* 2. V. sinuosa.
Montagu Test. Brit. p. 72.
Habitat in mari.
Testa diametro vix ½ poll. nivea, fragilis, rugosa. *Margo* plica seu sinu impressus. *Cardinis dens* obsoletus.

First discovered in Cornwall, by Mr. Montagu; not uncommon on the South coast of Devon.

17.

carnaria. T. testa suborbiculata, lævi, utrinque incarnata, oblique striata, striis hinc reflexis. *Linn. Syst. Nat. p.* 1119. *n.* 66. *Linn. Gmel. p.* 3240.
Lister Conch. t. 339. *f.* 176.
Born Test. t. 2. *f.* 14.
Da Costa Brit. Conch. p. 181. Card. carneosum.
Chemn. Conch. 6. *t.* 13. *f.* 126.
Pulteney in Hutch. Dorset. p. 30. *t.* 5. *f.* 6.
Donovan Brit. Shells, t. 47.
Montagu Test. Brit. p. 73.
Habitat in mari.
Testa diametro ferè 1 poll., colore rosaceo, fasciis transversis albis apicibusque roseis, parum convexa, subtilissime striata. *Area* antica constat striis obliquis a margine anteriore; postica striis transversis, undulatis; intermedia striis obliquis ab umbone versus anteriorem partem. *Cardo* dentibus congenerum.

First noticed by Da Costa, from Yorkshire, Devonshire, and Cornwall, where it is not now to be found. Dr. Pulteney notes it from Poole. It is perhaps thrown on our shores only accidentally.

18.

bimaculata. T. testa triangulo-subrotunda, latiore, lævi, albida; intus maculis duabus sanguineis subrotundis. *Linn. Fn. Suec. n.* 2135. *Syst. Nat. p.* 1120. *n.* 67. *Linn. Gmel. p.* 3240.

Da Costa Brit. Conch. p. 213.
Chemn. Conch. 6. *t.* 13. *f.* 127, & 132.
Pulteney in Hutch. Dorset. p. 30. *t.* 5. *f.* 7.
Donovan Brit. Shells, t. 19. *f.* 1, 2.
Montagu Test. Brit. p. 69.
Habitat in mari, rarior.
Testa magnitudine unguis extimi pollicis, alba, subdiaphana, maculis internis parum pellucentibus, interdum radiis purpurascentibus, minutissime transversim obsolete striata. *Cardinis Dens primarius* duplex, in medio testæ, satis manifestus.

First noticed by Da Costa, from the coasts of Hampshire and Lancashire. Dr. Pulteney and Mr. Bryer procured it from the Dorsetshire coast, near Weymouth.

19.
solidula. T. testa subglobosa, anterius subangulata.
Bonanni Recr. 2. *f.* 44. *Mus. Kirch.* 2. *f.* 43.
Lister Anim. Angl. t. 4. *f.* 25. —— *Conch. t.* 405. *f.* 250.
Petiver Gaz. t. 94. *f.* 6.
Pennant Brit. Zool. 4. *t.* 49. *f.* 32. T. carnaria.
Da Costa Brit. Conch. p. 211. *t.* 12. *f.* 4. T. rubra.
Favanne Conch. t. 49. *f.* B. 5?
Pulteney in Hutch. Dorset. p. 29. *t.* 8. *f.* 4.
Montagu Test. Brit. p. 63.
Habitat in mari, frequens.
Testa diametro fere 1 poll. solida, valde convexa, lævis, fasciis concentricis rubris, luteis, albidis variegata; intus glaberrima, rubra, alba, vel lutea. *Cardo* constat dentibus duobus parvis in alterutra valvula.

Common on many of our shores, buried 4 or 5 inches beneath the surface.

First figured and described as British by Lister. Pennant mistook this species for *T. carnaria* of Linnæus. Gmelin has referred to figures of it for varieties of

of *T. incarnata*; but it neither corresponds with Linnæus's description "*compresso-planiuscula*;" nor will it fall into the subdivision where he has placed that shell.

20. *cornea.* T. testa globosa, glabra, colore corneo, sulco transversali. *Linn. Fauna Suecica, n.* 2138. *Syst. Nat. p.* 1120. *n.* 72. *Linn. Gmel. p.* 3241.
Lister Anim. Angl. t. 2. *f.* 31. *App. t.* 1. *f.* 5.
—— *Conch. t.* 159. *f.* 14.
Gualt. Test. t. 7. *f.* C.
D'Argenv. Conch. t. 31. *f.* 9.
Pennant Brit. Zool. 4. *t.* 49. *f.* 36.
Da Costa Brit. Conch. p. 173. *t.* 13. *f.* 2. Cardium Nux.
Muller Verm. p. 202. T. rivalis.
Chemn. Conch. 6. *t.* 13. *f.* 133. a. b.
Maton in Act. Soc. Linn. 3. *t.* 13. *f.* 39, 40.
Pulteney in Hutch. Dorset. p. 31. *t.* 7. *f.* 2.
Donovan Brit. Shells, t. 95.
Montagu Test. Brit. p. 86. Cardium corneum.
β *Lister Anim. Angl. App. p.* 22.
Pulteney in Hutch. Dorset. p. 31. C. amnicum.

Habitat in rivis et paludibus copiosissima. *Incola* vivipara.
Testa magnitudine seminis pisi majoris, sub epidermide cornei coloris, subglobosa, lævis, valde gibba, latior transversim quam a cardinibus antrorsum, uno sulco striave transversali, intus cærulescens.
Varietas β duplo major absque sulco transversali.

First noticed by Lister, who also mentions the variety, which is Dr. Pulteney's *C. amnicum*. Common in rivers and ponds.

21.

lacustris. T. testa rhombea planiuscula glabra, umbone acuto.

Linn. Gmel. p. 3242.

Muller Verm. p. 204. *n.* 388.

Chemn. Conch. 6. *t.* 13. *f.* 135.

Schröt. Flussconch. p. 191. *n.* 12.

Montagu Test. Brit. p. 89. Cardium lacustre.

Habitat in rivis. *Incola* vivipara.

Testa $\frac{3}{10}$ poll. longa, $\frac{4}{10}$ lata, glabra, tenuis, pellucida, cornei coloris, sub epidermide fusca. *Valvulæ* versus marginem complanatæ seu depressæ. *Umbones* valde prominentes. *Cardo* dente primario simplici in altera valvula, in altera bifido, cum dentibus lateralibus in alterutra valvula. Distinguitur a *T. cornea*, quod subrhombea, umbones productiores, margo compressus.

Discovered by Mr. Swainson, in a river near Bulstrode. Found by Mr. Montagu near Hatch, Devon; in the Avon at Lackham; and at Wedhampton, Wilts.

22.

amnica. T. testa oblique subovata, transversim sulcata.

Gualt. Test. t. 7. *f.* C. C.

Chemn. Conch. 6. *t.* 13. *f.* 134.

Muller Verm. p. 205. *n.* 389.

Linn. Gmel. p. 3242.

Maton in Act. Soc. Linn. 3. *p.* 44. *t.* 13. *f.* 37, 38. T. rivalis.

Donovan Brit. Shells, t. 64. *f.* 2. T. rivalis.

Pulteney in Hutch. Dorset. t. 7. *f.* 2. a.

Montagu Test. Brit. p. 86. Cardium amnicum.

Habitat in rivis, rarior. *Incola* vivipara.

Testa $\frac{3}{8}$ poll. longa, $\frac{1}{2}$ lata, coloris cornei, rudis, sulcis latioribus, anterius planiuscula, *cardinis dentibus* duriusculis prominulis. Differt a *T. cornea*, quod umbones acutiores, et cardo versus extremitatem nec ad medium testæ. (*Maton.*)

First

First distinguished as British by Dr. Maton, in the 3d Vol. of the Linnean Transactions. Found in the rivers N. and S. Avon, Wilts, the Stour, and the Wareham river, Dorset.

CARDIUM.

Linn. Syst. Nat. n. 306.

1.

medium. C. testa subcordata, subangulata, valvulis angulatis, sulcatis, lævibus. *Linn. Syst. Nat. p.* 1122. *n.* 77. *M. L. U. p.* 485. *Linn. Gmel. p.* 3246.

Lister Conch. t. 316. *f.* 153.

Gualt. Test. t. 85. *f.* B.

Chemn. Conch. 6. *t.* 16. *f.* 162, 164.

Donovan. Test. Brit. t. 32. *f.* 1.

Montagu Test. Brit. p. 83.

Habitat in mari.

Testa diametro 1 poll. alba, maculis spadiceis aut fuscis variata, costis plurimis cum intermediis sulcis lævibus, valvulis altero latere quasi truncatis, medio tamen prominentibus. *Cardinis dens primarius* unicus.

First figured by Mr. Donovan. Found at Hartlepoole, Durham, by the Rev. T. Rackett.

2.

exiguum. C. testa subcordata, subangulata, sulcis recurvato-imbricatis.

Lister Conch. t. 317. *f.* 154.

Walker Test. Min. Rar. f. 83.

Linn. Gmel. p. 3255.

Donovan Brit. Shells, t. 32. *f.* 3. C. pygmæum.

Pulteney in Hutch. Dorset. t. 2. *f.* 11.

Montagu Test. Brit. p. 82.

Habitat in mari.

Testa

Testa diametro ¼ poll. vel paululum major, alba vel ochracea, intus candida, costis 20 tuberculatis, interstitiis dense transversim striatis.

First found by Mr. Boys, at Sandwich; and figured by Walker. Found also in Falmouth Harbour, by Dr. Maton.

3.

aculeatum. C. testa subcordata, sulcis convexis linea exaratis, exterius aculeato-ciliatis. *Linn. Syst. Nat. p.* 1122. *n.* 78. *Linn. Gmel. p.* 3247.

Gualt. Test. t. 72. *f.* A.

Seba Mus. 3. *t.* 86. *f.* 4.

Favanne Conch. t. 52. A.

Pennant Brit. Zool. 4. *t.* 50. *f.* 37.

Da Costa Brit. Conch. p. 175.

Chemn. Conch. 6. *t.* 15. *f.* 155—157.

Donovan Brit. Shells, t. 6.

Montagu Test. Brit. p. 77.

Habitat in mari.

Testa cordata, postice magis gibba, convexa, sulcata: sulcis obtusis, plurimis, exaratis, distantibus, versus marginem exteriorem repando-dentatum; *dentibus* acutis, distantibus, compressis. *Color* extus rufescens, intus albicans, sulcis plurimis. *Rima* ovato-oblonga, hians. *Cardinis dentes primores* in altera valvula duo, in altera vero unicus; alterno minore, *marginalis* utrinque unicus compressus, ad angulum rectum formatus. (*Linn. Mus. Lud. Ulr. p.* 485.)

First figured by Pennant, who says it is found off the Hebrides and Orkneys. Mr. Montagu has found it on the Devonshire coast.

4.

spinosum. C. testa oblique subcordata, hinc truncata, sulcis eminentioribus spinoso-aculeatis.

Sowerby Brit. Miscel. p. 65. *t.* 32.

Habitat in mari.

Testa

Testa similis *C. aculeato*, sed tenuior, magis truncata. *Spinæ* compressæ, acutæ, altero testæ latere versus cardinem, altero è cardine flexæ. (*Sowerby.*)

This species was first noticed by Mr. Sowerby, on whose authority it is here given, and who received it from the coast of Devonshire.

5. *echinatum.* C. testa subcordata, sulcis exaratis, linea ciliata, aculeis inflexis plurimis. *Linn. Fauna Suecica, n.* 2139. *Syst. Nat. p.* 1122. *n.* 79. *Linn. Gmel. p.* 3247.
Lister Anim. Angl. t. 5. *f.* 33. —— *Conch. t.* 324. *f.* 161.
Seba Mus. 3. *t.* 86. *f.* 3.
Gualt. Test. t. 72. *f.* B.
Murray in Amæn. Acad. t. 2. *f.* 19.
Muller Zool. Dan. p. 46. *t.* 13. *f.* 12.—*t* 14. *f.* 1—4.
Pennant Brit. Zool. n. 28.
Da Costa Brit. Conch. p. 176. *t.* 14. *f.* 2.
Favanne Conch. t. 52. *f.* C. 2.
Chemn. Conch. 6. *t.* 15. *f.* 158.
Pulteney in Hutch. Dorset. p. 30. *t.* 6. *f.* 2.
Donovan Brit. Shells, t. 107. *f.* 1.
Montagu Test. Brit. p. 78.

Habitat in mari, frequens.

Testa cordata, umbonibus gibba, exarata, sulcis 19 distantibus, elevatis, acuto-carinatis, ciliatis, spinis parvis, sæpius 12, erectis, subulatis, interstitiis sulcorum transversim striatis, at non in medio testæ. *Margo* dentibus obtusis alternis erectioribus; alternis interioribus apice a se invicem separatis; intus alba est, uti extus sulcata. *Cardinis dentes primores* bini recurvi, altero minore, marginis utrinque solitarius, compressus, fossula distinctus. (*Linn. Mus. Lud. Ulr. p.* 486.)

First noticed by Lister.

6. *ciliare.*

6. *ciliare.* C. testa subcordata, sulcis elevatis triquetris, extimis aculeato-ciliatis. *Linn. Syst. Nat. p.* 1122. *n.* 80. *Linn. Gmel. p.* 3243.
Lister Conch. t. 325. *f.* 162.
Gualt. Test. t. 72. *f.* C.
Pennant Brit. Zool. 4. *t.* 50. *f.* 39.
Da Costa Brit. Conch. p. 177. C. parvum.
Pulteney in Hutch. Dorset. p. 31. *t.* 4. *f.* 1.
Donovan Brit. Shells, t. 32. *f.* 2.
Montagu Test. Brit. p. 79.
Habitat in mari, rarior.
Testa diametro ¾ poll. tenuis, nivea; Sulci triquetri, latere scilicet altero adnato. (*Linn.*)

Found on the Dorset coast, by Dr. Pulteney; and in Cornwall and Devonshire, by Mr. Montagu; but rare. It has been brought also from the Orkneys.

7. *tuberculatum.* C. testa subcordata, sulcis obtusis, nodosis, transversim striatis. *Linn. Syst. Nat. p.* 1122. *n.* 81. *Linn. Gmel. p.* 3248.
Bonann. Recr. 2. *f.* 100.
Rumph. Mus. t. 48. *f.* 11.
Seba Mus. 3. *t.* 86. *f.* 7.
Pulteney in Hutch. Dorset. p. 31. *t.* 2. *f.* 2.
Donovan Brit. Shells, t. 107. *f.* 2.
Montagu Test. Brit. p. 79. & *p.* 568.
Habitat in pelago.
Testa magnitudine et figura *C. echinati*, sulcata, sulcis plurimis remotis obtusis, una cum interstitiis transversim striatis, versus latera et eorum extrema nodis aliquot obtusis. *Margo* dentatus, dentibus anterioribus cum exterioribus cohærentibus. *Color* albidus, fasciis aliquot luteofuscis.

Testa

Testa simillima *C. echinato*, fere omnibus etiam rima, cardine, dentibus, diversa tantum colore, striis, aculeis. (*Linn. Mus. Lud. Ulr. p.* 486.)

First noticed by Dr. Pulteney on the Dorset coast; found by Mr. Montagu at the mouth of the Ex, Devon. The specimens we have seen are stronger, thicker, and larger than *C. echinatum*.

8.

lævigatum. C. testa obovata, striis obsoletis longitudinalibus. *Linn. Syst. Nat p.* 1123. *n.* 88. *M. L. U. p.* 490. *Linn. Gmel. p.* 3251.

Lister Anim. Angl. t. 5. *f.* 32. — *Conch. t.* 332. *f.* 169.

Petiver Gaz. t. 93. *f.* 10.

Pennant Brit. Zool. 4. *t.* 51. *f.* 40. C. lævigatum.

Da Costa Brit. Conch. p. 178. *t.* 13. *f.* 6.

Chemn. Conch. 6. *t.* 18. *f.* 189.

Linn. Gmel. p. 3255. C. fluviatile.

Pulteney in Hutch. Dorset. p. 31. *t.* 7. *f.* 6.

Donovan Brit. Shells, t. 54. C. lævigatum.

Montagu Test. Brit. p. 80.

Habitat in mari, frequens.

Testa interdum diametro 2 poll. sub epidermide rufescente-brunneâ, lutescente- vel rufescente-alba, solida, rugis striisque nonnullis transversis. *Margo* intus crenatus. *Testæ juniores* glaberrimæ, colore rosaceo variegatæ.

This species was first noticed by Lister. Gmelin has referred to that author's figure for an erroneously constituted species, which he calls *Cardium fluviatile*.

9.

edule. C. testa antiquata, sulcis 26 obsolete recurvato-imbricatis. *Linn. Fauna Suecica, n.* 2141. *Syst. Nat. p.* 1124. *n.* 90. *Linn. Gmel. p.* 3252.

Lister Anim. Angl. t. 5. *f.* 34. — *Conch. t.* 334. *f.* 171.

Gualt. Test. t. 71. F.

Knorr Vergn. 6. *t.* 8. *f.* 4.
Pennant Brit. Zool. 4. *t.* 50. *f.* 41. C. edule.
Da Costa Brit. Conch. p. 180. *t.* 11. *f.* 1.
Chemn. Conch. 6. *t.* 19. *f.* 194.
Pulteney in Hutch. Dorset. p. 30. *t.* 11. *f.* 1.
Donovan Brit. Shells, t. 124. *f.* 2. C. rusticum.
Montagu Test. Brit. p. 76. C. edule.

Habitat in sinubus sub arena, vulgaris.

Testa magnitudine nucis juglandis, crassa, sub epidermide nigricante, lutescente-alba, rugis duobus tribusve transversis. *Sulci* longitudinales circiter 26, interjecto spatio vix striato. Hi sulci in umbonibus læves, versus marginem imbricato-rugosi, versus marginem profunde insculpti. Testa intus alba, lævis, antice violaceo-brunnea.

A variety, much larger, from the shores of Essex, is called the Ross Cockle. This is figured by Mr. Donovan for *Cardium rusticum*.

10.
rubrum. C. testa rotundata, convexa, cardinis dentibus primariis fere obsoletis, lateralibus manifestis.

Montagu Test. Brit. p. 9.
Walker Test. Min. Rar. n. 86?

Habitat in mari.

Testa minuta $\frac{1}{8}$ poll. lata, glabra, lævis, pellucida, rubra, utrinque rotundata; intus glabra, rubra, margine integerrimo. (*Montagu.*)

From the Kentish coast. (*Walker.*) Found at Falmouth, and Kingsbridge, Devon, by Mr. Montagu.

11.
nodosum. C. testa rotundata, compressa, costis 24, tuberculis numerosis, obtusis.

Montagu Test. Brit. p. 81.

Habitat in mari, rarior.

Testa diametro $\frac{3}{4}$ poll. rufescente-alba, minus convexa, costis minus acutis,

tis, tuberculis obtusioribus et distantioribus quam in testa juniore *C. echinati.* (*Montagu.*)

Discovered at Falmouth, in Cornwall, by Mr. Montagu.

12. *arcuatum.* C. testa orbiculari, transverse arcuatim striata. *Montagu Test. Brit. p.* 85. *t.* 3. *f.* 2.

Habitat in mari.

Testa Tellinæ divaricatæ affinis, diametro vix ¼ poll. tenuis, fragilis, semipellucida, alba, sed non glabra, subtilissimè striata, rugis nonnullis concentricis. *Umbones* centrales, acuti.

For the discovery of this elegant species we are indebted to Mr. Montagu; he describes it as rare in Falmouth Harbour.

13. *discors.* C. testa suborbiculari, maximè convexa, valvulis obliquè striatis. *Montagu Test. Brit. p.* 84.

Linn. Gmel. p. 3241? T. pisiformis.

Habitat in mari.

Testa magnitudine pisi, glabra, alba, striis obliquis (vix oculo nudo discernendis), in angulum acutum decurrentibus. *Cardo* dente primario in valvula alterutra; dentibus lateralibus lamellatis remotis. (*Montagu.*)

This is a doubtful species according to Mr. Montagu, who observes that he found only one dead specimen, at Falmouth, in Cornwall.

14. *elongatum.* C. testa angulato-subovali, compressa; costis 21 rotundatis, leviter rugosis. *Montagu Test. Brit. p.* 82.

Habitat in mari.

Testa diametro ¼ poll. flavescente-alba vel rufescens, postice elongata et angulata. *Umbo* non centralis. (*Montagu.*)

Found sparingly by dredging in Salcombe Bay, Devon.

15.

murica-tulum. C. testa cordata, opaca, alba, margine muricato. *Montagu Test. Brit. p.* 85.
Walker Test. Min. Rar. f. 84.
Habitat in mari, minuta.
Found at Shepey Island, Kent. Not uncommon. (*Walker.*)

MACTRA.

Linn. Syst. Nat. n. 307.

1.

dealbata. M. testa ovata, hiante, cardinis dente medio complicato,
t. 1. *f.* 10. denticuloque laterali. *Linn. Gmel. p.* 3260? M. pellucida?
Chemn. Conch. 6. *t.* 24. *f.* 234?
Pulteney in Hutch. Dorset. p. 31. *t.* 7. *f.* 7. M. dealbata.
Montagu Test. Brit. p. 95. *t.* 5. *f.* 1. M. dealbata.
Habitat in mari, rarissima.
Testa 1¼ poll. longa, 1¾ lata, tenuis, fragilis, pellucida, lævis, candida, leviter transversim striata. *Umbones* acutiusculi. *Cardo* valvulæ unius constat ex foveola triangulari, cum dente complicato, antrorsum porrecto, et denticulo laterali, postice inclinato; alterius ex foveolis duabus triangularibus.

First noticed as British by Dr. Pulteney, who received it from Mr. Bryer of Weymouth.

The figure we have given was taken from a specimen in Dr. Pulteney's cabinet. It appears to differ a little from the shell figured in *Testacea Britannica*, which was drawn from another specimen found at Weymouth by Mr. Bryer.

2.

glauca. M. testa ovata, sordide alba, glauco radiata, subtilissime transversim

transversim striata, anterius rugosa. *Linn. Gmel. p.* 3260.

Born Mus. t. 3. *f.* 11, 12?

Chemn. Conch. 6. *t.* 23. *f.* 232, 233.

Encyclop. Method. t. 256. *f.* 1.

Donovan Brit. Shells, t. 125.

Montagu Test. Brit. p. 571.

Habitat in mari.

Testa ad 3¼ poll. longa, 4¼ lata. *Umbones* retrorsum versi, rima intermedia angusta. (*Gmel.*)

Found only by Miss Pocock, on Hale Sands, Cornwall.

3. *radiata.* M. testa tenui, fragili, subtriangulari, compressa, albida, subtilissime striata, testaceo-radiata. *Donovan Brit. Shells, t.* 161.

Habitat in mari.

Testa diametro 2 poll. tenuis, rufescente-albida, radiis testaceis. *Epidermis* brunnea.

Found by Mr. Laskey upon Langston Beach, near Portsmouth, after a storm. (*Donovan.*)

4. *Stultorum.* M. testa subdiaphana, lævi, obsolete radiata, intus purpurascente, regione umbonali gibba. *Linn. Syst. Nat. p.* 1126. *n.* 99. *Linn. Gmel. p.* 3258.

Gualt. Test. t. 71. *f.* C.

Adans. Seneg. t. 17. *f.* 16?

Murray in Amæn. Acad. 8. *t.* 2. *f.* 10.

Knorr Vergn. 6. *t.* 5. *f.* 1.

Pennant Brit. Zool. 4. *t.* 49. *f.* 30.

Da Costa Brit. Conch. p. 196. *t.* 12. *f.* 3.

Born Mus. p. 50. vign.

Chemn. Conch. 6. *t.* 23. *f.* 224, 225.

Encyclop. Method. t. 256. *f.* 3.

Pulteney in Hutch. Dorset. p. 31. *t.* 8. *f.* 3
Donovan Brit. Shells, t. 106.
Montagu Test. Brit. p. 94.

Habitat in mari.

Testa ad 1¼ poll. longa, et 2 lata, fere triangularis, tenera, fragilis, lævis, subpellucida, cinerascens, radiis longitudinalibus rufescente-cinereis, lævissime transversim striata. *Umbones* minime prominentes. *Margo* exterior integerrimus, acutus. *Cardinis Dens* medius complicatus, cui adjicitur foveola triangularis. *Dentes laterales* in altera testa elongati, quibus in opposita testa respondent foveolæ.

First figured by Pennant, who mistook it for *Tellina radiata* of Linnæus.

5. *solida.* M. testa opaca, lævіuscula, subantiquata. *Linn. Syst. Nat. p.* 1126. *n.* 100. *Linn. Gmel. p.* 3259.
Rondel. Test. 1. *c.* 7.
Bonann. Recr. 2. *t.* 51.
Lister Anim. Angl. t. 4. *f.* 24. —— *Conch. t.* 253. *f.* 87.
Petiver Gaz. t. 94. *f.* 7.
Knorr Vergn. 6. *t.* 8. *f.* 5.
Penn. Brit. Zool. 4. *t.* 51. *f.* 43. A. M. solida; *t.* 52. *f.* 43.
Da Costa Brit. Conch. p. 197. *t.* 15. *f.* 1. Trigonella Zonaria, *et t.* 14. *f.* 6. T. gallina.
Chemn. Conch. 6. *t.* 23. *f.* 229, 230.
Pulteney in Hutch. Dorset. p. 31. *t.* 12. *f.* 1.
Donovan Brit. Shells, t. 61.
Montagu Test. Brit. p. 92.

Habitat frequens in mari.

Testa 1¼ poll. longa, 1¾ lata, subtriangularis, subantiquata, crassa, subdepressa, subalbida, vel flavescente-brunnea; seniores angulis aut fasciis lacteis, cinereis, vel cæruleis transversim pictæ; intus albida. *Cardo* dentibus lateralibus minus elongatis quam in præcedente. *Umbones* prominuli, acutiores. *Margo* integerrimus.

First described and figured by Lister.

6. *sub-*

6.

subtruncata. M. testa triangulata, lævi, crassiuscula, umbonibus tumidioribus.

t. 1. *f.* 10. *Da Costa Brit. Conch. p.* 198. Trigonella subtruncata.
Pennant Brit. Zool. t. 52. *f.* 42. M. Stultorum.
Donovan Brit. Shells, t. 126.
Montagu Test. Brit. p. 93.
Pulteney in Hutch. Dorset. t. 5. *f.* 10.
Habitat in mari.
Testa Mactræ solidæ affinis, sed vix dimidiam magnitudinem æquans; subalbida, omnino absque cingulis, fere equilatera.

First figured by Pennant. Not uncommon on the Southern coast.

7.

Listeri. M. testa tenera, compressa, subrotunda, foveola dentis cardinis triangulari. *Linn. Gmel. p.* 3261.
Bonanni Recr. 2. *t.* 52.
Lister Anim. Angl. t. 4. *f.* 23. —— *Conch. t.* 253. *f.* 88.
Petiver Gaz. t. 94. *f.* 3.
Pennant Brit. Zool. n. 52. V. borealis.
Da Costa Brit. Conch. p. 200. *t.* 13. *f.* 1. Trigonella plana.
Olivi Adr. t. 4. *f.* 1?
Encyclop. Method. t. 257. *f.* 4.
Pulteney in Hutch. Dorset. p. 31. *t.* 7. *f.* 1. M. compressa.
Donovan Brit. Shells, t. 64. *f.* 1. Tellina plana.
Montagu Test. Brit. p. 96. M. compressa.
Habitat in mari, ad ostia fluminum.
Testa 1¼ poll. longa, 2 lata, præcedentibus affinis, tenuis, fragilis, subdiaphana, sordide alba, interdum fasciis cinereis cincta, levissime striata, subrugosa. *Cardinis* dentes primarii duo, altero bifido; dentes laterales nulli.

First described and figured by Lister, and denominated

nated *M. Listeri* by Gmelin, in compliment to that laborious and accurate author.

8. *tenuis.* M. testa compressa, subtriangulari, equilatera; cardinis dente in altera valvula bifurcato, et dentibus lateralibus remotis.

Montagu Test. Brit. p. 572. ——— *Supplem. t.* 17. *f.* 7.

Habitat in mari, ad littora.

Testa ¼ poll. longa et lata, vel paululum major, tenera, semipellucida, alba, rugis concentricis; intus lævis, glabra; *cicatrice* conica, lata. *Valvula* una dente bifurcato et dentibus duobus lateralibus lamellatis remotis; altera dente simplici; foveola in utraque. *Umbo* centralis, productior. Distinguitur a *M. Listeri*, dentibus lateralibus; a testis junioribus *M. solidæ* et *M. Stultorum* facie et dentibus primariis, et quod una tantum valvula gaudeat dentibus lateralibus. (*Montagu.*)

Discovered by Mr. Montagu at Southampton; found also by Mr. Bryer at Weymouth, Dorset.

9. *triangularis.* M. testa subtriangulari; altera valvula dente unico crasso bifido, altera fossula triangulari inter dentículos duos. *Montagu Test. Brit. p.* 99. *t.* 3. *f.* 5.

Habitat in mari, rarior.

Testa diametro ⅛ poll. crassa, opaca, alba, paululum glabra. *Umbones* prominentes, obtusi. *Margo* crenatus.

Discovered by Mr. Montagu in Falmouth Harbour, and on the South coast of Devon.

10. *Boysii.* M. testa ovata, glabra, cardinis dente crasso, prominulo.

Wood in Act. Soc. Linn. 6. *t.* 18. *f.* 9. 12.

Montagu Test. Brit. p. 98. *t.* 3. *f.* 7.

Pulteney in Hutch. Dorset. t. 12. *f.* 7.

Habitat in mari.

Testa magnitudine fabæ minoris, tenera, alba, convexa, margine postico rotundato,

tundato, antico subangulato. *Cardinis dens* solitarius inseritur in foveolam alterius testæ, cujus dentes marginales obsoleti.

First discovered at Sandwich in Kent, by Mr. Boys; found in Salcombe and Biddeford Bays, Devonshire, by Mr. Montagu.

Called *Mactra Boysii* by Mr. Montagu, as a tribute of respect to that ingenious and indefatigable naturalist, the late W. Boys, Esq. of Sandwich.

11. *lutraria.* M. testa ovali oblonga lævi, dentibus lateralibus nullis.

Linn. Fauna Suecica, n. 2128. *Syst. Nat. p.* 1126. *n.* 101. *Linn. Gmel. p.* 3259.

Lister Anim. Angl. t. 4. *f.* 19. —— *Conch. t.* 415. *f.* 259.

Pennant Brit. Zool. 4. *t.* 52. *f.* 44. bene.

Chemn. Conch. 6. *t.* 24. *f.* 240, 241.

Encyclop. Method. t. 258. *f.* 3.

Pulteney in Hutch. Dorset. p. 32. *t.* 5. *f.* 11.

Wood in Act. Soc. Linn. 6. *t.* 16. *f.* 3, 4.

Donovan Brit. Shells, t. 58.

Montagu Test. Brit. p. 100.

β oblongata. *Chemn. Conch.* 6. *t.* 24. *f.* 238, 239?

Habitat ad littora, sub arena.

Testa ad 2½ poll. longa, et 5 lata, sub epidermide fuscâ, lutescente-alba, oblongo-ovalis, crassiuscula, vix transversim striata, utraque extremitate parum dehiscens. *Cardo* extus umbonibus minutis, intus singulæ valvulæ constans lamina rotundata, introrsum versa, concava; in altera testa juxta hunc cardinem est squamula erecta, complicata, cui in opposita testa respondet squama erecta, plana. (*Linn. Mus. Lud. Ulr. p.* 470.)

First described and figured by Lister. Not uncommon near the mouths of rivers.

12.
hians. M. testa oblonga rudi; extremitate anteriore repando-hiante.

Gualt. Test. t. 90. *f.* A. bene.
Da Costa Brit. Conch. p. 30. *t.* 17. *f.* 4. Chama magna.
Linn. Gmel. p. 3221. Mya oblonga.
Chemn. Conch. 6. *t.* 2. *f.* 12.
Pulteney in Hutch. Dorset. p. 32. *t.* 2. *f.* 4.
Wood in Act. Soc. Linn. 6. *t.* 16. *f.* 5, 6.
Donovan Brit. Shells, t. 140.
Montagu Test. Brit. p. 101.

Habitat in mari, rarior.

Testa 2 vel 2½ poll. longa, 4 vel 5 lata, crassa, sordide alba, rugis transversis inter cardinem et extremitatem anteriorem sæpius excavata. *Cardo* versus extremitatem. *Umbones* minime prominentes, incurvati.

First figured by Da Costa, who mistook it for *M. lutraria* of Linnæus. Found by Dr. Pulteney and Dr. Maton on the Dorset coast; and by Mr. Montagu in the river between Truro and Falmouth in Cornwall, and on the Devonshire coast.

This species is by Gmelin erroneously placed under the genus *Mya.*

DONAX.

Linn. Syst. Nat. n. 308.

1.
Truncu-lus. D. testa anterius lævi, intus violacea, marginibus crenatis. *Linn. Fn. Suec. n.* 2142. *Syst. Nat. p.* 1126. *n.* 105. *Linn. Gmel. p.* 3263.
Lister Anim. Angl. t. 5. *f.* 35. —— *Conch. t.* 376. *f.* 217.
Gualt. Test. t. 88. *f.* O?

Adans.

Adans. Seneg. t. 18. *f.* 2.
Pennant Brit. Zool. 4. *t.* 55. *f.* 45.
Da Costa Brit. Conch. t. 14. *f.* 3. Cuneus vittatus.
Favanne Conch. t. 49. *f.* E. 2.
Pulteney in Hutch. Dorset. p. 32. *t.* 6. *f.* 3.
Wood in Act. Soc. Linn. 6. *t.* 16. *f.* 13—16.
Donovan Brit. Shells, t. 29. *f.* 1.
Montagu Test. Brit. p. 103.
Habitat in mari.
Testa magnitudine amygdali, oblonga, sub epidermide stramineâ, alba vel flavescens, fasciis violaceis; antice oblique antrorsum truncata, subgibba, glabra; margines subtilissimè crenati, antice parum hiantes. *Cardinis dentes* bini: in altera valvula simplices, in altera didymi. *Marginales* nulli. (*Linn. Mus. Lud. Ulr. p.* 494.)

First noticed by Lister. Not uncommon on some parts of the Western coast.

2. *complanata.* D. testa oblonga lævi glaberrima, margine integerrimo.
Montagu Test. Brit. p. 106. *t.* 5. *f.* 4.
Bonanni Recr. 2. *f.* 42. *Mus. Kirch. f.* 41.
Lister Conch. t. 354. *f.* 227.
Habitat in mari.
Testa $\frac{5}{8}$ poll. longa, $1\frac{1}{4}$ lata, flavescens vel purpurascens, fascia unica, lata, alba ab umbonibus ad marginem; striis longitudinalibus expers; facie *D. Trunculi*, sed compressior, antrorsum productior.

First figured by Bonanni, who notices it from the British shores. Mr. Swainson has received it from Looe, in Cornwall; and Mr. Montagu from Milton Sands (S. Devon) and Falmouth. It is found also on the Dorset coast.

Gmelin has created a *Tellina vinacea* from Bonanni's figures, which evidently represent a *Donax*.

3.

denticula-ta. D. testa anterius obtusissima; labiis transversè rugosis, marginibus dentiformibus. *Linn. Syst. Nat. p.* 1127. *n.* 107. *Linn. Gmel. p.* 3263.

Lister Conch. t. 376. *f.* 218.

Petiver Gaz. t. 18. *f.* 4.

Gualt. Test. t. 89. *f.* D.

Adans. Seneg. t. 18. *f.* 3.

Knorr Vergn. 2. *t.* 23. *f.* 2, 3.

Pennant Brit. Zool. 4. *t.* 55. *f.* 46.

Da Costa Brit. Conch. p. 205. Cuneus truncatus.

Favanne Conch. t. 49. *f.* E. 3.

Chemn. Conch. 6. *t.* 26. *f.* 256.

Pulteney in Hutch. Dorset. p. 32. *t.* 5. *f.* 12.

Donovan Brit. Shells, t. 24. Donax crenulata.

Montagu Test. Brit. p. 104.

Habitat in mari.

Testa magnitudine nucis coryli, cuneiformis, lævis, alba, radiis seu fasciis purpureis. Striæ longitudinales, transversim delicatissime lineato-punctatæ, superficiem exarant. Area media regionis umbonalis transversè undatim rugosa; lateralis angulo truncato longitudinaliter striata, ut latus testæ. Intus purpurascens, lævissima. *Margines* acute crenulati. *Cardinis dens* duplex, lateralis, utrinque elongatus.

A rare species, said to be found at Weymouth, by Dr. Pulteney and by Mr. Bryer.

4.

plebeia. D. testa ovata lævi; margine integerrimo, cardinis dentibus validis.

Lister Conch. t. 389. *f.* 228.

Pulteney in Hutch. Dorset. p. 32. *t.* 5. *f.* 13.

Montagu Test. Brit. p. 107. *t.* 5. *f.* 2.

Habitat in mari.

Testa magnitudine fabæ equinæ, vel $\frac{1}{2}$ poll. longa, $\frac{3}{4}$ lata, colore corneo, glabra, fasciis duabus fuscis longitudinalibus.

First

First found at Weymouth by the late Duchess Dowager of Portland (*Dr. Pulteney*):—since, at the same place, by Mr. Bryer.

5.

castanea. D. testa ovata lævi ; rugis transversis antiquatis, cardinis dentibus utriusque valvulæ duobus, altero maximo, altero parvo.

Montagu Test. Brit. p. 573. —— *Supplem. t.* 17. *f.* 2.

Habitat in mari.

Testa ¼ poll. longa, ⅜ lata, crassa, glaberrima, castaneo colore, radio unico, fusco, curvo, ab umbone ad marginem ; intus castanea, glabra, cicatrice lata. *Umbones* obtusi. *Dentes laterales* nulli. (*Montagu.*)

A new species, discovered by Mr. Montagu in St. Austle Bay, Cornwall.

6.

Irus. D. testa ovali, rugis membranaceis erectis striatis cincta.

Linn. Syst. Nat. p. 1128. *n.* 111. *Linn. Gmel. p.* 3265.

Gualt. Test. t. 95. *f.* A.

Borl. Cornw. t. 38. *f.* 23.

Pennant Brit. Zool. n. 35. Tellina cornubiensis.

Da Costa Brit. Conch. t. 15. *f.* 6. sin. Cuneus foliatus.

Chemn. Conch. 6. *t.* 26. *f.* 268—270.

Pulteney in Hutch. Dorset. p. 32. *t.* 12. *f.* 6.

Donovan Brit. Shells, t. 29. *f.* 2.

Montagu Test. Brit. p. 108. *& p.* 573.

Habitat in mari, saxa perterebrans. *Animal* Ascidia. (*Montagu.*)

Testa magnitudine phaseoli, ovalis, anterius obtusissima, rugosa ; rugis arcuatis, reflexo-erectis, fere crispis, exterioribus sensim anterioribus majoribus. Intus alba, lævis, margine integerrimo. *Cardo* utrinque dentibus duobus minimis, altero bifido. (*Linn.*)

First noticed as an English shell by Borlase. Not uncommon on the Western coast, burrowed in limestone.

VENUS.

Linn. Syst. Nat. n. 309.

ANIMAL TETHYS.

Testa **bivalvis, labiis margini antico incumbentibus.**

Cardo **dentibus 3; omnibus approximatis, lateralibus apice divergentibus.**

1. * antice muricatæ.

spinifera. V. testa subtriangulari; sulcis numerosis, marginibus areæ anterioris spinosis.

Montagu Test. Brit. p. 577. —— *Supplem. t.* 17. *f.* 1.

Habitat **in mari, rarissima.**

Testa ¼ poll. longa, paululum latior, flavescente-alba, sulcis 36 concentricis, parallelis, elevatis, æqualibus, subrecurvatis exarata; anterius versus sinum sulci bini, convergentes in spinas obtusas, abbreviatas, recurvatas, decurrunt. *Valvula* altera dente unico primario, et laminis lateralibus; altera dentibus duobus. *Margo* lævis. (*Montagu.*)

A rare species, found only by Mr. Montagu, in sand from Salcombe Bay, Devon.

2. * * antice muticæ. † subcordatæ.

verrucosa. V. testa sulcis membranaceis striatis, antrorsum imprimis verrucosis; margine crenulato. *Linn. Syst. Nat. p.* 1130. *n.* 116. *Linn. Gmel. p.* 3269.

Lister Conch. t. 284. *f.* 122.

Petiver Gaz. t. 93. *f.* 17.

Gualt. Test. t. 75. *f.* H.

Borlase Cornw. t. 28. *f.* 32.

Born. Test. t. 4. *f.* 7.

Pennant Brit. Zool. 4. *t.* 54. *f.* 48. V. Erycina.

Da Costa Brit. Conch. p. 185. *t.* 12. *f.* 1. P. strigatus; & *p.* 193. *t.* 13. *f.* 4. sin. P. membranaceus.

Favanne Conch. t. 47. *f.* E. 9.

Wood

Wood in Act. Linn. Soc. 6. *t.* 17. *f.* 5, 6.
Chemn. Conch. 6. *t.* 29. *f.* 299, 300.
Pulteney in Hutch. Dorset. p. 33. *t.* 8. *f.* 1.
Donovan Brit. Shells, t. 44. *& t.* 115. V. cancellata.
Montagu Test. Brit. p. 112. *& p.* 574.
Habitat in mari.
Testa diametro 2 poll., crassa, opaca, sordide alba, vel ferruginea, sulcis numerosis reflexis, antice verrucosis; seu nodulosis, exasperata; intus alba. *Umbones* incurvati. *Areola* impressa, cordata.

First noticed by Lister. Not uncommon on the Western coast.

3. *lactea.* V. testa subcordata, subcompressa: striis concentricis, crassis, elevatis, obtusis, antrorsum subtruncata. *Donovan Brit. Shells, t.* 149.
Habitat in mari.
Testa diametro 1¼ poll., lactea; *V. verrucosæ* valde affinis. Quomodo distinguitur a sequente?

Found on the Western coast, according to Mr. Donovan.

4. *Casina.* *t.* 2. *f.* 1. V. testa sulcis transversis recurvis acutis, margine postico crenulato; pone areolam canaliculato. *Linn. Syst. Nat. p.* 1130. *n.* 117. *Linn. Gmel. p.* 3269.
Pennant Brit. Zool. 4. *t.* 54. *f.* 48. A. V. Erycina.
Chemn. Conch. 6. *t.* 29. *f.* 301, 302.
Schröt. Einl. in Conch. 3. *p.* 115. *t.* 8. *f.* 6.
Habitat in mari, rarissima.
Testa diametro 1½ poll., crassa, albida; lineis angulatis, subfuscis varia. Plicæ numerosæ, nunc latæ, nunc angustiores, fere coadunatæ. *Cardo* crassus.

This species corresponds exactly with the figures in Chemnitz and Schröter, which are cited by Gmelin for *Venus Casina* of Linnæus. Whether it be that shell is perhaps

perhaps rather doubtful, as Linnæus has given a very short description, and no reference to a figure. We received our specimen as British; and others have since been found by Mr. M'Leay on the coast of Caithnessshire.

5.

fasciata. V. testa subcordata, costis transversis, latis, depressis.
Lister Conch. t. 295. *f.* 132.
Da Costa Brit. Conch. p. 188. *t.* 13. *f.* 3. P. fasciatus.
Chemn. Conch. 6. *t.* 27. *f.* 277, 278.
Linn. Gmel. p. 3268. V. Paphia β?
Encyclop. Method. t. 276. *f.* 2.
Pulteney in Hutch. Dorset. p. 33. *t.* 7. *f.* 3. V. Paphia.
Montagu Test. Brit. p. 110. V. Paphia.
Donovan Brit. Shells, t. 170.

Habitat in mari.

Testa diametro ad 1 poll., sæpius minor, crassa, alba, spadiceo-radiata, vel lineis angulatis, spadiceo-nebulosa, interdum fasciis tribus spadiceis; intus purpurascens. Cinguli seu costæ nunc 10—12 recurvati, nunc in 4—5 coadunati. *Sinus* lanceolatus, canaliculato-concavus. *Areola* impressa, cordata. *Margo* crenulatus.

First described as British by Da Costa. Not uncommon on the Western shores, and on the coasts of Wales, and of Caithness.

This species was considered by Dr. Pulteney as *V. Paphia* of Linnæus in a depauperated state; but it differs materially from that shell both in outline and specific character, "rugis incrassatis, pube rugis attenuatis." See Donovan's description of *Venus fasciata*. (*Brit. Shells, t.* 170.)

Da Costa's *Pectunculus Vetula, p.* 190. *t.* 13. *f.* 5. is *Venus Paphia* of Linnæus. It was figured and described

by that author, from a foreign specimen through mistake, but has never been found on the British shores.

6.
minima. V. testa subcordata compressiuscula, glaberrima, transversim striata, maculis duabus rubris ad marginem.
Montagu Test. Brit. p. 121. *t.* 3. *f.* 3.
Habitat in mari, rarior.
Testa ¼ poll. longa, paululum latior, crassa, carnaria, interdum lineis duabus albis ab umbone divergentibus; intus candida, glaberrima. *Margo* integerrimus. *Striæ* latæ, concentricæ. *Cardinis dentes* manifesti.
Discovered at Falmouth by Mr. Montagu.

7.
sulcata. V. testa subtriangulari, lævi, rugis obsoletis; sinu ob-
t. 2. *f.* 2. longo-ovali; margine interiore denticulato.
Da Costa Brit. Conch. p. 195. Pect. truncatus?
Montagu Test. Brit. p. 131.
Habitat in mari.
Testa ungue pollicis extimi paulo major, vel diametro ad 1 poll. alba, sub epidermide brunnea, fere plana. *Umbones* acutiusculi. Testa *V. fasciatæ* valde affinis; distinguitur quod magis triangularis, quod antice rectiuscula, et sinus oblongo-ovalis.
From the North of Scotland. (*Mr. Swainson.*)

8.
Scotica. V. testa subcordata, subcompressa, sulcis transversis
t. 2. *f.* 3. parallelis regularibus, margine lævi.
Habitat in mari.
Testa $\frac{6}{10}$ poll. longa, $\frac{5}{10}$ lata, albida. *Sulci* 15 vel 16 obtusi, valdè regulares, neque membranacei. *Testa* magis triangularis quam *V. verrucosa*, neque antrorsum subtruncata.
A new species, discovered by Mr. M'Leay on the coast of Caithness-shire.

9.
subcordata. V. testa subcordata, striis costatis longitudinalibus, sulcis transversis, remotis, elevatis. *Montagu Test. Brit. p.* 121. *t.* 3. *f.* 1.

Linn. Gmel. p. 3270. V. cancellata?

Habitat in mari.

Testa diametro ¼ poll. alba, crassa, intus glabra, alba. *Umbones* incurvati. *Cardinis dentes* validi. *Margo* subcrenatus.

Mr. Montagu doubts whether this species be British, as he found it only once, in sand from Falmouth harbour. We have not had an opportunity of examining it; but it appears from the figure and description to resemble specimens of *Venus cancellata* in the British Museum.

10.
Gallina. V. testa subcordata radiata, striis transversis, obtusis, cardinis dente postico minimo, margine crenulato. *Linn. Fauna Suecica, n.* 2143. *Syst. Nat. p.* 1130. *n.* 119. *Linn. Gmel. p.* 3270.

Lister Conch. t. 282. *f.* 120.

Pennant Brit. Zool. 4. *t.* 56. *f.* 50. V. rugosa.

Born. Mus. p. 57. vign. 6.

Chemn. Conch. 6. *t.* 30. *f.* 308—310.

Da Costa Brit. Conch. p. 191. *t.* 12. *f.* 2. Pect. striatulus; *& p.* 192. P. sulcatus.

Wood in Act. Soc. Linn. 6. *t.* 17. *f.* 7, 8.

Pulteney in Hutch. Dorset. p. 33. *t.* 8. *f.* 2. V. Casina.

Donovan Brit. Shells, t. 68. V. striatula.

Montagu Test. Brit. p. 113. V. striatula.

Habitat in mari, frequens.

Testa 1 poll. longa, 1¼ lata, alba, radiis latis, spadiceis, angulato-linearibus marmorata; intus alba. *Margo* crenatus. *Umbones* recurvi, acuti. *Striæ* apparent crenulatæ, quamvis non sint. *Areola* impressa, ovata.

11. *trian-*

11.
triangularis. V. testa subtriangulari, cardine crasso; valvula altera dentibus tribus, altera duobus et lamina laterali semilunari. *Montagu Test. Brit. p.* 577. — *Supplem. t.* 17. *f.* 3.

Habitat in mari, rarissima.

Testa diametro $\frac{1}{2}$ poll. crassa, flavescente-alba, rugis nonnullis concentricis obsoletis; intus lævis. *Valvula* una dentibus duobus, uno bifido, altero triangulari, juxta laminam lateralem; altera dentibus tribus, duobus valde divergentibus (ad recipiendum dentem oppositum triangularem), denticuloque laterali. *Margo* lævis. *Umbones* centrales, maxime prominentes. (*Montagu.*)

A new and rare species, found only by Mr. Montagu, on the coast of Devonshire.

12.
Islandica. V. testa transversim striata, rudi, labris hiantibus. *Linn. Syst. Nat. p.* 1131. *n.* 24. *Linn. Gmel. p.* 3271.
Lister Anim. Angl. t. 4. *f.* 22. — *Conch. t.* 272. *f.* 108.
Gualt. Test. t. 85. *f.* B.
Olafs Isl. t. 11. *f.* 8.
Pennant Brit. Zool. 4. *t.* 53. *f.* 47. V. mercenaria.
Da Costa Brit. Conch. p. 183. *t.* 14. *f.* 5. Pect. crassus.
Chemn. Conch. 6. *t.* 32. *f.* 341.
Encyclop. Method. t. 272. *f.* 6.
Wood in Act. Soc. Linn. 6. *t.* 17. *f.* 1, 2.
Pulteney in Hutch. Dorset. p. 38. *t.* 6. *f.* 5.
Donovan Brit. Shells, t. 77.
Montagu Test. Brit. p. 114.

Habitat in mari.

Testa ad $3\frac{1}{4}$ poll. longa, 4 lata, sub epidermide nigricante-fuscâ, albida seu ferruginea, subcordata, ventricosa, solida, antice versus umbones obsoletè

obsoletè carinata, intus cretacea. *Margo* integerrimus, acutissimus. *Umbones* recurvati, contigui. *Areola* inconspicua. *Cardinis dentes* 3, medius didymus, lateralis sub areola, linearis, obliquus, crenulatus.

First figured and described by Lister. Common.

13.

Chione. V. testa transverse subrugosa, lævi, cardinis dente posteriori lanceolato. *Linn. Syst. Nat. p.* 1131. *n.* 125. *Linn. Gmel. p.* 3272.

Lister Conch. t. 269. *f.* 105.
D'Argenv. Conch. t. 24. *f.* C.
Gualt. Test. t. 86. *f.* A.
Knorr Vergn. 6. *t.* 4. *f.* 1.
Pennant Brit. Zool. 4. *t.* 51. *f. intermedia.*
Da Costa Brit. Conch. p. 184. *t.* 14. *f.* 7. Pect. glaber.
Favanne Conch. t. 47. B.
Chemn. Conch. 6. *t.* 32. *f.* 343.
Encyclop. Method. t. 266. *f.* 1.
Wood in Act. Soc. Linn. 6. *t.* 17. *f.* 3, 4.
Pulteney in Hutch. Dorset. p. 33. *t.* 6. *f.* 7.
Donovan Brit. Shells, t. 17.
Montagu Test. Brit. p. 115.

Testa cordato-ovata, oblonga, compressa, glaberrima, striis transversis obsoletis, coloris castanei, radiis fuscis, intus alba. *Margo* integerrimus. *Areola* depressa, ovata, acuta. *Umbones* recurvati. *Cardinis dentes* 4, duobus mediis approximatis, lanceolatis; laterales 2 divaricati, sub areolâ, major acutus, sub labris linearis, obliquus. (*Linn. Mus. Lud. Ulr. p.* 500.)

First figured by Lister. Not uncommon on the Cornish coast; more rare on the Dorset coast. It is found also in Cheshire.

14.
ovata. V. testa ovata, longitudinaliter sulcata, transversim ob-
t. 2. f. 4. solete striata. *Maton West. Counties*, 1. *p.* 178.
Pennant Brit. Zool. 4. *t.* 56. *f.* 56.
Walker Test. Min. Rar. f. 82.
Pulteney in Hutch. Dorset. t. 1. *f.* 15.
Montagu Test. Brit. p. 120.
Habitat in mari.
Testa vix magnitudine fabæ equinæ, depressior, subalbida seu brunnea; intus alba vel purpurascens. *Cardo* fere ad medium testæ.

First figured by Pennant. Found on the Kentish and Devonshire coasts; and at Falmouth, in Cornwall.

15.
deflorata. V. testa ovali, longitudinaliter rugosa, anterius violacea.
Linn. Syst. Nat. p. 1133. *n.* 132. *Linn. Gmel. p.* 3274.
Lister Conch. t. 425. *f.* 273?
Knorr Vergn. 2. *t.* 20. *f.* 5; *&* 5. *t.* 11. *f.* 2.
Pennant Brit. Zool. 4. *t.* 57. *f.* 54.
Favanne Conch. t. 49. P.
Chemn. Conch. 6. *t.* 9. *f.* 79. 81.
Encyclop. Method. t. 231. *f.* 4.
Montagu Test. Brit. p. 123. *t.* 3. *f.* 4.
Habitat in mari, rarissima.
Testa 1 poll. longa, $1\frac{3}{4}$ lata, tenuis, flavescente-alba, radiis purpurascentibus, longitudinaliter striata, striis undulatis, rugis nonnullis transversis; intus violacea. *Cardinis dentes* utriusque testæ duo.

First described as a British shell by Pennant. Found at Falmouth by Mr. Montagu; but it must be considered as one of the rarest British species.

16.
granulata. V. testa rotundata, striis elevatis decussata, margine crenulato. *Linn. Gmel. p.* 3277.
Born Mus. t. 4. *f.* 5, 6.

Chemn.

Chemn. Conch. 6. *t.* 30. *f.* 313.
Donovan Brit. Shells, t. 83.
Montagu Test. Brit. p. 122.
Habitat in mari.
Testa diametro 1 poll. crassa, tumidiuscula, alba, maculis et lituris nigrescentibus; intus glaberrima, purpurea. *Umbones* incurvati, minime prominentes. *Areola* cordata, nigricans.

Discovered at Falmouth by Mr. Montagu.

†† orbiculatæ.

17. *tigerina. t.* 2. *f.* 5. V. testa lentiformi, striis decussatis; areola impressa, ovata. *Linn. Syst. Nat. p.* 1134. *n.* 141. *Linn. Gmel. p.* 3283.
Rumph. Mus. t. 43. *f.* H.
Lister Conch. p. 1133.
Gualt. Test. t. 77. *f.* A.
Knorr Vergn. 4. *t.* 2. *f.* 1; *& t.* 3. *f.* 2; 6. *t.* 37. *f.* 2.
Favanne Conch. t. 47. *f.* D. 1.
Chemn. Conch. 7. *t.* 37. *f.* 190, 191.
Pulteney in Hutch. Dorset. p. 34. *t.* 1. *f.* 14.
Montagu Test. Brit. p. 119. *t.* 4. *f.* 1.
Habitat in mari.
Testa diametro vix 1 poll. parum convexa, tota alba, striis longitudinalibus et transversis numerosissimis reticulata. Intus alba seu flavescens, glabra. *Umbones* recurvi, acutiusculi, obsoleti. *Sinus* oblongus, hians. *Areola* ovata. *Cardinis dentes* 3 vel 4, intermediis didymis. (*Linn. Mus. Lud. Ulr. p.* 503.)

First ascertained to be English by Dr. Maton, who found it on Studland Beach, Dorset; on the N. Shore, Poole; and at Weymouth.

18. *undata.* V. testa orbiculari, transversim striata, rugosa, umbonibus prominentibus.
Pennant Brit. Zool. 4. *t.* 55. *f.* 51.

Wood

Wood in Act. Soc. Linn. 6. *t.* 17. *f.* 17, 18.
Donovan Brit. Shells, t. 121.
Montagu Test. Brit. p. 118.
Habitat in mari.
Testa diametro 1¼ poll. tenuis, alba, intus glabra, margine integerrimo. Distinguitur a *Tellina rotundata* quod cardo crassus, altera valvula dentibus tribus, altera duobus, margo undatus, et cicatrix lata, usque ad medium testæ.

First figured by Pennant. Found near Llaugharne, Caermarthenshire; and on the Cornish and Devonshire coasts, by Mr. Montagu.

19.
exoleta. V. testa lentiformi, transversim striata, pallida, obsolete
t. 3. *f.* 1. radiata, areola cordata. *Linn. Fn. Suec. n.* 2145. *Syst. Nat. p.* 2134. *n.* 142. *M. L. U. p.* 506. *Linn. Gm. p.* 3284.
Lister Conch. t. 291. *f.* 127. benè, & 293. *f.* 129.
Petiver Gaz. t. 93. *f.* 15.
Gualt. Test. t. 75. *f.* F.
Adans. Seneg. t. 16. *f.* 4.
Born Test. t. 5. *f.* 9.
Da Costa Brit. Conch. p. 187. *t.* 12. *f.* 5. P. capillaceus.
Favanne Conch. t. 48. *f.* F. 1.
Chemn. Conch. 7. *f.* 402. 404.
Encyclop. Method. t. 279. *f.* 4, 5.
Wood in Act. Soc. Linn. 6. *t.* 17. *f.* 9, 10.
Pulteney in Hutch. Dorset. p. 34. *t.* 8. *f.* 5.
Donovan Brit. Shells, t. 42. *f.* 1.
Montagu Test. Brit. p. 116.
t. 3. *f.* 2. β *Lister Conch. t.* 290. *f.* 126; & *t.* 289. *f.* 125.
Chemn. Conch. 7. *f.* 403.
Pulteney in Hutch. Dorset. p. 34. *t.* 1. *f.* 14. V. lincta.
Habitat in mari.

Testa

Testa diametro 2 poll. crassa, convexiuscula, albida, interdum fasciis rufescente-brunneis; intus alba. *Striæ* numerosæ, filiformes; paucæ evidentiores. *Cicatrix* obliquè transversalis.

Varietas β minus orbicularis, ab umbone declivis.

First noticed by Lister. It is not uncommon.

20. †††† ovales, supra rimam subangulatæ.

decussata. V. testa ovata, antice angulata, decussatim striata.
t. 2. *f.* 6. *Linn. Syst. Nat. p.* 1135. *n.* 149. *Linn. Gmel. p.* 3294.
Lister Anim. Angl. t. 4. *f.* 20. —— *Conch. t.* 423. *f.* 271.
Gualt. Test. t. 85. *f.* E. L.
Pennant Brit. Zool. 4. *t.* 57. *f.* 53. V. literata.
Da Costa Brit. Conch. p. 102. *t.* 14. *f.* 4. C. reticulatus.
Chemn. Conch. 6. *t.* 43. *f.* 455, 456.
Pulteney in Hutch. Dorset. p. 34. *t.* 6. *f.* 4.
Donovan Brit. Shells, t. 67.
Montagu Test. Brit. p. 124.

Habitat in mari, frequens.

Testa ad 2 poll. longa, 3 lata, ovata, antice latior, vix angulata, striis longitudinalibus, et sæpe transversalibus, confertis. *Color* variat, sæpius pallide ferrugineus, interdum radiis maculis, aut lituris fuscis; intus albus. *Areola* minima, retusa. *Sinus* longus angustus, margine interno utplurimum cæruleo.

This species was first noticed by Lister.

21.
Pullastra. V. testa oblongo-ovata, antice angulata, delicatissime
t. 2. *f.* 7. decussatim striata.
Chemn. Conch. 7. *t.* 42. *f.* 439.
Wood in Act. Soc. Linn. 6. *t.* 17. *f.* 13, 14.
Montagu Test. Brit. p. 125.
Pulteney in Hutch. Dorset. t. 1. *f.* 8.

Habitat in mari, frequens. *Incola* edulis.

Testa 1¾ poll. longa, 2 poll. lata, brunnea vel albida, præcedenti valde affinis,

nis, sed minor; striis delicatissimis anterius in rugas pauciores decurrentibus; lituris cinereis, brunneis, vel purpureis variegata et radiata. *Cicatrix* productior. *Cardinis dentes* tres approximati, pectinati; medius sæpius bifidus.—Varietas nivea, anterius maculis nigricantibus angulatis notata, et *sinu* nigricante.

First described by Mr. Wood.

22.

perforans. V. testa subrhomboidea, antice truncata, rugosa, postice transversim striata. *Montagu Test. Brit. p.* 127 *t.* 3. *f.* 6.

Habitat ad littora, saxis calcareis innidulans.

Testa $\frac{3}{8}$ poll. longa, $\frac{1}{8}$ lata, flavescente-brunnea, striis transversis posticis in rugas anteriores longitudinales decurrentibus. *Cardo* dentibus tribus, duobus longis, recurvatis, altero parvo; his facillime à testa juniore *V. decussatæ* distinguitur.

A new species, discovered by Mr. Montàgu, burrowed in limestone at Plymouth, where it is found in abundance.

23.

virginea. V. testa subovata, anterius subangulata; striis transversis inæquilineatis, sinu tumido. *Linn. Syst. Nat.* *t.* 2. *f.* 8. *p.* 1136. *n.* 150. *Linn. Gmel. p.* 3294.

Lister Conch. t. 403. *f.* 247.

Pennant Brit. Zool. t. 55. *f.* dextra. V. Rhomboides.

Da Costa Brit. Conch. p. 204. Cuneus fasciatus.

Chemn. Conch. 7. *t.* 42. *f.* 443. *& t.* 43. *f.* 457. a. b. c.

Encyclop. Method. t. 283. *f.* 2.

Pulteney in Hutch. Dorset. p. 34. *t.* 13. *f.* 1.

Montagu Test. Brit. p. 129.

Habitat in mari.

Testa V. decussatæ similis, sed magis rotundata, minor; striis perpendicularibus nullis distincta, rarius rubella, interdum radiata, maculis cinereis aut lineis angularibus fuscis varia. Intus alba vel rubescens; striis

striis transversis nunc magis nunc minus conspicuis; sulcis 2 vel 3 obsoletis. (*Gmel.*)

First figured by Lister. It is found on the Western coast, but not common.

24. *aurea.* *t.* 2. *f.* 9. V. testa subcordata, nitida, transversim subtiliter sulcata, longitudinaliter striata; sinu indistincto. *Linn. Gmel. p.* 3288.

Lister Conch. t. 404. *f.* 249.

Petiver Gaz. t. 94. *f.* 8.

Pennant Brit. Zool. t. 57. *f.* 34.

Chemn. Conch. 7. *t.* 43. *f.* 458.

Pulteney in Hutch. Dorset. p. 54. *t.* 13. *f.* 3. V. nebulosa.

Montagu Test. Brit. p. 129.

Habitat in mari.

Testa 1 poll. longa, 1⅛ lata, colore subalbido vel flavicante, lituris seu maculis cinereis; magis triangularis quam *V. virginea*, cum margine ab umbonibus declivi, neque producto ut in illa testa; intus aliquando purpurea. *Cardinis dentes* sæpius bifidi.

First noticed and figured by Lister. Not uncommon on many parts of the Western coast.

25. *sinuosa.* V. testa tenui, convexa, margine profunde sinuato. *Pennant Brit. Zool.* 4. *t.* 55. *f.* 51. A.

This species, so imperfectly described by Pennant, is perhaps not distinct from *Tellina flexuosa*, or possibly only a deformed shell.

CHAMA.

Linn. Syst. Nat. n. 311.

1. *Cor.* Ch. testa subrotunda, lævi, umbonibus recurvatis, rima hiante. *Linn. Syst. Nat. p.* 1137. *n.* 154. *M. L. U. p.* 516. *Linn. Gmel. p.* 3299.

Bonann.

Bonann. Recr. 2. *f.* 88.
Lister Conch. t. 275. *f.* 111.
Rumph. Mus. t. 48. *f.* 10.
Ginann. Adriat. 2. *t.* 19. *f.* 129.
Gualt. Test. t. 71. *f.* E.
Seb. Mus. 3. *t.* 96. *f.* 1.
Favanne Conch. t. 53. C.
Chemn. Conch. 7. *t.* 48. *f.* 483.
Encyclop. Method. t. 232. *f.* 1.
Donovan Brit. Shells, t. 134.
Montagu Test. Brit. p. 134.
Habitat in mari.
Testa diametro 3 poll. crassa, subrotunda, exalbido-lutescens. *Umbones* evidentiores, cornu arietis in modum oblique versus areolam convoluti.

Found near the North Foreland, by Mr. Swainson; and also on the shores of the Hebrides, by Mr. Agnew.

ARCA.

Linn. Syst. Nat. n. 312.

1. * Margine integro; umbonibus inflexis.

Noæ. A. testa oblonga, striata, apice emarginata, umbonibus incurvis, remotissimis; margine integerrimo, hiante.
Linn. Syst. Nat. p. 1140. *n.* 169. *Linn. Gmel. p.* 3306.
Lister Conch. t. 368. *f.* 208.
Rumph. Mus. t. 44. *f.* P.
Adans. Seneg. t. 18. *f.* 9.
Borlase Cornw. t 28. *f.* 15, 16.
Knorr Vergn. 1. *t.* 16. *f.* 1, 2.
Pennant Brit. Zool. n. 57. A. tortuosa.
Chemn. Conch. 7. *t.* 63. *f.* 531. a.

Donovan Brit. Shells, t. 158. *f.* 1. 2.
Montagu Test. Brit. p. 139. *t.* 4. *f.* 3.

Habitat in mari, rarissima.

Testa navicularis, antice compressa, retusa et fere biloba, extus rugosa; striis elevatis, longitudinalibus, distantibus. *Umbones* remotissimi incurvati, area interjecta plano-concava, ad angulum rectum striata in rhombos. *Margo* exterior in medio hians, rima barbata. *Color* nebulosus, albo-fuscus. *Cardo* rectus, serratus, lamellis numerosissimis, minutissimis, æqualibus. (*Linn. Mus. Lud. Ulr. p.* 117.)

First noticed as British by Borlase. Found on Milton Sands, Devon, by Mr. Montagu; and on the shores of Cornwall, by Miss Pocock. Size half an inch in breadth; extremely rare.

2.
minuta. A. testa oblongo-ovali; extremitate altera rotundata, altera subtruncato-angulata.

Walker Test. Min. Rar. f. 81.
Linn. Gmel. p. 3309.
Chemn. Conch. 10. *t.* 170. *f.* 1657, 1658.
O. Fabr. Fn. Groenl. p. 414. *n.* 415.
Adams in Act. Soc. Linn. 3. *p.* 64?
Donovan Brit. Shells, t. 78. A. caudata.
Montagu Test. Brit. p. 140.

Habitat in mari.

Testa $\frac{3}{8}$ poll. longa, $\frac{1}{4}$ lata, albida, fasciis lacteis cincta, transversim striata, in angulum producta, angulo vix truncato. *Margo* integerrimus. *Umbones* acuti. *Cardo* constat foveola cum dentibus lateralibus angulatis, numerosis.

First found by Mr. Boys at Sandwich, in Kent, where it is not uncommon.

3. ** Margine crenato; umbonibus recurvatis.
lactea. A. testa subrhomboidea, obsolete decussatim striata, diaphana;

diaphana ; umbonibus recurvis, margine crenulato.
Linn. Syst. Nat. p. 1141. *n.* 173. *Linn. Gmel. p.* 3309.
Lister Conch. t. 235. *f.* 69.
Petiver Gaz. t. 73. *f.* 1.
Pennant Brit. Zool. 4. *t.* 58. *f.* 59. A. barbata.
Da Costa Brit. Conch. p. 171. *t.* 11. *f.* 5.
Pulteney in Hutch. Dorset. p. 54. *t.* 11. *f.* 5. A. crinita.
Chemn. Conch. 7. *t.* 55. *f.* 547.
Donovan Brit. Shells, t. 135.
Montagu Test. Brit. p. 138.
Habitat in mari.
Testa magnitudine fabæ equinæ, albida, epidermide pilosa fusca obtecta, transversim inæqualiter sulcata.

First noticed and figured by Lister. It is found plentifully on many parts of the Western coast. Shells with the animal are rare.

This species agrees with Linnæus's description of *A. lactea*, if we except the crenulated margin, which our shell does not appear to possess.

4. *Glycymeris.* t. 3. f. 3.

* * * Margine crenato ; umbonibus inflexis.

A. testa suborbiculata, gibba, substriata, umbonibus incurvis, margine crenato. *Linn. Syst. Nat. p.* 1143. *n.* 181. *Linn. Gmel. p.* 3313.
Bellon. Aquat. 408.
Rondel. Test. 31.
Bonann. Recr. 2. *t.* 60 ?
Lister Conch. t. 247. *f.* 82.
Gualt. Test. t. 82. *f.* C. D.
Adans. Seneg. t. 18. *f.* 10 ?
Knorr Vergn. 6. *t.* 14. *f.* 3.
Chemn. Conch. 7. *t.* 57. *f.* 564.
Habitat in mari.

Testa

Testa orbicularis, convexa, crassa, margine acuto, striata transversim striis obsoletis, vix manifestis, maculata maculis flavescentibus, fere fasciatis. Intus alba excavata. *Umbones* distantes, inter quas *Rima* hians, acutissima, minime striata. *Cardo dentibus* circiter 10 transversis. (*Linn. Mus. Lud. Ulr. p.* 521.)—Testa diametro ad 2¼ poll.

Mr. Sowerby first ascertained this species to be British. He found it on the coast of Cornwall. It is not uncommon on the shores of Guernsey.

5.

pilosa. *t.* 3. *f.* 4.

A. testa suborbiculata, æquilatera, pilosa, umbonibus incurvis, margine crenato. *Linn. Syst. Nat. p.* 1143. *n.* 182. *Linn. Gmel. p.* 3314.

Lister Conch. t. 247. *f.* 82.

Petiver Gaz. t. 79. *f.* 7.

Gualt. Test. t. 73. *f.* A.

Knorr Vergn. 2. *t.* 23. *f.* 6; & *t.* 12. *f.* 4.

Pennant Brit. Zool. 4. *t.* 58. *f.* 58. A. Glycymeris.

Da Costa Brit. Conch. p. 168. *t.* 11. *f.* 2. Glycymeris orbicularis.

Born Mus. t. 6. *f.* 1. a. b.

Chemn. Conch. 7. *t.* 57. *f.* 565. 566.

Encyclop. Method. t. 310. *f.* 2.

Pulteney in Hutch. Dorset. p. 35. *t.* 11. *f.* 2.

Donovan Brit. Shells, t. 37. A. Glycymeris.

Montagu Test. Brit. p. 136.

Habitat in mari.

Testa diametro ad 2½ poll. crassa, ponderosa, solida, fere orbicularis, albida, lineis angulatis castanei coloris, maculata, longitudinaliter manifeste transversim leviter striata, epidermide villosa holosericea tecta. Intus alba, interdum fusco-castanea. *Margo* crenatus. *Cardinis dentes* obliqui, seu ad centrum tendentes.

"Testa simillima *A. Glycymeri,* sed testa perfecte regularis. *A. Glycymeris* vero parum irregularis." (*Linn.*)

For

For want of attention to the distinction here pointed out by Linnæus, this species has frequently been mistaken for *Arca Glycymeris.*

A. pilosa is not uncommon on the Western coast of England. It was first figured by Lister.

6.

Nucleus. A. testa oblique ovata, læviuscula; cardine triangulari.

Linn. Syst. Nat. p. 1140. *Linn. Gmel. p.* 3314.

Petiver Gaz. t. 17. *f.* 9.

Pennant Brit. Zool. 4. *n.* 58.

Da Costa Brit. Conch. p. 170. *t.* 15. *f.* 6. dextra. Glycymeris argentea.

Chemn. Conch. 7. *t.* 58. *f.* 574.

Pulteney in Hutch. Dorset. p. 35. *t.* 12. *f.* 6.

Donovan Brit. Shells, t. 63.

Montagu Test. Brit. p. 141.

Habitat in mari, frequens.

Testa diametro ½ poll. alba, sub epidermide olivacea, striis longitudinalibus subtilissimis, rugis paucis transversis. *Umbones* acuti, incurvi. Intus argentea. *Margo* internus subtilissime crenulatus. *Cardo* arcuatus, denticulis numerosis.

OSTREA.

Linn. Syst. Nat. n. 313.

Animal Tethys.

Testa bivalvis, inæquivalvis, subaurita.

Cardo edentulus, fossula cava ovata, striisque lateralibus transversis.

Dissimilar in habit as we must acknowledge the species of this genus to be, they are for the most part aptly included under the Linnean character; and unless we deviate from the rules of that

that system (according to which the generic distinctions are founded chiefly on the conformation of the hinge) the *Pectines* cannot be separated from the *Ostreæ* without manifest impropriety. Even a difference in the animals will not warrant such a division; for the discriminative marks adopted by Linnæus are professedly *external*; to which circumstance is ascribable, in our opinion, the great utility of his method. And if what may be called the *accessorial* part of his characters be in any case converted into a *basis* for generic *diagnosis*, the simplicity and consistency of the system are destroyed.

1. * *Pectines*, auriculati æquilateres.

maxima. O. testa radiis rotundatis, longitudinaliter striatis. *Linn. Fauna Suecica, n.* 2148. *Syst. Nat. p.* 1144. *n.* 185. *Linn. Gmel. p.* 3315.
Bonann. Recr. 2. *f.* 8.
Lister Anim. Angl. t. 5. *f.* 29. —— *Conch. t.* 163. *f.* 1.
Petiver Mus. 86. *n.* 829.
Gualt. Test. t. 98. *f.* A. B.
Knorr Vergn. 2. *t.* 14. *f.* 1.
Bytem. App. t. 12. *f.* 50.
Pennant Brit. Zool. 4. *t.* 59. *f.* 61. Pecten maximus.
Da Costa Brit. Conch. p. 140. *t.* 9. *f.* 3.
Chemn. Conch. 7. *t.* 60. *f.* 585.
Pulteney in Hutch. Dorset. p. 35. *t.* 9. *f.* 3.
Donovan Brit. Shells, t. 49.
Montagu Test. Brit. p. 143.
Habitat in mari; *Incola* edulis.
Testa diametro 5 poll. *Operculum* inter aures quasi gula depressa. *Fornix* radiis 14 rotundatis, striatis longitudinaliter una cum interstitiis. *Auriculæ* æquales, rectangulæ, striatæ. *Color* extus rufo- seu ferrugineo-nebulosus, intus albus. (*Linn. Mus. Lud. Ulr. p.* 522.)

First

Not uncommon on many parts of the Western coast.

2.
Jacobæa. O. testa radiis quatuordecim angulatis, longitudinaliter striatis. *Linn. Syst. Nat. p.* 1144. *n.* 186. *Linn. Gmel. p.* 3316.
Bonann. Recr. 2. *f.* 3, 4.
Lister Conch. t. 165. *f.* 2. & 166. *f.* 3.
Gualt. Test. t. 99. *f.* B.
Knorr Vergn. 2. *t.* 22. *f.* 3. 5; *t.* 25. *f.* 4. & 6; *t.* 38. *f.* 1.
Pennant Brit. Zool. 4. *t.* 60. *f.* 62.
Da Costa Brit. Conch. p. 143. *n.* 2. } Pecten Jacobæus.
Favanne Conch. t. 54. *f.* L.
Pulteney in Hutch. Dorset. p. 36. *t.* 13. *f.* 2.
Montagu Test. Brit. p. 144.
Donovan Brit. Shells, t. 137.

Habitat in mari.

Testa diametro 3 poll. *Operculum* obtusius plicatum, totum transversim striatum, basi depressum, auriculis concavis. *Fornix* albus, plicatus, angulis rectis. Plicæ longitudinaliter sulcis 4 seu 5 striatæ, lateribus perpendiculares; interstitia plicarum transverse striata. *Auriculæ* æquales, rectangulæ; operculi læves, fornicis striatæ. *Color* fornicis albus; operculi extus purpureus. (*Linn. Mus. Lud. Ulr. p.* 522.)

First noticed as British by Pennant. Found at Poole and Weymouth, Dorset; and at Scarborough, Yorkshire; but very rare.

3. ** *Pectines,* auricula altera intus ciliato-spinosa.
varia. O. testa æquivalvi, radiis triginta scabris, compresso-carinatis, uniaurita. *Linn. Syst. Nat. p.* 1146. *n.* 199. *M. L. U. p.* 529. *Linn. Gmel. p.* 3324.
Lister Conch. t. 180. *f.* 17; *t.* 181. *f.* 18; *t.* 189. *f.* 23.
Act. Paris. 1711. *t.* 2. *f.* 12.

D'Argenv. Conch. t. 24. *f.* H.
Gualt. Test. t. 73. *f.* C. N. *&* 74. *f.* R.
Knorr Vergn. 2. t. 18. *f.* 3. 5; *t.* 11. *f.* 3; *& t.* 12. *f.* 5. 6.
Pennant Brit. Zool. 4. *t.* 61. *f.* 64. Pecten varius.
Da Costa Brit. Conch. p. 151. *t.* 10. *f.* 1, 2, 4, 5, 7, 9. Pecten monotis.
Favanne Conch. 54. *f.* B. 3, 4.
Chemn. Conch. 7. *t.* 66. *f.* 633, 634.
Pulteney in Hutch. Dorset. p. 30. *t.* 10. *f.* 1, 2, 4, 5, 7, 9.
Donovan Brit. Shells, t. 1. *f.* 1.
Montagu Test. Brit. p. 146.

Habitat in mari, frequens.

Testa 2 poll. longa, 1½ lata, ovalis, striis compressis echinatis. *Fornix* operculo paulo convexior. *Auricula* operculi altera fere obsoleta. *Color* ruber, fusco-nebulosus, fulvus, flavus, albus, purpurascens, vel variegatus. Intus concolor.

4. *operculatis.* O. testa radiis viginti, subrotunda, decussatim striato-scabra, operculo convexiore. *Linn. Syst. Nat. p.* 1147. *n.* 202. *Linn. Gmel. p.* 3325.

Lister Anim. Angl. t. 5. *f.* 30. —— *Conch. t.* 190. *f.* 27. *&* 191. *f.* 28.
Petiver Gaz. t. 94. *f.* 1.
Seb. Mus. 3. *t.* 87. *f.* 15.
Knorr Vergn. 2. *t.* 3. *f.* 2, 3.
Pennant Brit. Zool. 4. *t.* 60. *f.* 63. Pecten subrufus.
Da Costa Brit. Conch. p. 144. *t.* 9. *f.* 1, 2, 4, 5.
Favanne Conch. t. 54. *f.* L. 2.
Chemn. Conch. 7. *t.* 67. *f.* 646.
Wood in Act. Soc. Linn. 6. *t.* 18. *f.* 7, 8.
Pulteney in Hutch. Dorset. p. 36. *t.* 9. *f.* 1, 2, 4, 5.

Donovan

Donovan Brit. Shells, t. 12. P. subrufus.
Montagu Test. Brit. p. 145.

Habitat in mari, frequens; *Incola* edulis.

Testa suborbiculata, mediocris, superficie decussate subtilissime striato-scabra, radiis 20 seu 22 convexis. *Fornix* minus quam operculum convexus, quod singulare. *Auricula* altera major; fornicis subtus excisa, ciliato-aculeata. Hiat maxime inter auriculas. (*Mus. Lud. Ulr. p.* 530.)—*Color* purpurascente-rufus, albus, flavus, vel brunneus, sæpe marmoratus, intus albus.

5.
lineata. O. testa radiis viginti longitudinaliter punctato-scabris, operculo convexiore.

Da Costa Brit. Conch. p. 147. *t.* 10. *f.* 8. P. lineatus.
Pulteney in Hutch. Dorset. p. 36. *t.* 10. *f.* 8.
Donovan Brit. Shells, t. 116.
Montagu Test. Brit. p. 147.

Habitat in mari.

Testa præcedenti affinis, alba, lineis coccineis.

First distinguished by Dr. Pulteney, who sent it to Da Costa. It has been found at Weymouth, by Dr. Maton; and in Cornwall and Devonshire, by Mr. Montagu; but not common.

6.
sinuosa. O. testa subglobosa, longitudinaliter striata, auriculis æqualibus. *Linn. Gmel. p.* 3319.

Lister Anim. Angl. t. 5. *f.* 31. —— *Conch. t.* 172. *f.* 9.
Petiver Gaz. t. 94. *f.* 2.
Pennant Brit. Zool. 4. *t.* 61. *f.* 65. Pecten Pusio.
Da Costa Brit. Conch. p. 148. *t.* 10. *f.* 3, 6. P. distortus.
Pult. in Hutch. Dorset. p. 36. *t.* 10. *f.* 3, 6. O. distorta.
Donovan Brit. Shells, t. 34. P. Pusio.
Montagu Test. Brit. p. 148. P. distortus.

Habitat in mari, saxa perterebrans.

Testa ad 2 poll. longa, 1⅓ lata, sordide-alba, ferruginea, seu violacea, albo et rubro marmorata, margine crenato. Intus alba. *Operculum* oblongatum, planiusculum, striis numerosis evidentioribus, intermediis minoribus. *Fornix* maxime irregularis, sinuosus seu gibbosus. *Auriculæ* æquales, transversim striatæ.

First figured and described by Lister.

This shell does not answer to Linnæus's description of *O. Pusio*, for which it has been mistaken by Pennant.

7.
obsoleta. O. testa æquivalvi, uniaurita, pellucida, radiis tenuibus numerossissimis.

Pennant Brit. Zool. 4. *n.* 66. *t.* 61. *f.* 66.

Da Costa Brit. Conch. p. 153. *n.* 7. Pecten parvus.

Donovan Brit. Shells, t. 1. *f.* 2.

Montagu Test. Brit. p. 149.

Habitat in mari, rarissima.

Testa diametro ¾ poll. colore purpurascente-brunneo, striis minutissimis obliquis. *Margo* denticulatus, rotundatus. *Auricula* pectinata.

First noticed by Pennant; found on the Cornish coast, according to Da Costa.

8.
lævis. O. testa suborbiculari, pellucida, lævi, auriculis inæqua-
t. 3. *f.* 5. libus.

Pennant Brit. Zool. 4. *n.* 67.

Montagu Test. Brit. p. 150. *t.* 4. *f.* 4.

Habitat in mari.

Testa ⅝ poll. longa, tenuis, glabra, rugis nonnullis obsoletis concentricis. *Auriculæ* longitudinaliter dense striatæ. Striæ transversæ delicatissimæ. *Color* sordide-flavus, intus candidus.

First noticed by Pennant, from Anglesea. It has been found in Falmouth and Salcombe Bays, by Mr. Montagu, but rarely.

Pecten

Pecten glaber of Pennant (*n.* 68) does not answer to the description of *Ostrea glabra* of Linnæus.

Never having met with this species, we are unable to make any additional remarks of our own.

*** Rudes, vulgo *Ostreæ* dictæ.

9. *edulis.* O. testa semiorbiculata, membranis imbricatis, undulatis, valvula altera plana, integerrima. *Linn. Fauna Suec. n.* 2149. *Syst. Nat. p.* 1148. *n.* 211. *M. L. U. p.* 534. *Linn. Gmel. p.* 3334.

Rond. Aquat. 2. *p.* 37.

Gesn. Aqu. p. 645.

Aldrovand. Exsang. p. 482.

Merrett Pin. p. 193.

Lister Anim. Angl. t. 4. *f.* 26.

—— *Conch. t.* 193. *f.* 30. & 194. *f.* 31.

Bonanni Recr. 2. *p.* 108. *f.* 70.

Sibbald Mus. Balf. p. 161.

Wallace Ork. p. 42.

Leigh Lanc. p. 134.

Smith Cork, p. 318.

Borlase Cornw. p. 274.

Wallis Northumb. p. 394.

Dale Harwich, p. 383.

Gualt. Test. t. 102. *f.* A. B.

Knorr Vergn. 3. *t.* 24. *f.* 2; & *t.* 25. *f.* 2.

Ginann. Adr. 2. *t.* 18. *f.* 137.

Bast. Op. subsec. 2. *p.* 62. *t.* 8. *f.* 1, 2, 8, 9.

Martini Geschichte der Natur. 4 Band.

Pennant Brit. Zool. 4. *t.* 62. *f.* 70. inf.

Da Costa Brit. Conch. p. 154. *t.* 11. *f.* 6.

Chemn.

Chemn. Conch. 8. *t.* 74. *f.* 682.
Wood in Act. Soc. Linn. 6. *t.* 18. *f.* 9, 10.
Pulteney in Hutch. Dorset. p. 36. *t.* 11. *f.* 6.
Montagu Test. Brit. p. 151.

Habitat in mari, scopulis affixa, aut limo immersa.

Testa vulgaris, rudis, brunnea, intus glabra, alba, nitens; forma et magnitudine plurimum variat. *Cardo* est cavitas ad extremitatem acutiorem. (*Linn.*)

ANOMIA.

Linn. Syst. Nat. n. 314.

1. *Ephippium.* A. testa suborbiculata, rugoso-plicata, planiore, perforata. *Linn. Syst. Nat. p.* 1150. *n.* 218. *Linn. Gmel. p.* 3340.
Lister Conch. t. 204. *f.* 38.
D'Argenv. Conch. t. 19. *f.* C.
Pennant Brit. Zool. 4. *t.* 62. fig. superior.
Chemn. Conch. 8. *t.* 76. *f.* 694, 695.
Da Costa Brit. Conch. p. 165. *t.* 11. *f.* 3.
Favanne Conch. t. 41. B.
Wood in Act. Soc. Linn. 6. *t.* 18. *f.* 11, 12.
Pulteney in Hutch. Dorset. p. 37. *t.* 11. *f.* 3.
Donovan Brit. Shells, t. 26.

Habitat in mari, testaceis adhærens.

Testa interdum diametro 3 poll. tenera, sublamellata, fragilis, pellucida, alba vel submargaritacea, variis coloribus micans, valde irregularis, corporum quibus adhæret flexuram æmulans, intus utplurimum virescente-margaritacea. *Operculum* planiusculum, foramine ovato pertusum, ad cardinem fissum.

2. *Squamula.* A. testa orbiculata, integerrima, plana; margine altero gibbo,

gibbo, lævi. *Linn. Fauna Suecica. n.* 2151. *Syst. Nat. p.* 1151. *n.* 221. *Linn. Gmel. p.* 3341.
Linn. It. Wgoth. p. 171. Patella.
Pennant Brit. Zool. n. 71.
Da Costa Brit. Conch. p. 167.
Walker Test. Min. Rar. f. 80.
Chemn. Conch. 8. *t.* 77. *f.* 696.
Pulteney in Hutch. Dorset. p. 37. *t.* 13. *f.* 4.
Montagu Test. Brit. p. 156. *& p.* 561.

Habitat in mari, super *Cancros* et *Testacea*.
Testa diametro $\frac{1}{4}$ poll. tenuissima, lævis, alba seu argentea, pellucida. *Valvula* altera convexior, umbone acuto; altera plana, perforata.
An non Testa junior præcedentis?

3.
aculeata. A. testa subrotunda, aculeata, vertice lævi posterius recurvo. *Linn. Gmel. p.* 3346.
Gualt. Test. t. 77. fig. inf.
Mull. Zool. Dan. Prod. p. 3005.
Chemn. Conch. 8. *t.* 77. *f.* 702.
Montagu Test. Brit. p. 157. *t.* 4. *f.* 5.

Habitat in mari, radicibus algarum adhærens.
Testa diametro $\frac{3}{8}$ poll., subalbida, valva inferiori plana, lævi, ad verticem perforata. (*Gmel.*)

First noticed as British by Mr. Montagu, in Devonshire and Cornwall.

4.
undulata. A. testæ margine crenato, valva planiore tenuissima lævi, foramine ovali amplo pertusa, convexa, striis transversis arcuatis longitudinales undulatas decussantibus. *Linn. Gmel. p.* 3346.
Lister Anim. Angl. t. 4. *f.* 27. —— *Conch. t.* 202. *f.* 36.
Mull. Zool. Dan. Prodr. p. 3003?

Da

Da Costa Brit. Conch. p. 162. *t.* 11. *f.* 4. O. striata.
Chemn. Conch. 8. *t.* 77. *f.* 699.
Encyclop. Method. t. 184. *f.* 5, 6.
Pulteney in Hutch. Dorset. p. 36. *t.* 11. *f.* 4. O. striata.
Donovan Brit. Shells, t. 45. O. striata.
Montagu Test. Brit. p. 153. *& p.* 157. *t.* 4. *f.* 6. *& p.* 580.

Habitat in mari, testaceis adhærens.

Testa diametro 1 poll., tenuis, pellucida, plana, interdum rufescente-brunnea inter costas versus marginem. Differt ab *A. aculeata*, quod major, et costæ distantiores nunquam spinosæ. (*Montagu.*)

5.
cymbiformis. A. testa oblonga, rudi, substriata, umbone incurvato, valvula planiore perforata.
t. 3. *f.* 6. *Schröt. Einl. in Conch.* 3. *t.* 9. *f.* 13.

Habitat in mari.

Testa $\frac{5}{8}$ poll. longa, $\frac{3}{8}$ lata, tenerrima, albida. *A. Grypho* similis.

Several specimens, all resembling the figure we have given, were discovered by Mr. M'Leay, on the coast of Caithness-shire, N. B.

MYTILUS.

Linn. Syst. Nat. n. 315.

1.
Crista galli. M. testa plicata, spinosa, labro utroque scabro. *Linn. Syst. Nat. p.* 1155. *n.* 243. *Linn. Gmel. p.* 3350.
Rumph. Mus. t. 47. *f.* D.
Gualt. Test. t. 104. *f.* E.
D'Argenv. Conch. t. 23. *f.* D.
Sloane Jam. 1. *t.* 18. *f.* 1.
Chemn. Conch. 8. *t.* 75. *f.* 683, 684; *& t.* 73. *f.* 685.
Montagu Test. Brit. p. 166.

Habitat

Habitat in mari, navium carinis affixa.

Testa ferrugineo-opaca, striata punctis elevatis, acute palmata, complicata, digitis profunde incurvis ad angulos acutos antrorsum retrorsumque; intus glabra, notata juxta marginem serie punctorum eminentium, extus armata spinis compressis, quæ intus concava, et ubi attingunt solida adjacentia adhærent instar radicum. *Cardo* simplicissimus, linearis, edentulus, secundum marginem insculptus. (*Linn. Mus. Lud. Ulr. p.* 537.)

This species has been found adhering to bottoms of ships. (*Montagu Test. Brit. p.* 167.)

2.

rugosus. M. testa rhomboideo-ovali, rugosa, obtusa, antiquata.

Linn. Syst. Nat. p. 1156. *n.* 249. *Linn. Gmel. p.* 3352.
Lister Anim. Angl. t. 4. *f.* 21. —— *Conch. t.* 426. *f.* 227.
Pennant Brit. Zool. t. 63. *f.* 72.
Da Costa Brit. Conch. p. 223.
Schröt. Einl. in Conch. t. 9. *f.* 14. a. b.
Pulteney in Hutch. Dorset. p. 37. *t.* 13. *f.* 5.
Donovan Brit. Shells, t. 141.
Montagu Test. Brit. p. 164.

Habitat in mari, rupes perterebrans.

Testa 1 poll. longa, ½ lata, sed forma et magnitudine variat; rudis, sordide alba sub epidermide flavescente, rugis transversis. *Cardo* versus extremitatem, margine cardinali rotundato.

Found plentifully on many of our shores.

3.

edulis. M. testa læviuscula, violacea, valvis anterius subcarinatis, posterius retusis, umbonibus acuminatis. *Linn. Fn. Suec. n.* 2156. *Syst. Nat. p.* 1157. *Linn. Gm. p.* 3353.

Rondel. Aquat. 2. *p.* 46.
Aldrov. Exsang. p. 512.
Gesner Aquat. p. 277.

Bellon Aquat. p. 397.
Bonann. Recr. 2. *f.* 30. *Mus. Kirch.* 2. *f.* 29.
Lister Anim. Angl. t. 4. *f.* 28. —— *Conch. t.* 362. *f.* 200.
Mery in Act. Paris. 1711. *t.* 3. *f.* 4, 5.
Gualt. Test. t. 91. *f.* E.
Ginann. Adr. 2. *p.* 36. *t.* 23. *f.* 168.
Knorr Vergn. 4. *t.* 15. *f.* 1; & 5. *t.* 25. *f.* 1.
Baster Opusc. subseciv. 3. *p.* 101. *t.* 11. *f.* 9, 11.
Pennant Brit. Zool. 4. *t.* 63. *f.* 73.
Da Costa Brit. Conch. p. 210. *t.* 15. *f.* 5. M. vulgaris.
Wood in Act. Soc. Linn. 6. *t.* 18. *f.* 13, 14.
Pulteney in Hutch. Dorset. p. 38. *t.* 12. *f.* 5.
Donovan Brit. Shells, t. 128.
Montagu Test. Brit. p. 159.

Habitat in mari, vulgatissima, ad scopulos bysso affixa.

Testa lævis, crassa, violaceo-nigra. *Valvulæ* cymbiformes, multum concavæ, margine altero semicirculari, altero recto et fere concavo. *Cardo* fossula intra apicem absque denticulo. Par testarum distinctarum in plano juxta se positarum refert ungulas pecoris binas, medio inter se dehiscentes, basi conjunctas. (*Linn. Mus. Lud. Ulr. p.* 541.)

4. *incurvatus.* t. 3. *f.* 7.

M. testa læviuscula, violacea, valvis incurvatis.
Lister Conch. t. 357. *f.* 195, 196.
Pennant Brit. Zool. t. 64. *f.* 74.
Montagu Test. Brit. p. 160.

Habitat in mari.

Testa præcedenti affinis, sed vix dimidiam magnitudinem æquans, latior, postice curva. An distincta species?

First noticed as British by Pennant; found on the Devonshire coast.

5. *pellu-*

5.

pellucidus. M. testa oblonga, lævi, tenerrima, pellucida, longitudinaliter violaceo-radiata.

Pennant Brit. Zool. t. 63. *f.* 75.
Chemn. Conch. 8. *t.* 84. *f.* 755.
Donovan Brit. Shells, t. 81.
Montagu Test. Brit. p. 160.

Habitat in mari.

Testa 2 poll. longa, 1 lata, albida, sub epidermide lutescente. *M. eduli* affinis, sed tenerrima, lævissima, glaberrima.

First noticed by Pennant. Found in Anglesea, by the Rev. Hugh Davies; and in Flintshire, by Mr. Donovan.

6.

ungulatus. M. testa lævi, subcurvata; margine posteriori inflexo, cardine terminali, bidentato. *Linn. Syst. Nat. p.* 1157. *n.* 254. *Linn. Gmel. p.* 3354.

Lister Conch. t. 364. *f.* 203.
Gualt. Test. t. 91. *f.* E.
Regenf. Conch. t. 4. *f.* 47.
Chemn. Conch. 8. *t.* 85. *f.* 756.
Donovan Brit. Shells, t. 128. *f.* 2.

Habitat in mari, rarissima.

Testa rudis, fragilis, livida, striata transversim quasi ex lineis imbricatis. Sutura postica linea recta excurrit ultra apicem obtusum. *Cardo* rima longitudine suturæ eique parallela. Par testarum distinctarum, in plano juxta se positarum, refert ungulas pecoris binas medio a se invicem dehiscentes et basi divaricatas. (*Linn. Mus. Lud. Ulr. p.* 541.)

First noticed as British by Mr. Donovan. Found on the coast of Cornwall, by Miss Pocock.

7.

Modiolus. M. testa lævi, margine anteriore carinato, umbonibus gibbis, cardine sublaterali. *Linn. Syst. Nat. p.* 1158. *n.* 256. *Linn. Gmel. p.* 3354.

Lister Conch. t. 359. *f.* 128.
D'Argenv. Conch. t. 22. *f.* C.
Gualt. Test. t. 91. *f.* H.
Adans. Seneg. t. 15. *f.* 1.
Knorr Vergn. 4. *t.* 15. *f.* 3.
Pennant Brit. Zool. t. 66. *f.* 77.
Da Costa Brit. Conch. p. 219. *t.* 15. *f.* 5.
Chemn. Conch. 8. *t.* 85. *f.* 757.
Pulteney in Hutch. Dorset. p. 38.
Donovan Brit. Shells, t. 23.
Montagu Test. Brit. p. 163.

Testa junior.

Linn. Fauna Suecica, n. 2157. *Syst. Nat. p.* 1156. *n.* 252.
Linn. Gmel. p. 3353. M. barbatus.
Ginan. Adr. t. 27. *f.* 169.
Gualt. Test. t. 91. *f.* H. fig. med.
Pennant Brit. Zool. t. 64. *f.* 76. A. M. curtus.
Chemn. Conch. 8. *t.* 84. *f.* 749.
Pulteney in Hutch. Dorset. p. 38. *t.* 12. *f.* 5. dextra.
M. barbatus.
Donovan Brit. Shells, t. 70. M. barbatus.
Montagu Test. Brit. p. 161. M. barbatus.

Habitat in mari.

Testa perniformis, crassa, rugosa, sub epidermide tenui nigricans, seu fusca. *Margo* anterior ad basin longius fere excurrit quam apex; dorsum vero attenuatur versus apicem, qui obtusus. Gibbositas testæ versus dorsum postice flectitur. *Cardo* fossula intra apicem et marginem anticum, qua itaque non terminalis est. (*Linn. Mus. Lud. Ulr. p.* 542.)

Testæ juniores antice barbatæ; saxis, testaceis onustæ.

First noticed as an English species by Pennant. It is sometimes dredged up from deep water, on various parts of the coast.

Dr.

Dr. Pulteney first suspected *M. barbatus* of Linnæus to be the young of *M. Modiolus.* The truth of this surmise has been confirmed by Mr. M'Leay, who has had an opportunity of examining this species in all the stages of its growth.

8.
umbilicatus. M. testa obovata, antiquata, rugosa, margine posteriore alterius valvulæ involuto.

Pennant Brit. Zool. 4. *t.* 65. *f.* 76.
Da Costa Brit. Conch. p. 220. M. curvirostratus.
Donovan Brit. Shells, t. 40.
Montagu Test. Brit. p. 164.

Habitat in pelago.

Testa magnitudine, forma, et colore *M. Modioli,* cui maxime affinis; rudis, crassa, rugosa, epidermide nigricante-fusca; sæpius serpulis aliisque testaceis obtecta. An varietas solum?

Discovered by the Rev. Hugh Davies, off Priestholme Island, Anglesea.

9.
cygneus. M. testa ovata, anterius compressiuscula, fragilissima, *t.* 3. A. *f.* 2. cardine laterali. *Linn. Syst. Nat. p.* 1158. *n.* 257.
β. *Linn. Gmel. p.* 3355.
t. 3. A. *f.* 3. *Lister Anim. Angl. App. t.* 1. *f.* 3. —— *Conch. t.* 156. *f.* 11.
Gualt. Test. t. 7. *f.* F.
D'Argenv. Conch. t. 31. *f.* 10. sin.
Pennant Brit. Zool. t. 67. *f.* 78.
Da Costa Brit. Conch. p. 214. *t.* 15. *f.* 2.
Schröt. Flussconch. t. 3. *f.* 1.
Chemn. Conch. 8. *t.* 86. *f.* 762.
Pulteney in Hutch. Dorset. p. 38. *t.* 12. *f.* 2.
Donovan Brit. Shells, t. 55.
Montagu Test. Brit. p. 179.

Habitat

Habitat in rivis et stagnis, frequens.

Testa interdum 3 poll. longa, 6 lata, subpellucida, ad cardinem ventricosa, rugosa, epidermide virescente aut nigricante induta, intus margaritacea.

Differt a *M. anatino* quod multo major, tenuior, et sæpius convexior.

Varietas β. 2 poll. longa, 3 lata, crassa, ponderosa, rudis, anterius declivis.

Mytilus cygneus and *anatinus* frequently resemble each other so much, that it is with difficulty they are to be distinguished; and there are also many shells which appear to differ from them in some respects, but we have never found the variation sufficient to enable us to form a specific character upon it.

10.

anatinus. M. testa ovali, compressiuscula, fragilissima, margine
t. 3. A. *f.* 1. membranaceo, umbonibus decorticatis. *Linn. Fauna Suecica, n.* 2158. *Syst. Nat. p.* 1158. *n.* 258. *Linn. Gmel. p.* 3355.

Lister Anim. Angl. t. 2. *f.* 29. —— *App. t.* 1. *f.* 2.
—— *Conch. t.* 153. *f.* 8.

Petiver Gaz. t. 93. *f.* 8.

Gualt. Test. t. 7. *f.* E.

D'Argenv. Conch. t. 31. *f.* 10. med.

Pennant Brit. Zool. t. 68. *f.* 79.

Da Costa Brit. Conch. p. 215.

Schröt. Flussconch. t. 1. *f.* 2, 3.

Pulteney in Hutch. Dorset. p. 38. *t.* 13. *f.* 6.

Donovan Brit. Shells, t. 113.

Montagu Test. Brit. p. 171.

β. *Lister Conch. t.* 154. *f.* 9?

t. 3. A. *f.* 4. *Montagu Test. Brit. p.* 172. M. Avonensis.

Habitat in aquis dulcibus, frequens.

Testa interdum 2 poll. longa, 3½ lata, epidermide virescente-fusca, rugis transversis

transversis rudis, antice compressa, productior, postice rotundata; intus margaritacea.

Varietas β. 1¾ poll. longa, 3 poll. lata, margine anteriore rectiusculo seu subarcuato, cardine versus extremitatem posteriorem.

11. *discors.* t. 3. f. 8.

M. testa ovali, cornea, subdiaphana, antice longitudinaliter, postice transversaliter, striata. *Linn. Syst. Nat. p.* 1159. *n.* 261. *Linn. Gmel. p.* 3356.

Da Costa Brit. Conch. p. 221. *t.* 17. *f.* 1.

Born Mus. p. 121. vign.

Chemn. Naturf. 10. *t.* 1. *f.* 8.

—— *Conch.* 8. *t.* 86. *f.* 764. 767.

Pulteney in Hutch. Dorset. p. 38. *t.* 2. *f.* 1.

Donovan Brit. Shells, t. 25.

Montagu Test. Brit. p. 167.

β. t. 3. f. 9.

Montagu Test. Brit. p. 169. M. discrepans.

Habitat in mari, sæpius epidermide *Ascidiæ Mentulæ,* vel testaceis, et fucis, bysso adhærens.

Testa ⅜ poll. longa, ½ lata, alba, rufescente-maculata, sub epidermide olivacea, tenuissima, fragilissima. Testa tribus areis distinguitur. *Area antica* striis constat ab umbonibus ad marginem exteriorem anticum, longitudinalibus; *tertia* ab umbonibus ad marginem exteriorem posticum, fere transversalibus; *intermedia* vel striis obsoletis transversalibus vel plane nullis. (*Linn.*)

Varietas β. minor, minus convexa, antice rotundata, latior, striis solum 8 vel 9 in area juxta umbones; absque maculis.

First noticed as British by Dr. Pulteney, who sent it to Da Costa. Found sparingly on the Western coast. The variety was first noticed by Mr. Montagu, and is found at Southampton, Poole, and Ilfracombe, Devon; and on the S. coast of Wales.

12.
præcisus. M. testa oblonga, difformi, rugosa, cardine ad extremitatem.

Montagu Test. Brit. p. 165. *t.* 4. *f.* 2.

Habitat in mari, radicibus algarum adhærens, vel rupes perterebrans.

Testa præcedenti affinis, facie *Solenis* minuti, ¼ poll. longa, ⅛ lata, sæpius minor, umbonibus prominentibus, margine cardinali truncato, valvula altera majore. Interdum utrinque truncata. *Cardo* rugosus, inflexus, cum foramine sub margine. (*Montagu.*)

A new species, discovered by Mr. Montagu on the Devonshire coast, and in Wales.

13.
striatus. M. striatus, umbonibus productis. *Walker Test. Min. Rar. f.* 75.

Montagu Test. Brit. p. 173.

Habitat in mari.

Testa pellucida, alba. (*Walker.*)

Found, according to the above author, at Reculver and Sandwich.

PINNA.

Linn. Syst. Nat. n. 316.

1.
ingens. P. testa rugosissima, rugis concentricis irregularibus longitudinaliter a rostro decurrentibus, et versus cardinem angulo recto inflexis. *Montagu Test. Brit. p.* 180.

Pennant Brit. Zool. 4. *n.* 81.

Donovan Brit. Shells, t. 152. P. lævis.

Habitat in mari.

Testa 1 ped. longa, 7 poll. lata, opaco-fusca.

Variat interdum striis 7 vel 8 remotis, spinosis.

This species has been found on the Devonshire coast, by Mr. Montagu, and received from the coast of Shetland, by Mr. M'Leay.

Specimens

Specimens from Scotland and the Western coast do not appear to differ; and there is great probability that this is the species mentioned by Pennant.

2.
pectinata. P. testa dimidia longitudinaliter striata, latere altero transverse subrugoso. *Linn. Syst. Nat. p.* 1160. *n.* 264. *Linn. Gmel. p.* 3364.
Gualt. Test. t. 79. *f.* A.
Seba Mus. t. 91. *f.* 3.
Pennant Brit. Zool. 4. *t.* 69. *f.* 80.
Da Costa Brit. Conch. p. 240. *t.*16. *f.* 3.
Chemn. Conch. 8. *t.* 87. *f.* 770.
Pulteney in Hutch. Dorset. p. 39. *t.* 3. *f.* 3.
Donovan Brit. Shells, t. 10.
Montagu Test. Brit. p. 178.
Habitat in mari.
Testa 6 poll. longa, 3 lata, tenuis, fragilis, coloris cornei, ad basin cæruleo-viridis vel purpureo variegata; striis 10 vel 12 elevatis; spinis concavis ab apice ad marginem decurrentibus. Testæ pars tertia expers spinarum, rugosa, oblique striata.

Found on the Western coast, but not common.

3.
muricata. P. testa striata; squamis concavis, ovatis, acutis. *Linn. Syst. Nat. p.* 1160. *n.* 266. *Linn. Gmel. p.* 3364.
Lister Conch. t. 370. *f.* 210; *& t.* 374. *f.* 215.
Rumph. Mus. t. 46. *f.* M.
Seb. Mus. 3. *t.* 92. ser-1. *f.* prim. et ult.
Gualt. Test. t. 79. *f.* D.
Chemn. Conch. 8. *t.* 87. *f.* 769.
Pulteney in Hutch. Dorset. p. 39.
Montagu Test. Brit. p. 183. *t.* 5. *f.* 3.
Habitat in mari.
Testa pellucida; striis plurimis, elevatis, alternis, versus apicem echinatis; squamis

squamis 6 ad 8, parvis, acutis, patulis, concavis. (*Linn. Mus. Lud. Ulr. p.* 195.) Testæ juniores læves.

Found near Weymouth, Dorset, by Dr. Pulteney.

NAUTILUS.

Linn. Syst. Nat. n. 318.

1. * spirales, rotundati : anfractibus contiguis.

lacustris. N. testa spirali, compressa, umbilicata, carinata; anfractibus tribus, supra convexis contiguis; apertura semiovata; septis triradiato-perforatis. *Lightfoot in Act. Angl. t.* 76. *t.* 1. *f.* 1—7.

Walker Test. Min. Rar. t. 1. *f.* 28.

Montagu Test. Brit. p. 191. *t.* 6. *f.* 3.

Habitat in aquis dulcibus.

Testa diametro ¼ poll. tenera, pellucida, incola vivente rufescente-brunnea, lineis 3 vel 4 albis ab umbilico ad marginem decurrentibus. *Incola* Limax, antennis filiformibus, oculis capiti infixis juxta antennarum bases, ut in aquaticis. (*Lightfoot.*)

Discovered by Mr. Boys on flags in Hernhill brooks, Kent. Found on the roots of *Carices*, near Eton, Buckinghamshire, by Mr. Agnew; and in the marshes near Rotherhithe, by Mr. Swainson.

2.

rotatus. N. testa spirali, lævi; apertura semicordata; geniculis sex; striis flexuosis, elevatis, notatis; carina integerrima.

Planc. Conch. t. 1. *f.* 12. 13?

Martini Conch. t. 20. *f.* 180. 181?

Montagu Test. Brit. p. 189. *t.* 15. *f.* 4. N. Calcar.

Habitat in mari.

This species has been imagined to be the *N. Calcar* of Linnæus, but it does not agree either with his description or with the figures which he refers to.

3. *lævigа-*

3. *lævigatulus.* N. testa spirali; geniculis lævibus. *Walker Test. Min. Rar. t. 3. f. 67.*
Montagu Test. Brit. p. 188. —— *Supplem. t.* 18. *f.* 7. 8.
Habitat in mari.
Testa semipellucida, alba, glaberrima.
Found at Sandwich and Seasalter; not common. (*Walker.*)
We are unable to add to the above imperfect description, never having obtained this species.

4. *depressulus.* N. testa spirali, utrinque subumbilicata; geniculis depressis, plurimis. *Walker Test. Min. Rar. t. 3. f. 68.*
Adams Microsc. p. 641. *t.* 14. *f.* 33.
Montagu Test. Brit. p. 190. —— *Supplem. t.* 18. *f.* 9.
Habitat ad littora arenosa.
Testa opaca, alba.
From Reculver, in Kent; very rare. (*Walker.*)

5. *umbilicatulus.* N. testa spirali, umbilicata; geniculis sulcatis. *Walker Test. Min. Rar. t. 3. f. 69.*
Adams Microsc. p. 641. *t.* 14. *f.* 34.
Montagu Test. Brit. p. 191. —— *Supplem. t.* 18. *f.* 1.
Habitat in mari.
Testa opaca, alba.
From Sandwich; not common. (*Walker.*)
Neither this species nor the preceding have ever fallen under our notice.

6. *crispus.* N. testa spirali; apertura semicordata; anfractibus contiguis; geniculis crenatis. *Linn. Syst. Nat. p.* 1162. *n.* 275. *Linn. Gmel. p.* 3370.
Planc. Conch. t. 1. *f.* 2.
Gualt. Test. t. 19. *f.* A. D.

Ginann. Adriat. t. 14. *f.* 112.
Lederm. Micr. t. 8. *f.* b.
Walker Test. Min. Rar. t. 3. *f.* 65.
Martini Conch. t. 20. *f.* 172—174.
Soldani Testaceog. t. 33. *f.* F.; *& t.* 34. *f.* G. H.
Favanne Conch. t. 69. D. 2.
Adams Microsc. p. 640. *t.* 14. *f.* 30.
Fichtel & Moll Test. Micr. t. 4. *f.* d. e. f.
Montagu Test. Brit. p. 187. —— *Supplem. t.* 18. *f.* 5.
Pulteney in Hutch. Dorset. t. 19. *f.* 29.
Habitat in mari.
Testa minuta, utrinque æqualis et umbilicata, striata, striis elevatis, dorso carinato.

Found on the Kentish coast; at Teignmouth and Salcombe, Devonshire; in the Isle of Purbeck, and at Weymouth, Dorset; and on the South coast of Wales.

7. *Beccarii.* N. testa spirali, apertura obovata, anfractibus contiguis torulosis, geniculis insculptis. *Linn. Syst. Nat. p.* 1162. *n.* 276. *Linn. Gmel. p.* 3370.

Planc. Conch. t. 1. *f.* 1.
Gualt. Test. t. 19. *f.* H. I. H.
Ginan. Adr. 2. *t.* 14. *f.* 111.
Lederm. Micr. t. 8. *f.* a.; *& t.* 4. *f.* b.
Martini Conch. 1. *t.* 19. *f.* 178. 179; *t.* 20. *f.* 175—177.
Walker Test. Min. Rar. t. 3. *f.* 63.
Favanne Conch. t. 69. *f.* D. 2.
Murray in Amæn. Acad. 8. *t.* 2. *f.* 16.
Adams Microsc. p. 640. *t.* 14. *f.* 29.
Schröt. Inn. Bauder See. t. 1. *f.* 3.
Montagu Test. Brit. p. 186. —— *Supplem. t.* 18. *f.* 4.
Pulteney in Hutch. Dorset. t. 19. *f.* 28.
β perversus. *Walker Test. Min. Rar. t.* 3. *f.* 64.

Martini

Martini Conch. 1. *t.* 19. *f.* 178. 179.
Montagu Test. Brit. p. 187. —— *Supplem. t.* 18. *f.* 6.

Habitat in mari, fucis et testaceis adhærens, frequens.
Testa minuta, alba, pellucida, sub epidermide brunnea.
Varietas β anfractibus contrariis.

First noticed on the British shores by Mr. Boys.

8.
crassulus. N. testa crassa, utrinque umbilicata, geniculis lineatis.
Walker Test. Min. Rar. t. 3. *f.* 70.
Adams Microsc. p. 641. *t.* 14. *f.* 35.
Martini Conch. 1. *t.* 19. *f.* 171.
Montagu Test. Brit. p. 191; *& Supplem. t.* 18. *f.* 2.

Habitat in mari.
Testa opaca, alba.

From Reculver; exceedingly rare. (*Walker.*)

9.
lobatulus. N. testa planiuscula, minuta, confluente, verrucosa, spirali, isthmis intercepta: septis semilunaribus tenerrimis. *Linn. Gmel. p.* 3739. Serpula Nautiloides.
Schröter n. Litterat. 3. *t.* 3. *f.* 22. 23.
Montagu Test. Brit. p. 515. Serpula lobata.

Habitat in mari, fucis, testaceis, bysso, *Pinnæ ingenti* adhærens.
Testa diametro 1 lin. alba, vel flavescens, figura inconstante, nunc magis orbiculari, nunc magis oblonga, supra convexa, subtus plana, lobis 6—7—8, parallelis. *Apertura* angustissima.

The structure of this shell is so obviously that of a *Nautilus*, that, notwithstanding its being usually found attached to other bodies, it cannot, with propriety, be placed among the *Serpulæ*. We agree, therefore, with Dr. Turton (whose trivial name we have adopted) in transferring it to the genus *Nautilus*.

10. *semili-*

** elongati, rectiusculi.

10. *semilituus.* N. testa recta, apice incurvato-spirali, anfractibus contiguis. *Linn. Syst. Nat. p.* 1163. *n.* 280. *Linn. Gmel. p.* 3372.

Column. Phytob. t. 38. *f.* D.
Planc. Conch. t. 1. *f.* 10.
Martin. Conch. 1. *t.* 20. *f.* 186. 187.
Walker Test. Min. Rar. t. 3. *f.* 73.
Adams Microsc. p. 642. *t.* 14. *f.* 38.
Montagu Test. Brit. p. 196; *& Supplem. t.* 19. *f.* 3.
Habitat in mari.
Testa minuta, brunnea; geniculis elevatis; siphone producto, minimo.

From Sandwich and Sheppy Island; rare. Found by Mr. Boys.

11. *carinatulus.* N. testa oblonga, carinata; apertura lineari, ovali.

Walker Test. Min. Rar. t. 3. *f.* 72.
Adams Microsc. p. 642. *t.* 14. *f.* 37.
Montagu Test. Brit. p. 195.
Habitat in mari.
Testa albida, diaphana, vitrea.

From Seasalter and Sandwich; very rare. (*Walker.*)

12. *Legumen.* N. testa compressa articulata, hinc marginata: siphone laterali. *Linn. Syst. Nat. p.* 1164. *n.* 288. *Linn. Gmel. p.* 3373.

Planc. Conch. 8. *t.* 1. *f.* 7.
Gualt. Test. t. 19. *f.* P.
Lederm. Micr. t. 8. *f.* g.
Martin. Conch. 1. vign. 1. *f.* e. E.I.
Montagu Test. Brit. Supplem. t. 19. *f.* 6.
Habitat in mari.

Testa

Testa minuta, subconica, apice ad alterum latus cultrato, ad alterum leviter arcuato. (*Gmelin.*)

Found by Mr. Montagu.

13.

rectus. N. testa subarcuata; geniculis lævibus, depressis.

Walker Test. Min. Rar. t. 3. *f.* 74.

Montagu Test. Brit. p. 197. — *Supplem. t.* 19. *f.* 4. *& f.* 7.

Habitat in mari, rarissima.

Testa $\frac{1}{10}$ poll. longa, crassa, opaca, brunnea, cameris inconspicuis.

Found at Sandwich, by Mr. Boys.

14.

Radicula. N. testa recta, oblongo-ovata, articulis torosis, glabris.

Linn. Syst. Nat. p. 1164. *n.* 285. *Linn. Gmel. p.* 3373.

Planc. Conch. t. 1. *f.* 5.

Lederm. Micr. t. 8. *f.* e; *& t.* 4. *f.* r. s.

Martini Conch. 1. vign. 1669.

Montagu Test. Brit. p. 197. *t.* 6. *f.* 4; *& t.* 14. *f.* 6.

Habitat in mari.

Testa minuta, opaca, brunnea, lævis; geniculis 2 ad 5. *Articulus* primus nunc globosus, nunc conicus. *Apex* nunc obtusus, nunc acutus.

Found at Sandwich, by Mr. Boys.

15.

subarcuatus. N. testa subcylindrica, subarcuata; articulis tribus globosis, reliquis indistinctis.

Montagu Test. Brit. p. 198. *t.* 6. *f.* 5.

Lederm. Micr. t. 4. *f.* S.

Habitat ad littora.

Testa $\frac{1}{10}$ poll. longa, alba, pellucida, glabra, interdum sub epidermide brunnea. *Sipho* productus.

Found at Sandwich, Kent, by Mr. Boys.

16.

jugosus. N. testa subcylindrica, subarcuata, articulis novem globosis, costatis. *Montagu Test. Brit. p.* 198. *t.* 14. *f.* 4.

Gualt. Test. t. 19. *f.* N?

Martin. Conch. 1. vign. 1. *f.* H. h.

Linn.

Linn. Gmel. p. 3372. N. obliquus.
Montagu Test. Brit. p. 198.
Habitat in mari.
Testa ¼ poll. longa, opaca, brunnea, apice producto.
Found by Mr. Boys, on the Kentish coast.

17.
costatus. N. testa recta, subcylindrica; articulis duodecim torosis, costatis. *Montagu Test. Brit. p,* 199. *t.* 14. *f.* 5.
β ——— *Supplem. t.* 19. *f.* 2.
Habitat in mari.
Testa ¼ poll. longa, costis quatuor æquidistantibus, longitudinalibus.
Varietas β articulis sex.
Found by Mr. Boys, on the Kentish coast.

CYPRÆA.

Linn. Syst. Nat. n. 320.

1.
Pediculus. C. testa marginata, transversim sulcata. *Linn. Syst. Nat. p.* 1180. *n.* 364. *Linn. Gmel. p.* 3418.
Borlase Cornw. t. 28. *f.* 12.
Da Costa Brit. Conch. p. 32. *t.* 2. *f.* 6.
Donovan Brit. Shells, t. 43.
β minor, pallida, purpurascens, seu carnaria, absque maculis.
Lister Anim. Angl. t. 3. *f.* 17. ——*Conch. t.* 707. *f.* 57.
Borlase Cornw. t. 28. *f.* 13.
Martini Conch. t. 29. *f.* 308—9.
Pennant Brit. Zool. t. 70. *f.* 82.
Encyclop. Method. t. 356. *f.* 1.
Pulteney in Hutch. Dorset. p. 39. *t.* 22. *f.* 6. Cyp. arctica.
Montagu Test. Brit. p. 201. Cyp. arctica.
Habitat in mari.
Testa magnitudine pisi, subovata, rotundata, maculis tribus subfuscis.
First noticed by Borlase.

Linnæus

Linnæus has noticed that the European shells want the longitudinal furrow; and he appears to have been acquainted with the variety above mentioned, which, he says, is without spots.

2. *bullata.* C. testa subglobosa, lævi.
Montagu Test. Brit. p. 202. *t.* 6. *f.* 1.
Habitat in mari, rarior.
Testa vix magnitudine pisi, candidissima, diaphana, glabra, interdum obsolete striata. *Spira* acutiuscula. *Rima* utrinque dentata, dentibus acutiusculis. An distincta species? vel testa junior præcedentis?
Found at Tenby, S. Wales, by Mr. Adams; and in Salcombe Bay, Devon, by Mr. Montagu.

BULLA.

Linn. Syst. Nat. n. 321.

1. *patula.* B. testa birostri, margine plano, rostris inæqualibus.
Mærtin. Conch. 1. *t.* 23. *f.* 217. a. b?
Pennant Brit. Zool. 4. *t.* 70. *f.* 85. A.
Encyclop. Method. t. 357. *f.* 1.
Pulteney in Hutch. Dorset. p. 40. *t.* 12. *f.* 8.
Donovan Brit. Shells, t. 143.
Montagu Test. Brit. p. 207.
Habitat in mari.
Testa 1 poll. longa, ¼ poll. lata, alba, pellucida, lævissima, fragilis; altera extremitate quasi truncata. *Columella* subumbilicata.
Found at Weymouth, according to Pennant and Dr. Pulteney.

2. *aperta.* B. testa subrotunda, pellucida, transversim substriata, tota hiante. *Linn. Syst. Nat. p.* 1183. *n.* 376. *Linn. Gmel. p.* 3424.

Gualt. Test. t. 13. *f.* E. E.
Martin. Conch. 1. *p.* 266. vign. 13. *f.* 3.
Schröt. Einl. in Conch. t. 1. *f.* 8. a. b.
Da Costa Brit. Conch. p. 30. *t.* 2. *f.* 3.
Chemn. Conch. 10. *t.* 146. *f.* 1354. 1355.
Pulteney in Hutch. Dorset. p. 40. *t.* 22. *f.* 3.
Donovan Brit. Shells, t. 120. *f.* 1.
Montagu Test. Brit. p. 208.
Habitat in mari.
Testa diametro $\frac{1}{2}$—1 poll. tenuis, fragilis, pellucida. *Columella* potius inflexa quam involuta. *Umbilicus* nullus. *Rima* patentissima.

First noticed as British by Da Costa. Not uncommon on many parts of the Western and Southern coasts. Mr. Donovan has found it below Tenby, in Caermarthenshire.

3. *Catena.* B. testa ovali, pellucida, transversim striata; spira obtusa.
Adams in Act. Soc. Linn. 5. *t.* 1. *f.* 6, 7, 8. B. punctata?
Montagu Test. Brit. t. 7. *f.* 7.
Habitat in mari.
Testa minuta, *B. aperta* similis, candida, striis transversis, punctatis, catenam æmulantibus: hæ striæ oculo armato solum discernendæ sunt. *Apertura* ampliata, versus apicem angustata.

Found among sand in Bigberry Bay, Devon, by Mr. Montagu; and at Tenby, S. Wales, by Mr. Adams.

4. *emarginata.* B. testa gibba; apertura emarginata. *Adams in Act. Soc. Linn.* 5. *t.* 1. *f.* 9, 10, 11.
Habitat in mari.

Found near Pembroke. (*Adams.*)

5. *denticulata.* B. testa oblonga, subæquali, obtusa, lævi, apertura ad apicem denticulata, acutissima. *Adams in Act. Soc. Linn.* 5. *t.* 1. *f.* 3, 4, 5.

Habitat

Habitat in mari.

Testa pellucida, alba.

Found near Pembroke; "not common." (*Adams.*)

The above two species appear to have been noticed only by the late Mr. Adams.

6.

Plumula. B. testa depressa, ovato-oblonga, aperta.

Montagu Test. Brit. p. 214. *t.* 15. *f.* 9.

Habitat in mari.

Testa $\frac{1}{4}$ poll. longa, $\frac{1}{8}$ lata, tenuis, pellucida, flavescente-alba, striis concentricis rugosa, costis 2 vel 3 fere obliteratis a margine ad apicem, intus rugosa. *Spira* vix conspicua.

A new species, discovered by Mr. Montagu, at Milton Sands, South Devon.

7.

Haliotoidea. B. testa subovali, pellucida; apertura ovali, dilatata.

Montagu Test. Brit. p. 211. *t.* 7. *f.* 6.

Pulteney in Hutch. Dorset. t. 22. *f.* 5.*

Habitat in mari.

Testa $\frac{3}{4}$ poll. longa, $\frac{1}{2}$ poll. lata, alba, tenuissima, obsolete rugosa, omnino facie *Haliotidis*. *Spira* obsoleta, anfractibus vix duobus. *Apex* contortus.

Discovered in Salcombe Bay, and at Torcross, Devonshire; and on Studland Beach, Dorset, by Mr. Montagu. Found at Weymouth, by Mr. Bryer.

8.

Hydatis. B. testa rotundata, pellucida, longitudinaliter substriata, vertice umbilicato. *Linn. Syst. Nat. p.* 1183. *n.* 377. *Linn. Gmel. p.* 3424.

Gualt. Test. t. 13. *f.* D D.

Martin. Conch. 1. *t.* 21. *f.* 199.

Da Costa Brit. Conch. p. 23. *t.* 1. *f.* 10. B. Navicula.

Chemn. Conch. 9. *t.* 118. *f.* 1019.

Pulteney in Hutch. Dorset. p. 40. *t.* 23. *f.* 10.

Donovan Brit. Shells, t. 88.
Montagu Test. Brit. p. 217.
Habitat in mari.
Testa diametro fere 1 poll. tenuis, fragilissima, globosa; colore corneo vel stramineo, interdum epidermide ferruginea. *Spira* nulla. *Umbilicus* antice imperforatus. *Rima* ovato-oblonga, versus apicem angustata.

Not uncommon on the Western coast.

9.
Ampulla. B. testa rotundata, opaca, vertice umbilicato. *Linn. Syst. Nat. p.* 1183. *n.* 378. *Mus. Lud. Ulr. n.* 220. *Linn. Gmel. p.* 3424.
Bonann. Recr. 3. *f.* 3.
Grew Mus. t. 9. *f.* 7, 8.
Lister Conch. t. 714. *f.* 72.
Petiver Gaz. t. 50. *f.* 13; *& t.* 99. *f.* 14.
Rumph. Mus. t. 27. *f.* G.
Gualt. Test. t. 12. *f.* 1.
Lesser Testaceoth. f. 31.
Mus. Gottwald. t. 4. *c.* 4. *f.* 56—59.
Adans. Seneg. t. 1. *f.* 2.
Pennant Brit. Zool. 4. *n.* 84.
Favanne Conch. t. 27. *f.* F. 6.
Murray in Amæn. Acad. 8. *t.* 2. *f.* 9.
Knorr Vergn. 2. *t.* 8. *f.* 15.
Martin. Conch. 1. *t.* 22. *f.* 202—204.
Encyclop. Method. t. 358. *f.* 2.
Montagu Test. Brit. p. 206. *t.* 7. *f.* 1.
Habitat in mari.
Testa $\frac{3}{8}$ poll. longa, albida, castaneo-nebulosa. *Spira* nulla.

English specimens are smaller than the *B. Ampulla* described by Linnæus.

Found by Mr. Montagu, in sand, from Falmouth harbour; but rare.

10. *lignaria.*

10.

lignaria. B. testa obovata, oblongiuscula, transverse striata, vertice subumbilicato. *Linn. Syst. Nat. p.* 1184. *n.* 379. *Linn. Gmel. p.* 3425.

Lister Conch. t. 714. *f.* 71.

Borlase Cornw. t. 28. *f.* 14.

Knorr Vergn. 6. *t.* 37. *f.* 4, 5.

Martin. Conch. t. 21. *f.* 195.

Pennant Brit. Zool. t. 70. *f.* 83.

Da Costa Brit. Conch. p. 26. *t.* 1. *f.* 9.

Humphry in Act. Soc. Linn. 2. *p.* 15. *t.* 2. *f.* 18.

Encyclop. Method. t. 359. *f.* 3.

Pulteney in Hutch. Dorset. p. 40. *t.* 23. *f.* 9.

Montagu Test. Brit. p. 205.

Habitat in mari.

Testa rarius 2 poll. longa, colore fere ligneo vel flavescente-brunneo, striis minutissimis albis exarata, intus alba. *Spira* nulla. *Umbilicus* obsoletus. *Rima* versus apicem angustata.

Found at Weymouth, Dorset, and in Cornwall and Devonshire; rare.

11.

Akera. B. testa ovata, pellucida; vertice truncato canaliculato. *Linn. Gmel. p.* 3434.

Chemn. Conch. 10. *t.* 146. *f.* 1358. 1, 2, 3.

Donovan Brit. Shells, t. 79. B. resiliens.

Montagu Test. Brit. p. 219.

Pulteney in Hutch. Dorset. t. 22. *f.* 13.

Habitat in mari.

Testa magnitudine nucis avellanæ, cornea, tenuissima, elastica, longitudinaliter obsolete rugosa, transversim (oculo armato) minutissime striata. *Apex* retusus. *Rima* apice angustata.

Found on the shores of Bamff, in Scotland; at Lymington, by Mr. Keate; at Portsmouth, Hants, by Mr. Laskey; at Poole, Dorset; and near Southampton, by Mr. Montagu.

12. *diaphana.*

12.

diaphana. B. testa ventricosa; spira acuta, vix producta.

Pennant Brit. Zool. 4. *t.* 71. *f.* 87? V. Jonensis.

Montagu Test. Brit. p. 225. *t.* 7. *f.* 8.

Habitat, rarior, in mari.

Testa $\frac{3}{8}$ poll. longa, $\frac{2}{8}$ lata, alba, pellucida, nitida, tenuissima, fragilissima. *Spira* anfractibus tribus parum prominentibus. *Apertura* subovalis.

Found by Mr. Montagu, in Salcombe Bay, Devon.

13.

fontinalis. B. testa ovata, pellucida, contraria; spira obsoleta; apertura ovato-oblonga. *Linn. Fauna Suecica, n.* 2160. *Syst. Nat. p.* 1185. *n.* 386. *Linn. Gmel. p.* 3427.

Lister Anim. Angl. t. 2. *f.* 25. —— *Conch. t.* 134. *f.* 34.

Gualt. Test. t. 5. *f.* C. C.

Muller Verm. p. 167. *n.* 353.

Da Costa Brit. Conch. p. 96. *t.* 5. *f.* 6.

Favanne Conch. t. 61. *f.* E. 9?

Montagu Test. Brit. p. 226.

Pulteney in Hutch. Dorset. p. 40. *t.* 21. *f.* 6.

Habitat in rivis et stagnis, plantis aquaticis adhærens.

Testa $\frac{1}{3}$ poll. longa, $\frac{1}{4}$ lata, ventricosa, ovata, pellucida, flava, fragilissima, ut vix tactum ferat. *Apertura* ovato-oblonga, fere longitudinalis. *Anfractus* infimus ventricosus, reliqui vix prominentes. *Mucro* obtusissimus est. *Spiræ* sinistrorsum incedunt. (*Linn.*)

14.

rivalis. B. testa ovali, pellucida, sinistrorsa; spira prominula, acuta; apertura ovato-oblonga.

Favanne Conch. t. 61. *f.* E. 6?

Schröt. Flussconch. t. 6. *f.* 16. a. b.

Chemn. Conch. 9. *t.* 103. *f.* 877, 878.

Habitat in rivis et stagnis.

Testa $\frac{1}{4}$ poll. longa, $\frac{1}{4}$ lata, pellucida, flava, fragilissima, *B. fontinali* affinis, sed utplurimum major, exacte ovalis. *Mucro* acutus. *Apertura* magis coarctata versus apicem.

Found by Mr. James Hay, in Hampshire.

15. *Hypnorum.*

15.
Hypnorum. B. testa ovata, pellucida, sinistrorsa; spira prominente; apertura ovato-lanceolata. *Linn. Fauna Suecica, n.* 2159. *Syst. Nat. p.* 1185. *n.* 387. *Linn. Gmel. p.* 3428.
Petiver Gaz. t. 10. *f.* 8.
Lister Conch. t. 1059. *f.* 5.
Schröt. Flussconch. t. 6. *f.* 9.
Walker Test. Min. Rar. t. 2. *f.* 54.
Muller Verm. p. 169. *n.* 354. Planorbis turritus.
Chemn. Conch. 9. *t.* 103. *f.* 882, 883.
Montagu Test. Brit. p. 228.
Pulteney in Hutch. Dorset. t. 18. *f.* 20.
Habitat in aquis dulcibus.
Testa longitudine seminis avenæ, sed crassior, pellucida, subflava, tenerrima, prominens, oblonga, minus acuta, spiris seu anfractibus quatuor, sinistrorsum flexis. *Apertura* oblonga est, cum spiræ infimæ latitudo superat totum corpus testæ superioris. (*Linn.*)

Figured and described by Petiver, who says it is found at Mitcham, Surrey; and in ponds and ditches about London. Found near Exeter, and in Wiltshire, of a large size, by Mr. Montagu. We have received it from Kent.

16.
cylindracea. B. testa cylindrica, lævi, apertura angustissima.
Lister Conch. t. 714. *f.* 70. b. c.
Pennant Brit. Zool. 4. *t.* 70. *f.* 85.
Pulteney in Hutch. Dorset. p. 40. *t.* 18. *f.* 22.
Donovan Brit. Shells, t. 120. *f.* 2.
Habitat in mari.
Testa $\frac{1}{4}$ poll. longa, vix $\frac{1}{8}$ lata, alba, pellucida, nitida. *Apertura* linearis, basi paululum ampliata. *Spira* vix apparet.

First noticed by Lister, who had it from Barnstaple, Devon. Found at Weymouth, by Dr. Pulteney; at Falmouth,

Falmouth, Teignmouth, and Biddeford, by Mr. Montagu; near Ilfracombe, Devon, by the Rev. T. Rackett.

This species must not be confounded with *B. cylindrica* of Gmelin.

17. *obtusa.* B. testa subcylindrica, spira prominula.

Walker Test. Min. Rar. t. 3. *f.* 62. perperam.

Montagu Test. Brit. p. 223. *t.* 7. *f.* 3. bene.

Habitat in mari.

Testa ad $\frac{1}{4}$ poll. longa, $\frac{1}{8}$ lata, alba, opaca, versus spiram angustior. *Apertura* linearis, latior ad basin.

First noticed by Mr. Boys, at Sandwich. Found in abundance near Southampton; at Llaugharne, Caermarthenshire; and sparingly at Salcombe, Devon, by Mr. Montagu. We have received it from Chester, and have found it at Poole and Weymouth, Dorset.

18. *retusa.* B. testa subcylindrica, spira retuso-umbilicata.

Adams in Act. Soc. Linn. 5. *t.* 1. *f.* 1, 2. B. truncata.

Montagu Test. Brit. p. 223. *t.* 7. *f.* 5. B. truncata.

Pulteney in Hutch. Dorset. t. 18. *f.* 13.

Habitat in mari.

Testa $\frac{1}{8}$ poll. longa, alba, versus apicem longitudinaliter striata, medio coarctata. *Apex* truncatus.

Discovered by Mr. Adams, near Pembroke. Found by Mr. Montagu, at Falmouth, in Cornwall; in Salcombe Bay, Devon; and at Weymouth, Dorset.

We have not retained the specific name of *truncata*, given to this shell by Mr. Adams, on account of its having been pre-occupied by Gmelin for a very different species, originally described by Kaëmmerer, in the Rudolstadt cabinet.

19. *umbili-*

19. *umbilicata.* B. testa oblongo-ovali, apice obtuso-umbilicata.
Montagu Test. Brit. p. 222. t. 7. f. 4.
Habitat in mari, rarior.
Testa $\frac{1}{8}$ poll. longa, $\frac{1}{16}$ lata, alba, tumidiuscula. *Apertura* apice angustissima, basi dilatior.

Discovered by Mr. Montagu, at Falmouth.

VOLUTA.

Linn. Syst. Nat. n. 322.

1. * Apertura integra.

tornatilis. V. testa coarctata, ovata, substriata: spira elevata, acutiuscula; columella uniplicata. *Linn. Syst. Nat. p.* 1187. *n.* 394. *Linn. Gmel. p.* 3437.
Lister Conch. t. 835. *f.* 58.
Knorr Vergn. 6. *t.* 19. *f.* 4.
Schröt. n. Litteral. 3. *t.* 2. *f.* 12, 13.
Pennant Brit. Zool. t. 71. *f.* 86.
Da Costa Brit. Conch. p. 101. *t.* 8. *f.* 2. T. ovalis.
Martin. Conch. 3. *t.* 43. *f.* 442, 443.
Pulteney in Hutch. Dorset. p. 41. *t.* 14. *f.* 2.
Donovan Brit. Shells, t. 57.
Montagu Test. Brit. p. 231.
Habitat in mari.
Testa vix magnitudine olivæ, lævis, colore rubicundo, fasciis 2 albis; striis capillaceis numerosis longitudinalibus. *Apertura* oblonga, parum dehiscens.

First described as English by Da Costa; he notes it from Devonshire. Found at Weymouth, Dorset; Anglesea, North Wales; Torcross, Devon; Llaugharne, Caermarthenshire; and in Scotland.

Gmelin refers to the figures of Lister and Martini,

for *V. tornatilis*; and to the *same* figures for his *V. bifasciata*, *p.* 3436.

2. *denticulata.* V. testa ovata; spira elevata, acutiuscula; columella triplicata; labio denticulato.

Walker Test. Min. Rar. t. 2. *f.* 50; *& f.* 52. testa junior.
Moniagu Test. Brit. p. 234. ——— *Supplem. t.* 20. *f.* 5.
Donovan Brit. Shells, t. 138. V. triplicata.
Pulteney in Hutch. Dorset. t. 18 *f.* 1.

Habitat in paludibus salinis, juncorum radicibus, algis adhærens.

Testa fere ¼ poll. longa, vix ¼ lata, glabra, colore corneo, ad apicem purpurascente. Testæ juniores gaudent columella uniplicata, carent labio denticulato.

Found in marshes, near Faversham, by Mr. Boys; plentifully on the shore between Plymouth and Dock, at Barnstaple and Ilfracombe, Devon, near Aberavon, S. Wales, and at Southampton, by Mr. Montagu; and at Weymouth, by Mr. Bryer.

3. *alba.* V. testa ovali, spira obtusa, apertura coarctata.

Walker Test. Min. Rar. f. 61.
Adams Microsc. t. 14. *f.* 27.
Montagu Test. Brit. p. 235.

Habitat in mari.

Testa $\frac{1}{10}$ poll. longa, alba, opaca, glabra, longitudinaliter striata.

From Sandwich and Sheppy Island.

We have never obtained this species. In Walker's figure the *columella* does not appear to be plicated.

4. *spiralis.* V. testa conica, anfractu primo ad basin costis transversis spiralibus, versus apicem longitudinalibus.

Test. Min. Rar. f. 46.
Adams in Act. Soc. Linn. 3. *p.* 253?

Montagu

Montagu Test. Brit. p. 323. *t.* 12. *f.* 9.

Habitat in mari.

Testa 1 lin. longa, $\frac{1}{4}$ lata, pellucidâ, glabra, alba. *Anfractus* planiusculi; *suturæ* linea elevata. *Apex* obtusior.

First found by Mr. Boys, at Sandwich, and since by Mr. Montagu, in Salcombe Bay, Devon; rare.

5.

unidentata. V. testa conica, lævi; anfractibus 5 vel 6 depressioribus; columella unidentata. *Montagu Test. Brit. p.* 324.

Habitat in mari.

Testa $\frac{3}{10}$ poll. longa, crassa, subpellucida, glabra, alba; apice purpurascente seu roseo, obtuso; apertura subovali.

Dens et color hanc testam distinguunt a *Turbine Ulvæ*.

Found by Mr. Montagu, on the *Pecten maximus*, and in Salcombe Bay, Devon; not common.

6.

interstincta. V. testa turrita, anfractibus 5 planiusculis, longitudinaliter costatis; columella denticulata. *Montagu Test. Brit. p.* 324. *t.* 12. *f.* 10.

Adams in Act. Soc. Linn. 3. *p.* 66. *t.* 13. *f.* 23, 24?

Habitat in mari, rarissima.

Testa 1 lin. longa, $\frac{1}{3}$ lata, glabra, alba. *Anfractus* costis longitudinalibus, versus suturam papillosis. *Apex* obtusus. *Apertura* subovalis.

Found by Mr. Montagu, in sand, from Bigberry Bay, Devon.

7.

plicata. V. testa acuminata, lævi; anfractibus 6 planiusculis; columella plicata. *Montagu Test. Brit. p.* 325. —— *Supplem. t.* 21. *f.* 2.

Habitat in mari, rarior.

Testa $\frac{1}{8}$ poll. longa, glabra, subpellucida, alba. *Apex* obtusior. *Sutura* tenuis. *Columella* intus plica unica. *Apertura* subovalis, ad superiorem partem coarctata.

Testa tenuior quam *V. unidentata*, facie *Helicis politæ*, sed obtusior, et columella plicata distinguenda. (*Montagu.*)

Found by Mr. Montagu, in sand, from Salcombe Bay, Devon; but rare.

8.

ambigua. V. testa lævi, acuminata; anfractibus 6 vel 7 depressiusculis; columella læviter plicata; apertura suborbiculari. *Montagu Test. Brit. p.* 325. —— *Supplem. t.* 21. *f.* 4. Turbo pallidus.

Habitat in mari, rarissima.

Testa plus quam $\frac{1}{8}$ poll. longa, $\frac{1}{3\frac{1}{2}}$ lata, alba; sutura manifesta. *Umbilicus* fit ex labio interiore super columellam revoluto. (*Montagu.*)

Found by Mr. Montagu, in Salcombe Bay, Devon.

9. * * Ovatæ, seu obovatæ; effusæ, emarginatæ.

pallida. V. testa integra, oblongo-ovata, spira obtusa; columella quadriplicata. *Linn. Syst. Nat. p.* 1189. *n.* 405. *Linn. Gmel. p.* 3444.

Lister Conch. t. 714. *f.* 70. a.

Adans. Seneg. t. 5. *f.* 3.

Da Costa Brit. Conch. t. 2. *f.* 7.

Adams in Act. Soc. Linn. 3. *p.* 253.

Encyclop. Method. t. 384. *f.* 4.

Donovan Brit. Shells, t. 66. Bulla pallida.

Montagu Test. Brit. p. 232.

Habitat in mari.

Testa cylindrica, glaberrima, solida, candidissima. *Spira* convexo-conica, mucronata, lævigata, obsoletior. *Columella* postice quadriplicata. *Labium* exterius læve, crassiusculum, minus, hians in medio. (*Linn. Mus. Lud. Ulr. p.* 558. Bulla pallida.)

Da Costa in describing this shell has confounded it with *Bulla cylindracea* of Pennant. He notes it from the Western coast, where it is not to be found. The late Mr. Adams mentions it, as procured at Tenby, and on this gentleman's authority we have admitted it as a British species.

10. *catenata.*

10.

catenata. V. testa ovata, glaberrima; spira retusa; columella quadriplicata.

Montagu Test. Brit. p. 236. *t.* 6. *f.* 2.

Habitat in mari.

Testa ¼ poll. longa, subpellucida, alba, cingulis quatuor opacis, albis, rubro-punctatis. *Labrum* non marginatum, crassum.

A new and elegant species, discovered by Mr. Swainson in St. Austle Bay, near Fowey, Cornwall; it is said to be found off the Lizard, and at Penzance.

11.

lævis. V. testa lævissima; spira obtusa; columella biplicata; labro gibbo, subdenticulato. *Donovan Brit. Shells, t.* 165.

Montagu Test. Brit. p. 203. *t.* 6. *f.* 7. Cypræa voluta.

Habitat in mari.

Testa vix ½ poll. longa, crassa, glaberrima, viridescens vel albida, subtus interdum pallide rosacea. *Columella* leviter plicata.

This species has somewhat of the habit of a *Cypræa*, but is linked to the genus *Voluta* by its plicated *columella*. Mr. Montagu first described and figured it as British; he found it in Salcombe Bay, Devon. Mr. Donovan has since given figures of it from the Portland cabinet.

BUCCINUM.

Linn. Syst. Nat. n. 322.

1.

Perdix. B. testa ovata, inflata, subsulcata, alboque undulata; apertura edentula. *Linn. Syst. Nat. p.* 1197. *n.* 440. *Linn. Gmel. p.* 3470.

Bonann. Recr. 3. *t.* 191. *Mus. Kirch. f.* 189.

Lister

Lister Conch. t. 984. *f.* 43.
Rumph. Mus. t. 27. *f.* C.
Gualt. Test. t. 51. *f.* F.
Argenv. Conch. t. 17. *f.* A.
Adans. Seneg. t. 7. *f.* 5.
Seb. Mus. 3. *t.* 68. *f.* 16.
Mus. Gottwald. t. 27. *f.* 1, 2.
Knorr Vergn. 3. *t.* 8. *f.* 1.
Martin. Conch. 3. *t.* 117. *f.* 1078, 1079.
Pulteney in Hutch. Dorset. p. 41. *t.* 15. *f.* 14.
Montagu Test. Brit. p. 244. *t.* 8. *f.* 5.

Habitat in mari.

Testa ovata, fragilis; sulcis lævibus superficialibus. *Color* livido-griseus, lineis undulatis, albis, longitudinalibus. *Spiræ* anfractus totius testæ 5 ad 6. *Apertura* lunari-patula. *Labium exterius* tenue, subrepandum, non reflexum, *interius* membranaceum, dimidiato antice adnatum. *Umbilicus* ubi labium interius abrumpitur. *Basis* emarginata, non vero reflexa. (*Linn. Mus. Lud. Ulr. p.* 600.)

Specimens of the size of a hazle-nut have been dredged up at Weymouth, by Dr. Pulteney and Mr. Bryer.

2. *bilineatum.* B. testa ovata, lævi; in anfractum primum serie duplici tuberculorum.

Lister Conch. t. 998. *f.* 63.
Pennant Brit. Zool. 4. *App. t.* 79. fig. inf.

Testa junior.

Linn. Gmel. p. 3476.
Pulteney in Hutch. Dorset. p. 41. *t.* 17. *f.* 8. B. porcatum.
Montagu Test. Brit. p. 244.

Habitat in mari, rarissima.

Testa

Testa albida, fasciis 2, 3, vel 4 maculosis, brunneis, cincta. *Apertura* ampla, subovalis. *Spira* prominula. *Labrum* leviter dentatum.

This species is admitted into our catalogue on the testimony of Pennant, who says it was found at Weymouth; but we have not been able to ascertain it as British by any other authority.

Exotic specimens size of an egg. (*Dr. Pulteney.*)

3. *hepaticum.* B. testa ovato-oblonga, subplicata; spira acuta, elevata; labio interiore rugoso.

Lister Conch. t. 975. *f.* 50.
Pulteney in Hutch. Dorset. p. 41. *t.* 15. *f.* 13.
Montagu Test. Brit. p. 243. *t.* 8. *f.* 1.
Habitat in mari.
Testa 1 poll. longa, ⅓ lata, colore hepatico, fascia alba. *Anfractus* papilloso-coronati. *Labium* exterius plicatum. *Columellæ* pars anterior plica una manifesta. *Cauda* striata.

First described by Dr. Pulteney, who says it is found in Purbeck, and at Weymouth, Dorset; but rarely.

4. *Lapillus.* B. testa ovata, acuta, striata, lævi; columella planiuscula. *Linn. Fauna Suecica, n.* 2161. *Syst. Nat. p.* 1202. *n.* 467. *Linn. Gmel. p.* 3484.
Cole in Act. Angl. 1684.
Lister Conch. t. 965. *f.* 18, 19. —— *Anim. Angl. t.* 3. *f.* 5, 6.
Petiver Gaz. t. 18. *f.* 5.
Linn. Wgoth. Resa. 170.
Adans. Seneg. t. 7. *f.* 4.
Knorr Vergn. 6. *t.* 29. *f.* 4.
Martini Conch. 3. *t.* 121. *f.* 1111, 1112.
Pennant Brit. Zool. t. 72. *f.* 89.
Da Costa Brit. Conch. p. 125. *t.* 7. *f.* 1, 2, 3, 4. 9. 12.
Pulteney in Hutch. Dorset. p. 41. *t.* 15. *f.* 1, 2, 3, 4. 9. 12.

Donovan

Donovan Brit. Shells, t. 11.
Montagu Test. Brit. p. 239.
Habitat, frequentissima, in mari.
Testa 1 vel 2 poll. longa, albida, flavicans, interdum colore flavo vel castaneo, fasciata, crassa, rudis, striis membranaceis, longitudinalibus, (interdum absque striis). *Apertura* ovalis. *Labrum* interius subdentatum.

5.
lineatum. B. testa oblonga, spira acuta pyramidali.
Martini Conch. 4. *f.* 1188, 1189?
Da Costa Brit. Conch. p. 130. *t.* 8. *f.* 5.
Pulteney in Hutch. Dorset. p. 41. *t.* 14. *f.* 5.
Donovan Brit. Shells, t. 15.
Montagu Test. Brit. p. 245.
Habitat in mari, fucis adhærens.
Testa magnitudine seminis tritici, vel paululum major, lævis, subalbida, lineis fuscis spiralibus. *Apertura* ovalis.

First noticed as British by Da Costa, who received it from Cornwall and Devonshire. Dr. Pulteney and Mr. Montagu have found it on the coast of Dorset, between Weymouth and Portland.

Not *B. lineatum*, of Gmelin.

6.
glaciale. B. testa lævi, substriata, ovato-oblonga: anfractu infimo subcarinato. *Linn. Fauna Suecica, n.* 2162. *Syst. Nat. p.* 1204. *n.* 474. *Linn. Gmel. p.* 3491.
Muller. Zool. Dan. Prodr. 2942.
Oth. Fabric. Fn. Grænl. p. 397. *n.* 397.
Schröt. n. Litterat. 3. *p.* 270. *t.* 3. *f.* 20, 21.
Chemn. Berl. Naturf. 6. *t.* 6. *f.* 4, 5.
Chemn. Conch. 10. *t.* 152. *f.* 1446, 1447.
Donovan Brit. Conch. t. 154.
Habitat in mari.
Testa crassa, magnitudine extimi articuli pollicis, pallida, secundum anfractus obsolete striata, acuminata, superne conica. *Anfractus* infimus

seu

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.*)

Discovered by Mr. Agnew among the Orkney Islands.

7.

undatum. B. testa oblonga, rudi, transversim striata, anfractibus curvato-multangulis. *Linn. Fauna Suecica, n.* 2163. *Syst. Nat. p.* 1204. *n.* 475. *Linn. Gmel. p.* 3492.
Lister Conch. t. 962. *f.* 14. —— *Anim. Angl. t.* 3. *f.* 2.
Seb. Mus. 3. *t.* 39. *f.* 76—80.
Knorr Vergn. 4. *t.* 19. *f.* 1.
Martini Conch. 4. *t.* 126. *f.* 1206—1209.
Olafs Isl. t. 10. *f.* 1.
Pennant Brit. Zool. t. 73. *f.* 9. B. vulgare.
Da Costa Brit. Conch. p. 122. *t.* 6. *f.* 6.
Pulteney in Hutch. Dorset. p. 42. *t.* 17. *f.* 6.
Montagu Test. Brit. p. 237.*
β *Lister Anim. Angl. t.* 3. *f.* 3. —— *Conch. t.* 962. *f.* 15.
Pennant Brit. Zool. t. 74. *f.* 91. B. striatum.
Habitat, vulgaris, in mari.
Testa ad 5 pollices longa, crassa, sub epidermide flavicante, rufescente-alba.
Anfractus costis numerosis obsoletis decussatim striatis.
Varietas β absque costis.

8.

reticulatum. B. testa ovato-oblonga, transversim striata, longitudinaliter rugosa, apertura dentata. *Linn. Syst. Nat. p.* 1204. *n.* 476. *Linn. Gmel. p.* 3495.
Lister Conch. t. 966. *f.* 21. bene.
Petiver Gaz. t. 75. *f.* 4.
Gualt. Test. t. 44. *f.* C.
Adans. Seneg. t. 8. *f.* 9.
Martini Conch. 4. *t.* 124. *f.* 1162—1164. et var. 1165, 1166.
Pennant Brit. Zool. t. 72. *f.* 92. & *f.* 88.

Da Costa Brit. Conch. p. 131. *t.* 7. *f.* 10.
Schröt. Einl. in Conch. 1. *t.* 2. *f.* 5.
Pulteney in Hutch. Dorset. p. 42. *t.* 15. *f.* 10.
Donovan Brit. Shells, t. 76.
Montagu Test. Brit. p. 240.
Habitat, frequens, in mari.
Testa 1 vel 1½ poll. longa, ¾ lata, flavescente-brunnea, longitudinaliter costata, maculis tuberculatis. Variat et magnitudine et colore.
Varietas β fusca, fauce purpurea, costis latioribus, dentibus obsoletis.

9.
ambiguum. B. testa subpyramidali, transversim striata, longitudi-
t. 4. *f.* 5. naliter lineato-costata, labro tenuiore.
Pulteney in Hutch. Dorset. p. 42. *t.* 18. *f.* 19.
Montagu Test. Brit. p. 242. *t.* 9. *f.* 7.
Habitat in mari.
Testa ⅛ poll. longa, ⅜ lata, præcedenti affinis sed tenuior. *Color* ochraceus. *Anfractus* distinctiores, subangulati.
Found by Mr. Bryer, between Weymouth and Portland.

10.
Macula. B. testa ovata, transversim striata, labro incrassato.
t. 4. *f.* 4. *Act. Nidr.* 4. *p.* 369. *t.* 16. *f.* 25.
Pennant Brit. Zool. t. 79. *fig. sinistra inferiore interiore.*
β. minutum.
Montagu Test. Brit. p. 241. *t.* 8. *f.* 4. B.
Pulteney in Hutch. Dorset. t. 15. *f.* 8.
Habitat in mari.
Testa ½ poll. longa, ¼ lata, crassa, rugosa, omnibus facile coloribus varia. *Anfractus* cancellati, costis tumidioribus longitudinalibus. *Labrum* interius denticulatum, exterius macula fusco-purpurea. *Apex* purpurascens.
First distinguished as a British shell by Pennant. Found at Falmouth, Cornwall; and on the Dorsetshire and Devonshire coasts, by Mr. Montagu.

11. *cinctum.*

11.
cinctum. B. testa conica, costis numerosis, apice acuto.
Montagu Test. Brit. p. 246. *t.* 15. *f.* 1.
Pulteney in Hutch. Dorset. t. 14. *f.* 17.

Habitat in mari.

Testa ¼ poll. longa, alba, linea unica rufescente-brunnea spirali. *Anfractus* inter costas numerosas obsolete transversim-striati. *Apertura* coarctata.

Found only by Mr. Bryer, near Weymouth; rare.

12.
minimum. B. testa acuminata, costis eminentibus, striis transversis.
Montagu Test. Brit. p. 247. *t.* 8. *f.* 2.
Donovan Brit. Shells, t. 179. *f.* 2. B. brunneum.

Habitat in mari.

Testa $\frac{2}{10}$ poll. longa, crassa, colore castaneo. *Anfractus* 5, costis et striis quasi decussati.

Found by Mr. Montagu, in abundance, on the S. coast of Devon. Mr. Donovan notes it from Cornwall.

13.
terrestre. B. testa subulata, lævi, anfractuum suturis manifestis, obliquis.
Gualt. Test. t. 6. *f.* B. B.
Walker Test. Min. Rar. t. 2. *f.* 60.
Schröt. Flussconch. t. 8. *f.* 6. a. b.
——— *Erdconch. p.* 142.
Muller Verm. p. 150. *n.* 340.
Montagu Test. Brit. p. 248. *t.* 8. *f.* 3.

Habitat in ericetis, radicibus graminum et muscis adhærens.

Testa minuta, ¼ poll. longa, alba, pellucida, glabra. *Anfractus* sex, tumidiusculi, obliqui. *Apex* obtusior.

Found first by Mr. Boys, in Faversham Creek, Kent. It has been noticed also by Mr. Montagu, on Barham Downs, in the same county, upon the roots of grass

and under moss. Mr. Sowerby has found it at Battersea, Surrey.

We have never met with the following species, nor are we able to add any thing to the discoverer's very brief and imperfect descriptions.

14. *obtusulum.* B. testa ventricosa, anfractibus tribus, apertura ovali.
Walker Test. Min. Rar. t. 3. *f.* 89.
Adams Micr. t. 14. *f.* 25.
Testa opaca alba.
From Faversham Creek; rare.

15. *breve.* B. testa quinque anfractibus longitudinaliter costatis, transversim striatis.
Adams in Act. Soc. Linn. 3. *t.* 13. *f.* 34.
Color albus, opacus. *Cauda* brevissima.

16. *minutum.* B. testa anfractibus tribus longitudinaliter costatis.
Adams in Act. Soc. Linn. 3. *t.* 13. *f.* 5, 6.
Color albus, opacus.
An distincta a præcedente?

17. *læve.* B. testa lævi, tribus anfractibus, cauda elongata. *Adams in Act. Soc. Linn.* 3. *t.* 13. *f.* 7, 8.

18. *obtusissimum.* B. testa lævi, anfractibus tribus, apertura coarctata, cauda elongata. *Adams in Act. Soc. Linn.* 3. *t.* 13. *f.* 9, 10.

The two last appear by the figures to be shells that have not attained their full growth.

STROMBUS.

STROMBUS.

Linn. Syst. Nat. n. 324.

1. *Pes Pelecani.* S. testa labro tetra-dactylo palmato digitis angulato, fauce lævi. *Linn. Fauna Suecica, n.* 2164. *Syst. Nat. p.* 1207. *n.* 490. *Linn. Gmel. p.* 3507.
Bonann. Recr. 3. *n.* 85, 87.
Lister Conch. t. 865. *f.* 20.; *t.* 866. *f.* 21.; & *t.* 1059. *f.* 3.
Petiver Gaz. t. 79. *f.* 6.
Gualt. Test. t. 53. *f.* A. B. C.
Argenv. Conch. t. 14. *f.* M.
Mus. Gottwald. f. 130. a. b.
Knorr Vergn. 3. *t.* 7. *f.* 4.
Martini Conch. 3. *t.* 85. *f.* 849, 850.
Murray in Amœn. Acad. t. 1. *f.* 21.
Pennant Brit. Zool. t. 75. *f.* 94.
Da Costa Brit. Conch. p. 136. *t.* 7. *f.* 7. Aporrhais quadrifidus.
Pulteney in Hutch. Dorset. p. 42. *t.* 15. *f.* 7.
Donovan Brit. Shells, t. 4.
Montagu Test. Brit. p. 253.

Habitat in mari.

Testa vix 2 poll. longa, crassa, lævis, coloris exalbidi, aut rufescentis. *Anfractus* inferior cingulis 2 vel 3 nodosis, in carinam labri desinentibus. Anfractus superiores cingulis nodosis simplicibus circumdati, striati. *Spira* exquisita, longa. *Labrum* palmatum, tetradactylum, digitis patentissimis, angulatis, acutis, mediocribus, primo et ultimo adnato. *Cauda* producta sinistrorsum versus. (*Linn.*)

Inhabits the British and Irish coasts. (*Da Costa.*)

2. *costatus.*

2.
costatus. S. testa subulata, labro rotundato.
Da Costa Brit. Conch. p. 118. *t.* 8. *f.* 14.
Pulteney in Hutch. Dorset. p. 42. *t.* 14. *f.* 14.
Donovan Brit. Shells, t. 94.
Montagu Test. Brit. p. 255.
Habitat in mari.
Testa ½ poll. longa, turrita, colore castaneo. *Spira* acutissima. *Anfractus* rotundati, costis numerosis elevatis longitudinalibus; anfractuum suturæ eminentes. *Labrum* ampliatum. *Cauda* nulla.

First noticed by Da Costa, from Cornwall. It has been found on the sands of the Dorsetshire coast, by Dr. Pulteney; and on Milton Sands, Devon, but rare, by Mr. Montagu.

MUREX.

Linn. Syst. Nat. n. 325.

* *Frondosus:* suturis crispato-frondescentibus, cauda abbreviata.

1.
Erinaceus. M. testa multifariam subfrondoso spinosa, spiræ anfractibus retuso-coronatis, cauda abbreviata. *Linn. Syst. Nat. p.* 1216. *n.* 526. *Linn. Gmel. p.* 3530.
Gualt. Test. t. 49. H.
Martini Conch. 3. *t.* 110. *f.* 1026—1028.
Seb. Mus. 3. *t.* 49. *f.* 78, 79.
Born Mus. t. 11. *f.* 3, 4. benè.
Pennant Brit. Zool. 4. *t.* 76. *f.* 95.
Da Costa Brit. Conch. p. 132. *t.* 8. *f.* 7. Bucc. porcatum.
Pulteney in Hutch. Dorset. p. 43. *t.* 14. *f.* 7.
Donovan Brit. Shells, t. 35.
Montagu Test. Brit. p. 259.
Habitat in mari, frequens.
Testa utplurimum magnitudine nucis juglandis, rugosa, colore lutescente-brunneo,

brunneo, vel albo; interdum ferrugineo marmorata. *Anfractus* suturis varicosis, inter varices carinati, costis elevatis, alternis minoribus. *Apertura* ovalis. *Cauda* brevissima.

** *Caudigeri*: cauda subulata clausa recta elongata, testa inermi.

2. *gracilis.* M. testa turrita, anfractibus costatis decussato-striatis, suturis planis.

Montagu Test. Brit. p. 267. *t.* 15. *f.* 5. *& p.* 586.
Donovan Brit. Shells, t. 169. *f.* 2. M. emarginatus.
Pulteney in Hutch. Dorset. t. 14. *f.* 18.

Habitat in mari, rarissima.

Testa $\frac{7}{8}$ poll. longa, $\frac{3}{8}$ lata, flavescens, suturis pallide ferrugineis. *Anfractus* 9 vel 10, costis 11 vel 12 convexis. *Suturæ* spiraliter striatæ. *Apertura* coarctata. *Cauda* longiuscula, adscendens.

A new and beautiful species, discovered by Mr. Montagu on the sands of Biddeford Bay, Devon. Mr. Donovan notes it from the Western coast. Mr. Bryer found live specimens, by dredging in the west bay of Portland.

3. *attenuatus.* M. testa fusiformi, spiræ anfractibus minime prominentibus; costis novem æquidistantibus, manifestis.

Montagu Test. Brit. p. 266. *t.* 9. *f.* 6.

Habitat in mari.

Testa $\frac{1}{2}$ poll. longa, $\frac{1}{8}$ lata, flavescente-alba. *Anfractus* octo in apicem acutum desinentes. *Suturæ* subtiles. *Costæ* arcuatæ. *Apertura* coarctata, desinens in canalem longiusculum.

A new and rare species, discovered by Mr. Montagu in sand from Falmouth harbour; and at Biddeford, Devon.

4. *Nebula.* M. testa turrita, anfractibus octo costatis, subtilissime reticulatis, cauda obliqua.

Montagu Test. Brit. p. 267. *t.* 15. *f.* 6.

Pulteney

Pulteney in Hutch. Dorset. t. 14. *f.* 16.

Habitat in mari.

Testa ¼ poll. longa, nunc flavescens, nunc purpurascens, vel carnaria, striis albis reticulata. *Anfractus* plani. *Suturæ* manifestæ. *Costæ* 10 vel 11 depressiusculæ, quibus distinguitur a *M. costato.*

Discovered by Mr. Montagu, at Falmouth. Found sparingly on the Western coast, and on the coast of South Wales.

5.

costatus. M. testa oblonga, subcaudata, costis elevatis longitudinalibus.

Pennant Brit. Zool. 4. *t.* 79. in angulo superiore sinistro.

Da Costa Brit. Conch. p. 128. *t.* 8. *f.* 4. B. costatum.

Pulteney in Hutch. Dorset. p. 43. *t.* 14. *f.* 4.

Donovan Brit. Shells, t. 91.

Montagu Test. Brit. p. 265.

Habitat in mari.

Testa vix ¼ poll. longa, colore castaneo vel purpurascente-brunneo, lævis, interdum glabra absque striis. *Apertura* oblonga. *Cauda* fere nulla.

First noticed by Pennant. Found on the Western coast, and on the sandy shores of South Wales; but not plentifully.

6.

septangularis. M. testa oblonga, costis septem longitudinalibus, continuis, parum elevatis.

Montagu Test. Brit. p. 268. *t.* 9. *f.* 5.

Donovan Brit. Shells, t. 179. *f.* 4.

Habitat in mari, rarior.

Testa ⅛ poll. longa, leviter purpurascens, glabra; sutura anfractuum vix depressa. *Apertura* oblongo-ovalis. *Cauda* brevissima.

Discovered at Falmouth, by Mr. Montagu; afterwards found at Weymouth, Dorset, by Mr. Bryer.

7.

Turricula. M. testa acuminata, transversim striata, anfractibus costatis, angulatis. *Montagu Test. Brit. p.* 262. *t.* 9. *f.* 1.

Donovan

Donovan Brit. Shells, t. 156. M. angulatus.
Pulteney in Hutch. Dorset. t. 14. *f.* 15.
Habitat in mari.
Testa ¾ poll. longa, ¼ lata, alba, glabra, apice acuto. *Anfractus* septem, angulati non rotundati, sed supra ferè plani.

First discovered near Sandwich, Kent, by Mr. Boys. Found at Biddeford Bay, Devon; at Tenby and Llaugharne, S. Wales; at Brighton; and at Weymouth.

8. *rufus.* M. testa acuminata, anfractibus costatis; costis numerosis, transversim striatis.
Montagu Test. Brit. p. 263.
Habitat in mari.
Testa $\frac{3}{10}$ poll. longa, ⅛ lata, purpurascens, rufescente-brunnea, vel coloris castanei. *Anfractus* costis 15 vel 16. *Apertura* coaretata, oblonga. *Cauda* brevis.

Found, with the last, at Sandwich, Kent; on the Devon and Dorset coasts; and on the coast of Wales.

9. *sinuosus.* M. testa acuminata, anfractibus sex costatis, delicatissime transversim striatis, cauda brevissima, labro antice fisso.
Montagu Test. Brit. p. 264. *t.* 9. *f.* 8.
Habitat in mari.
Testa ¾ poll. longa, ¼ lata, crassa, alba. *Anfractus* minime prominentes, costis septem elevatis striatis. *Sutura* filiformis. *Apertura* oblongo-ovalis.

A new and rare species, discovered by Mr. Bryer, at Weymouth.

10. *antiquus.* M. testa patulo-caudata, oblonga, anfractibus octo teretibus. *Linn. Fauna Suecica, n.* 2165. *Syst. Nat. p.* 1222. *n.* 558. *Linn. Gmel. p.* 3546.
Lister Conch. t. 913. *f.* 4. —— *Anim. Angl. t.* 3. *f.* 1.
Martin. Conch. 4. *t.* 138. *f.* 1292. & 1294.

Pennant Brit. Zool. t. 78. *f.* 93. M. despectus.
Da Costa Brit. Conch. p. 120. *t.* 6. *f.* 4. Buccinum magnum.
Pulteney in Hutch. Dorset. p. 43. *t.* 17. *f.* 4. M. despectus.
Donovan Brit. Shells, t. 31. M. despectus.
Montagu Test. Brit. p. 257. M. despectus.

Habitat in mari.

Testa interdum 6 poll. longa, crassa, valida, sordide alba, neque glabra, intus croceo-rutilans. *Anfractus* 7 vel 8 rugosi, numerosissime striati. *Spira* producta. *Apertura* anticè angulata. *Labrum* interius lævissimum, margine acuto, integerrimo.

First figured and described by Lister, who received it from Scarborough, Yorkshire. It has been found on the coasts of Essex, Yorkshire, Scotland, and Ireland, according to Da Costa; on the Dorset coast, but rarely, by Dr. Pulteney; and at Hartlepool, in Durham, by the Rev. T. Rackett.

This shell agrees perfectly with Linnæus's description. Pennant, and every subsequent writer on British Conchology, by attending to an erroneous reference to Lister's figure, instead of Linnæus's definition of *M. despectus*, have given that name to this species. We have seen specimens of *M. despectus* from Gröenland, which correspond exactly both with Linnæus's description "*lineis duabus elevatis*" and with his *own* figure in the *Iter Westrogothicum*; and they appear to differ from any British species hitherto noticed.

Since this paper was read, Mr. Donovan has corrected his description of this species, and has also given a good figure of *M. despectus*, (*t.* 180.); though, as he acknowledges, on too slight authority to be inserted as British.

11. *carinatus.*

11.
carinatus. M. testa patulo-subcaudata, oblonga; anfractibus sex, lævibus, bicarinatis.

Pennant Brit. Zool. 4. *t.* 4. *p.* 123.
Donovan Brit. Shells, *t.* 109.
Montagu Test. Brit. p. 257.
Habitat in mari.
Testa 4 poll. longa, sordide alba. *Anfractus* versus suturam declives, non rotundati ut in *M. despecto* et *antiquo*; primus carinis 4 vel 5.

First figured by Pennant from the Duchess of Portland's cabinet.

The specimen from which we have formed the above characters, and which is unique, is nearly allied to Linnæus's *M. despectus*, but appears to be a distinct species.

12.
subantiquatus. M. testa patulo-subcaudata, anfractibus orto tuberculato-carinatis.

Lister Conch. t. 1057. *f.* 1.
Martini Conch. 4. *t.* 138. *f.* 1293.
Pennant Brit. Zool. n. 97. M. antiquus.
Donovan Brit. Shells, 4. *t.* 119. M. antiquus.
Montagu Test. Brit. p. 257. M. antiquus.
Habitat in mari.
Testa 3¼ poll. longa, rudis, flavescente-brunnea, subantiquata. *Anfractus* transversaliter lineato-striati, interdum costis obliquis irregularibus in tubercula decurrentibus.

First noticed as British by Pennant, and first figured as such by Mr. Donovan; found on the Scottish coast.

13.
corneus. M. testa oblonga, rudi, anfractuum marginibus complanatis, apice tuberculoso, apertura edentula, cauda adscendente. *Linn. Syst. Nat. p.* 1224. *n.* 565. *Linn. Gmel. p.* 3552.

Lister Conch. t. 913. *f.* 5. —— *Anim. Angl. t.* 3. *f.* 4.

It. Wgoth. t. 5. *f.* 6. fossilis.
Martini Conch. 4. *t.* 143. *f.* 1337?
Pennant Brit. Zool. t. 76. *f.* 99.
Da Costa Brit. Conch. p. 124. *t.* 6. *f.* 5. Bucc. gracile.
Pulteney in Hutch. Dorset. p. 43. *t.* 17. *f.* 5.
Donovan Brit. Shells, t. 38.
Montagu Test. Brit. p. 258.
Habitat in pelago.
Testa vix magnitudine digiti, lævis sed non glabra, alba, sub epidermide cornea. *Anfractus* teretiores, striis levibus numerosis. *Spira* productior. *Apertura* postice angulata. *Cauda* parum adscendens.

First noticed by Lister, from Scarborough, Yorkshire. Da Costa notes it from various parts of the kingdom; not uncommon on the Dorset coast (*Dr. Pulteney*), and on the shores of South Devon (*Mr. Montagu*).

14.
linearis. M. testa acuminata, rugosa; anfractibus rotundatis, costatis, lineato-striatis. *Montagu Test. Brit. p.* 261. *t.* 9. *f.* 4.
Donovan Brit. Shells, t. 179. *f.* 3. M. elegans.
Habitat in mari, rarior.
Testa vix $\frac{1}{4}$ poll. longa, $\frac{1}{8}$ lata, pallidè brunnea, striis transversis, filiformibus, purpurascente-brunneis, costis 9 vel 10. *Labrum* incrassatum, intus crenatum. *Spira* acuta, producta, in testis senioribus purpurascens. *Cauda* productiúscula.

A new species, discovered by Mr. Montagu, in sand from Falmouth harbour, and in Salcombe Bay, Devonshire; found also by Miss Pocock, in Cornwall.

15.
purpureus. M. testa oblonga, caudata; anfractibus teretibus cancellatis.
Montagu Test. Brit. p. 260. *t.* 9. *f.* 3.
Habitat in mari.

Testa

Testa ⅜ poll. longa, ¼ lata, rugosa, purpurea, maculis albis. *Anfractus* costis 19 vel 20 obliquis, striis numerosis elevatis acutis cancellati. Color intus purpureus. *Margo* albus, crenatus.

A new, elegant, and rare species, first described and figured by Mr. Montagu, from Salcombe Bay, Devon.

16.

muricatus. M. testa oblonga, rugosa, anfractibus ventricosis, costis longitudinalibus et striis elevatis tuberculatis.

Montagu Test. Brit. p. 262. *t.* 9. *f.* 2.

Habitat in mari, rarior.

Testa ¼ poll. longa, ¼ lata, carneo-alba vel viridescens, sub epidermide rubicunda. *Labrum* acutum, dentatum, intus crenulatum. *Apex* glaber, acutus. *Cauda* recta, producta.

This species also was first discovered by Mr. Montagu, in Salcombe Bay, Devon.

17.

Bamffius. M. testa ventricosa, alba; costis longitudinalibus acutis, plicatis. *Donovan Brit. Shells, t.* 169. *f.* 1.

Habitat in mari, rarissima.

Testa interdum 1 poll. longa, ¼ lata.

Found by Mr. Cordiner on the coast of Bamffshire, N. Britain.

18.

minutissimus. M. quinque anfractibus spiraliter striatis, costis remotis, canali clauso. *Adams in Act. Soc. Linn.* 3. *p.* 68.

Habitat in mari.

Testa elegans pellucida. (*Adams.*)

Found at Pembroke, by Mr. Adams.

* * * Turriti: *subulati, cauda brevissima.*

19.

fuscatus. M. testa turrita, anfractibus stria superiore denticulata.

t. 4. *f.* 6. *Linn. Syst. Nat. p.* 1225. *n.* 573. *Linn. Gmel. p.* 3562.

Lister Conch. t. 121. *f.* 17?

Petiver Gaz. t. 5. *f.* 5?

Gualt. Test. t. 56. *f.* H.
D'Argenv. Conch. t. 14. *f.* α.
Pennant Brit. Zool. t. 82. *f.* 111*? Turbo tuberculatus.
Chemn. Conch. t. 136. *f.* 1267, 1268.
Pulteney in Hutch. Dorset. p. 43.
Montagu Test. Brit. p. 209.
Habitat in mari, rarissima.
Testa 1¼ poll. longa. *Spira* acutissima. *Anfractus* striis granulatis, et versus basin testæ spinis subconicis coronati. *Apertura* pyriformis. *Cauda* brevis, rectiuscula.

Found at Weymouth, Dorset, after a violent storm, by Mr. Bryer.

Dr. Pulteney, in his Dorsetshire Catalogue, imagines the *Turbo tuberculatus* of Pennant to be a depauperated variety of this species.

20. *reticulatus.* M. testa turrita, tuberculato-reticulata.
Borlase Cornw. p. 277.
Da Costa Brit. Conch. p. 117. *t.* 8. *f.* 13. Strombiformis reticulatus.
Pulteney in Hutch. Dorset. p. 43. *t.* 14. *f.* 13.
Habitat in mari.
Testa magnitudine avenæ, subfusca, crassa. *Apertura* ovalis, minima. *Cauda* vix conspicua.

First figured by Da Costa. Common on the Cornish coast. Found also in Devonshire, Dorsetshire, Kent, and S. Wales.

21. *tuberculatus.* M. testa turrita; anfractibus 9 vel 10 tuberculatis, sutura obsoletiore divisis. *Montagu Test. Brit. p.* 270.
Habitat in mari.
Testa ¼ poll. longa, coloris castanei. *Apertura* ovalis, desinens in canalem coarctatum. *Columella* involuta (*Montagu*). Testa *M. reticulato* valde affinis.

Found

Found at Sandwich, by Mr. Boys, and sparingly at the mouth of the Aun, Devonshire, by Mr. Montagu.

22. *adversus.* M. testa turrita; anfractibus contrariis, serie triplici tuberculorum cinctis, media minore.

Walker Test. Min. Rar. f. 48.
Adams Microsc. Essays, t. 14. *f.* 21.
Montagu Test. Brit. p. 271.
Donovan Brit. Shells, t. 159. T. reticulatus.
Habitat in mari.
Testa ⅜ vel ½ poll. longa, pallide brunnea. *Anfractus* fere coadunati. *Testa* præcedenti affinis, sed perversa.

First found by Mr. Boys, and figured by Walker. It has been discovered also on the Cornish and Devonshire coasts.

TROCHUS.

Linn. Syst. Nat. n. 326.

* Umbilicati *erecti, perforata columella.*

1. *Magus.* Tr. testa oblique umbilicata, convexa; anfractibus obtusè nodulosis. *Linn. Syst. Nat. p.* 1228. *n.* 585.
Linn. Gmel. p. 3567.
Gualt. Test. t. 64. *f.* C.
Argenv. Conch. t. 11. *f.* S.
Seb. Mus. 3. *t.* 73. *f.* 13, 14.
Knorr Vergn. 6. *t.* 27. *f.* 4.
Pennant Brit. Zool. t. 80. *f.* 107.
Da Costa Brit. Conch. p. 44. *t.* 3. *f.* 11. T. tuberculatus.
Chemn. Conch. 5. *t.* 170. *f.* 1656—1659.
Pulteney in Hutch. Dorset. p. 44. *t.* 16. *f.* 1.
Donovan Brit. Shells, t. 8. *f.* 1.
Montagu Test. Brit. p. 283.

Habitat

Habitat ad littora.

Testa depresso-conica, rubro-nebulosa. *Anfractus* 4 seu 5, gibbi, supra longitudinaliter nodosi, obsolete striati. *Apertura* subrotunda, integra, intus margaritacea. *Umbilicus* latere postico sinuatus. (*Linn. Mus. Lud. Ulr. p.* 647.)

First figured as British by Pennant. Not uncommon on most of our shores.

2.

cinereus. Tr. testa pyramidali, umbilicata, anfractibus planis distinctis.

Lister Conch. t. 633. *f.* 21?

Da Costa Brit. Conch. p. 42. *t.* 3. *f.* 9, 10.

Donovan Brit. Shells, t. 155. *f.* 2.

Montagu Test. Brit. p. 289.

Habitat ad littora.

Testa magnitudine nucis avellanæ, coloris cinerei, lineis obliquis purpureo-nigricantibus. *Anfractus* striis numerosis, eminentibus. *Spira* acutiuscula. *Umbilicus* patulus.

This species has been described and figured only by Da Costa, who notes it as common in various maritime counties. Our description was taken from a specimen in that author's cabinet, now in the possession of Mr. Donovan; but we have not been able to ascertain it as a British shell.

3.

lineatus. Tr. testa subconica, umbilicata; anfractibus convexiusculis.

Lister Conch. t. 641. *f.* 31? —— *Anim. Angl. t.* 3. *f.* 15?

Pennant Brit. Zool. n. 106.

Da Costa Brit. Conch. p. 43. *t.* 3. *f.* 11, 12.

Chemn. Conch. 5. *t.* 171. *f.* 1686.

Pulteney in Hutch. Dorset. p. 44. *t.* 16. *f.* 11, 12.

Donovan Brit. Shells, t. 74. *f.* sup. et 2 inf.

Montagu Test. Brit. p. 284. T. cinerarius.

Habitat

Habitat ad littora.

Testa diametro $\frac{1}{8}$ poll. subalbida, flavescens vel cinerascens, lineis obliquis parallelis brunneis. *Anfractus* striis obsoletioribus. *Spira* obtusior. *Umbilicus* minus patulus.

Notwithstanding the figure in Chemnitz, referred to by Gmelin for *Tr. cinerarius* of Linnæus, resembles our shell, we cannot suppose it to be that species, as it does not sufficiently agree with the description in the *Systema Naturæ* of "*Anfractibus rotundatis*," or the more detailed characters given by Otho Fabricius, in his *Fauna Gröenlandica*.

4. *umbilicatus.* T. testa umbilicata, depressa; anfractibus contiguis.

Lister Conch. t. 641. *f.* 32?
Pennant Brit. Zool. t. 80. *f.* 106.
Da Costa Brit. Conch. p. 46. *t.* 3. *f.* 7, 8.
Pulteney in Hutch. Dorset. p. 44. *t.* 16. *f.* 7, 8.
Donovan Brit. Shells, t. 74. fig. med.
Montagu Test. Brit. p. 286.

Habitat in mari, ad littora.

Testa magnitudine uvæ, albida, fasciis obliquis rubro-cinereis. *Anfractus* substriati, parum convexi, ita coadunati, ut difficillime distinguendi. *Spira* obtusissima. *Umbilicus* testam perforat.

Lister's figure is a doubtful one, though so common a shell must have been known to him. Pennant imagined it to be the *Tr. umbilicaris*, and Dr. Pulteney the *Tr. cinerarius*, of Linnæus; but it will not agree with the description of either.

5. *tumidus.* Tr, testa subconica, striata; anfractibus prominentibus planis.

Chemn. Conch. 5. t. 171. *f.* 1676?
Linn. Gmel. p. 3574. Tr. patholatus?

Montagu Test. Brit. p. 280. *t.* 10. *f.* 4.
Pulteney in Hutch. Dorset. t. 16. *f.* 9, 10.
Habitat in mari, saxis, testaceis adhærens.
Testa ¼ poll. longa, paululum latior, cinerascente- flavescente- vel purpurascente-brunnea, lineis fuscis longitudinalibus. *Anfractus* spiraliter striati, plani, versus suturam angulati; primus ad basin subcarinatus. *Umbilicus* minimus.

We have found this species on the coast of Devonshire. It was first described and figured by Mr. Montagu.

6. *fuscus.* T. umbilicatus, quinque anfractibus marginatus; apertura subrotunda. *Walker Test. Min. Rar. f.* 58.
Habitat in mari.
Testa opaca brunnea. An varietas *T. tumidi?*

From Sandwich, common. (*Walker.*)

** Imperforati *erecti, umbilico clauso.*

7. *crassus.* Tr. testa subovata, imperforata; columella unidentata.
Petiver Gaz. t. 36. *f.* 11?
Da Costa Brit. Conch. p. 100. *t.* 6. *f.* 7. Turbo lineatus.
Pulteney in Hutch. Dorset. p. 44. *t.* 17. *f.* 3, *& f.* 7.
Donovan Brit. Shells, t. 71.
Montagu Test. Brit. p. 281.
Habitat ad littora.
Testa 1 poll. longa, vix totidem lata, crassa, rudis, purpureo-cinerea aut exalbida, lituris nigricantibus reticulatim variegata. *Anfractus* subconvexi, rugis obliquis, sutura inconspicua. *Spira* vertice carioso. *Umbilicus* vix manifestus, interdum nullus.

First noticed and figured by Da Costa, who received it from various parts of the kingdom, particularly the Western coast, where it has been since found in abundance.

8. *papillosus.*

8.

papillosus. Tr. testa imperforata, conica, lineato-punctata, basi gibba.

Gualt. Test. t. 61. *f.* G. M.

Da Costa Brit. Conch. p. 38. *t.* 3. *f.* 5, 6.

Chemn. Conch. 5. *t.* 166. *f.* 1597, 1598.

Pulteney in Hutch. Dorset. p. 44. *t.* 16. *f.* 5. Tr. fragilis.

Donovan Brit. Shells, t. 127.

Montagu Test. Brit. p. 275. *t.* 10. *f.* 3. Tr. tenuis.

Habitat ad littora, rarior.

Testa Tr. Zizyphino major, colore rubescente, maculis distinctioribus. *Anfractus* planiusculi, lineis duabus punctatis prominentioribus interstincti. *Spira* acutissima.

First described by Da Costa, who received it from Cornwall. Found at Poole and Weymouth, Dorset, by Dr. Pulteney.

There is reason to believe that Da Costa's figure was taken from a foreign specimen.

9.

Zizyphinus. Tr. testa imperforata, conica, livida, lævi; anfractibus marginatis. *Linn. Fauna Suecica, n.* 2168. *Syst. Nat. p.* 1231. *n.* 599. *Linn. Gmel. p.* 3579.

Lister Conch. t. 616. *f.* 1. bene.

—— *Anim. Angl. t.* 3. *f.* 14. bene.

Gualt. Test. t. 61. *f.* C.

D'Argenv. Conch. t. 8. *f.* N?

Knorr Vergn. 3. *t.* 14. *f.* 2; & 6. *t.* 27. *f.* 5.

Pennant Brit. Zool. t. 80. *f.* 103.

Da Costa Brit. Conch. p. 37. *t.* 3. *f.* 3, 4.

Chemn. Conch. 5. *t.* 166. *f.* 1592, 1593.

Pulteney in Hutch. Dorset. p. 44. *t.* 16. *f.* 3, 4.

Donovan Brit. Shells, t. 52.

Montagu Test. Brit. p. 274.

Habitat in mari.

Testa 1 poll. longa, et fere totidem lata, exacte conica, striata, striis 10 purpurascentibus cavis; totidemque alternis pallidis ex serie concatenata punctorum. *Anfractus* novem, ambitu marginati, arctissime coadunati, ut vix queant distingui. (*Linn. Mus. Lud. Ulr. p.* 650.)

10. *exiguus.* Tr. testa imperforata, conica, striata; anfractibus crenato-lineatis.

Da Costa Brit. Conch. p. 40. *t.* 2. *f.* 4. Tr. Conulus.
Maton's Western Counties, 1. *p.* 216.
Pulteney in Hutch. Dorset. p. 44. *t.* 21. *f.* 4.
Donovan Brit. Shells, t. 8. *f.* 2. Tr. Conulus.
Montagu Test. Brit. p. 277.

Habitat ad littora, rarior.

Testa $\frac{3}{8}$ poll. longa, $\frac{1}{4}$ lata, purpurea vel cinerascente-brunnea. *Anfractus* sex, oblique striati, lineis 4 vel 5 crenatis spiraliter cincti. *Suturæ* rubræ, latiores, striis obliquis. *Apex* acutus, rubicundus.

First figured and described by Da Costa, who notices it from the coasts of Devonshire and Sussex. It was found by Dr. Pulteney on the Dorset coast; by Dr. Maton at Treryn Cove, Cornwall, and at Weymouth.

This shell differs materially from Linnæus's description of *Tr. Conulus,* for which it has been mistaken, but which is described as smooth, and much resembling *Tr. Zizyphinus.*

11. *erythroleucos.* Tr. testa imperforata, conica, lævi, transversaliter striata; anfractibus contiguis.

Lister Conch. t. 616. *f.* 2.
Pennant Brit. Zool. n. 105? T. exasperatus.
Da Costa Brit. Conch. p. 41. Tr. parvus.
Chemn. Conch. 5. *t.* 161. *f.* 1529. a. b.

Linn.

Linn. Gmel. p. 3581.
Adams in Act. Soc. Linn. 3. *t.* 65. T. parvus?
Pulteney in Hutch. Dorset. p. 44. *t.* 18. *f.* 2.
Montagu Test. Brit. p. 278. Tr. striatus.
Donovan Brit. Shells, t. 155. *f.* 1. Tr. conicus.
Habitat in mari.
Testa ⅜ poll. longa, satis crassa, albo rubroque undatim depicta. *Anfractus* striis crebris transversis et obliquis cancellati. *Spira* productior.

First described by Da Costa. Dr. Pulteney and Dr. Maton found it at Weymouth. It has been seen also on the coast of Devon.

12.
terrestris. Tr. testa conica, striata, basi plano.
Lister Conch. t. 61. *f.* 58. — *Anim. Angl. App. t.* 3. *f.* 12.
Petiver Gaz. t. 22. *f.* 10?
Morton Northampt. p. 416.
Pennant Brit. Zool. t. 80. *f.* 108.
Da Costa Brit. Conch. p. 35.
Favanne Conch. t. 64. *f.* O. 1—3.
Donovan Brit. Shells, t. 111.
Montagu Test. Brit. p. 287.
Habitat in montosis, rarissimus.
Testa diametro vix ¼ poll. tenera, subflava, anfractuum suturis marginatis.

Found by Hudson on the mountains of Cumberland; though probably first noticed by Morton in his History of Northamptonshire.

It is said not to differ from the land *Trochus* found at Montpellier, and figured by Lister and Petiver.

TURBO.

Linn. Syst. Nat. n. 327.

1. * *Neritoidei:* aperturæ margine columnari plano, imperforato.

jugosus. T. testa subovata, ventricosiore; anfractibus sulcatis.

t. 4. *f.* 7. *Pulteney in Hutch. Dorset. p.* 45. *t.* 19. *f.* 1. T. obtusatus.
Montagu Test. Brit. p. 586. —— *Supplem. t.* 20. *f.* 2.

Habitat in mari.

Testa diametro $\frac{3}{8}$ poll., obscure flava vel fulva, interdum viridescens, vel purpurea, sulcis albis. *Anfractus* primus sulcis 10—16. *Spira* prominula. *Apex* acutiusculus.

Discovered by Mr. Knight in the Isle of Purbeck, Dorset. It has also been found at St. Ives, Cornwall, by Mr. Gibbs.

2.

littoreus. T. testa subovata, acuta, striata, margine columnari plano. *Linn. Fauna Suec. n.* 2169. *Syst. Nat. p.* 1232. *n.* 607. *Linn. Gmel. p.* 3588.

t. 4. *f.* 8, 9, 10, 11. *Lister Conch. t.* 585. *f.* 43. —— *Anim. Angl. t.* 3. *f.* 9. *Petiver Gaz. t.* 36. *f.* 11. *Gualt. Test. t.* 45. *f.* G. *Baster Opusc. Subsec. t.* 14. *f.* 1. *Hill's Swammerd.* 183. *Linn. It. Wgoth.* 169. 199. *t.* 5. *f.* 4. *Pennant Brit. Zool.* 4. *t.* 81. *f.* 109. *Da Costa Brit. Conch. p.* 98. *t.* 6. *f.* 1. *Chemn. Conch.* 5. *t.* 185. *f.* 1852. 1, 2, 3, 4, 5, 6, 7, 8.; & *f.* 1854. a—d.; & *f.* 1855. a—g. *Pulteney in Hutch. Dorset. p.* 45. *t.* 17. *f.* 1.; & *t.* 19. *f.* 2, 3. *Donovan Brit. Shells, t.* 33. *f.* 1, 2.
Montagu Test. Brit. p. 301.

Habitat in mari, ad littora, frequentissima.

Testa

Testa ad 1 poll. longa. Testæ seniores utplurimum læves, brunneæ; juniores vel parvæ, striatæ, interdum sulcatæ, nunc brunneæ fasciis albis, nunc fuscæ lineis purpureis, nunc flavæ vel fulvæ, et sæpius fasciis sordide cæruleis, nunc viridescentes maculis albis.

3.

rudis. T. testa subovata, obtusiore; anfractibus ventricosis. *t.*4. *f.*12,13. *Chemn. Conch.* 5. *t.* 185. *f.* 1853.

Maton's Western Counties, vol. 1. *p.* 277.
Donovan Brit. Shells, t. 33. *f.* 3.
Montagu Test. Brit. p. 304.
Pulteney in Hutch. Dorset. t. 18. *f.* 6.

Habitat in mari, ad littora.

Testa diametro $\frac{3}{4}$ poll., exalbido-flavescens, brunnea vel viridescens. *Anfractus* interdum leviter striati.

Distinguitur a *T. littoreo*, quod anfractus teretiores, sutura magis conspicua, animal flavescens.

First distinguished by Dr. Maton, who found it on the banks of the Tamar, Devonshire, and in Dorsetshire: found also at Whitstable, Kent, by Mr. Henry Boys; and in Caithness-shire, by Mr. M'Leay.

4.

crassior. T. testa conica, rudi, longitudinaliter striata; anfractu primo subcarinato.

Walker Test. Min. Rar. f. 34.
Montagu Test. Brit. p. 309. —— *Supplem. t.* 20. *f.* 1.
Donovan Brit. Shells, t. 178. *f.* 4. T. pallidus.

Habitat in mari.

Testa $\frac{1}{6}$ poll. longa, $\frac{1}{4}$ lata, coloris subalbidi. *T. rudi* affinis sed minor. *Spira* productior, acutiuscula. *Anfractus* teretes, leviter striati. *Sutura* profunda.

First noticed by Mr. Boys, at Sandwich; found on the shores of Biddeford Bay, Devon, by Mr. Montagu.

5. *tenebrosus.*

5.

tenebrosus. T. testa subconica, obtusiore, anfractu primo ventricosissimo.

Montagu Test. Brit. p. 303. ——— *Supplem. t.* 20. *f.* 4.
Pulteney in Hutch. Dorset. t. 18. *f.* 15.

Habitat in mari, ad rupes.

Testa diametro $\frac{1}{4}$ poll. picea, intus purpurascente-brunnea. *Anfractus* 5 ventricosiores, primus cæteros longitudine æquans. *Labrum* tenue. *Apex* obtusior.

First noticed by Mr. Montagu, who proposes it as distinct from *T. littoreus,* but not without some doubt. Found in Kent, and on the Western coast; but not so common as *T. littoreus.*

6.

petræus. T. testa conica, acuta, apertura pyriformi.

Montagu Test. Brit. p. 403.
Pulteney in Hutch. Dorset. t. 18. *f.* 13.

Habitat in mari.

Testa vix $\frac{3}{8}$ poll. longa, $\frac{2}{10}$ lata, purpureo-brunnea. *Anfractus* 5, minime prominentes, rugis transversis obliteratis, primus partem $\frac{2}{3}$ testæ longitudine æquans. *Faux* glabra, purpurea.

Distinguitur a præcedentibus, quod apertura deflexa, magis oblonga, versus apicem acutior. *Varietas* albo vel rufo variegata.

This species was discovered by Mr. Montagu on the South coast of Devon; he also found it at Swanwich, in the Isle of Purbeck, Dorset.

7.

Ziczac. T. testa subconica, acutiore, substriata; anfractu primo ad basin carinato.

t. 4. *f.* 14.

Lister Conch. t. 583. *f.* 38.
Chemn. Conch. 5. *t.* 166. *f.* 1599.
β *Chemn. Conch.* 5. *t.* 166. *f.* 1600.
Linn. Gmel. p. 3587. Trochus Ziczac.

Testa 1 poll. longa, $\frac{1}{2}$ lata, glabra, alba, erubescens, aut cærulea, lineis angulatis fuscis picta. *Anfractus* 5—6 planiusculi, substriati lineis depressis,

pressis tenuissimis, oculo armato solum conspiciendis. *Apertura* suborbiculata, versus apicem coarctata.

Varietas β. minor, alba, lituris fusco-cæruleis marmorata, striis paucioribus. Varietas Anglica ¼ poll. longa, plusquam ⅛ lata, cærulescens, versus apicem alba, striis paucioribus (10—14).

A small variety of this species, without the dark zig-zag lines which are found on those brought from the West Indies, was discovered by Lady Wilson, near Sunderland, in the county of Durham.

8. *fulgidus.* T. testa subconica, lævi; anfractibus tribus, primo maximo; apice minimo, obtuso.

Adams in Act. Soc. Linn. 3. p. 254.

Montagu Test. Brit. p. 332.

Habitat in mari.

Testa ½ lineæ longa, pellucida, glabra, albo castaneoque, utplurimum fasciis, variegata. *Apertura* suborbicularis. Intus margaritacea.

Habitat in mari.

Found in sea-sand at Linny, near Pembroke, by Mr. Adams; and in sand from Whitsand Bay, Cornwall, by Mr. Montagu.

9. ** *Solidi* imperforati.

Cimex. T. testa oblongo-ovata; striis decussatis, punctis eminentibus. *Linn. Syst. Nat. p.* 1233. *n*, 609. *Linn. Gmel. p.* 3589.

Gualt. Test. t. 44. X.

Adans. Seneg. t. 10. *f.* 6.

Da Costa Brit. Conch. p. 104. *t.* 8. *f.* 6. 9.

Donovan Brit. Shells, t. 2. *f.* 1.

Montagu Test. Brit. p. 315.

Pulteney in Hutch. Dorset. t. 14. *f.* 6. 9.

Habitat in mari, rarior.

Testa ⅛ poll. longa, $\frac{1}{10}$ lata, crassa, lactea. *Anfractus* 4. *Labrum* intus crenatum. *Apex* obtusior.

First noticed and figured by Da Costa, who received it from Cornwall; found also on the S. Devon, Dorset, and Kentish coasts.

10.

Pullus. T. testa imperforata, ovata, lævi; apertura anterius ducta. *Linn. Syst. Nat. p.* 1233. *n.* 610. *Linn. Gmel. p.* 3589.

Borlase Cornw. p. 276.

Da Costa Brit. Conch. p. 103. *t.* 8. *f.* 1. 3.

Pulteney in Hutch. Dorset. p. 45. *t.* 14. *f.* 1. 3.

Donovan Brit. Shells, t. 2. *f.* 2—6.

Montagu Test. Brit. p. 319.

Habitat in mari.

Testa magnitudine seminis carthami, lævis, glabra, nitida, fasciis maculisve roseis, purpurascentibus, fuscis, albis, undatim depicta. *Anfractus* primus ventricosior. *Apex* vix acutus. *Operculum* crassius, convexum, album, læve.

Not uncommon in Cornwall, and on the Devonshire coast. Found by Dr. Maton at Weymouth.

11.

semicostatus. T. testa conica, brevi, anfractibus 4 vel 5, rotundatis; anfractu primo leviter versus apicem costato, ad basin obsolete transversim striato.

Montagu Test. Brit. p. 326. ——— *Supplem. t.* 21. *f.* 5.

Habitat in mari, rarissima.

Testa $\frac{1}{2}$ lin. longa, $\frac{1}{4}$ lata, alba. *Spira* sine costis. *Apex* obtusus. *Columella* lævis. *Apertura* suborbicularis. Testa *Volutæ spirali* affinis, sed anfractus magis rotundati, pauciores, majores, et columella sine plica.

Found only by Mr. Montagu on the southern coast of Devonshire.

12.

ruber. T. anfractibus quinque pellucidis, glabris, lævibus, rotundatis; sutura tenui; apice acuto; apertura suborbiculari,

orbiculari, paululum in columellam reflexa. *Montagu Test. Brit. p.* 220.

Adams in Act. Soc. Linn. 3. *t.* 13. *f.* 21—22.

Habitat in mari.

Testa $\frac{1}{8}$ poll. longa, rufescente-brunnea. An hujus generis?

Varietas alba, pellucida.

Found by Mr. Adams, at Pembroke; and by Mr. Montagu in Whitsand Bay, Cornwall.

It appears impossible from the figures and descriptions of many of Mr. Adams's shells to ascertain correctly to what genus they belong. Never having obtained a sight of this or the following species, we are in doubt whether they should be referred to the *Turbines* or *Helices*.

13. *unifascia-tus.* T. testa conica, lævi; anfractibus quinque planiusculis, fasciatis. *Montagu Test. Brit. p.* 327.

——— *Supplem. t.* 20. *f.* 6.

Adams in Act. Soc. Linn. v. p. 2. *t.* 1. *f.* 13, 14.?

Habitat in mari, rarior.

Testa $\frac{1}{4}$ poll. longa, alba, fascia unica purpurascente-brunnea. *Anfractus* primus rarius fasciis duabus. *Fasciæ* spiræ juxta suturam. *Apertura* subovalis. *Labrum* tenue.

Discovered by Mr. Adams at Pembroke. Found by Mr. Montagu at Southampton, and on Burrow Island, Devonshire.

14. *nivosus.* T. testa lævi, subturrita, anfractibus 5 vel 6 rotundatis, apice obtuso, columella lævi. *Montagu Test. Brit. p.* 326.

Habitat in mari, rarissima.

Testa 1 lin. longa, glabra, alba; sutura exarata. *Apertura* subovalis.

Testa facie *Volutæ interstinctæ*, sed caret dente et costis.

Found by Mr. Montagu, in sand, on the south coast of Devon.

15.
labiosus. T. testa subconica, anfractibus planis, plicis numerosis.
Pennant Brit. Zool. 4. n. 114. t. 79?
Adams in Act. Soc. Linn. 5. p. 2. t. 1. f. 14, 15.?
Pulteney in Hutch. Dorset. p. 45. t. 18. f. 16. T. costatus.
Montagu Test. Brit. p. 400. t. 13. f. 7. Helix labiosa.
Habitat in mari.
Testa $\frac{3}{10}$ poll. longa, vix $\frac{2}{10}$ lata, tenuis, subpellucida, interdum tenerrima et pellucida, cornea; apice sæpius purpurascente. *Anfractus* 2 vel 3, plicis seu costis indistinctis 15 vel 16, primus reliquos omnes æquans. *Apertura* ovalis, margine repando. *Apex* acutus. *Varietas* sine plicis.

It is uncertain whether this species was known to Pennant or Da Costa. Dr. Pulteney found it on the Western coast, where it is plentiful.

16.
Ulvæ. T. testa acuminato-conica; apertura subovata.
Pennant Brit. Zool. 4. t. 86. f. 120.
Da Costa Brit. Conch. p. 105.
Pulteney in Hutch. Dorset. p. 49. t. 18. f. 12.
Montagu Test. Brit. p. 318.
Habitat in mari, saxis, fucis adhærens.
Testa $\frac{1}{4}$ vel $\frac{3}{8}$ poll. longa, $\frac{1}{3}$ lata, opaca, spadicea seu fusca, vix striata. *Anfractus* primus ventricosior, reliqui minime convexi. *Sutura* filiformis. *Apertura* versus apicem acutiuscula. *Labium* marginatum.

Common in harbours and inlets.

17.
ventrosus. T. testa conica, lævi, anfractibus sex teretibus, apertura subovata, margine integerrimo.
Walker Test. Min. Rar. f. 36.
Adams Microsc. t. 14. f. 15.
Montagu Test. Brit. p. 317. t. 12, f. 13.
Pulteney in Hutch. Dorset. t. 18. f. 12. a.

Habitat

Habitat in mari.

Testa $\frac{1}{8}$ poll. longa, tenuis, glabra, pellucida, pallide cornea, adhærente incolâ nigra apparet. *Apex* acutior. *Operculum* tenue corneum.

Distinguitur a *T. Ulvæ*, quod cornea, glabra, pellucida, tenuior, anfractus magis rotundati.

First noticed by Mr. Boys, and figured in the *Test. Min. Rar.* Not uncommon at Folkestone and Sandwich, Kent, and on the Dorset coast.

18.

subumbilicatus. T. testa conica, subumbilicata, anfractibus tumidis, apertura exacte ovali.

Montagu Test. Brit. p. 316.

Pulteney in Hutch. Dorset. t. 18. *f.* 12. b.

Testa $\frac{1}{8}$ poll. longa, $\frac{1}{16}$ lata, lævis, subglabra, flavescente-alba. *Anfractus* 4, 5, primus dimidiam partem testæ æquans. *Apex* obtusiusculus.

Differt a *T. Ulvæ*, quod sæpius minor, ventricosior, subumbilicata, anfractus tumidiores, neque apertura angulata versus apicem, ut in illa testa et *T. ventroso.* Testa paululum major quam *T. ventrosus*, et latior ad basin. (*Montagu.*)

This species was first noticed by Mr. Bryer at Weymouth.

19.

Cingillus. T. testa conica ; anfractibus sex planiusculis, leviter striatis, contiguis.

Montagu Test. Brit. p. 328. *t.* 12. *f.* 7.

Donovan Brit. Shells, t. 178. *f.* 1. T. vittatus.

Habitat in mari.

Testa interdum fere $\frac{1}{4}$ poll. longa, vix $\frac{1}{8}$ lata, subpellucida, cornea, fasciis castaneis. *Anfractus* primus striis ad basin conspicuis, utplurimum fasciis tribus. *Apex* obtusior. *Apertura* subovata. *Helicibus* affinis.

Found in abundance at Plymouth, and Salcomb, Devon, by Mr. Montagu; in the Menai between Caernarvonshire and the I. of Anglesea, by Mr. Donovan.

20. *interruptus.* T. testa acuminato-conica; anfractibus depressioribus, lituris interruptis.

Adams in Act. Soc. Linn. 5. p. 3. t. 1. f. 16, 17.
Montagu Test. Brit. p. 329. ——— *Supplem. t. 20. f. 8.*
Donovan Brit. Shells, t. 178. f. 2.

Habitat in marī, rarior.

Testa $\frac{1}{8}$ poll. longa, plusquam $\frac{1}{16}$ lata, pellucida, lævis, glabra, pallide cornea, vel alba, lituris longitudinalibus ochraceis interruptis. *Apertura* suborbicularis. Margo crassiusculus.

Mr. Adams appears to have first noticed this species. It has been found on the coasts of Pembrokeshire and Devonshire.

21. *mammillatus.* T. testa imperforata, subovata; anfractibus striatis punctis eminentibus, striis aliquot majoribus subangulata. *Donovan Brit. Shells, t. 173.*

Geve Conch. t. 16. f. 152. a.
Chemn. Conch. 5. t. 182. f. 1813, 1814.
Linn. Gmel. p. 3595. T. castanea?

Habitat in mari.

Testa 1 poll. longa, badia seu pallide castanea, striis papillosis, elatioribus, 5 vel 6, minoribus punctatis.

Mr. Donovan informs us that this species was picked up on the Scilly Rocks, and sent to Da Costa. It is common in the West Indies.

22. *auricularis.* *** *Solidi* umbilico perforato.

T. testa conica, lævi, anfractibus valde rotundatis; apertura auriculari. *Montagu Test. Brit. p. 308.*

Habitat in mari, rarior.

Testa $\frac{3}{8}$ poll. longa, vix $\frac{2}{3}$ lata, subpellucida, pallide cornea. *Anfractus* 5, sutura incisi. *Apex* satis acutus, magis fuscus. *Labium* reflexum, medio angulatum. *Umbilicus* coarctatus. (*Montagu.*)

Testa *Helici fossariæ* affinis, sed maritima. Differt præsertim apertura.

Discovered

Discovered by Mr. Montagu, and found only at Southampton.

23.
vinctus. T. testa conica, lævi, anfractibus sex rotundatis, apice obtusiore.

Montagu Test. Brit. p. 307. —— *Supplem. t.* 20. *f.* 3.

Habitat in mari, algis adhærens.

Testa ¼ poll. longa, subpellucida, cornei coloris, nunc rufescens, nunc pallida. *Anfractus* primus fasciis 4 vel 5 purpurascente-brunneis, secundus ac tertius fasciis duabus. *Apertura* suborbicularis. *Labrum* tenuissimum. *Labium* crassum, album, canaliculo in umbilicum desinente. (*Montagu.*)

A new species, discovered in Salcomb Bay, Devon, by Mr. Montagu.

24.
quadrifasciatus. T. testa subconica, lævi; anfractu primo subcarinato, columella sinuata, umbilicata.

Da Costa Brit. Conch. p. 86. Cochlea parva?

Montagu Test. Brit. p. 328. —— *Supplem. t.* 20. *f.* 7.

Habitat in mari, algis insidens.

Testa ¼ poll. longa, ⅛ lata, crassa, subpellucida, alba, cingulis pallide brunneis. *Anfractus* primus subcarinatus, magnitudine dimidium testæ superans. *Labrum* incrassatum, margine acuto. *Apex* obtusior. Noscitur ab *Heliee canali*, quod magis crassa et opaca.

Found at Falmouth, Cornwall, by Mr. Montagu. Da Costa's *Cochlea parva*, of which we have seen a specimen, resembles a young *Nerita Glaucina.*

25.
elegans. T. testa subovata, umbilicata, transversim striata; apertura vix adnata. *Linn. Gmel. p.* 3606.

Lister Conch. t. 27. *f.* 25. —— *Anim. Angl. t.* 2. *f.* 5.

Act. Angl. n. 105. *f.* 2.

Guált. Test. t. 4. *f.* A.

Morton Northampt. p. 415.

Ginann. Op. Post. t. 8. *f.* 25.
Muller Verm. 2. *p.* 177. *n.* 363.
Pennant Brit. Zool. t. 82. *f.* 110. T. tumidus.
Da Costa Brit. Conch. p. 86. *t.* 5. *f.* 9. T. striatus.
Schröt. Flussconch. t. 9. *f.* 15. a—b.
Chemn. Conch. 9. *t.* 123. lit. c. d.
Pulteney in Hutch. Dorset. p. 45. *t.* 21. *f.* 9.
Donovan Brit. Shells, t. 59. T. striatus.
Montagu Test. Brit. p. 342. ——— *Supplem. t.* 22. *f.* 7.
Habitat in sylvis et arenosis.

Testa $\frac{5}{8}$ poll. longa, $\frac{3}{8}$ lata, purpurascente-cinerea seu albida, maculis vel lituris purpureis fasciata et variegata. *Anfractus* rotundati, striis transversis numerosis longitudinalibus delicatissimis. *Apex* obtusior, purpureus. *Umbilicus* vix conspicuus. *Operculum* corneum, cochleatum. Intus utplurimum flavescens.

First described and figured by Lister; found in various parts of the kingdom, under moss, on dry gravel, and in sandy or chalky soils.

26.
fontinalis. T. testa subconica, umbilicata; anfractibus teretibus, lævibus.
Petiver Gaz. t. 18. *f.* 2.
Walker Test. Min. Rar. f. 56.
Muller Verm. p. 171. *n.* 357. Nerita pusilla; *&* *p.* 172. *n.* 358. N. piscinalis.
Schröt. Flussconch. p. 246. *n.* 52. *&* 247. *n.* 61.; *&* *p.* 280. *t.* 6. *f.* 11. Trochus cristatus.
Linn. Gmelin. p. 3627, H. piscinalis & H. pusilla; *&* *p.* 3641, H. fascicularis.
Pulteney in Hutch. Dorset. p. 45. *t.* 18. *f.* 3, 4.
Martini Berl. Mag. 4. *p.* 247. *n.* 59.
Donovan Brit. Shells, t. 102.
Montagu Test. Brit. p. 348. ——— *Supplem. t.* 22. *f.* 4.
Habitat

Habitat, rarior, in aquis dulcibus, confervis adhærens.

Testa diametro ¼ poll. tenuis, pellucida, colore corneo. *Anfractus* tres teretes, leviter cohærentes, minutissime longitudinaliter striati. *Umbilicus* patulus usque ad apicem. *Apertura* circinata.

Muller has probably described this shell in two places; and Gmelin has not only continued this error, but has given the same species a third time, as a *Helix*, with a reference to Schröter's figure.

27.

Nautileus. T. testa planiuscula; anfractibus annulatis, dorso cristatis. *Linn. Syst. Nat. p.* 1241. *n.* 654. *Linn. Gmel. p.* 3612.

t. 4. f. 4.

Linn. Syst. Nat. 10. *p.* 709. *n.* 234. Nautilus Crista.

Act. Helv. 4. *p.* 212. *t.* 9. *f.* 21, 22.

Walker Test. Min. Rar. f. 20. *&* 21.

Muller Verm. 2. *n.* 351. Planorbis imbricatus.

Schröt. Flussconch. p. 238. *n.* 50.

Chemn. Conch. 9. *t.* 123. *f.* 1077. A. a.

Adams Micr. t. 14. *f.* 10, 11.; *& t.* 22. *f.* 39.

Montagu Test. Brit. p. 464. H. nautileus.

——— *Supplem. t.* 25. *f.* 5.

Pulteney in Hutch. Dorset. t. 19. *f.* 16.

Habitat in aquis dulcibus, plantis aquaticis adhærens. *Incola* pallidus, tentaculis duobus setaceis.

Testa diametro ⅛ poll. pellucida, pallide cornea, sub epidermide fusca, subtus umbilicata. *Anfractuum* anuuli nunc manifesti, nunc fere obsoleti, nunc spinis seu cristis dorsalibus.

First figured as British by Walker. Found in ponds and ditches.

28.

cristatus. T. testa supra planiuscula, subtus umbilicata; anfractibus 3 vel 4, teretibus.

Muller Verm. 2. *p.* 198. *n.* 384. Valvata cristata.

Walker Test. Min. Rar. f. 18.
Schröter Flussconch. t. 5. *f.* 26. a. b.
Montagu Test. Brit. p. 460. vign. 1. *f.* 78. H. cristata.

Habitat in aquis dulcibus, rarior. *Incola* griseus, a dextro latere instruitur spiculo tentaculum mentiente, quod quoties testa exit exseritur, retrorsumque aliquantum curvatur, et a latere sinistro crista pennacea branchiali insignitur. (*Muller.*)

Testa diametro $\frac{1}{10}$ poll. subpellucida, pallide cornea, apice plano. *Anfractus* levissime striati. *Apertura* exacte circinata, anfractui vicino incumbens.

First figured as British by Walker. Found by Mr. Boys, near Sandwich; and by Mr. Montagu, in the river Avon, and near Wedhampton, Wilts.

29.
depressus. T. testa depressa, subtus umbilicata, anfractibus quatuor, apertura orbiculari.

Montagu Test. Brit. p. 439. *t.* 13. *f.* 5.

Habitat in mari, rarior.

Testa diametro vix 1 lin. subpellucida, dilute brunnea, subrugosa. *Anfractus* sutura conspicua, infimus cylindricus. *Apertura* subæqualis, juxta anfractum dilatior. *Spira* nulla.

Testa *T. cristato* similis, sed minor, magis solidus et opacus. *Apex* magis prominens. (*Montagu.*)

Found only by Mr. Montagu, in Cornwall and Devonshire.

30. **** Cancellati.
Clathrus. T. testa cancellata, turrita, exumbilicata; anfractibus contiguis, lævibus. *Linn. Fauna Suecica, n.* 2170. *Syst. Nat. p.* 1237. *n.* 631. *Linn. Gmel. p.* 3603.
Rondel. Test. 89. *f.* 5.
Bonann. Recr. 3. *t.* 111.
Lister Conch. t. 588. *f.* 51.
Rumph. Mus. t. 29. *f.* W.
Gualt. Test. t. 58. *f.* H.

Planc. Conch. t. 5. *f.* 7, 8.
Borlase Cornw. t. 28. *f.* 9.
Knorr 1. *t.* 11. *f.* 5.; 4. *t.* 20. *f.* 5.; & 6. *t.* 39. *f.* 3.
Lesser Testaceoth. f. 41.
Martini Conch. 4. *t.* 153. *f.* 1434. & 1438.
Pennant Brit. Zool. t. 81. *f.* 111. & 111. A.
Da Costa Brit. Conch. p. 115. *t.* 7. *f.* 11.
Pulteney in Hutch. Dorset. p. 45. *t.* 15. *f.* 11.
Donovan Brit. Shells, t. 28.
Montagu Test. Brit. p. 296.
Habitat in mari.
Testa ad 1¼ poll. longa, alba, glaberrima, costis membranaceis cincta.

β minor, anfractibus 5 vel 6, costis numerosioribus.
t. 5. *f.* 1. *Walker Test. Min. Rar. f.* 45.
Adams Microsc. t. 14. *f.* 19.
Montagu Test. Brit. p. 297. T. clathratulus.

Found on various parts of the coast, but not common. The smaller variety has been found in Kent; South Devon; and at Weymouth.

31. *parvus.* T. testa turrita, anfractibus 5 vel 6, costis elevatis distantibus.
Da Costa Brit. Conch. p. 104.
Adams in Act. Soc. Linn. 3. *p.* 66. *t.* 13. *f.* 29, 30. T. æreus; & *t.* 13. *f.* 15, 16. T. subluteus.
Donovan Brit. Shells, t. 90. T. lacteus.
Montagu Test. Brit. p. 310.
Pulteney in Hutch. Dorset. t. 19. *f.* 4.
Habitat in mari, frequens.
Testa ⅛ poll. longa, alba, castanea, rufescens, vel violacea, costis albis; apice violaceo. *Costæ* 9 vel 11, prominentes. *Labrum* incrassatum.
First noticed by Da Costa. Common on sandy shores.

32.

striatulus. T. testa subcancellata, turrita; anfractibus contiguis, cingulisque varicosis interceptis. *Linn. Syst. Nat. p.* 1238. *n.* 635. *Linn. Gmel. p.* 3604.

Da Costa Brit. Conch. p. 102. *t.* 8. *f.* 10.

Montagu Test. Brit. p. 306. *t.* 10. *f.* 5.

Pulteney in Hutch. Dorset. t. 14. *f.* 10.

Habitat in mari, rarissima.

Testa magnitudine seminis hordei, alba; anfractibus cinctis striis membranaceis, parvis, passimque rugis convexis, callosis. *Apertura* minus orbiculata, fere obovata, et subtus subangulata. (*Linn.*)

First noticed as British by Da Costa. Found in Falmouth Harbour, and on the South Devon coast, by Mr. Montagu.

33.

reticulatus. T. testa conica, anfractibus tumidis, reticulatis.

Walker Test. Min. Rar. f. 32.

Adams in Act. Soc. Linn. 3. *p.* 66. *t.* 13. *f.* 19, 20.

Montagu Test. Brit. p. 322. ——— *Supplem. t.* 21. *f.* 1.

Habitat in mari.

Testa $\frac{1}{10}$ poll. longa, $\frac{1}{30}$ lata, crassa, opaca, albida. *Anfractus* elevati rotundati. (*Montagu.*) *Apertura* suborbicularis, margine crassa. *Apex* acutior.

An non potius ad *Helices* referenda?

Found by Mr. Boys, at Seasalter, Kent; and by Mr. Adams, at Pembroke.

34.

Bryereus. T. testa turrita, anfractibus lævibus, costis contiguis, apertura ovata.

Montagu Test. Brit. p. 313. *t.* 15. *f.* 8.

Donovan Brit. Shells, t. 178. *f.* 3. T. costatus.

Pulteney in Hutch. Dorset. t. 19. *f.* 7.

Habitat in mari, ad littora.

Testa vix $\frac{1}{4}$ poll. longa, satis crassa, glabra, nivea. *Anfractus* minimè prominent.

minent. *Costæ* 17 vel 18, linea subtilissima tantum disjunctæ. *Sutura* manifesta. *Labrum* crassum. *Labium* replicatum læve.

Varietas costis 10 vel 12 majoribus.

The *Turbo* above described was named by the author of *Testacea Britannica*, in honour of Mr. Bryer, of Weymouth, to whom we are indebted for the discovery of this and many other curious species, and whose indefatigable researches in various departments of natural history must render his death sincerely regretted.

35. *coniferus.* T. testa turrita, anfractibus costatis; costis contiguis, ad suturam sub-papillosis.

Montagu Test. Brit. p. 314. *t.* 15. *f.* 2.

Pulteney in Hutch. Dorset. t. 19. *f.* 6.

Habitat in mari.

Testa ¼ poll. longa, crassa, alba. *Anfractus* 6, plani, costis 12 undulatis, oculo armato subtilissimè striatis. *Apex* obtusior. *Apertura* ovalis, integerrimâ, margine crassissima.

A new and elegant species, discovered at Weymouth, by Mr. Bryer.

36. *denticulatus.* T. testa conica; anfractibus costatis; costis obliquis, ad suturam denticulatis. *Montagu Test. Brit. p.* 315.

Testa vix ¼ poll. longa, vix ⅛ lata, alba, subpellucida, præcedenti valde affinis, sed costis solum 9 vel 10, obliquis, validioribus, neque undulatis, interstitiis subpellucidis, neque striatis. *Apertura* suborbicularis, neque marginata, sed costâ solum incrassata.

Found at Weymouth, by Mr. Bryer.

37. *striatus.* T. testa subturrita, anfractibus striatis, striis transversis, regularibus, numerosissimis.

Walker Test Min. Rar. f. 49.

Adams Microsc. t. 14. *f.* 22.

Adams

Adams in Act. Soc. Linn. 3. *p.* 66. *t.* 13. *f.* 25, 26.
Montagu Test. Brit. p. 312.

Habitat in mari, radicibus algarum adhærens.

Testa $\frac{1}{8}$ poll. longa, glabra, pellucida, alba, sub epidermide brunnea. *Anfractus* teretiores, superne leviter plicati. *Sutura* manifesta. *Apex* vix acutus. *Apertura* ovata.

First found by Mr. Boys, and figured in *Test. Min. Rariora*; rare in Shepey Island. Found plentifully at Plymouth and on the Devonshire coast, by Mr. Montagu; and at Pembroke, by Mr. Adams.

38. *costatus.* T. testa subturrita, anfractibus costatis, apertura margine sulcata.

Walker Test. Min. Rar. f. 47.
Adams Microsc. t. 14. *f.* 20.
Adams in Act. Soc. Linn. 3. *p.* 65. *f.* 13, 14.
Montagu Test. Brit. p. 311. *t.* 10. *f.* 6.
Pulteney in Hutch. Dorset. t. 19. *f.* 5.

Habitat in mari, ad littora.

Testa $\frac{1}{8}$ poll. longa, solida, glabra, subpellucida, alba. *Anfractus* fere disjuncti, prominentes, costis paululum obliquis seu undulatis, validis, striis transversis, delicatissimis, numerosissimis, inter costas evidentioribus. *Apex* obtusior. *Apertura* fere orbicularis, margine sulcata, crassissima.

Discovered by Mr. Boys, in Kent. Found also on the coasts of Pembrokeshire, Devonshire, Dorsetshire, and Cornwall.

39. *unicus.* T. testa acuminata, glaberrima, anfractibus teretibus, striatis. *Montagu Test. Brit. p.* 299. *t.* 12. *f.* 2.

Walker Test. Min. Rar. f. 40.
Adams Micr. t. 14. *f.* 17.

Habitat in mari.

Testa

Testa $\frac{2}{10}$ poll. longa, pellucida, alba. *Anfractus* striis numerosis longitudinalibus, interstitiis delicatissime transversim striatis, oculo armato solum conspiciendis. *Apertura* suborbicularis, fere ovalis. (*Montagu.*)

First noticed by Mr. Boys, at Sandwich.

* * * * * *Turriti,* proprie dicti.

40. *nitidissimus.* T. testa acuminata, glaberrima, anfractibus subglobosis.

Montagu Test. Brit. p. 299. *t.* 12. *f.* 1.

Hab tat in mari.

Testa $\frac{1}{8}$ poll. longa, tenuis, pellucida, alba. *Anfractus* 9. *Apertura* suborbicularis. *Spira* acutissima. (*Montagu.*)

A new and rare species, discovered by Mr. Montagu, in sand, from Falmouth Harbour.

Nearly allied to *T. unicus*, but being perfectly smooth, it could not be placed in the subdivision of "*Cancellati.*"

41. *duplicatus.* T. testa turrita, anfractibus carinis duabus acutis.

Linn. Syst. Nat. p. 1239. *n.* 643. *Linn. Gmel. p.* 3607.

Bonanni Recr. 3. *t.* 114.

Lister Conch. t. 591. *f.* 58. —— *Anim. Angl. t.* 3. *f.* 7.

Seb. Mus. 3. *t.* 56. *f.* 7, 8.

D'Argenv. Conch. t. 11. *f.* C.

Martini Conch. 4. *t.* 151. *f.* 1414.

Pennant Brit. Zool. 4. *t.* 81. *f.* 112.

Da Costa Brit. Conch. p. 110. *t.* 6. *f.* 3.

Donovan Brit. Shells, t. 112.

Habitat in pelago, rarissima.

Testa $2\frac{1}{4}$ poll. longa, structura *Terebræ*, sed brevior, crassior. Color albus. *Anfractuum* anguli, seu costæ tantum 2 s. 3, obtusiores. (*Linn. Mus. Lud. Ulr. p.* 662.)

This species is described as British by Lister, who observes that he more than once obtained it from fishermen on the Yorkshire coast. We have inserted it, therefore,

therefore, on the authority of that diligent and accurate author, though it has not been found by any other person; but as it is a *pelagic* shell, it may perhaps have escaped the notice of less indefatigable naturalists.

42. *exoletus.* T. testa turrita, anfractibus carinis duabus obtusis distantibus. *Linn. Syst. Nat. p.* 1239. *n.* 644. *Linn. Gmel. p.* 3607.

Bonanni Recr. 3. *t.* 113. *Mus. Kirch. n.* 112.

Lister Conch. t. 592. *f.* 60.

Seb. Mus. 3. *t.* 56. *f.* 30. 37. 38.

Knorr Vergn. 6. *t.* 16. *f.* 8.

Martin. Conch. 4. *t.* 152. *f.* 1423.

Da Costa Brit. Conch. p. 114. *t.* 7. *f.* 8.

Donovan Brit. Shells, t. 22. *f.* 1. T. cinctus.

Montagu Test. Brit. p. 295. T. cinctus.

Habitat in mari, rarissima.

Testa $2\frac{1}{2}$ poll. longa, alba, vel purpurascens, lituris rufis, vel castaneis, marmorata. *Anfractus* 12 vel 14, obsolete spiraliter striati, paululum prominentes. *Apex* acutissimus.

Found on the Lincolnshire and Lancashire coasts, by Da Costa; and at Sandwich, in Kent.

This rare species answers so well to Linnæus's description, and to the only reference he makes, (viz. *Bonanni, t.* 113.) that we have followed Da Costa, who makes it *T. exoletus* of that author.

43. *Terebra.* T. testa turrita; anfractibus carinis sex acutis. *Linn. Fauna Suecica, n.* 2171. *Syst. Nat. p.* 1239. *n.* 645. *Linn. Gmel. p.* 3608.

Lister Anim. Angl. t. 3. *f.* 8. *Conch. t.* 590. *f.* 55.

Seb. Mus. 3. *t.* 56. *f.* 32. & *f.* 40.

Schröt. Einl. in Conch. 1. *t.* 3. *f.* 21.

Knorr

Knorr Vergn. 1. *t.* 8. *f.* 6.
Martin. Conch. 4. *t.* 151. *f.* 1418, 1419.
Pennant Brit. Zool. 4. *t.* 81. *f.* 113.
Da Costa Brit. Conch. p. 112. *t.* 7. *f.* 5, 6.
Donovan Brit. Shells, t. 22. *f.* 2.
Pulteney in Hutch. Dorset. p. 45. *t.* 15. *f.* 5, 6.
Montagu Test. Brit. p. 293.
Habitat in mari.
Testa ad 2 poll. longa, colore corneo. *Anfractus* costis plurimis acutis.

Most authors have considered this shell as *T. Terebra*, though Linnæus describes it as having only 6 or 7 ridges; but perhaps this character is not constant.

44.
truncatus. T. testa cylindrica, anfractibus planiusculis, apice truncato.

Adams in Act. Soc. Linn. 3. *p.* 65?
Montagu Test. Brit. p. 300. *t.* 10. *f.* 7.
Pulteney in Hutch. Dorset. t. 19. *f.* 8.
Habitat in mari.
Testa $\frac{2}{10}$ poll. longa, $\frac{1}{10}$ lata, lævis, pellucida, corneo colore. *Anfractus* 4. *Sutura* manifesta. *Apertura* ovalis, leviter marginata.
Varietas, rarior, striata versus suturas.

First noticed by Mr. Montagu; not uncommon at Southampton, more rare at Plymouth and on the Devonshire coast. Found also at Weymouth, by Mr. Bryer, and by ourselves at Poole.

Dr. Pulteney's *Helix subcylindrica*, which he describes as having the "volutions in some striated or finely plicated the whole length of the shell, in others principally apparent in the sutures, so as to give them a crenated appearance," appears to be this shell in a more perfect state; such are not uncommon in the

West Indies. The Doctor considered his specimens as English, and says they are found on water-plants, in rivers and ponds, in Dorsetshire; but we apprehend he was mistaken, since, although we have paid great attention to the natural history of that county, we have never been able to obtain any, similar to those in his cabinet.

45.

subtruncatus. T. testa subcylindrica, anfractibus teretioribus, versus apicem sensim minoribus, sutura profundiore.

Montagu Test. Brit. p. 300. *t.* 10. *f.* 1.

Habitat in mari.

Testa $\frac{2}{10}$ poll. longa, pellucida, flavescente-alba, interdum paululum glabra. *Anfractus* in nonnullis leviter striati. *Apertura* suborbicularis. (*Montagu.*)

Discovered by Mr. Montagu, at Southampton, and in Salcomb Bay, Devon.

46.

bidens. *t.* 5. *f.* 3. T. testa pellucida; anfractibus contrariis; sutura subcrenata; apertura posterius bidentata. *Linn. Syst. Nat. p.* 1240. *n.* 649. *Linn. Gmel. p.* 3609.

Bonann. Recr. 3. *t.* 41.

Gualt. Test. t. 4. *f.* D. E.

Ginann. Op. Post. t. 3. *f.* 23.

Muller Verm. 2. *p.* 120. *n.* 317. H. papillaris.

Chemn. Conch. 9. *t.* 112. *f.* 963, 964. ?

Schröt. Einl. in Conch. 1. *t.* 3. *f.* 22.

Pulteney in Hutch. Dorset. p. 46. *t.* 21. *f.* 16. ?

Olivier's Travels in the Ottoman Empire, t. 17. *f.* 3. ?

Habitat in muscosis, vel cavis arborum truncis.

Testa dimidium circiter pollicem longa, glaberrima, fusca. *Anfractibus* 10—11 in commissuris, papillis vel denticulis albis munitis. (*Gmel.*)

Noticed as English by Dr. Pulteney.

We have more than once had occasion to remark the

the necessity of adverting to Linnæus's descriptions, as well as his references. The words "*sutura subcrenata*," point out a distinction in this species not to be found in any other. Yet this character has been overlooked, and several of the following species have been supposed to be *T. bidens* by every British author except Dr. Pulteney, who describes his shell as having "the sutures prettily crenated." We have given a figure from a specimen in the doctor's museum, now in the possession of this Society. He notes it as a Dorsetshire shell; but there is reason to believe he was deceived, and that this species is not of British growth, since, notwithstanding a most diligent search, we have been unable to procure it.

47.

laminatus. T. testa turrita, pellucida, lævi; anfractibus contrariis; apertura adnata, postice bidentata.

Lister Conch. t. 41. *f.* 39. major.
Gualt. Test. t. 4. *f.* C.
Muller Verm. 2. *p.* 116. *n.* 315. H. bidens.
Schröt. Erdconch. t. 1. *f.* 4. a.
Chemn. Conch. 9. *t.* 112. *f.* 960. *n.* 1.
Pulteney in Hutch. Dorset. p. 46. *t.* 19. *f.* 9.
Montagu Test. Brit. p. 359. *t.* 11. *f.* 4.

Habitat in sylvis, et muscosis, rarior.

Testa $\frac{3}{4}$ poll. longa, $\frac{1}{8}$ lata, glabra, rufescente-cornea, obsolete rugosa. *Anfractus* 10. *Apertura* suborbicularis, leviter marginata, plicis duabus albis, et interdum laminis 3 vel 4 internis.

First noticed by Lister; found in Wiltshire, Kent, and Dorsetshire.

48.

biplicatus. T. testa turrita, opaca, striata; anfractibus contrariis; apertura postice bidentata, minus contigua.

Schröt. Erdconch. t. 1. *f.* 4, b.
Chemn. Conch. 9. *t.* 112. *f.* 960. *n.* 2.
Montagu Test. Brit. p. 361. *t.* 11. *f.* 5.
Habitat in sylvis et muscosis, rarior.
Testa ¾ poll. longa, ⅛ lata, brunnea, facie *T. laminati*, sed distinguitur quod dense et profunde striata. *Apertura* reflexa, nec ad corpus contigua. *Collum* compressum. *Anfractus* 12—13.

This species was first distinguished by Mr. Montagu, who found it at Easton Grey, in Wiltshire. It has been also found in Hyde Park.

49.
nigricans. T. testa turrita, opaca; anfractibus contrariis, striatis; apertura postice bidentata, dentibus minus approximatis.
Lister Conch. t. 41. *f.* 39. minor. —— *Anim. Angl. t.* 2. *f.* 10.
—— *Anim. Angl. App. t.* 1. *f.* 7.
Pennant Brit. Zool. t. 82. *f.* 116. T. perversus.
Da Costa Brit. Conch. p. 108.
Muller Verm. 2. *p.* 118. *n.* 316. H. perversus.
Pulteney in Hutch. Dorset. p. 46. *t.* 19. *f.* 10.
Donovan Brit. Shells, t. 72. T. perversus.
Montagu Test. Brit. p. 357. *t.* 11. *f.* 7. T. bidens.
Habitat in muscosis, frequens.
Testa vix ½ poll. longa, ⅒ lata, nigricans, minutè striata. *Apertura* suborbicularis. *Sutura* linea depressa, conspicua. Noscitur a *T. biplicato* quod minor, magis fusca, et dentes minus approximati.

50.
labiatus. T. testa turrita, opaca; anfractibus contrariis, striatis; apertura bidentata, margine dilatato, incrassato, albo.
Da Costa Brit. Conch. p. 107. Strombiformis perversus.
Chemn. Conch. 9. *t.* 112. *f.* 957. ?
Olivier's Travels in the Ottoman Empire, t. 17. *f.* 6.
Montagu Test. Brit. p. 362. *t.* 11. *f.* 6.

Habitat

Habitat in muscosis, vel in fissuris corticis arborum, rarissima.

Testa ⅛ poll. longa, ¼ lata, pallide brunnea. *Anfractus* 9 plani, striis numerosis densis regularibus; vix a sutura distincti, quæ fere obliterata. Distinguitur a cæteris ab apertura marginata et anfractibus haud prominentibus.

This species appears to have been described by Da Costa. It has been found by Mr. Swainson in ozier-grounds, at Battersea, Surrey.

51.

perversus. *t.* 5. *f.* 2. T. testa turrita, pellucida; anfractibus contrariis; apertura edentula. *Linn. Fauna Suecica, n.* 2172. *Syst. Nat. p.* 1240. *n.* 650.

Lister Anim. Angl. t. 2. *f.* 11.

Schröt. Erdconch. t. 1. *f.* 5.

Favanne Conch. t. 65. *f.* I. 4.

Chemn. Conch. 9. *t.* 112. *f.* 959. a.

Linn. Gmel. p. 3609.

Pulteney in Hutch. Dorset. p. 46. *t.* 19. *f.* 11.

Montagu Test. Brit. p. 355. *t.* 11. *f.* 12.

Habitat in muscis, ad radices arborum, rarior.

Testa ¼ poll. longa, pellucida, subflava; *spiris* 8 sensim minoribus; in longum producta; *apice* obtusiusculo sensim attenuato. *Spiris* sinistrorsum euntibus. (*Linn. Fn. Suec. p.* 525.) Dens obsoletus in senioribus.

First noticed by Lister. Found in Wiltshire, Dorsetshire, Devonshire, and Cornwall; but not common.

52.

tridens. T. testa subcylindrica, lævi; anfractibus 6 vel 7 planiusculis; apertura tridentata.

Linn. Gmel. p. 3611.

Gualt. Test. t. 4. *f.* F.

Muller Verm. 2. *p.* 106. *n.* 305.

Pulteney in Hutch. Dorset. p. 46. *t.* 19. *f.* 12.

Montagu Test. Brit. p. 338. *t.* 11. *f.* 2.

Habitat rarissima.

Testa ¼ poll. longa, 1 lin. lata, pellucida, glaberrima, colore pallide corneo.

Anfractus

Anfractus 6 vel 7, vix distinguendi. *Apertura* parva, versus apicem coarctata. Dentes 3, unus ad marginem, alteri duplices in columellam et juxta basin.

Found only by Mr. Boys and Dr. Pulteney; the latter says, "on water-plants by the river Stour, Dorset."

53.

Juniperi. T. testa subcylindrica, anfractibus oblique striatis, apertura septemdentata.

Schröt. Erdconch. t. 1. *f.* 6.

Chemn. Conch. 9. *t.* 136. *f.* 1236. a. b.

Olivi Adr. t. 5. *f.* 2.?

Montagu Test. Brit. p. 340. *t.* 12. *f.* 12.

Pulteney in Hutch. Dorset. t. 19. *f.* 11.*

Habitat ad radices *Juniperi communis*, rara.

Testa vix $\frac{1}{8}$ poll. longa, opaca, brunnea. *Anfractus* minime prominentes, sutura depressa. *Apertura* subrotunda, margine albo interrupto, dentibus 7, tribus in labrum, quatuor in columellam. *Apex* obtusus.

We are indebted to Mr. Montagu for ascertaining this curious species to be British. He found it at Easton Grey, and at Devizes, Wilts. Mr. Bryer, also, procured it on the hills near St. Catherine's Tower, Abbotsbury, Dorset; but it must be considered as a very local shell.

54.

Muscorum. T. testa ovata, obtusa, pellucida; anfractibus senis secundis, apertura edentula. *Linn. Fauna Suecica, n.* 2173. *Syst. Nat. p.* 1240. *n.* 651. *Linn. Gmel. p.* 3611.

Lister Anim. Angl. t. 2. *f.* 6.

Petiver Gaz. t. 35. *f.* 6.

Linn. It. Œl. p. 99.

Da Costa Brit. Conch. p. 89. *t.* 5. *f.* 16. T. cylindraceus.

Ströem. Act. Nidr. 3. *t.* 1. *f.* 7.

Schröt. Erdconch. t. 1. *f.* 7.

Muller

Muller Verm. 2. *p.* 105. *n.* 304.
Chemn. Conch. 9. *t.* 123. *f.* 1076.
Pulteney in Hutch. Dorset. p. 46. *t.* 21. *f.* 16.
Donovan Brit. Shells, t. 80.
Montagu Test. Brit. p. 335. ——— *Supplem. t.* 22. *f.* 3.

Habitat inter muscos ad radices arborum, et in tectis rusticorum antiquis. *Testa* plusquam $\frac{1}{8}$ poll. brunnea dum adhuc animalculo fœta est, alias cornea, pellucida, spiris 6. *Apertura* ovato-acuminata, mucrone obtuso. *Spiræ* more communi dextrorsum (aperturæ impositæ) procedunt. (*Fn. Suec.* 2173.) *Labium* sæpius dente unico.
Varietas duplo minor, nec dentata, nec apertura marginata. (*Montagu.*)

First noticed and figured by Lister. Found in most parts of the kingdom, though not very common.

55. *sexdentatus.* T. testa ovata obtusa lævi; apertura sexdentata; labro impresso.

Linn. Gmel. p. 3660.? H. minuta.
Muller Verm. 2. *p.* 101. *n.* 299.? H. minuta.
Montagu Test. Brit. p. 337. *t.* 12. *f.* 8.
Pulteney in Hutch. Dorset. t. 19. *f.* 12.
Habitat, rarior, in paludibus, supra *Iridem Pseudacorum*.
Testa Turbini Muscorum affinis, 1 lin. longa, $\frac{1}{2}$ lata, glabra, rufescente-cornea, pinguis. *Anfractus* tumidiusculi. *Apertura* subtriangularis, dentibus 6, quatuor in labrum, duobus in columellam; in junioribus dentibus 4, vix conspicuis. *Apex* obtusus.

Found by Mr. Boys, at Sandwich, Kent; and by Mr. Montagu, in Cornwall, Devonshire, and among the *rejectamenta* of the river Avon, in Wiltshire. It has also been found in Dorsetshire.

56. *Vertigo.* T. testa ovali; anfractibus 5, teretibus, substriatis, contrariis; apertura subtriangulari, dentata.

Linn. Gmel. p. 3664. Helix Vertigo.
Muller Verm. 2. *p.* 124. *n.* 320. Vertigo pusilla.
Schröt.

Schröt. Flussconch. p. 349. *n.* 142.
Montagu Test. Brit. p. 363. *t.* 12. *f.* 6.

Habitat super muros hedera obtectos. *Incola* tentaculis duobus linearibus, apice oculatis. (*Muller.*)

Testa 1 lin. longa, opaca, brunnea. *Apertura* irregularis, dentibus frequentius 3, albis, uno in labrum, duobus in columellam, cum tumore seu lamina ad angulum labri; interdum dentibus 6, cum rudimento septimi.

Testa T. sexdentato valde affinis, sed magis cylindrica, apice obtusiore, et anfractibus contrariis.

57. *Carychium.* T. testa subconica, glabra; apertura dentibus intus sesquitribus munita. *Linn. Gmel. p.* 3665. Helix Carychium.

Walker Test. Min. Rar. f. 51.
Muller Verm. 2. *p.* 125. *n.* 321.
Schröt. Flussconch. p. 324. *n.* 122.
Montagu Test. Brit. p. 339. ——— *Supplem. t.* 22. *f.* 2.
Pulteney in Hutch. Dorset. t. 19. *f.* 13.

Habitat in asseribus humidis fagi, foliis putrescentibus, et ligno putrescente, haud infrequens. *Incola* flavus; tentaculis modo 2, truncatis, quasi bulbigeris, ad basin posterius oculatis.

Testa omnium terrestrium minima, 1 lin. longa, $\frac{1}{3}$ lata, diaphana; limace fœta flava, apice albo; vacua tota alba. *Anfractus* quinque teretes. *Apertura* ovata, intus denticulis duobus minimis a latere sinistro limacis notata; a latere dextro rudimentum tertii in nonnullis conspicitur; denticuli certo testæ situ ope lenticulæ visibiles. (*Muller.*)

Anfractus striati, sed vix oculo armato conspiciendi. *Apex* obtusiusculus. *Spira* magis conica quam in præcedentibus.

First noticed by Mr. Boys, who found it in Kent, where it is common. Found in Wiltshire and Devonshire, by Mr. Montagu; and in Dorsetshire, by ourselves.

The six following descriptions are taken from Mr. Adams's paper in the 3d Volume of the Linnean Transactions. The six subsequent ones are from Walker's

Testacea

Testacea Minuta Rariora. We are unacquainted with the species, and unable, from the figures and descriptions only, to arrange them under the proper subdivisions of the genus. Those given on the authority of Mr. Adams are described by him as *minute* shells, and as having been found on the sea coast.

58.
albulus. T. quinque anfractibus longitudinaliter costatis, apertura subrotunda. *Adams in Act. Soc. Linn.* 3. *p.* 66. *t.* 13. *f.* 17, 18. T. albus.

59.
scriptus. T. testa lævi, tribus anfractibus lineis fuscis characteriformibus, apertura subrotunda. *Adams in Act. Soc. Linn.* 3. *p.*65. *t.* 13. *f.* 11,12. Obs.—"Istæ lineæ lineis Lichenis scripti omnino similes."

60.
subarcuatus. T. decem anfractibus longitudinaliter costatis, testa ad apicem subarcuata. Color albus. *Adams in Act. Soc. Linn.* 3. *p.* 66. *t.* 13. *f.* 27, 28.

61.
Adamsii. T. sex anfractibus spiraliter striatis, costis remotis, apertura ovali. *Adams in Act. Soc. Linn.* 3. *p.* 66. *t.* 13. *f.* 31, 32. T. elegans.

62.
divisus. T. quatuor anfractibus lævibus et striatis, apertura subovali. *Adams in Act. Soc. Linn.* 3. *p.* 254.

63.
subrufus. T. testa lævi, quinque anfractibus superne subangulatis. *Adams in Act. Soc. Linn.* 5. *p.* 3. 1. *f.* 18, 19.

64.
retiformis. T. tumidus quatuor anfractibus reticulatis, apertura subovali. *Walker Test. Min. Rar. f.* 37.

Habitat in mari, testa minuta.

From Sandwich; very rare. (*Walker.*)

65.
fuscus. T. quinque anfractibus striatis, apertura subovali. *Walker Test. Min. Rar. f.* 42.

Habitat in sylvis, terrestris.
Testa minuta, opaca, brunnea. An hujus generis?

From Bysingwood, near Faversham; very rare. (*Walker.*)

66.
strigatus. T. tribus anfractibus, primo strigis tribus transversis, apertura subovata. *Walker Test. Min. Rar. f.* 38. *Adams Microsc. t.* 14. *f.* 15.

Habitat
Testa minuta, opaca, alba.

From Seasalter; very rare. (*Walker.*)

67.
carinatulus. T. turritus carinatus, septem anfractibus, apertura coarctata marginata. *Walker Test. Min. Rar. f.* 44. *Adams Microsc. t.* 14. *f.* 18.

Habitat
Testa minuta, opaca, alba. An hujus generis?

From Sandwich; very rare. (*Walker.*)

68.
Rivulus. T. striatus, quatuor anfractibus, apertura ovali marginata. *Walker Test. Min. Rar. f.* 57.

Habitat in aquis dulcibus.
Testa opaca, alba.

From a stream near Faversham; very rare. (*Walker.*)

69. *Sandvi-*

69.
Sandvicensis. T. tribus anfractibus reticulatis, apertura unidentata.
Walker Test. Min. Rar. f. 55.
Habitat
Testa pellucida, alba.
From Sandwich; exceedingly rare. (*Walker.*)

HELIX.

Linn. Syst. Nat. n. 328.

1. * Carinatæ *anfractibus, margine acuto.*

Lapicida. H. testa carinata, umbilicata, utrinque convexa; apertura marginata, transversali, ovata. *Linn. Fn. Suec. n.*2174. *Syst. Nat. p.* 1241. *n.*676. *Linn. Gmel. p.* 3613.
Lister Anim. Angl. t. 2. *f.* 14. —— *Conch. t.* 69. *f.* 68.
—— *Act. Angl. n.* 105. *f.* 13.
Petiver Gaz. t. 92. *f.* 11.
Linn. It. Wgoth. 27.
Schröt. Erdconch. t. 2. *f.* 23.
Muller Verm. 2. *p.* 40. *n.* 240.
Pennant Brit. Zool. t. 83. *f.* 121.
Da Costa Brit. Conch. p. 55. *t.* 4. *f.* 9. H. acuta.
Chemn. Conch. 9. *t.* 126. *f.* 1107.
Pulteney in Hutch. Dorset. p. 46. *t.* 20. *f.* 9.
Donovan Brit. Shells, t. 39. *f.* 2.
Montagu Test. Brit. p. 435.
Habitat in sylvis et rupibus, rarior.
Testa $\frac{3}{4}$ poll. lata, $\frac{3}{8}$ alba. *Color* pallidus seu corneus, cum lituris spirarum transversis ferrugineis. Subpellucida, supra parum convexa, subtus magis convexa, subtilissime striata, et oculo armato punctis elevatis scabra. *Apex* minime prominet; subtus vero umbilicus, foramine tereti majusculo apertus. *Margo* spirarum undique acutissimus. *Apertura* subovata, transversa, levissime dilatata. (*Linn. Mus. Lud. Ulr. p.* 663.)
Found in most parts of the kingdom.

2.
subcarinata. H. testa umbilicata, striata, convexiuscula, anfractibus lineolis 3 elevatis delicatissimis.

Walker Test. Min. Rar. f. 22.?

Montagu Test. Brit. p. 438. *t.* 7. *f.* 9.

Habitat in mari, rarior.

Testa diametro ad basin $\frac{1}{10}$ poll., satis crassa, alba, subopaca. *Anfractus* 3, subtilissime transversim striati, supernè lineola unica elevata delicatissima, subtus lineolis duabus. *Apertura* ovalis. *Margo* integerrimus, versus anfractum secundum in angulum acutum decurrens. *Umbilicus* profundus. Testa *Neritis* valde affinis. (*Montagu.*)

Found on the coasts of Kent and Devonshire.

3.
Planorbis. H. testa subcarinata, umbilicata, plana, supra concava, apertura oblique ovata, utrinque acuta. *Linn. Fauna Suecica, n.* 2. *Syst. Nat. p.* 1242. *n.* 662. *Linn. Gmel. p.* 3617.

t. 5. *f.* 13.

Lister Anim. Angl. t. 2. *f.* 27. —— *Conch. t.* 138. *f.* 42.
—— *Act. Angl.. n.* 105. *t.* 2. *f.* 24.
Petiver Gaz. t. 10. *f.* 11.
Gualt. Test. t. 4. *f.* E. E.
Klein Ostr. t. 1. *f.* 8.
Hill Swammerd. t. 10. *f.* 5.
Muller Verm. 2. *p.* 160. *n.* 346.? Planorbis umbilicatus.
Pennant Brit. Zool. t. 83. *f.* 123.
Da Costa Brit. Conch. p. 63. *t.* 4. *f.* 10.; & *t.* 8. *f.* 8.
Schröt. Flussconch. t. 5. *f.* 13.
Favanne Conch. t. 61. *f.* B. 5.
Chemn. Conch. 9. *t.* 126. *f.* 1102. a—b.
Pult. in Hutch. Dorset. p. 46. *t.* 14. *f.* 8.; & *t.* 20. *f.* 10.
Montagu Test. Brit. p. 450. H. complanata.

Habitat in stagnis; frequens.

Testa constat 4 anfractibus nigricantibus, dum animal intra eandem latet opaca, aliàs pellucida, cornei coloris seu membranacei. *Striæ* minimæ obliquæ

obliquæ testam striatam reddunt. *Apertura* ovato-obliqua, utrinque parum acuta. *Margo* anfractuum prominet. (*Fn. Suec. p.* 527. *n.* 2176.)

3.*
planata. H. testa carinata, umbilicata, plana; carina marginali
t. 5. *f.* 14. media, apertura subovali.

Muller Verm. 2. *p.* 157. *n.* 344. Planorbis carinatus.
Schröt. Flussconch. t. 5. *f.* 22—25.
Born Mus. t. 14. *f.* 5, 6.
Chemn. Conch. 9. *t.* 127. *f.* 1121, 1122.?
Pulteney in Hutch. Dorset. t. 20. *f.* 18.
Montagu Test. Brit. p. 450. ——— *Supplem. t.* 25. *f.* 1.
H. carinata.

Habitat in stagnis et fossis, rarior. *Incola* flavescens, tentaculis flavis pellucidis. (*Montagu.*)

Testa diametro ¼ poll., forma et magnitudine præcedentis, plana, subpellucida, glabra, coloris cornei. *Anfractus* 4 planiusculi; primus carinatus, sed non limbo circumscriptus. Carina etiam in medio anfractûs, nec ad latus inferius, ut in *Helice Planorbi.*

4.
Vortex. H. testa carinata, supra concava; apertura ovali, plana.
Linn. Fauna Suec. n. 2178. *Syst. Nat. p.* 1243. *n.* 667.
Linn. Gmel. p. 3620.
Lister Anim. Angl. t. 2. *f.* 28. —— *Conch. t.* 138. *f.* 43.
—— *Act. Angl. n.* 105. *f.* 25.
Petiver Gaz. t. 92. *f.* 6.
Gualt. Test. t. 4. *f.* G. G.
Muller Verm. 2. *p.* 158. *n.* 345.
Pennant Brit. Zool. t. 83. *f.* 124.
Da Costa Brit. Conch. p. 65. *t.* 4. *f.* 12.

Schröt.

Schröt. Flussconch. t. 5. f. 16, 17.
Chemn. Conch. 9. t. 127. *f.* 1127. *α. β.*
Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 12.
Donovan Brit. Shells, t. 75.
Montagu Test. Brit. p. 454. ——— *Supplem. t.* 25. *f.* 3.

Habitat in fluviis, stagnis, fossis, frequentissima. *Incola* fuscus.
Testa diametro vix ¼ poll., subpellucida, coloris cornei sub epidermide virescente vel rufescente brunnea. Hæc *Hel. Planorbe* minor, at anfractibus pluribus. *Margo* testæ in illa extra testam exseritur, at in hac ipse testæ angulus est acutus. (*Linn. Fn. Suec. p.* 527.)

5. * * Rotundatæ *anfractibus, et umbilicatæ.*

cornea. H. testa supra umbilicata, plana, nigricante; anfractibus 4 teretibus. *Linn. Fauna Suecica, n.* 2179. *Syst. Nat. p.* 1243. *n.* 671. *Linn. Gmel. p.* 3623.

Buonanni Recr. t. 3. *f.* 316.
Lister Anim. Angl. t. 2. *f.* 26. —— *Conch. t.* 137. *f.* 41.
Petiver Gaz. t. 92. *f.* 5.
Gualt. Test. t. 4. *f.* D. D.
Seb. Mus. 3. *t.* 39. *f.* 17.
D'Argenv. Conch. t. 31. *f.* 2.
Lesser's Testaceoth. p. 148. *f.* 9.
Hill's Swammerd. t. 10. *f.* 3, 4.
Knorr Vergn. 5. *t.* 22. *f.* 6.
Muller Verm. 2. *p.* 154. *n.* 343.
Pennant Brit. Zool. t. 83. *f.* 126. *& f.* 125. testa junior.
Da Costa Brit. Conch. t. 4. *f.* 13. H. Cornu Arietis.
Schröt. Flussconch. t. 5. *f.* 19—21.
Chemn. Conch. 9. *t.* 127. *f.* 1113—1115.
Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 13.

Donovan

Donovan Brit. Shells, t. 39. *f.* 1.
Montagu Test. Brit. p. 448.

Habitat in fluviis, paludibus, et fossis, frequens.

Testa diametro 1 poll., vel major. *Testæ* spira seu anfractus teres est striis longitudinalibus et transversalibus, minutissimis elevatis; tota ferruginea seu pulla, subpellucida, plana utrinque est, nec spira prominens, at latere superiore concavo umbilicata, vix autem in inferiore latere. (*Linn. Fn. Suec. p.* 528.)

6.

Spirorbis. H. testa utrinque concava plana albida, anfractibus quinque teretibus. *Linn. Fauna Suecica, n.* 2180. *Syst. Nat. p.* 1244. *n.* 672. *Linn. Gmel. p.* 3624.
Martini Berl. Mag. 4. *p.* 258. *t.* 8. *f.* 20.
Muller Verm. 2. *p.* 161. *n.* 347. Planorbis Spirorbis.
Schröt. Flussconch. n. 47; *& t.* 5. *f.* 18.
Montagu Test. Brit. p. 455. ——— *Supplem. t.* 25. *f.* 2.
Pulteney in Hutch. Dorset. t. 20. *f.* 17.

Habitat in rivis et stagnis, frequens.

Testa diametro $\frac{2}{10}$ poll. *Testa* pellucida, cornea, anfractibus 5 vel 6, plana, parum utrinque concava, vix tamen umbilicata; minime marginata. (*Linn. Fn. Suec. p.* 528.)

First distinguished as a British species by Mr. Montagu; common.

7.

contorta. H. testa subumbilicata plana, utrinque æquali; apertura lineari acuta. *Linn. Fauna Suecica, n.* 2181. *Syst. Nat. p.* 1244. *n.* 673. *Linn. Gmel. p.* 3624.
Petiver Gaz. t. 92. *f.* 8.
Act. Ups. 1736. *p.* 40. *n.* 5.
Schröt. Flussconch. t. 5. *f.* 29.
Muller Verm. 2. *p.* 162. *n.* 348.
Da Costa Brit. Conch. p. 66. *t.* 4. *f.* 11. H. crassa.

Chemn.

Chemn. Conch. 9. *t.* 127. *f.* 1126.
Pultency in Hutch. Dorset. p. 47. *t.* 20. *f.* 11. H. umbilicata.
Donovan Brit. Shells, t. 99.
Montagu Test. Brit. p. 457. ——— *Supplem. t.* 25. *f.* 6.

Habitat in rivis et fossis.

Testa magnitudine seminis brassicæ, raro major. *Anfractibus* quatuor arctissime sibi invicem obvolutis; utrinque fere æqualis est testa et utrinque concava. *Apertura* literam C refert, seu lunam in primo quadrante; corpus nigrum, corniculis subulatis, longis, cum in aquis versatur, et e testa prorepit animalculum vivum; videtur testa eminus inspecta, quasi deaurata. (*Fn. Suec. p.* 528. *n.* 2181.)

First noticed and figured by Petiver. Mr. Donovan, at our suggestion, first gave this species as *Helix contorta* of Linnæus, with whose minute and exact description it corresponds in every respect. It may be readily distinguished by its appearance of being gilded, when occupied by the living animal, and viewed in water.

This is rather a local species. Found in ditches near Lackham, Wilts; in the Isle of Purbeck, near Wareham, and at Charmouth, Dorset, by Mr. Montagu; and plentifully at Spetisbury, Dorset, by the Rev. T. Rackett.

8. *alba.* H. testa utrinque umbilicata striata; apertura dilatata.

Linn. Gmel. p. 3625.
Petiver Gaz. t. 92. *f.* 7.
Muller Verm. 3. *p.* 164. *n.* 350.
Walker Test. Min. Rar. f. 19.
Schröt. Flussconch. t. 5. *f.* 12.
Montagu Test. Brit. p. 459. ——— *Supplem. t.* 25. *f.* 7.
Pulteney in Hutch. Dorset. t. 9. *f.* 18.

Habitat

Habitat in fluviis, fossis et stagnis, frequens. *Incola* griseus, tentaculis albis oculisque nigris.

Testa diametro $\frac{1}{4}$ poll., pellucida, cornea, sub epidermide brunnea. *Anfractus* 4 teretes, striis longitudinalibus subtilissimis manifestis, transversis.

9. *fontana*. H. testa compressa, obtuse carinata, hinc umbilicata; anfractibus tribus, utrinque convexis; apertura semi-ovata.

Lightfoot in Act. Angl. 76. *t.* 2. *f.* 1—4.
Montagu Test. Brit. p. 462. *t.* 6. *f.* 6.
Pulteney in Hutch. Dorset. t. 19. *f.* 19.

Habitat in aquis dulcibus.

Testa diametro vix $\frac{2}{10}$ poll., pellucida, lævis, glabra, coloris cornei. Similis *Nautilo lacustri*, verum superne minus convexa, et absque concamerationibus.

First noticed by Mr. Agnew, and described by Lightfoot. Found at Bulstrode, Bucks; near Sandwich, Kent, in ditches; near Wareham, Dorset; and near Wedhampton, Wilts.

10. *paludosa*. H. testa umbilicata, superne convexiuscula; apertura fere orbiculari, marginata; margine reflexo. *t.* 4. *f.* 5.

Morton Northampt. p. 417.
Da Costa Brit. Conch. p. 59.
Walker Test. Min. Rar. f. 23.
Montagu Test. Brit. p. 440.
Pulteney in Hutch. Dorset. t. 19. *f.* 25.

β. Anfractibus striatis, seu annulatis.

Lightfoot in Act. Angl. 76. *t.* 3. *f.* 1—4. Turbo Helicinus.
Montagu Test. Brit. p. 441. H. Crenella.

Habitat in paludibus, sepibus, et ripis, super folia putrescentia, haud infrequens.

Testa diametro $\frac{1}{10}$ poll., alba, lævis, anfractibus 4 torosis. *Umbilicus* patulus. *Varietas β. anfract.* striis, interdum etiam annulis numerosis membranaceis cincti.

First noticed by Morton, who found it in bogs in Northamptonshire. Found also by Mr. Agnew, at Bulstrode, Middlesex; by Mr. Boys, near Sandwich, Kent; after a flood, on the banks of the Avon, Wilts, and in the sand of the Kennet, near Newbury, Berks, by Mr. Montagu; on dry banks, at Spetisbury, Dorset, by the Rev. T. Rackett.

Mr. Montagu has remarked, that the variety is seen with every gradation from slight *striæ* to membranaceous rings; and we have found the plain and the annulated shells in precisely the same situations.

11.

Ericetorum. H. testa umbilicata, depressa, fascia una vel pluribus, umbilico ampliato. *Linn. Gmel. p.* 3632.

Lister Anim. Angl. t. 2. *f.* 13. —— *Conch. t.* 78. *f.* 78.

Pennant Brit. Zool. t. 85. *f.* 122. H. albella.

Da Costa Brit. Conch. p. 53. *t.* 4. *f.* 8. H. Erica.

Muller Verm. 2. *p.* 33. *n.* 236.

Chemn. Conch. 9. *t.* 132. *f.* 1193. a. b.

Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 8.

Montagu Test. Brit. p. 437. ——— *Supplem. t.* 24. *f.* 2.

Donovan Brit. Shells, t. 151. *f.* 2.

Habitat in ericetis aridis, arenosis, seu cretaceis, frequentissima.

Testa $\frac{3}{4}$ poll. lata, $\frac{1}{4}$ alta, tenuis, subpellucida, lævis, alba, subalbida, vel lutescens, fascia unica flavescente brunnea in partem superiorem anfractus primi, et per suturam ad apicem excurrente; interdum fasciis plurimis pallescentibus, interdum tota albida. *Spira* depressa, fere plana. *Umbilicus* ampliatus. *Anfractus* minores conspicui.

First figured and described by Lister.

12. *cingenda.*

12.
cingenda. H. testa umbilicata, subconvexa, spira obtusiore, aper-
t. 5. *f.* 6. tura suborbiculari.

Gualt. Test. t. 2. H.?
Pennant Brit. Zool. 4. *t.* 85. *f.* 33. H. zonaria.
Montagu Test. Brit. p. 418. ——— *Supplem. t.* 24. *f.* 4.
Pulteney in Hutch. Dorset. t. 18. *f.* 5.

Habitat ad ora arenosa, supra plantas maritimas, rarissima.

Testa $\frac{3}{4}$ poll. lata, $\frac{1}{2}$ poll. alta, lævis, subopaca, lutescens; sursum fasciis latis, lineis plurimis piceis interruptis, confertis; subtus fascia unica ciliata. *Striæ* lævissimæ, anfractus transversim et longitudinaliter excavantes, superficiem lineato-punctatam (oculo armato solum manifestam) reddunt. *Spira* picea ad apicem. *Umbilicus* minimus.

A very local species, found by Mr. Montagu, at Tenby, in South Wales; and in abundance at St. Ives, in Cornwall, by ourselves.

13.
virgata. H. testa umbilicata, convexa, alba, fascia fusca; apertura suborbiculari.

Lister Conch. t. 59. *f.* 56.
Petiver Gaz. t. 17. *f.* 6.
Gualt. Test. t. 3. *f.* L.
Pennant Brit. Zool. t. 85. *f.* 133. A.
Da Costa Brit. Conch. p. 79. *t.* 4. *f.* 7.
Schröt. Erdconch. t. 2. *f.* 22. *&* 22. a.
Linn. Gmel. p. 36, 40. H. media.
Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 7.
Donovan Brit. Shells, t. 65. H. zonaria.
Montagu Test. Brit. p. 415. ——— *Supplem. t.* 24. *f.* 1.

Habitat in campis arenosis et cretaceis, copiosissima.

Testa diametro $\frac{1}{2}$ poll., subopaca, alba, unica fascia fusca ab apertura per suturam anfractuum ad apicem conspicua, subtus lineis plurimis fuscescentibus vittata. *Umbilicus* coarctatus, profundus. *Labium* purpurascente-rubrum, albo marginatum.

Varietas α. subalbida, fascia pallida.

Plentiful on downs, in Kent, Cambridgeshire, Wilts, Dorset, Devon, and Cornwall.

This species has been mistaken for *H. zonaria*; but will agree neither with Linnæus's character "*depressiuscula*," nor with his references.

14.

caperata. H. testa umbilicata, subcarinata, subdepressa, striata, apice nigro.

Montagu Test. Brit. p. 430. *t.* 11. *f.* 11.

Pulteney in Hutch. Dorset. t. 19. *f.* 20.

Habitat in sepibus.

Testa ad ½ poll. lata, ¼ poll. alta, subopaca, subalbida; superne fascia purpurascente brunnea, interdum albo interrupta; subtus lineis purpurascenté-brunneis. *Anfractus* striis densis numerosissimis, quibus facillime dignoscitur testa juniore *H. virgatæ*. *Labrum* tenue.

Testa colore variat, interdum brunnea, albo maculata, fascia alba ad carinam; interdum cinerea, absque fasciis.

First noticed by Mr. Boys, who found it in Kent. Mr. Montagu first gave a figure of it. Found by him in Wiltshire and Cornwall; about Stanborough and Woolcomb, and in the Barrack-Yard of George's Square, at Plymouth Dock, Devon; and by ourselves at Torquay, in that county; at Spetisbury, Dorset; and in the Isle of Portland.

15.

rufescens. H. testa umbilicata, subcarinata, subdepressa, subrugosa, apertura semilunari.

Lister Anim. Angl. t. 2. *f.* 12. —— *Conch. t.* 71. *f.* A. inf.

Pennant Brit. Zool. t. 85. *f.* 127.

Da Costa Brit. Conch. p. 80. *t.* 4. *f.* 6.

Muller Verm. 2. *p.* 62. *n.* 258. H. sericea?

Linn. Gmel. p. 3639. H. Turturum; & *p.* 3617. H. sericea.?

Schröt. Erdconch. t. 2. *f.* 24.?

Pulteney

Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 6.
Montagu Test. Brit. p. 420. ——— *Supplem. t.* 23. *f.* 2.
Donovan Brit. Shells, t. 157.

Habitat in hortis, sepibus, nemoribus, frequentissima.

Testa diametro ½ poll., tenuis, subdiaphana, rufescens seu spadicea, striis numerosis, seu rugis fere obliteratis. *Anfractus* 4 vel 5, minime prominentes; primus subcarinatus, carina pallescente. *Spira* nunc depressa, nunc convexior. *Labrum* marginatum. *Umbilicus* cylindricus, perforatus usque ad apicem.

Testæ juniores nonnunquam tomentosæ.

Gmelin has described this species from Lister as *Helix Turturum*, but has added erroneous references. *Helix sericea* of Muller and Gmelin, and *H. holosericea* of the latter, are also probably the same shell. We have retained Da Costa's trivial name "*rufescens*," which is used by all the English authors.

16.

Cantiana. H. testa umbilicata, substriata, subdepressa; apertura suborbiculata.

Lister Anim. Angl. p. 126.
Montagu Test. Brit. p. 422. ——— *Supplem. t.* 23. *f.* 1.
Donovan Brit. Shells, t. 157. *f.* 2. H. pallida.
Pulteney in Hutch. Dorset. t. 19. *f.* 21.

Habitat in pratis et sepibus.

Testa ¾ poll. lata, dilute rufescens, interdum superne cæruleata; præcedenti affinis, magnitudine verò facillimè distinguenda, duplo major, tenuior, umbilico minore, obsolete striata, vix carinata, interdum fascia pallida.

First noticed by Lister, as brought from Kent. Found also by Mr. Boys, near Sandwich; at Chelsfield, Kent; Ripley, Surrey; Spetisbury, Dorset; and Alton, Hants, by the Rev. Thomas Rackett. We have not heard of its having been found in any other counties, though it is in these so frequent.

17. *nitens.*

17.
nitens. H. testa umbilicata, depressa, pellucida, fulvo-cornea,
t. 5. f. 7. substriata; apertura larga. *Linn. Gmel. p.* 3633.
Petiver Gaz. t. 93. *f.* 14.
Gualt. Test. t. 2. *f.* G.
Pennant Brit. Zool. n. 134. H. pellucida?
Muller Verm. p. 32. *n.* 234.
Ström. in Act. Nidros. 3. *t.* 6. *f.* 16.
Pulteney in Hutch. Dorset. p. 47. *t.* 19. *f.* 22. H. lucida.
Montagu Test. Brit. p. 425. H. lucida.
——— *Supplem. t.* 23. *f.* 4.

Habitat in sylvis, et muscosis humidis. *Incola* niger.

Testa diametro usque ad $\frac{1}{8}$ poll., tenuis, glaberrima, lubrica, nitens, cornei coloris, subtus albescentis. *Anfractus* striis obliteratis. *Umbilicus* teres, profundus.

18.
hispida. H. testa umbilicata, convexa, hispida, diaphana, anfractibus quinis, apertura subrotundo-lunata. *Linn. Fauna Suecica, n.* 2182. *Syst. Nat. p.* 1244. *n.* 675. *Linn. Gmel. p.* 3625.
Petiver Gaz. t. 93. *f.* 13.
Morton Northampt. p. 416.?
Da Costa Brit. Conch. p. 58. *t.* 5. *f.* 10.
Muller. Verm. 2. *p.* 73. *n.* 268.
Chemn. Conch. 9. *t.* 122. *f.* 1057, 1058.
Schröter Erdconch. t. 2. *f.* 21.
Pulteney in Hutch. Dorset. p. 47. *t.* 21. *f.* 10.
Montagu Test. Brit. p. 423. ——— *Supplem. t.* 23. *f.* 3.
Donovan Brit. Shells, t. 151.

Habitat in pratis humectantibus.

Testa diametro $\frac{1}{4}$ poll., cornei coloris convexa, rotundata, subtus perforata, pilis raris brevissimis hispida, *apertura lunari-subrotunda.* (*Fn. Suec. p.* 528.)

Da Costa

Da Costa received it from Wilts, Hants, and Lincolnshire. Dr. Pulteney says it is common in Dorsetshire, in woods, among moss, and in wet and shady places. We have found it in abundance in wet meadows, at Spetisbury, in that county. It has been found also by Mr. Montagu, about Tremough-House, near Penryn, Cornwall; and sparingly in Devonshire and Wiltshire. It is certainly a local species.

19. *radiata.* H. testa umbilicata, subcarinata, subdepressa, dense striata, subtus convexa.

Lister Conch. t. 1058. *f.* A. benè.
Petiver Gaz. t. 31. *f.* 5.
Morton Northampt. p. 416.
Gualt. Test. t. 3. *f.* Q.
Da Costa Brit. Conch. p. 57. *t.* 4. *f.* 15, 16.
Muller Verm. 2. *p.* 29. *n.* 231. H. rotundata.
Schröt. Erdconch. t. 2. *f.* 25.
Linn. Gmel. p. 3633. H. rotundata.
Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 15, 16.
Montagu Test. Brit. p. 432. ——— *Supplem. t.* 24. *f.* 3.

Habitat in hortis, sepibus, nemorosis, sub ligno putrescente et saxis.
Testa diametro ¼ poll., pallide brunnea, fasciis transversis rufis tessulata; interdum pallidè cornea, fasciis vix manifestis; *striis* numerosis subtilissimis circumvoluta. *Spira* depressa, apice obtusiore. *Umbilicus* patulus, teres, profundus.

Gmelin has described a different shell as *H. radiata*; ours is probably his *H. rotundata*; but we have retained the trivial name given to it by Da Costa, in justice to him as the first describer, and because it so well characterizes the species.

20. *umbili-*

20. *umbilicata.* H. testa subconica, subpellucida, striata, anfractibus quinis teretibus, umbilico ampliore.

Montagu Test. Brit. p. 434. *t.* 13. *f.* 2.
Pulteney in Hutch. Dorset. t. 19. *f.* 24.

Habitat subter saxa et tecta imbricata. *Incola* niger.

Testa diametro $\frac{1}{10}$ poll., fusco-cornea, anfractibus rotundatis, eminentibus, fere disjunctis, subtiliter striatis. *Apertura* subrotundo-lunata. *Labrum* tenue. *Umbilicus* adeo profundus, ut anfractus interne usque ad apicem conspiciendi. *Apex* obtusior.

Distinguitur ab *H. radiata*, quod omnino fusca, magis convexa, anfractuum suturæ evidentiores, et striæ vix oculo armato discernendæ.

First discovered and figured by Mr. Montagu, who found it on walls, near Tenby, Caermarthenshire; under loose stones, in Portland; and on the top of Corfe Castle, Dorset; also under the tiles of Laycock Abbey, and Lackham-House, Wilts.

21. *Trochiformis.* H. testa subumbilicata, subconica, lævi; apertura sublunata, transversim compressa. *Montagu Test. Brit. p.* 427. *t.* 11. *f.* 9.
Lister Anim. Angl. p. 123.
Act. Angl. n. 105. *f.* 9.?
Muller Verm. 2. *p.* 79. *n.* 276.
Da Costa Brit. Conch. p. 35.

Habitat super truncos arborum putrescentes, rarior.

Testa diametro $\frac{1}{8}$ poll., tenuis, pellucida, cornea, vel rufescens. *Anfractus* sex rotundati, læves, glabri, sutura manifesta. *Labrum* tenue, in senioribus ad angulum inferiorem paululum reflexum, sub umbilicum formans. *Apex* quam maxime productus. (*Montagu.*)

Found in Wiltshire and Devonshire, by Mr. Montagu.

22. *spinulosa.*

22.

spinulosa. H. testa subconica, umbilicata; anfractibus 5 convexis, annulis membranaceis acutis cinctis, dorso spinuloso-carinatis; apertura suborbiculari. *Lightfoot in Act. Angl.* 76. *p.* 166. *t.* 2. *f.* 1, 2, 3, 4, 5. inf.

Morton Northampt. p. 415. ?

Muller Verm. 2. *p.* 81. *n.* 279.

Linn. Gmel. p. 3638. H. aculeata.

Chemn. Conch. 9. *t.* 133. *f.* 1209.

Montagu Test. Brit. p. 429. *t.* 11. *f.* 10.

Pulteney in Hutch. Dorset. t. 19. *f.* 23.

Habitat in muscosis, terrestris.

Testa diametro $\frac{1}{10}$ poll., tenuis, subpellucida, brunnea, sub epidermide spinulosa.

Found by Mr. Agnew, near Bulstrode, Bucks; at Lackham, Wilts, and at Kingsbridge, Devon, by Mr. Montagu; and at Spetisbury, Dorset, by the Rev. T. Rackett.

23.

Lacuna. H. testa umbilicata, subglobosa; anfractibus ventricosioribus, lævibus; columella sinuata.

Montagu Test. Brit. p. 428. *t.* 13. *f.* 6.

Habitat in mari.

Testa diametro $\frac{1}{4}$ poll., tenuis, pellucida, pallidè cornea. *Anfractibus* 4. *Apertura* ampla, fere orbicularis. *Labrum* tenuissimum. *Columella* rimâ producta, desinente in umbilicum profundum. *Spira* fere nulla. *Mucro* obtusissimus. Testa *Helici ampullaceæ* (Linn.) valde affinis.

Varietas, rarior, fasciis duabus rufescente-brunneis.

This new and curious species was discovered by Mr. Montagu, in abundance, near Southampton; and sparingly on the Devonshire coast.

24.

Pomatia. H. testa umbilicata, subovata, obtusa, decolore; apertura subrotundo-lunata. *Linn. Fauna Suecica, n.* 2183. *Syst. Nat. p.* 1244. *n.* 677. *Linn. Gmel. p.* 3627.

Gesner Aqu. p. 355.
Aldrov. Exang. 389.
Lister Anim. Angl. t. 2. *f.* 1. —— *Conch. t.* 48. *f.* 46.
Act. Angl. n. 105. *f.* 1.
Gualt. Test. t. 1. *f.* A.
D'Argenv. Conch. t. 28. *f.* 1.
Geve Conch. t. 29. *f.* 339, 340.
Hill's Swammerd. t. 4. *f.* 2.
Schröt. Erdconch. t. 1. *f.* 10.
Muller Verm. 2. *p.* 43. *n.* 243.
Pennant Brit. Zool. t. 84. *f.* 128.
Da Costa Brit. Conch. p. 67. *t.* 4. *f.* 14.
Chemn. Conch. 9. *t.* 128. *f.* 1138.
Pulteney in Hutch. Dorset. p. 47. *t.* 20. *f.* 14.
Donovan Brit. Shells, t. 84.
Montagu Test. Brit. p. 405.

Habitat in nemoribus et sepibus.

Testa diametro 2 poll., subglobosa, sordide alba, fasciis tribus vel plurimis rubiginosis. *Spira* subconica. *Umbilicus* exiguus.

Said to have been introduced by Mr. Howard into Surrey, where it is now common, near Darking, Ashted, Chipstead, Measthám, Boxhill, and Leatherhead. It has been found also in Oxfordshire, Kent, Wilts, Gloucestershire, and Dorsetshire.

25. *Arbustorum.* H. testa subumbilicata, convexa, acuminata; apertura suborbiculari, bimarginata, antice elongata. *Linn. Fauna Suecica, n.* 2184. *Syst. Nat. p.* 1245. *n.* 680. *Linn. Gmel. p.* 3630.

Lister Anim. Angl. t. 2. *f.* 4. —— *Conch. t.* 56. *f.* 53.
Act. Angl. n. 105. *f.* 4.

Geve

Geve Conch. t. 30. *f.* 354—356.
Seb. Mus. 3. *t.* 38. *f.* 68.
Pennant Brit. Zool. 4. *t.* 85. *f.* 130.
Da Costa Brit. Conch. p. 75. *t.* 17. *f.* 6.
Chemn. Conch. 9. *t.* 133. *f.* 1202.
Pulteney in Hutch. Dorset. p. 47. *t.* 2. *f.* 6.
Donovan Brit. Shells, t. 136.
Montagu Test. Brit. p. 413.

Habitat in sylvis et sepibus. *Incola* niger.

Testa diametro vix ¾ poll., convexiuscula. *Color* pallide- seu fulvo-castaneus, punctis oblongis fuscis marmorata, fascia solitaria fusca per medium anfractus; intus castaneus. *Labium* album, reflexum. *Umbilicus* utplurimum vix conspicuus.

A local species, found in Surrey, Hampshire, Wiltshire, and Dorsetshire; but not common. We have found it in abundance in Derbyshire.

We are unable to add to the brief descriptions of the following six species in the *Testacea Minuta Rariora*.

26. *resupinata.* H. apertura ampla, ovali; anfractibus apicis resupinatis. *Walker Test. Min. Rar. t.* 1. *f.* 24.

Testa minuta, cornea, semipellucida, glabra.

From Sandwich; very rare.

27. *globosa.* H. globosa, duobus anfractibus, lævis; apertura subrotunda. *Walker Test. Min. Rar. t.* 1. *f.* 25.

Testa minuta, alba, opaca, glabra.

From Sandwich; not common.

28. *reticulata.* H. unici anfractus, subumbilicata; apertura rotunda, marginata, eleganter reticulata. *Walker Test. Min. Rar. t.* 1. *f.* 26.

Adams Microsc. t. 14. *f.* 13.

Testa minuta, alba, pellucida.

From Reculver; extremely rare.

29. *unispiralis.* H. utrinque umbilicata, apertura rotunda, unici anfractus. *Walker Test. Min. Rar. t.* 1. *f.* 27.

Testa minuta, alba, opaca, glabra.

From Sandwich; not common.

30. *striata.* H. striata, apertura subovali, anfractibus supra dorsalibus. *Walker Test. Min. Rar. t.* 1. *f.* 29.

Adams Micr. t. 14. *f.* 13.

Testa minuta, viridescente-alba, pellucida.

From Sandwich; very rare.

31. *coarctata.* H. anfractibus duobus; apertura subrotunda, ad umbilicum coarctata. *Walker Test. Min. Rar. t.* 1. *f.* 30.

Testa alba pellucida. An Testa junior?

From Sandwich; not common.

The following five species are from Mr. Adams's specific characters of minute shells found on the coast of Pembrokeshire.

32. *tubulata.* H. tribus anfractibus longitudinaliter striatis. *Adams in Act. Soc. Linn.* 3. *p.* 67. *t.* 13. *f.* 35, 36.

Obs.—"Singularis hac in specie est constructio, nam testa umbilici loco, tubo marginato qui extra testæ superficiem extenditur instructa est."

33. *variegata.* H. testa lævi, quatuor anfractibus primo ventricosiore, lineis rubris notatis. *Adams in Act. Soc. Linn.* 3. *p.* 67.

Obs.—"Basi imperforata, testa subpellucida, apertura margine patentissima."

34. *fasciata.*

34. *fasciata.* H. testâ lævi, tribus anfractibus primo ventricosiore, subumbilicata, apertura ampliata. *Adams in Act. Soc. Linn.* 5. *t.* 1. *f.* 20, 21.

Obs.—"Testa tenuis pellucida alba, anfractus primus fasciis tribus purpureis, media lata, lateralibus angustis."

35. *nitidissima.* H. testa duobus anfractibus subtilissime transverse striata. *Adams in Act. Soc. Linn.* 5. *t.* 1. *f.* 22—24.

Obs.—"Testa cornea pellucida umbilicata, eximio nitore facillime distinguenda."

36. *bicolor.* H. testa lævi, duobus anfractibus vix umbilicata. *Adams in Act. Soc. Linn.* 5. *t.* 1. *f.* 25, 26, 27.

Obs.—"Hæc species differt a præcedente cui affinis, quod lævis, neque glabra, et intus alba."

**** Rotundatæ *imperforatæ.*

37. ***vivipara.*** H. testa imperforata, subovata, obtusa, cornea, cingulis fuscatis; apertura suborbiculari. *Linn. Fauna Suec. n.* 2185. *Syst. Nat. p.* 1247. *n.* 690. *Linn. Gmel. p.* 3646.

Lister Anim. Angl. t. 2. *f.* 18.

—— *Conch. t.* 126. *f.* 26.; *& t.* 1055. *f.* 6.

—— *Act. Angl. n.* 105. *f.* 17.

Petiver Gaz. t. 99. *f.* 16.

Seb. Mus. 3. *t.* 38. *f.* 12.; *& t.* 39. *f.* 33, 34.

Gualt. Test. t. 5. *f.* A.

Ginann. Op. Post. t. 1. *f.* 6, 7.?

Hill's Swammerd. t. 8. *f.* 5—13.

Knorr Vergn. 5. *t.* 17. *f.* 4.

Pennant Brit. Zool. t. 84. *f.* 132.; *& t.* 85. fig. sup. Testa junior?

Da Costa Brit. Conch. p. 81. *t.* 6. *f.* 2.

Schröt.

Schröt. Flussconch. t. 8. *f.* 1, 2.; *& t.* Min. C. *f.* 6.
Chemn. Conch. 9. *t.* 132. *f.* 1182, 1183.
Pulteney in Hutch. Dorset. p. 48. *t.* 17. *f.* 2.
——— *Ibid.* H. compactilis.
Donovan Brit. Shells, t. 87.
Montagu Test. Brit. p. 386.

Habitat in rivis et lacubus.

Testa ad 1½ poll. longa, 1 poll. lata, pellucida, tenera, ex luteo olivacea, subtilissime striata. *Anfractus* teretes, linea triplici livida. *Spira* obtusa. *Apertura* ovata, operculo membranaceo.

Plentiful in the Thames, and streams communicating with that river. Found also in the Stour, Dorset.

38.
nemoralis. H. testa imperforata, subrotunda, lævi, diaphana, fasciata; apertura subrotundo-lunata. *Linn. Fauna Suec. n.* 2186. *Syst. Nat. p.* 1247. *n.* 691. *Linn. Gmel. p.* 3647.

α. Citrina, incarnata seu spadicea, labris fuscis.
Lister Conch. t. 57. *f.* 54. superior.
Petiver Gaz. t. 91. *f.* 9—11.; *& t.* 92. *f.* 10.
Gualt. Test. t. 1. *f.* Q. sin.
Geve Conch. t. 32. *f.* 398, 399.; *& t.* 33. *f.* 426.
Da Costa Brit. Conch. t. 5. *f.* 1, 2, 8.

β. Citrina, virescente lutea, seu incarnata, fascia unica fusca, labris fuscis.
Petiver Gaz. t. 91. *f.* 10. 12.
Seb. Mus. 3. *t.* 39. *f.* 13. *&* 18.
Geve Conch. t. 32. *f.* 402—404.
Schröt. Erdconch. t. 2. *f.* 21.
Da Costa Brit. Conch. t. 5. *f.* 3.
Chemn. Conch. 9. *t.* 133. *f.* 1198.
Donovan Brit. Shells, t. 13. *f.* sup. & media.

γ. Citrina,

γ. Citrina, virescente-lutea, seu incarnata, fasciis plurimis fuscis, nunc angustioribus, nunc latioribus, labris fuscis.

Lister Conch. t. 57. *f.* 54. quatuor inferiores.
Petiver Gaz. t. 92. *f.* 9.
Seb. Mus. 3. *t.* 39. *f.* 12.
Gualt. Test. t. 1. *f.* P.
Geve Conch. t. 32. *f.* 393—397. *& f.* 406—411.; *& t.* 33. *f.* 412—420.
Hill's Swammerd. p. 70. *t.* 8. *f.* 5.
Schröt. Erdconch. t. 1. *f.* 14—17. *& f.* 29, 30.
Muller Verm. 2. *p.* 46. *n.* 246.
Da Costa Brit. Conch. t. 5. *f.* 4, 5—14, 15.
Born Mus. t. 16. *f.* 3—8.
Favanne Conch. t. 63. H.
Chemn. Conch. 9. *t.* 133. *f.* 1196-7.
Donovan Brit. Shells, t. 13. fig. tres inf.
Pulteney in Hutch. Dorset. p. 48. *t.* 21.
Montagu Test. Brit. p. 411.

δ. Structura coloribusque variis omnino eadem cum præcedentibus sed minor, et labro constanter incrassato albo.

Lister Anim. Angl. p. 117. *n.* 1.
Gualt. Test. t. 1. *f.* Q. dextr.
Geve Conch. t. 31. *f.* 368—390.
Schröt. Erdconch. t. 2. *f.* 27.
Muller Verm. p. 52. *n.* 147. H. hortensis.
Born Mus. p. 385. *t.* 16. *f.* 18, 19. H. hortensis.
Chemn. Conch. 9. *t.* 133. *f.* 1199—1201.
Linn. Gmel. p. 3649. H. hortensis.
Montagu Test. Brit. p. 412. H. hortensis.

Habitat

Habitat in sepimentis, et nemoribus, frequentissima.
Testa diametro 1 poll., subrotunda, substriata. *Spira* convexa, obtusa. *Apertura* latior quam longa. *Umbilicus* nullus.

39. *hortensis.* H. testa imperforata, subglobosa, lutea; fasciis quatuor spadiceis, maculis albis interruptis, labro candido.
Linn. Gmel. p. 3631. H. aspersa.
Lister Anim. Angl. t. 2. *f.* 2. —— *Conch. t.* 49. *f.* 47.
Act. Angl. n. 105. *f.* 5.
D'Argenv. Conch. t. 28. *f.* 11.
Knorr Vergn. 4. *t.* 27. *f.* 3.
Geve Conch. t. 30. *f.* 344.
Martin Berl. Mag. 2. *t.* 2. *f.* 17.
Muller Verm. 2. *p.* 59. *n.* 253.
Pennant Brit. Zool. t. 84. *f.* 129.
Da Costa Brit. Conch. p. 72. *t.* 4. *f.* 1. Cochlea vulgaris.
Favanne Conch. t. 63. *f.* D. 2, 3, 4.
Pulteney in Hutch. Dorset. p. 48. *t.* 20. *f.* 1. H. lucorum.
Montagu Test. Brit. p. 407. H. aspera.
Donovan Brit. Shells, t. 131.
Habitat in hortis, sepimentis et nemoribus, passim.
Testa diametro ad 1½ poll., alba, vel lutea, fasciis 4 spadiceis interruptis, tertia latissima, punctis minimis impressis rugosula. *Anfractus* 4, plicis obliteratis. *Spira* subconica, obtusior. *Labium* interne dilatatum, marginatum, candidum. *Columella* candida.

This species was with propriety named *H. hortensis*, by Pennant, as it is our common garden snail. We have therefore retained his trivial name in preference to Gmelin's *aspersa*. *H. hortensis* of Gmelin appears to us to be a variety of *H. nemoralis*, as it differs only in having a white, thickened margin, and is found of all the colours of that species.

40. *fusca.*

40.
fusca. H. testa lævi, diaphana, apertura lunari, umbilico nullo. *Montagu Test. Brit. p.* 424. *t.* 13. *f.* 1.

Habitat in nemoribus.

Testa $\frac{3}{8}$ poll. lata, vix $\frac{1}{4}$ poll. alta, rufescente-cornea. *Anfractus* 5 vel 6, rugis levissimis. *Labrum* tenue, paululum reflexum ad angulum inferiorem.

Testa facie *H. rufescentis*, sed magis diaphana, minus rugosa, et umbilico nullo. (*Montagu.*)

Found by Mr. Boys at Sandwich, and by Mr. Montagu in Devonshire.

41. **** *Turritæ.*

elegantissima. H. testa subulato-turrita, anfractibus oblique sulcatis. *Walker Test. Min. Rar. f.* 39.
Montagu Test. Brit. p. 298. *t.* 10. *f.* 2.
Donovan Brit. Shells, t. 179. *f.* 1. Turbo acutus.

Habitat in mari.

Testa ad $\frac{1}{4}$ poll. longa, sub epidermide brunnea, alba, semipellucida, glaberrima, *Anfractus* 9—13, sulcis obliquis regularibus æquidistantibus; sutura manifesta. *Spira* acutissima.

First noticed by Mr. Boys, at Sandwich. Not uncommon in sand, from Falmouth Harbour, Salcomb Bay, and Ilfracomb. (*Mr. Montagu.*)

This species is allied to the acuminated *Turbines*, but from its aperture must be arranged, like the species which follow, among the *Helices*.

42.
decussata. H. testa subulato-turrita, decussata, apertura utrinque angulata.
Montagu Test. Brit. p. 399. *t.* 15. *f.* 7.

Habitat in mari.

Testa $\frac{3}{10}$ poll. longa, $\frac{1}{10}$ lata, alba, oculo armato decussata. *Anfractus* 8—9, parum eminentes, striis longitudinalibus fortioribus regularibus, transversis minutissimis. *Apertura* subovalis, utrinque angustata.

Labrum paululum incrassatum. *Labium* leviter replicatum. *Sutura* tenuissima.

Testa forma *Helicis politæ*, sed apertura magis obliqua. (*Montagu.*)

An elegant and new species, discovered by the late Mr. Bryer, at Weymouth.

43.

subulata. H. testa subulato-turrita, levissima, testaceo-fasciata, apertura ovata.

Da Costa Brit. Conch. p. 117. Strombiformis glaber.

Donovan Brit. Shells, t. 172.

Pulteney in Hutch. Dorset. t. 19. *f.* 14.

Testa $\frac{3}{4}$ poll. longa, tenuis, subdiaphana, pallidè carnaria, lineis albis et testaceis, vel brunneis, spiralibus. *Anfractus* plani. *Apex* acutissimus.

First noticed by Da Costa, from Exmouth, in Devonshire. Mr. Donovan received it from Weymouth.

44.

polita. H. testa turrita, imperforata, glaberrima, apertura ovata. *Linn. Syst. Nat. p.* 1241. *n.* 653. *Linn. Gmel. p.* 3612. Turbo politus.

Borlase Cornw. p. 277.

Pennant Brit. Zool. t. 79. *fig. sup.*

Da Costa Brit. Conch. p. 116. Strombiformis albus.

Pulteney in Hutch. Dorset. p. 49. *t.* 19. *f.* 15.

Donovan Brit. Shells, t. 177. Turbo albus.

Montagu Test. Brit. p. 398.

Habitat in mari, rarior.

Testa grani hordei magnitudine, albissima, opaca, nitidissima, anfractibus linea excavata tenui interstinctis. (*Linn.*)

First noticed by Borlase; found on the Western coast.

45.

bifasciata. H. testa subumbilicata, turrita, oblonga, rudi, anfractibus teretiusculis, apertura ovata.

Lister Conch. t. 9. *f.* 14.

Pennant

Pennant Brit. Zool. 4. *t.* 82. *f.* 119.
Da Costa Brit. Conch. p. 90.
Pulteney in Hutch. Dorset. p. 49. *t.* 18. *f.* 10.
Donovan Brit. Shells, t. 18. *f.* 1. T. fasciatus.
Montagu Test. Brit. p. 346. ——— *Supplem. t.* 22. *f.* 1.
Habitat in arenosis, supra plantas maritimas.
Testa ad 1 poll. longa, alba. *Anfractus* fascia fusca interrupta; infimus fascia duplici.

First figured and described by Lister, who had it from Wales. This is a very local species, although found in great profusion on many parts of the Western coast; *viz.* near Whitsand Bay, Cornwall; at Bigberry Bay, Devon; and at Lullworth Cove, Dorset.

46. *octona. t.* 5. *f.* 10. H. testa subperforata, turrita, anfractibus 8, apertura subrotunda. *Linn. Syst. Nat. p.* 1248. *n.* 698. *Linn. Gmel. p.* 3653.
Chemn. Conch. 9. *t.* 136. *f.* 1264.
Pulteney in Hutch. Dorset. p. 49. *t.* 18. *f.* 5.
Habitat in subpaludosis.
Testa magnitudine grani secalis, cornea. *Umbilicus* adeo obsoletè perforatus, ut vix constet utrum vere perforatus dicendus. *Apertura* fere orbiculata. (*Linn.*)

We insert this species solely on Dr. Pulteney's authority. He says, "I have only found it dead, and in a bleached state, but otherwise perfect."

47. *octanfracta.* H. testa imperforata, turrita, substriata, anfractibus 8, apertura ovata.
Pennant Brit. Zool. 4. *t.* 86. *f.* 135. H. octona.
Montagu Test. Brit. t. 11. *f.* 8.
Pulteney in Hutch. Dorset. t. 18. *f.* 11.
Habitat in aquis stagnantibus, rarissima.
Testa $\frac{5}{8}$ poll. longa, $\frac{3}{8}$ lata, sub epidermide fusco-cornea, pellucida. *Anfractus*

fractus planiusculi, æquabiliter decrescentes, linea tenui discreti. *Spira* acuta.

This is either a rare, or very local species. It is probably the shell figured by Pennant for *H. octona*. Mr. Montagu has found it between Looe and Fowey, in Cornwall. We have procured it from a gravel-pit between Litchet and Lower Litchet, Dorset; and it is said to inhabit a pond at Nine Elms, near Vauxhall, Surrey.

48. *Lackham-ensis.* H. testa subperforata, ovato-oblongiuscula, apertura subrotundo-lunata, margine reflexo.

Montagu Test. Brit. p. 394. *t.* 11. *f.* 3.

Habitat in nemoribus humectantibus. *Incola* pallidus.

Testa $\frac{4}{8}$ poll. longa, $\frac{1}{4}$ lata, sordide brunnea, cornea vel cinerascens, subpellucida, paululum inflata, leviter rugosa. *H. obscuræ* affinis, sed duplo major, neque tam opaca. *Aperturæ* margo exterius magis reflexus.

This rare species was discovered by Mr. Montagu; and found only in woods, at Lackham, and Bow-Wood, Wilts.

49. *obscura.* H. testa subperforata, ovato-oblongiuscula, impura, anfractibus 5—7, subrugosis, apertura subrotundo-lunata, labro candido. *Linn. Gmel. p.* 3661. *n.* 141. *t.* 5. *f.* 11.

Muller Verm. 2. *p.* 103. *n.* 302.

Da Costa Brit. Conch. p. 90. Turbo Rupium?

Walker Test. Min. Rar. f. 41.

Favanne Conch. t. 65. *f.* F.

Montagu Test. Brit. p. 391. —— *Supplem.* 22. *f.* 5.

Pulteney in Hutch. Dorset. p. 49. *t.* 19. *f.* 27. H. stagnorum.

Habitat in sylvis, super fagi et fraxini truncos, rarius in sepibus aridis.

Testa $\frac{3}{8}$ poll. longa, plusquam $\frac{1}{8}$ lata, opaca, fusca, ventricosa. *Anfractus* paululum rotundati. *Sutura* profunda. *Apex* obtusus. *Aperturæ margo* acutus.

Found

Found by Mr. Boys at Faversham; by Mr. Montagu in a moist wood, at Lackham, Wilts, on dry banks, in Devonshire, and under stones, on the highest part of Portland Island; and by the Rev. Thomas Rackett in dry banks, at Spetisbury, Dorset.

50. *lubrica.* H. testa imperforata, subturrita, anfractibus 5 vel 6, *t.* 5. *f.* 12. parum convexis.

Lister Anim. Angl. t. 2. *f.* 7.
Petiver Gaz. t. 30. *f.* 7.
Schröt. Erdconch. t. 1. *f.* 9.
Muller Verm. 2. *p.* 104. *n.* 303.
Pennant Brit. Zool. 4. *t.* 82. *f.* 118.
Da Costa Brit. Conch. p. 87. *t.* 5. *f.* 18.
Linn. Gmel. p. 3661.
Pulteney in Hutch. Dorset. t. 21. *f.* 18.
Montagu Test. Brit. p. 390. ——— *Supplem. t.* 22. *f.* 6.

Habitat in dumetis humidis, sub ligno putrescente. *Incola* niger, tentaculis 4 clavatis.

Testa $\frac{1}{4}$ poll. longa, $\frac{1}{10}$ lata, pellucida, lævis, glaberrima, nitidissima, fulvo flavescens vel cornea. *Apex* obtusior. *Sutura* apparet linea duplex. *Labrum* crassiusculum utplurimum, rufescente-brunneum. *Apertura* ovata. *Umbilicus* nullus.

First described as British by Da Costa, who, with Dr. Pulteney, conceived it to be *H. stagnorum* of Linnæus, *n.* 697; but it does not sufficiently answer to his character of "*subperforata*," or to Baster's figure, *Op. Subs. t.* 7. *f.* 4.

51. *vitrea.* H. testa subcylindrica, anfractibus 4 rotundatis; apertura subovali, versus apicem coarctata. *Montagu Test. Brit. p.* 321. *t.* 12. *f.* 3.

Testa $\frac{1}{8}$ poll. longa, tenuis, pellucida, glabra, alba. *Sutura* profunda. *Apex* obtusior. *Columella* manifesta usque ad apicem.

Distinguitur

Distinguitur a varietate alba *T. rubri,* quod magis acuminata, vel subcylindrica. *Anfractus* validiores, et magis obliqui.

Differt a *T. striato* quod lævis, nec apertura marginata. (*Montagu.*)

Found by Mr. Montagu, sparingly, at Whitsand Bay, Cornwall.

52.

Punctura. H. testa conica, anfractibus 6 globosis, reticulatis, apertura suborbiculari. *Montagu Test. Brit. p.* 320. *t.* 12. *f.* 5. Turbo Punctura.

Habitat in mari, rarissima.

Testa $\frac{1}{10}$ poll. longa, $\frac{1}{30}$ lata, flavescente-alba. *Anfractus* ope microscopii videntur punctati, et decussati striis delicatissimis.

A new and elegant species, discovered by Mr. Montagu, at Whitsand Bay, in Cornwall; and in sand from Salcomb Bay, Devon.

53.

arenaria. H. testa conica, anfractibus 5 rotundatis, decussatis.

Walker Test. Min. Rar. f. 52.?

Adams in Act. Soc. Linn. 3. *p.* 66. *t.* 13. *f.* 33, 34.?

Montagu Test. Brit. p. 322. *t.* 12. *f.* 4. T. decussatus.

Habitat in mari, rarissima.

Testa vix $\frac{1}{8}$ poll. longa, vix $\frac{1}{10}$ lata, subpellucida, glabra, alba. *Anfractus* striis longitudinalibus elevatis, et transversis delicatissimis decussati. *Apex* vix acutus. *Labrum* tenue.

Testa magis cylindrica, striis longitudinalibus solidioribus, et apertura magis ovali quam *H. Punctura.* (*Montagu.*)

Found by Mr. Montagu, in sand, from Salcomb Bay, Devon.

54. ***** Ovatæ *imperforatæ.*

stagnalis. H. testa imperforata, ovato-subulata, subangulata, apertura ovata. *Linn. Fauna Suecica, n.* 2188. *Syst. Nat. p.* 1249. *n.* 703. *Linn. Gmel. p.* 3657.

Aldr. Test. 3. *p.* 359. *n.* 3.

Lister Anim. Angl. t. 2. *f.* 21. —— *Conch. t.* 123. *f.* 21.

—— *Act. Angl. n.* 105. *f.* 22.

Petiver

Petiver Mus. 82. *n.* 85.
Swammerd. Bibl. Nat. t. 9. *f.* 4.
Gualt. Test. t. 5. *f.* I. I.
D'Argenv. Conch. t. 27. *n.* 6. *f.* 1.
Seb. Mus. 3. *t.* 39. *f.* 52—53.
F. Ginann. Op. Post. t. 1. *f.* A. B. C.
Muller Verm. 2. *p.* 132. *n.* 327.
Pennant Brit. Zool. t. 86. *f.* 106.
Da Costa Brit. Conch. p. 93. *t.* 5. *f.* 11.
Schröt. Flussconch. t. 7. *f.* 1—3. *t.* 11—min. C. *f.* 1.
Born Mus. t. 16. *f.* 16.
Favanne Conch. t. 61. *f.* 16. *&* 23.
Chemn. Conch. 9. *t.* 135. *f.* 1237, 1238.
Pulteney in Hutch. Dorset. p. 48. *t.* 21. *f.* 11.
Donovan Brit. Shells, t. 51. *f.* 2.
Montagu Test. Brit. p. 367. *t.* 16. *f.* 8.
Habitat in fluviis, fossis, stagnis, et paludibus, passim.
Testa ad 2 poll. longa, 1 poll. lata, tenera, fragilis, pellucida, omni pictura caret, sed colore variat, aliis fere atra, aliis cinerea, aliis albida, aliis subgrisea. *Striæ* minutissimæ, anfractuum transversæ, seu testæ longitudinales, vix oculis nudis conspicuæ. *Anfractus* 6 vel 7, primus turgidus, reliquis simul sumtis æqualis. *Spira* acutissima. *Apertura* ampla, labro repando, non marginato.

55. *fragilis.* H. testa imperforata, ovato-subulata, tereti, pellucida, apertura ovato-oblonga. *Linn. Fauna Suecica, n.* 2187. *Syst. Nat. p.* 1249. *n.* 704. *Linn. Gmel. p.* 3658.
Act. Ups. 1736. *p.* 41. *n.* 24.
Martin. Berl. Mag. 4. *t.* 9. *f.* 35.
Montagu Test. Brit. p. 369. *t.* 16. *f.* 7.
Habitat in aquis dulcibus.
Testa pellucida, longa, sed tam tenera ut vix tactum ferat. (*Linn. Faun. Suec. p.* 530.)

H. fragilis appears to differ but little from *H. stagnalis.*

nalis. The shell figured in *Test. Brit. t.* 16. *f.* 7. is certainly "more slender, and the volutions are more diaphanous and turn more oblique" than *H. stagnalis*; it is therefore probably the shell which Linnæus has described; but a question may arise, whether it ought to be considered as a distinct species.

We have not quoted the *whole* of the description given by Linnæus in the *Fauna Suecica*, on account of his comparing this species, from a singular inadvertency, with *H. nemoralis.*

Found by Mr. Montagu in the canal between Chippenham and Laycock, Wilts.

56. *palustris.* *t.* 5. *f.* 8.

H. testa oblonga, anfractibus paululum rotundatis, apertura ovata.

Lister Anim. Angl. t. 2. *f.* 22. —— *Conch. t.* 124. *f.* 24.
Gualt. Test. t. 5. *f.* E.
Seb. Mus. 3. *t.* 39. *f.* 39, 40.
Ginann. Op. Post. t. 1. *f.* 2.
Muller Verm. 2. *p.* 131. *n.* 326.
Pennant Brit. Zool. 4. *t.* 86. *f.* 136. B.
Schröt. Flussconch. t. 7. *f.* 9, 10.
Favanne Conch. t. 61. *f.* F. 22.
Linn. Gmel. p. 3658.
Pulteney in Hutch. Dorset. p. 48. *t.* 18. *f.* 18.
Montagu Test. Brit. p. 373. *t.* 16. *f.* 10.
Donovan Brit. Shells, t. 175. *f.* 1. H. fragilis; *& f.* 2. H. fontinalis.

Habitat in fossis et rivulis.

Testa ad 1 poll. longa, $\frac{3}{8}$ lata. *Color* griseus, sub epidermide fusca, in junioribus brunneus. *Striis* subtilissimis confertis, transversis et spiralibus, exarata. *H. stagnali* affinis, sed minor, minus fragilis, nec apice subulata,

subulata, nec basi ventricosa. *Apertura* minus dilatata. Intus purpureus vel purpurascente-brunneus. *Incola* cinereus, albido punctatus.

57.
fossaria. *t.* 5. *f.* 9. H. testa imperforata, subovata, anfractibus 5 vel 6, rotundatis; sutura conspicua; apertura ovata.
Montagu Test. Brit. p. 372. *t.* 16. *f.* 9.

Habitat in fossis et aquis stagnantibus supra limum, haud infrequens.
Testa $\frac{3}{8}$ poll. longa, plusquam $\frac{1}{8}$ lata, tenuis, pellucida, nec transverse rugosa, cornei coloris; *H. palustri* quam maximè affinis, sed vix unquam cum illa reperta, duplo minor, ac utplurimum magis attenuata. *Anfractus* magis rotundati. *Sutura* evidentior. *Apertura* minus oblonga.

This species appears to have been first distinguished by Mr. Montagu. He has found it in many parts of the kingdom.

58.
detrita. H. testa conica, alba, lineis transversis rufis; apertura ovata. *Linn. Gmel. p.* 3660. *n.* 139.
Schröter Erdconch. t. 1. *f.* 1.
Favanne Conch. t. 65. *f.* A. 5.
Chemn. Conch. 9. *t.* 134. *f.* 1224. 1, 2.
Pulteney in Hutch. Dorset. p. 49. *t.* 19. *f.* 26.
Montagu Test. Brit. p. 384. *t.* 11. *f.* 1.

Habitat in stagnis et rivis? rarissima.
Testa $\frac{3}{4}$ poll. longa, $\frac{3}{8}$ lata, glabra, polita, subpellucida, alba, vel pallide cornea, strigis obsoletis, in quibusdam obliteratis. *Anfractus* 6 minus prominentes. *Apertura* ovata. *Labium* ad columellam aliquantulum reflexum, in subumbilicum desinens. *Apex* obtusior.

Found only by Mr. Bryer, in a stream, near Upway, in Dorsetshire.

Dr. Pulteney, who described this species in his Dorsetshire Catalogue, doubts whether it be really *Helix detrita* of Gmelin and Muller. All the specimens are

destitute of bands. Chemnitz's figure represents the shell, but is cited by Gmelin for *Helix acuta*, perhaps a variety of *H. detrita*; see Pulteney's Catalogue, *p.* 49. et *Montagu Test. Brit. p.* 385.

This shell has been frequently sought for, (but without success) in the place where the late Mr. Bryer procured it.

59.

succinea. H. testa oblonga, fulva, diaphana, anfractibus 3; apertura ovata. *Muller Verm.* 2. *p.* 97. *n.* 296.

Hill's Swammerd. p. 69. *t.* 8. *f.* 4.

Gualt. Test. t. 5. *f.* H.

Schröt. Erdconch. t. 1. *f.* 2.

Chemn. Conch. 9. *t.* 135. *f.* 1248.

Pulteney in Hutch. Dorset. p. 48. *t.* 18. *f.* 19. H. limosa.

Montagu Test. Brit. p. 376. *t.* 16. *f.* 4. (bene.) H. putris.

Donovan Brit. Shells, t. 168. *f.* 1. H. putris.

Habitat in pratis humidis supra plantas riparias. *Incola* flavescens, maculis cinereis, tentaculis quatuor.

Testa $\frac{3}{4}$ poll. longa, vix $\frac{1}{2}$ lata, sæpius minor, oblonga, glabra, pellucidissima, membranacea, fragilissima, colore succini flavi. *Anfractus* primus maximus, elongatus, minimè ventricosus. *Apertura* plusquam dimidiam testam longitudine æquans. *Labrum* tenuissimum. *Spira* productior. *Apex* acutus.

Dr. Pulteney first distinguished this species as different from *H. putris.* It does not agree better with the description of *H. limosa*, "*anfractibus quinque.*" We have therefore retained Muller's trivial name of *succinea*, who has well defined the shell, and described its included animal. Gmelin has followed Muller in supposing this species to be the *H. putris* of Linnæus, and has

has retained Linnæus's references to Lister, &c. which do not represent our shell, together with that to Chemnitz, which figures it exactly. He has also adopted Muller's description of the animal, which has 4 *tentacula.* This would serve to determine the species, but Linnæus has no where noticed the circumstance, and describes *H. putris* as "*obtusa;*" and "*mucrone obtusiusculo,*" characters which do not belong to *H. succinea.*

60. *putris.* H. testa imperforata, ovata, obtusa, flava; apertura ovata. *Linn. Fauna Suecica, n.* 2189. *Syst. Nat. p.* 1249. *n.* 705. *Linn. Gmel. p.* 3659.

Bonann. Recr. 6. *t.* 54.

Tulp. Obs. 210. *p.* 195. *t.* 201.

Lister Anim. Angl. t. 2. *f.* 24. —— *Conch. t.* 123. *f.* 23. —— *Act. Angl. n.* 105. *f.* 18.

Klein Ostr. t. 3. *f.* 70.

Pennant Brit. Zool. t. 86. *f.* 137.

Da Costa Brit. Conch. p. 92. *t.* 5. *f.* 13. T. trianfractus.

Schröt. Flussconch. t. 6. *f.* 3. *&* 6.; *t.* 7. *f.* 12.; *& t.* min. C. *f.* 2.

Favanne Conch. t. 61. *f.* E. 4.

Montagu Test. Brit. p. 373. *t.* 16. *f.* 3. H. peregra.

Pulteney in Hutch. Dorset. t. 21. *f.* 13.; *& t.* 19. *f.* 30.

Habitat, vulgatissima, in stagnis, fossis, fluviis. *Incola* subalbidus.

Testa ad 1 poll. longa, $\frac{5}{8}$ lata, tenera, pellucida, strigis minutissimis parallelis obliquis, flavescens, seu cornea, utplurimum sub epidermide fusca. *Anfractus* 4, mucrone obtusiusculo. *Apertura* ampla, margine tenui, nec dilatato.

t. 5. *f.* 8. *Varietas* labro incrassato, albo.

The variety is found in a pond between Whitchurch and Milbourne, Dorset.

61.
tentacula-ta. H. testa imperforata, ovata, obtusa, impura; apertura subovata. *Linn. Fauna Suecica, n.* 2191. *Syst. Nat. p.* 1249. *n.* 707. *Linn. Gmel. p.* 3662.

Lister Anim. Angl. t. 2. *f.* 19. —— *Conch. t.* 132. *f.* 32. —— *Act. Angl. n.* 102. *f.* 21.

Petiver Gaz. t. 18. *f.* 8.

Gualt. Test. t. 5. *f.* B.

Muller Verm. 2. *p.* 185. *n.* 372. Nerita Jaculator.

Pennant Brit. Zool. t. 86. *f.* 140.

Da Costa Brit. Conch. p. 91. *t.* 5. *f.* 12. Turbo Nucleus.

Schröt. Flussconch. t. 7. *f.* 19—22.

Walker Test. Min. Rar. f. 33. pullus.

Chemn. Conch. 9. *t.* 135. *f.* 1245.

Pulteney in Hutch. Dorset. p. 49. *t.* 21. *f.* 12.

Donovan Brit. Shells, t. 93.

Montagu Test. Brit. p. 389.

Habitat in rivis, stagnis, et paludibus, frequens.

Testa ½ poll. longa, ¼ lata, sordide alba, seu cornea, diaphana, glabra. *Anfractus* 4 vel 5, teretes. *Spira* oblongiuscula. *Apex* obtusior. *Apertura* fere orbicularis, operculo clausa.

One of the most common of our British fresh-water species.

62.
canalis. H. testa conica, anfractibus 5 rotundatis lævibus, columella canaliculata. *Montagu Test. Brit. p.* 309. *t.* 12. *f.* 11.

Habitat in mari.

Testa ⅜ poll. longa, ¼ lata, pellucida, cornea. *Anfractus* primus magnus. *Apex* acutus. *Apertura* suborbicularis, subangulata.

Distinguitur ab *Helice tentaculata*, et apertura, et columella canaliculata.

Varietas, rarior, fasciis 2 brunneis.

First

First noticed and figured by Mr. Montagu; plentiful on the shore near Southampton.

63.

auricularia. H. testa imperforata, ovata, obtusa; spira acuta, brevissima; apertura ampliata. *Linn. Fauna Suecica, n.* 2192. *Syst. Nat. p.* 1250. *n.* 708. *Linn. Gmel. p.* 3662.

Lister Anim. Angl. t. 2. *f.* 23. —— *Conch. t.* 123. *f.* 22.
Ginann. Op. Post. t. 1. *f.* 3.
Gualt. Test. t. 5. *f.* F.
D'Argenv. Conch. t. 31. *f.* 7.
Geoffr. Test. 3.
Muller Verm. 2. *p.* 126. *n.* 322.
Murray in Amœn. Acad. 8. *t.* 1. *f.* 4.
Pennant Brit. Zool. t. 86. *f.* 138.
Da Costa Brit. Conch. p. 95. *t.* 5. *f.* 17.
Schröt. Flussconch. t. 6. *f.* 4, 5.
Favanne Conch. t. 61. *f.* E. 3. *&* E. 11.
Chemn. Conch. 9. *t.* 135. *f.* 1241, 1242.
Pulteney in Hutch. Dorset. p. 49. *t.* 21. *f.* 17.
Donovan Brit. Shells, t. 51. *f.* 1.
Montagu Test. Brit. p. 375. *t.* 16. *f.* 2.

β. *Schröt. Erdconch. t.* 1. *f.* 3.
Chemn. Conch. 9. *t.* 135. *f.* 1246, 1247.
Montagu Test. Brit. p. 381. *t.* 16. *f.* 1. H. limosa.

Habitat in aquis, stagnantibus, et rivis, vulgaris.

Testa 1 poll. longa, ¾ lata, tenuis, fragilis, pellucida, sordide alba, seu flavescens, anfractu primo maxime ventricoso seu inflato, minutissime transversim striata. *Apertura* patentissima, labro dilatato, margine reflexo. *Columella* uniplicata.

The variety is perhaps a young shell of this species.

The

The first volution is less ventricose and thinner, and the mouth not so patulous, but it has no character to entitle it to be considered as distinct. It cannot be *H. limosa*, as Chemnitz and Gmelin have asserted, since it does not accord with Linnæus's referent to *Gualt. Test. t.* 5. *f.* H. or with his descriptions of that species in the two editions of his *Fauna Suecica*—"*Testa oblongiuscula, anfractibus quinque, valde tenera et acuta.*"

64. *lutea.* H. testa imperforata, subovali; apertura patula, ovali. *Montagu Test. Brit. p.* 380. *t.* 16. *f.* 6.

Habitat in mari? rarior.

Testa fere ¼ poll. longa, plusquam ¼ lata, lævis, subpellucida, sordidè aurantiaca. *Anfractus* vix 3, primus amplus.

Testa H. auriculariæ β. similis, sed minus tumida, et quamvis minor magis crassa et solida; hactenus, expers limacis incolæ, solum ad littora maris reperta. (*Montagu.*)

65. *glutinosa.* H. testa ventricosa, diaphana, mucrone obtuso, apertura ampla. *Muller Verm.* 2. *p.* 129. *n.* 323. Buccinum glutinosum. *Linn. Gmel. p.* 3659. *n.* 134.

Schröt. Flussconch. p. 271. *n.* 79.

Montagu Test. Brit. p. 379. *t.* 16. *f.* 5.

Habitat, rarior, *Nymphææ luteæ* foliis insidens. *Limax* incola pallio gelatinoso totam testam obvolvens.

Testa plusquam ½ poll. longa, ⅜ lata, tenerrima, fragilissima, flava. *Anfractus* 2 vel 3. *Apertura* repanda, rotundata. (*Gmelin.*)

First noticed by Mr. Boys; plentiful in the marshes at Deal. Found also by Mr. Montagu.

66. *lævigata.* H. testa imperforata, obovata, obtusissima, pellucida lævissima. *Linn. Syst. Nat. p.* 1250. *n.* 709. *Linn. Gmel. p.* 3663.

Pennant

Pennant Brit. Zool. 4. *t.*86. *f.* 139.
Walker Test. Min. Rar. f. 17.
Pulteney in Hutch. Dorset. p. 49. *t.* 18. *f.* 9.
Donovan Brit. Shells, t. 105.
Montagu Test. Brit. p. 382.
Habitat in pelago, rarior.
Testa magnitudine pisi vel duplo major, et interdum diametro $\frac{3}{4}$ poll. tenera, fragillima, diaphana, rubescente-alba, vel brunnea, sub epidermide lutescente. *Anfractus* primus maximus, ventricosus, minutissime transversim striatus, costis obsoletis longitudinalibus, seu ab apice ad marginem. *Spira* obsoleta, apice obtusa. *Apertura* fere orbicularis, patentissima, margine acutissima.

First noticed and figured as British by Pennant. Found by Mr. Montagu, at Southampton, in Devonshire, and at Falmouth, Cornwall; by Mr. Boys, at Sandwich; and by ourselves, on the beach at Studland, Dorset.

67. *Bulloides.* H. testa ovata, lævi, nitida, cornea, fragili, anfractibus contrariis, spira brevi. *Donovan Brit. Shells, t.* 168. *f.* 2.

We are unable to add to this description; as the specimen received from Lincolnshire by the late Duchess of Portland, and engraved by Mr. Donovan, was accidentally destroyed. He is confident that the shell was distinct from *Bulla fontinalis*, which the figure strongly resembles.

NERITA.

Linn. Syst. Nat. n. 329.

* Umbilicatæ.

1. *Canrena.* N. testa umbilicata, lævi, spira submucronata, umbilico gibbo,

gibbo, bifido. *Linn. Syst. Nat. p.* 1251. *n.* 715. *Linn. Gmel. p.* 3669.
Bonanni Recr. t. 224. 228.
Gualt. Test. t. 67. *f.* Q. R. S. V. X.
Murray in Amœn. Acad. t. 1. *f.* 23.
Chemn. Conch. f. 1860—1865. 1868—1871. 1881—1886.
Donovan Brit. Shells, t. 167. N. intricata.
Habitat in mari.
Testa alba, picta lineis spiralibus interruptis ferrugineis, seu maculis spiraliter digestis, lævis, magnitudine avellanæ. *Spira* parum eminens, acuta. *Apertura* hians, edentula. *Umbilicus* profundus, arcuatus versus posteriora. (*Linn. Mus. Lud. Ulr. n.* 383.)

Mr. Donovan's figure, from a shell found at Weymouth, appears to represent one of the varieties of this species, which are very numerous.

2.
glaucina. N. testa umbilicata, lævi, spira obtusiuscula, umbilico semiclauso; labio gibbo dicolore. *Linn. Fauna Suec. n.* 2197. *Syst. Nat. n.* 716. *p.* 1251. *Linn. Gmel. p.* 3671.
Lister Anim. Angl. t. 3. *f.* 10. —— *Conch. t.* 568. *f.* 19.
Petiver Gaz. t. 93. *f.* 7.
Rumph. Mus. t. 22. *f.* A.
Seb. Mus. 3. *t.* 39. *f.* 16.
Gualt. Test. t. 67. *f.* M. P.
Knorr Vergn. 2. *t.* 11. *f.* 1.; *&* 6. *t.* 13. *f.* 7.
Pennant Brit. Zool. t. 87. *f.* 141.
Da Costa Brit. Conch. p. 83. *t.* 5. *f.* 7. Cochlea Catena.
Pulteney in Hutch. Dorset. p. 50. *t.* 21. *f.* 7.
Donovan Brit. Shells, t. 20. *f.* 1.
Montagu Test. Brit. p. 469.
Habitat in pelago.
Testa diametro 1¼ poll., lævis, modice convexa, nunc livida vel purpurascens, nunc alba vel cinereo-cærulescens, obumbrata sæpius lituris cærulescentibus

rulescentibus aut fuscis fasciata. *Spira* obtusa, submucronata. *Apertura* griseo-purpurascens. *Umbilicus* teretiusculus, labii interioris medio gibboso, crasso, griseo, reflexo. (*Mus. Lud. Ulr. p.* 674.)

Common on most sandy shores.

3.

Mammilla. N. testa umbilicata, ovata, glabra, umbilico obtecto, apertura ovata. *Linn. Syst. Nat. p.* 1252. *n.* 719. *Linn. Gmel. p.* 3672.

Column. Aquat. t. 52. *f. ult.*

Lister Conch. t. 571. *f.* 22.

Rumph. Mus. t. 22. *f.* F.

Gualt. Test. t. 67. *f.* C. D.

D'Argenv. Conch. t. 10. *f.* X.

Seb. Mus. 3. *t.* 38. *f.* 9, 10.

Knorr Vergn. 6. *t.* 40. *f.* 2, 3.

Born Mus. p. 399.

Chemn. Conch. 5. *t.* 189. *f.* 1.

Donovan Brit. Shells, t. 144. N. nitida.

Habitat in mari.

Testa magnitudine extimi articuli pollicis, lactea aut lutea, lævis, nitida, ovato-oblonga. *Spira* brevis, neque acuta, neque obtusa, suturis anfractuum subobliteratis. *Apertura* ovata, labio edentulo, subtus gibbo. *Umbilicus* perforatus, sed fere et sæpe totaliter obtectus labio interiore replicato, ut ne vestigium appareat. (*Mus. Lud. Ulr. p.* 675.)

First ascertained to be British by Mr. M'Leay, who found small specimens on the coast of Caithness, in North Britain.

4.

fluviatilis. N. testa rugosa, labiis edentulis. *Linn. Fauna Suecica, n.* 2194. *Syst. Nat. n.* 723. *p.* 1253. *Linn. Gmel. p.* 3676.

Lister Anim. Angl. t. 2. *f.* 20.

—— *Conch. t.* 141. *f.* 38.; *& t.* 607. *f.* 43, 44.

Petiver Gaz. t. 91. *f.* 3.

D'Argenv. Conch. t. 27. *f.* 3.?
Hill's Swammerd. p. 83. *t.* 10. *f.* 2.
Pennant Brit. Zool. t. 87. *f.* 142.
Da Costa Brit. Conch. p. 48. *t.* 3. *f.* 17, 18.
Schröt. Flussconch. t. 5. *f.* 5—10.
Favanne Conch. t. 61. *f.* D. 3, 4, 17, 20.
Chemn. Conch. 9. *t.* 124. *f.* 1088.
Pulteney in Hutch. Dorset. p. 50. *t.* 16. *f.* 17, 18.
Donovan Brit. Shells, t. 16. *f.* 2.
Montagu Test. Brit. p. 470.

Habitat in rivis et fluviis.

Testa $\frac{3}{8}$ poll. longa, $\frac{2}{8}$ lata, subovalis, lævis, utplurimum alba, colore nigro, cinereo, rubro, virescente, reticulatim depicta, maculata vel fasciata. *Spira* obtusa. *Apertura* magnitudine fere testæ. *Labrum* interne planum, *operculo* aurantiaco, semiovato.

First described and figured by Lister. Common in gentle rivers.

5.

pallidula. N. testa umbilicata, lævi, umbilico profundo productiore.

Da Costa Brit. Conch. p. 51. *t.* 4. *f.* 4, 5.
Donovan Brit. Shells, t. 16. *f.* 1.
Montagu Test. Brit. p. 468.
Pulteney in Hutch. Dorset. t. 20. *f.* 4, 5.

Habitat ad littora, rarior.

Testa magnitudine pisi, convexa, flavescens, sub epidermide brunnea. *Spira* prominula. *Apertura* semilunaris, patula.

First described and figured by Da Costa. Found sparingly in Kent, and on the Western coast. It has been received also from Shetland.

6.

littoralis. N. testa lævi, vertice carioso, labiis edentulis. *Linn. t.* 5. *f.* 15. *Fauna Suecica, n.* 2195. *Syst. Nat. n.* 724. *p.* 1253. *Linn. Gmel. p.* 3677.

Lister

Lister Anim. Angl. t. 3. *f.* 11, 12, 13.
—— *Conch. t.* 607. *f.* 39—42.
Petiver Gaz. t. 34. *f.* 4, 5, 6.
Gualt. Test. t. 4. *f.* L. L.
Pennant Brit. Zool. t. 87. *f.* 143.
Da Costa Brit. Conch. p. 50. *t.* 3. *f.* 13, 14, 15, 16.; *t.* 4. *f.* 2, 3.
Chemn. Conch. 5. *t.* 185. *f.*
Pulteney in Hutch. Dorset. p. 44. *t.* 16. *f.* 13, 14, 15, 16.; & *t.* 20. *f.* 2, 3. Turbo Neritoides.
Donovan Brit. Shells, t. 20. *f.* 2.
Montagu Test. Brit. p. 467.
Habitat in mari, ad littora, frequentissima.
Testa diametro ad $\frac{3}{4}$ poll., solida, colore sordidè viridi, flavo, rubro, bruneo, modis innumeris variegata.

The variety engraved in *t.* 5. *f.* 13. was found near Castle Sinclair, in the county of Caithness, by Mr. M'Leay.

7. *pellucida.* N. testa lævi, pellúcida, anfractibus 3. *Adams in Act. Soc. Linn.* 3. *p.* 67.

8. *alba.* N. testa lævi, subpellucida, anfractibus 2. *Adams in Act. Soc. Linn.* 3. *p.* 67.

The two last-mentioned *Neritæ* (found by Mr. Adams on the coast of Pembrokeshire) may prove to be varieties merely of *N. glaucina.*

HALIOTIS.

Linn. Syst. Nat. n. 330.

1. *tuberculata.* H. testa subovata, dorso transversim rugoso tuberculato. *Linn. Fauna Suecica, n.* 2198. *Syst. Nat. n.* 741. *p.* 1256. *Linn. Gmel. p.* 3687.

Rondel. Pisc. 5.
Gesner Aquat. 808.
Lister Anim. Angl. t. 3. *f.* 16. —— *Conch. t.* 611. *f.* 2.
Rumph. Mus. t. 40. *f.* G. H.
Gualt. Test. t. 69. *f.* I.
D'Argenv. Conch. t. 3. *f.* A.
Lessers Testaceoth. f. 87.
Adans. Seneg. t. 2. *f.* 1. *inf.*
Ginann. Adr. t. 3. *f.* 27.
Martini Conch. 1. *t.* 16. *f.* 148-9.
Pennant Brit. Zool. t. 88. *f.* 144.
Da Costa Brit. Conch. p. 15. *t.* 2. *f.* 1, 2.
Pulteney in Hutch. Dorset. p. 50. *t.* 22. *f.* 1, 2.
Donovan Brit. Shells, t. 5.
Montagu Test. Brit. p. 473.

Habitat in mari, scopulis adhærens.

Testa subovata. *Rugæ* inter foramina et spiram transversæ, undatæ tuberculis elevatis. *Spira* elevata; interna margine decumbente acutissimo. *Foramina* 28 elevata, quorum 4 sæpius pervia. (*Mus. Lud. Ulr. p.* 683.) Testa 3—4½ poll. longa, 2—3½ lata. Foramina numero variant.

Found after storms on the Western and Southern coasts.

PATELLA.

Linn. Syst. Nat. n. 331.

1. * Labiatæ, *seu labio interno instructæ.*

Chinensis. P. testa integra, subconica, lævi, labio laterali. *Linn. Syst Nat. p.* 1257. *n.* 749. *Linn. Gmel. p.* 3692.
Lister Conch. t. 546. *f.* 39.
Bonanni Recr. t. 1. *f.* 12.
Martini Conch. 1. *t.* 13. *f.* 121, 122.

Born

Born Mus. p. 414. vign. *f.* e.
Donovan Brit. Shells, t. 129. P. albida.
Montagu Test. Brit. p. 489.

Habitat in mari, ostreis adhærens.

Testa alba, pellucida, lævis, integerrima, latior quam longa. *Interne labium* adglutinatum longitudinaliter, sed oblique, membranaceum, versus latus flexum, dehiscens a testa. (*Mus. Lud. Ulr. p.* 688.)

First noticed as British by Col. George, at Penryn, Cornwall, where it has been also found by Mr. Montagu and Miss Pocock.

** Dentatæ *basi, seu margine angulatæ.*

2. *vulgata.* P. testa subangulata, angulis 14 obsoletis, margine dilatato acuto. *Linn. Fauna Suecica, n.* 2199. *Syst. Nat. n.* 758. *p.* 1258. *Linn. Gmel. p.* 3697.
Lister Anim. Angl. t. 5. *f.* 40. —— *Conch. t.* 535. *f.* 14.
Gualt. Test. t. 8. *f.* L.
Ginann. Adriat. t. 2. *f.* 17.
Borlase Cornw. t. 28. *f.* 3.
Martini Conch. 1. *t.* 5. *f.* 38.
Knorr Vergn. 6. *t.* 27. *f.* 8.
Pennant Brit. Zool. t. 89. *f.* 145. *& f.* 146. P. depressa.
Da Costa Brit. Conch. p. 3. *t.* 1. *f.* 1, 2, 8.
Pulteney in Hutch. Dorset. p. 51. *t.* 23. *f.* 1, 2, 8.
Donovan Brit. Shells, t. 14.
Montagu Test. Brit. p. 475.

Habitat in mari, rupibus et saxis adhærens, frequentissima.

Testa interdum $2\frac{1}{2}$ poll. longa, 2 lata, $1\frac{1}{8}$ a vertice ad basin, nunc conica, nunc depressa, sordide viridescens, vel fasciis fuscis variegata, subtus colore testudinis vel flavescente; angulis plurimis elevatis tuberculatisque costata. *Apex* obtusiusculus est, et margini angustiori propior, nec in centro. *Margo* nunc indentatus, nunc integerrimus.

The conic and depressed shells of this species, though at

at first sight sufficiently distinct, run into each other so much that they cannot be considered as essentially different.

3. *** Mucronatæ, *vertice acuminato recurvo.*

Mitrula. P. testa integra, subconica, imbricata, vertice recurvato.
Lister Conch. t. 544. *f.* 81.
Klein Ostr. t. 8. *f.* 11, 12.
Martini Conch. 1. *t.* 12. *f.* 11, 12.
Linn. Gmel. p. 3708. *n.* 82.
Favanne Conch. t. 4. *f.* F. 2.
Pulteney in Hutch. Dorset. p. 51. *t.* 22. *f.* 7. a. P. antiquata.
Montagu Test. Brit. p. 485. *t.* 13. *f.* 9. P. antiquata.
Habitat in mari, rarissima.
Testa diametro ¼ poll., solida, opaca, lactea. *Apertura* ovata.
Found after a storm, by Mr. Bryer, at Weymouth.

4.

ungarica. P. testa integra, conico-acuminata, striata; vertice hamoso, revoluto. *Linn. Syst. Nat. n.* 761. *p.* 1259. *Linn. Gmel. p.* 3709.
Gualt. Test. t. 9. *f.* V. W.
D'Argenv. Conch. t. 2. *f.* R.
Borlase Cornw. t. 28. *f.* 4.
Martini Conch. 1. *t.* 12. *f.* 107, 108.
Knorr Vergn. 6. *t.* 16. *f.* R.
Pennant Brit. Zool. t. 90. *f.* 147.
Da Costa Brit. Conch. t. 1. *f.* 7. P. Pileus Morionis.
Pulteney in Hutch. Dorset. p. 51. *t.* 23. *f.* 7.
Donovan Brit. Shells, t. 21. *f.* 1.
Montagu Test. Brit. p. 486.
Habitat in mari, testaceis adhærens, rarior.
Testa diametro 1 poll., ⅝ a vertice ad basin, sub epidermide pilosa, rubronebulosa, seu carnaria, subtilissime longitudinaliter striata, interdum transversim

transversim plicata, versus marginem rugosa. *Intus* alba, lævis, rosaceo-erubescens. *Margo* sæpius crenatus. *Vertex* prope marginem, recurvus.

First noticed as British by Borlase. Found sparingly on the Western coast.

5.

militaris. P. testa integra, conica, acuminata, striata; vertice hamoso, lateraliter recurvo. *Linn. Mant. p.* 552.

Lister Conch. t. 544. *f.* 32.

Favanne Conch. 1. *p.* 538. *t.* 4. *f.* B.

Pulteney in Hutch. Dorset. p. 51. *t.* 22. *f.* 7.

Montagu Test. Brit. p. 488. *t.* 13. *f.* 11.

Donovan Brit. Shells, t. 171.

Habitat in mari.

Testa similis *P. ungaricæ,* magnitudine seminis cannabis, pellucida, tenera, absque epidermide. *Apex* spiraliter revolutus, sed ad alterum latus flexus.

First noticed as British by Dr. Pulteney. Found by Mr. Bryer at Weymouth, and by Miss Pocock in Cornwall.

6.

intorta. P. testa subintegra, ovata; sulcis fornicato-imbricatis, alternis minoribus.

Pennant Brit. Zool. 4. *t.* 90. *f.* 148.?

Born Mus. t. 18. *f.* 7.

Donovan Brit. Shells, t. 146.

Habitat in mari, rarissima.

Testa $\frac{6}{8}$ poll. longa, $\frac{5}{8}$ lata, subpellucida, extus nigrescens. *Dorsum* sulcis plurimis elevatis. *Vertex* recurvus, margini posteriori proximus, sæpius decorticatus.

This species is probably *P. intorta* of Pennant. Mr. Donovan has given an excellent representation of it, and it has been engraved also in the splendid work of Baron Born, who supposed it to be *Patella pectinata* of Linnæus.

Linnæus. It will not, however, agree with his description "*striis rugosis subramosis.*" Chemnitz has figured the latter species, which appears to correspond exactly with the characters above mentioned.

Found on the Western coast, by Mr. Laskey. (*Donovan.*)

7.

lacustris. P. testa integerrima, ovali, membranacea; vertice mucronato, reflexo. *Linn. Fauna Suecica, n.* 2200. *Syst. Nat. p.* 1260. *n.* 769. *Linn. Gmel. p.* 3710.

Lister Anim. Angl. t. 2. *f.* 32. —— *Conch. t.* 141. *f.* 39.

Gualt. Test. t. 4. *f.* B. B.

D'Argenv. Conch. t. 27. *f.* 1. le 3me Patelle.

Muller Verm. p. 201. *n.* 386.

Pennant Brit. Zool. 4. *n.* 149.

Da Costa Brit. Conch. p. 1. *t.* 2. *f.* 8.

Schröt. Flussconch. t. 5. *f.* 1, 2, 3.

Favanne Conch. t. 61. *f.* A. 3, 4.

Pulteney in Hutch. Dorset. p. 51 *t.* 22. *f.* 8.

Donovan Brit. Shells, t. 147.

Montagu Test. Brit. p. 482. P. fluviatilis.

Habitat in fluviis, rivis, stagnis, saxis et plantis aquaticis adhærens; frequens.

Testa diametro ¼ poll., subdiaphana, fragilis, subalbida. *Vertex* coarctatus, margini approximatus.

Varietas interdum a vertice striata.

First figured and described by Lister.

One of Linnæus's references, *Gualt. Test. t.* 4. *f.* A. A. represents the following species, viz. *P. oblonga*; but it is evident from his specific characters, that he meant to describe Lister's shell, *Anim. Angl. t.* 2. *f.* 32., to which he has also referred. Gmelin has transferred all the synonyms of this species of Linnæus to his own *P. fluviatilis,*

viátilis, and has given some references of *P. oblonga*, to *P. lacustris* of Linnæus. If the editor of the *Systema Naturæ* had consulted the *Philosophical Transactions*, this confusion would have been avoided, as the distinctions between the two species are pointed out, and *P. oblonga* is accurately described by Lightfoot.

8.

oblonga. P. testa integerrima, oblonga, compressa, membranacea; vertice mucronato, reflexo, obliquo. *Lightfoot in Act. Angl.* 76. *p.* 168. *t.* 3. *f.* 1, 2, 3, 5.

Gualt. Test. t. 4. *f.* A. A.

Muller Verm. 2. *p.* 199. *n.* 385.

Schröt. Flussconch. t. 5. *f.* 4. a. b.

Pulteney in Hutch. Dorset. p. 51. *t.* 18. *f.* 20.; & *t.* 22. *f.* a.

Donovan Brit. Shells, t. 150.

Montagu Test. Brit. p. 484. P. lacustris.

Habitat in rivis, plantis aquaticis adhærens.

Testa $\frac{1}{4}$ poll. longa, $\frac{1}{10}$ lata, tenerrima, colore corneo, sub epidermide viridescente. *Vertex* prope marginem angustiorem.

First noticed as English by Lightfoot, who received it from Beaconsfield, in Buckinghamshire. Found in ditches, near Deal, by Mr. Boys; at Lackham, and in the river Avon, Wilts, by Mr. Montagu; and in the river Stour, Dorset, by the Rev. Thomas Rackett.

9. * * * * Integerrimæ *absque vertice mucronato.*

pellucida. P. testa integerrima, obovata, gibba, pellucida, radiis quatuor cæruleis. *Linn. Syst. Nat. n.* 776. *p.* 1260. *Linn. Gmel. p.* 3717.

Lister Conch. t. 543. *f.* 27.

Wallace Orkneys, p. 41.

Petiver Mus. p. 68. *n.* 725.

Davil. t. 1. *p.* 428.
Da Costa Brit. Conch. p. 7. *t.* 1. *f.* 5.
Chemn. Conch. 10. *t.* 168. *f.* 1620.
Pulteney in Hutch. Dorset. p. 51. *t.* 23. *f.* 5.

Testæ seniores. *Linn. Syst. Nat. n.* 759. *p.* 1259. *Linn. Gmel. p.* 3697. P. cærulea?
Lister Anim. Angl. App. t. 2. *f.* 10.
—— *Conch. t.* 542. *f.* 26.
Petiver Gaz. t. 75. *f.* 3.
Borlase Cornw. t. 28. *f.* 2.
Pennant Brit. Zool. t. 90. *f.* 151.
Da Costa Brit. Conch. t. 1. *f.* 6.
Chemn. Conch. 10. *t.* 168. *f.* 1621.
Pulteney in Hutch. Dorset. p. 51. *t.* 23. *f.* 6.
Donovan Brit. Shells, t. 3. *f.* 1.
Montagu Test. Brit. p. 477.
Habitat in mari.
Testa interdum diametro ¾ poll. rudis, colore flavescente-brunneo, nunc conica, nunc depressa, radiis cæruleis obsoletis. *Mucro* obtusior, decorticatus.

First figured and described by Lister. Common on the Western coast, and among the Western Isles of Scotland.

This shell, so different in shape and appearance under various stages of growth, has been commonly separated into two or more species. Dr. Pulteney always maintained a contrary opinion; and it appears from the observations of Mr. Montagu, that the gradations are so regular, that no permanent specific distinction is to be established.

10.
virginea. P. testa integerrima, oblongo-orbiculari, substriata, verticis

verticis mucrone fere marginali. *Linn. Gmel. p.* 3711.

Da Costa Brit. Conch. p. 7. *t.* 8. *f.* 11.
Muller Zool. Dan. t. 12. *f.* 4, 5.
Donovan Brit. Shells, t. 21. *f.* 2.
Montagu Test. Brit. p. 480.
Pulteney in Hutch. Dorset. t. 14. *f.* 11.

Habitat in mari, scopulis adhærens.

Testa $\frac{3}{8}$ poll. longa, $\frac{2}{8}$ lata, lævis nec glabra, sub epidermide fusca, subalbida seu cærulescens, fasciis rubescentibus a vertice ad marginem tincta; striis obsoletis concentricis et costis seu radiis vix manifestis. *Intus* alba, seu pallidè purpurascens. *Apex* obtusus. *Margo* integerrimus.

First described and figured by Da Costa, who received it from Dorsetshire. Found by Mr. Boys, at Sandwich and Dover; by Mr. Bryer, at Weymouth; and by Mr. Montagu, in Cornwall and Devonshire.

11. *bimaculata.* P. testa ovali, convexa, depressa, vertice obsoleto. *Montagu Test. Brit. p.* 432. *t.* 13. *f.* 8.

Habitat in mari.

Testa $\frac{1}{4}$ poll. longa, $\frac{1}{8}$ lata, opaca, glabra, flava, macula oblonga nigra utraque extremitate. *Intus* flava.

A new species, discovered by Mr. Montagu, at Falmouth, and at Milton Sands, Devon.

12. ***** Perforatæ *vertice.*

Fissura. P. testa ovali, striato-reticulata, vertice recurvo, antice fissa. *Linn. Syst. Nat. p.* 1261. *n.* 778. *Linn. Gmel. p.* 3728.

Lister Conch. t. 543. *f.* 28.
Petiver Gaz. t. 75. *f.* 2.
Martini Conch. 1. *t.* 12. *f.* 109, 110.
Pennant Brit. Zool. 4. *t.* 90. *f.* 152.

Da Costa Brit. Conch. t. 1. *f.* 4.
Muller Zool. Dan. 1. *p.* 83. *t.* 24. *f.* 7, 9.
Pulteney in Hutch. Dorset. p. 51. *t.* 23. *f.* 4.
Donovan Brit. Shells, t. 3. *f.* 2.
Montagu Test. Brit. p. 490.
Habitat in mari, saxis et testaceis adhærens.
Testa ¼ poll. longa, ⅜ lata, brunnea, cancellata. *Vertex* acutiusculus, paululum reflexus. *Margo* anterior fissura lineari, crenatus. *Intus* alba, seu carnaria, lævis.

First figured by Lister. Found on the Kentish and Western coasts; but not common.

13.
Græca. P. testa ovata, convexa, margine introrsum crenulato, vertice perforato. *Linn. Syst. Nat. p.* 1262. *n.* 780.
Linn. Gmel. p. 3728.
Lister Conch. t. 527. *f.* 2.
Gualt. Test. t. 9. *f.* N.
D'Argenv. Conch. t. 2. *f.* L.
Adans. Seneg. t. 2. *f.* 7.
Martini Conch. 1. *t.* 11. *f.* 98.
Pennant Brit. Zool. t. 89. *f.* 153.
Da Costa Brit. Conch. t. 1. *f.* 3. P. Larva reticulata.
Pulteney in Hutch. Dorset. p. 52. *t.* 23. *f.* 3.
Donovan Brit. Shells, t. 21. *f.* 3. P. reticulata.
Habitat in mari, rarior.
Testa ¾ poll. longa, ⅛ lata, oblongo-ovata, subalbida vel sordide brunnea. *Striis* et costis numerosissimis cancellata. *Intus* livida. *Vertex* non centralis, fissura oblonga perforatus.

First figured by Lister; found near Sandwich, Kent, and on the Western coasts.

14.
Apertura. P. testa subconica, longitudinaliter costata; vertice perforato, recurvo. *Montagu Test. Brit. p.* 491. *t.* 13. *f.* 10.
Habitat in mari, saxis adhærens, rarissima.

Testa

Testa vix ¼ poll. longa, nec ¼ a vertice ad basin, subpellucida, alba, costis longitudinalibus, tuberculatis; sulcis paucis concentricis; intus alba, glaberrima. *Foramen* rhomboideum prope apicem. *Apex* interdum revolutus.

A new species, discovered by Mr. Montagu, in sand, from Falmouth Harbour; and at Salcomb Bay, Devon.

DENTALIUM.

Linn. Syst. Nat. n. 332.

1.

Dentalis. D. testa viginti-striata, subarcuata, interrupta. *Linn. Syst. Nat. p.* 1263. *n.* 785. *Linn. Gmel. n.* 3736.
Rumph. Mus. t. 41. *f.* 6.
Born Mus. t. 18. *f.* 13.
Montagu Test. Brit. p. 495. D. striatum.
Habitat in mari, rarissimum.
Testa ½ poll. longa, alba, tubularis. *Apex* valde acuminatus.
Discovered by Mr. Montagu, on the Western coast.

2.

Entalis. D. testa tereti, subarcuata, continua, lævi. *Linn. Fauna Suecica, n.* 2201. *Syst. Nat. p.* 1263. *n.* 786. *Linn. Gmel. p.* 3736.
Bonanni Recr. t. 1. *f.* 9.
Lister Conch. t. 547. *f.* 2.; & *t.* 1056. *f.* 4.
Petiver Gaz. t. 65. *f.* 9.
Rumph. Mus. t. 41. *f.* 5.
Ginann. Adr. 2. *t.* 1. *f.* 2.
Gualt. Test. t. 10. *f.* E.
D'Argenv. Conch. t. 7. *f.* K.
Borlase Cornw. t. 28. *f.* 5.
Knorr Vergn. 1. *t.* 29. *f.* 4.
Martini Conch. t. 1. *f.* 1, 2.
Pennant Brit. Zool. t. 90. *f.* 154.

Da Costa Brit. Conch. p. 24. *t.* 2. *f.* 10.
Pulteney in Hutch. Dorset. p. 52. *t.* 22. *f.* 10.
Donovan Brit. Shells, t. 48.
Montagu Test. Brit. p. 494.
Habitat in mari.
Testa teres alba, subulata, quasi articulata, lævis, apice truncata. (*Linn. Mus. Lud. Ulr. p.* 697.)

3. *striatulum.* D. testa octangulata, octo-striata, acuminata, viridi, apice albo. *Linn. Gmel. p.* 3738. *n.* 13.
Lister Conch. t. 547. *f.* 1, 6.?
Martini Conch. 1. *t.* 1. *f.* 5. B.?
Donovan Brit. Shells, t. 162. D. octangulatum.
Habitat in mari, *elephantino* affine, at testa longiore, angustiore. *Apertura* altera angulata, altera angustissima orbiculata. (*Gmel.*)

This species, which from Mr. Donovan's description is probably *Dentalium striatulum* of Gmelin, in a depauperated state, was discovered by Miss Pocock, on the sandy coasts of Cornwall, near Lelant.

4. *Gadus.* D. testa subarcuata, lævissima, versus aperturam angustiore.
Montagu Test. Brit. p. 496. *t.* 14. *f.* 7.
Habitat in pelago.
Testa vix $\frac{3}{8}$ poll. longa, $\frac{1}{16}$ lata ad mediam partem, quâ tumidiuscula est; alba, glabra. *Apex* acutiusculus.

First described and figured by Mr. Montagu. It is called by mariners *Hake's-tooth.*

5. *imperforatum.* D. testa cylindrica, subarcuata, transverse striata; apice truncato, imperforato.
Walker Test. Min. Rar. f. 15.
Adams Micr. t. 14. *f.* 8.
Montagu Test. Brit. p. 496.

Habitat

Habitat in mari, rarius.

Testa $\frac{1}{8}$ poll. longa, alba, vel cinerea. *Apertura* rotunda, margine coarctato. *Apex* imperforatus, truncatus, tuberculatus.

Found by Mr. Boys, at Sandwich; and by Mr. Montagu, at Falmouth.

6.

Trachea. D. testa tereti, arcuata; striis annularibus, densis, confertissimis; apice truncato, imperforato.

Montagu Test. Brit. p. 497. *t.* 14. *f.* 10.

Habitat in mari, rarissimum.

Testa $\frac{1}{8}$ poll. longa, vel paululum major, ferruginea. *Apertura* orbicularis. Distinguitur a præcedente quod testa magis arcuata, acutiuscula, angustior; margo aperturæ integer, neque coarctatus; striis annularibus numerosis, densis; tracheam æmulans. (*Montagu.*)

Found only by Mr. Montagu, in sand, from Milton, Devonshire.

7.

glabrum. D. testa cylindrica, tereti, arcuata, lævi, imperforata.

Montagu Test. Brit. p. 497.

Habitat in mari.

Testa vix 1 lin. longa, alba, glabra. *Apertura* orbicularis. *Apex* rotundatus, submarginatus. (*Montagu.*)

A new species, found by Mr. Montagu, in sand, at Biddeford Bay, and near Barnstable, Devon.

SERPULA.

Linn. Syst. Nat. n. 333.

Animal utplurimum *Terebella.*

Testa univalvis, tubulosa, frequentiùs adhærens (sæpe isthmis integris passim intercepta).

This genus has been divided by Mr. Montagu into two, on account of some of the species being unattached to other bodies, and to these he has given the appellation of *Vermiculum.* The Linnean *Serpulæ* certainly constitute a very irregular genus, as they vary extremely, not only in the structure of the shell, but also

also in the anatomy of the contained animal; yet it appeared to us that, in the present imperfect state of our knowledge respecting the latter, and as *independence*, or the not being affixed to other bodies, is not allowed to form of itself a distinctive generic character, in other instances, it was better to adhere to Linnæus's original arrangement. The bottle-shaped division of *Serpulæ* (which we have denominated *Lagenæformes*) might be removed into a separate genus, with much more propriety than any of the others, and with no violation of the Linnean method, for to that author they were unknown; yet even these we prefer leaving among the *Serpulæ*, until opportunities of further investigation have been attained.

1. * Spirales.

Spirillum. S. testa regulari, spirali, orbiculata, pellucida, anfractibus teretibus, sensimque minoribus. *Linn. Fn. Suec. n.* 2203. *Syst. Nat. n.* 793. *p.* 1264. *Linn. Gmel. p.* 3740.
Planc. Conch. t. 1. *f.* 8.
Ginann. Adr. 2. *t.* 1. *f.* 7.
Martini Conch. 1. *t.* 3. *f.* 20. C. D.
Pallas Nov. Act. Petrop. 2. *p.* 236. *t.* 5. *f.* 21.
Pulteney in Hutch. Dorset. p. 52. *t.* 19. *f.* 27.*
Montagu Test. Brit. p. 499.

β. anfractibus contrariis.
Walker Test. Min. Rar. t. 1. *f.* 13, 14.
Montagu Test. Brit. p. 504. S. sinistrorsa.
Habitat in mari, super *Sertularias* et *Zoophyta alia*; β. super *Cancrum Gammarum.*
Differt a *S. spirorbi*, cui simillima, quod triplo minor; quod pellucida, nec opaca: quod ad latus inferius vix manifeste canaliculata; quodque anfractus omnino teretes, nec a latere centrum respiciente, obsolete canaliculati. (*Linn. Syst. Nat. p.* 1265.)
Testa diametro 1 lin.

First noticed as British, by Dr. Pulteney.

2. *minuta.*

2.
minuta. S. testa regulari, spirali, orbiculata; anfractibus teretibus, contrariis.

Montagu Test. Brit. p. 505.

Habitat in mari, *Zoophytis* et *Corallinæ officinali* adhærens, frequens.

Testa diametro $\frac{1}{30}$ poll.: differt a varietate præcedentis, quod duplo minor, sordide alba, opaca, transversè rugosa, interdum dorso leviter carinata, a *S. sinistrorsa*, quod minor, neque anfractibus sulcatis.

Discovered by Mr. Montagu.

3.
spirorbis. S. testa regulari, spirali, orbiculata; anfractibus supra introrsum subcanaliculatis, sensimque minoribus. *Linn. Fauna Suecica, n.* 2204. *Syst. Nat. n.* 794. *p.* 1265. *Linn. Gmel. p.* 3740.

Lister Conch. t. 553. *f.* 5.
Petiver Gaz. t. 35. *f.* 8.
Gualt. Test. t. 10. *f.* O.
Planc. Conch. 18. *n.* 3.
Linn. It. Wgoth. t. 170.
Ginann. Adr. 2. *t.* 1. *f.* 8.
Baster Opusc. Subsec. 1. *t.* 9. *f.* 3.
Pennant Brit. Zool. t. 91. *f.* 155.
Da Costa Brit. Conch. p. 22. *t.* 2. *f.* 11.
Pulteney in Hutch. Dorset. p. 52. *t.* 22. *f.* 11.
Donovan Brit. Shells, t. 9. *f.* 1, 2.
Montagu Test. Brit. p. 498.

Habitat in mari, *Fucis* et *Zoophytis* adhærens.

Testa diametro $\frac{1}{8}$ poll., alba, opaca, lævis, subtus plana.

First figured by Lister; common.

4.
granulata. S. testa tereti, spirali, glomerata, latere superiore sulcis tribus elevatis. *Linn. Syst. Nat. n.* 798. *p.* 1266. *Linn. Gmel. p.* 3741.

O. Fabr. Fn. Groenl. p. 380. *n.* 375.

Adams in Act. Soc. Linn. 3. *p.* 254. S. sulcata.
Donovan Brit. Shells, t. 100.
Montagu Test. Brit. p. 500.
Habitat in mari, super lapides et testas.
Testæ magnitudine seminis coriandri confertæ, spirales, sed irregulares, (*Linn.*); albæ, opacæ, subumbilicatæ, anfractibus duobus, diametro $\frac{1}{8}$ poll.
Found by Mr. Montagu.

5. *heterostropha.* S. testa tereti, spirali; anfractibus 2 vel 3, sulcatis, contrariis.
Montagu Test. Brit. p. 503.
Habitat in mari, testaceis et schisto adhærens.
Testa præcedenti affinis, sed duplo minor, sordidè alba, sulcis minus profundis, supra concava; anfractibus contrariis, usque ad apicem conspicuis, cum præcedens umbilicum parvum habet. *Apertura* orbiculata.
Discovered by Mr. Montagu, in abundance, in Kingsbridge Bay, Devon.

6. *carinata.* S. testa regulari, spirali, anfractu exteriore suprà carinato. *Montagu Test. Brit. p.* 502.
Habitat in mari, testaceis adhærens.
Testa sordidè alba, opaca, medio concava, interdum pervia, *S. spirorbi* duplo minor, a quad ignoscitur anfractu exteriore angulato, veluti in *S. triquetra.* *Testa* semper tamen spiralis. *Anfractus* interiores inconspicui. *Apertura* orbicularis. (*Montagu.*)
Discovered by Mr. Montagu on the Devonshire coast, where it is not uncommon.

7. *corrugata.* S. testa regulari, spirali, transversim rugosa, umbilicata.
Montagu Test. Brit. p. 502.
Habitat in mari, rupibus adhærens.
Testa diametro $\frac{1}{4}$ poll., crassa, alba, paululum dilatata ad basin, magis crassa, rugosa, et glabra, quam *S. Spirillum.* *Anfractus* secundus fere inconspicuus. *Animal* aurantiaco-rubrum, radiis octo viridescentibus ciliatis, proboscide subinfundibuliformi. (*Montagu.*)
Discovered by Mr. Montagu, at Milton, Devon.

8, *cornea.*

8.
cornea. S. testa regulari, rotunda, pellucida, tribus anfractibus.
Adams in Act. Soc. Linn. 5. t. 1. f. 33, 34, 35.
Montagu Test. Brit. p. 503.
Habitat ad littora Com. Pembroke. (*Adams.*)
Testa coloris cornei. An distincta species?

9.
lucida. S. testa tereti, spirali, lævissima, vitreo-splendente, anfractibus contrariis.
Ellis Zooph. p. 37.
Linn. Gmel. p. 3746.? S. vitrea.
Adams in Act. Soc. Linn. 5. t. 1. f. 31, 32.
Habitat in mari, *Zoophytis* adhærens.
Testa diametro $\frac{1}{3}$ lin. alba, a congeneribus distinguenda facie glaberrima vitrea. *Anfractus* sæpe disjuncti. *Apertura* quasi porrecta. *Animal* rubrum, capite bimaculato, tentaculis plumosis pallidis. (*Montagu.*)
Found by Mr. Boys; common on the Kentish and Western coasts.

10. ** Contortæ, irregulares.
vermicularis. S. testa tereti, subulata, curvata, rugosa. *Linn. Syst. Nat. p. 1267. n. 805. Linn. Gmel. p. 3743.*
Pennant Brit. Zool. t. 91. f. 158.
Martini Conch. 3. t. 24. f. A?
Da Costa Brit. Conch. p. 18. t. 2. f. 5.
Pulteney in Hutch. Dorset. p. 53. t. 22. f. 5.
Montagu Test. Brit. p. 509.
Habitat in mari, testaceis et lapidibus adhærens.
Testa alba, rugosa, nunc simplex, nunc contortuplicata, nunquam carinata, tota affixa. *Animal Terebella,* tentaculis ramosis ciliatis coccineomaculatis, proboscide duplici infundibuliformi. (*Montagu, p.* 508.)

11.
reversa. S. testa subcylindrica, rugosa, spirali, irregulari, apertura contraria.
Montagu Test. Brit. p. 508.

Habitat in *Ostream operculatem* et *Cancros*, rarior.
Testa alba, rugis transversis, flexuris varians, nunc lateralibus, nunc sibi invicem oppositis.
Animal ut in præcedente. An species vere distincta?

Found on the Devonshire coast.

12.
triquetra. S. testa repente flexuosa, triquetra. *Linn. Fauna Suec. n.* 2206. *Syst. Nat. p.* 1265. *n.* 795. *Linn. Gmel. p.* 3740.
Ephem. Act. Nat. Curios. 1727. *p.* 315. *t.* 10.
Gualt. Test. t. 10. *f.* P.
Linn. It. Wgoth. 170.
Ellis Corall. t. 38. *f.* 2.
Martini Conch. 1. *t.* 3. *f.* 25.
Baster Opusc. Subsec. 1. *t.* 9. *f.* 2.
Pennant Brit. Zool. 4. *t.* 91. *f.* 157.
Da Costa Brit. Conch. p. 20. *t.* 2. *f.* 9.
Born Mus. t. 18. *f.* 14.
Pulteney in Hutch. Dorset. p. 52. *t.* 22. *f.* 9.
Donovan Brit. Shells, t. 95.
Montagu Test. Brit. p. 511.
Habitat in mari, supra Testas, Lapides, Naves, Fucos, frequens.
Testa sordidè alba vel rubescens, opaca, rugosa, figura variabili, dorso carinato, interdum lateribus leviter carinatis.
Animal proboscide simplici tubiformi (unde a congeneribus distinguendum) tentaculis duobus plumosis. (*Montagu.*)

13.
tubularia. S. testa tereti, subulata, extremitate angustiore affixa, subconvoluta. *Montagu Test. Brit. p.* 513.
Habitat in mari, testaceis adhærens.
Testa S. vermiculari simillima, sed partim tantum affixa; extremitate latiore libera, rectiuscula, adscendente.
Animal Amphitrite (vide *Montagu Test. Brit. p.* 514.)

Discovered by Mr. Montagu, at Torcross, Devon.

14. *Seminulum.*

*** Liberæ.

a. Subconvolutæ.

14. *Seminulum.* S. testa regulari, ovali, libera, glabra. *Linn. Syst. Nat. p.* 1364. *n.* 791. *Linn. Gmel. p.* 3739.

Planc. Conch. t. 2. *f.* 1.?

Gualt. Test. t. 10. *f.* S.

Martini Conch. 1. *t.* 3. *f.* 22. a. h.?

O. Fabr. Fn. Gröenl. p. 376. *n.* 370.

Walker Test. Min. Rar. f. 1.

Adams in Act. Soc. Linn. 5. *t.* 1. *f.* 28, 29, 30. S. ovalis.

Montagu Test. Brit. p. 520. Vermiculum intortum.

Pulteney in Hutch. Dorset. t. 19. *f.* 31.

Habitat in mari, frequentissima.

Testa diametro $\frac{1}{16}$ poll. alba, opaca, glabra. *Apertura* compressa, semilunaris.

First found on the British shores by Mr. Boys.

15. *subrotunda.* S. testa subrotunda, dorso elevato. *Walker Test. Min. Rar. t.* 1. *f.* 4.

Montagu Test. Brit. p. 521.

Habitat in mari, frequens.

Testa diametro $\frac{1}{3}$ lin. alba, opaca, glabra. *Apertura* parva, angulata, margine flavo. (*Montagu.*) An vere distincta a præcedente?

16. *oblonga.* S. testa oblongo-ovali, subcompressa, hinc sutura unica longitudinali.

Montagu Test. Brit. p. 522. *t.* 14. *f.* 9. Vermiculum oblongum.

Habitat in mari, rarior.

Testa vix $\frac{1}{3}$ lin. longa, opaca, glabra. *Apertura* producta, ovalis, margine flavo.

Found by Mr. Montagu, in sand, from Salcomb Bay, Devon.

17. *bicornis.*

17.
bicornis. S. testa bicorni, ventricosa. *Walker Test. Min. Rar. t.* 1. *f.* 2. *& f.* 3.
Adams Micr. t. 14. *f.* 2. *&* 3.
Montagu Test. Brit. p. 519. Vermiculum bicorne, *et* V. perforatum.
Habitat in mari.
Testa 1 lin. longa, alba, opaca, glabra.
Found at Sandwich and Reculver, by Mr. Boys.

We may be permitted to express our doubts whether the four last *Serpulæ* ought not to be considered rather as varieties than as distinct species. Their form is very irregular and variable; and it is scarcely possible to give any permanent characters by which they may be satisfactorily discriminated.

18.
incurvata. S. testæ extremitate posteriore involuta, anfractibus tribus contiguis.
Walker Test. Min. Rar. f. 11.
Adams Microsc. t. 14. *f.* 7.
Montagu Test. Brit. p. 518. Vermiculum incurvatum.

β. *Walker Test. Min. Rar. f.* 12.
Montagu Test. Brit. p. 508. Vermiculum parvum.
Habitat in mari, rarior.
Testa vix 1 lin. longa, alba, semipellucida, lævis.
Varietas β. anfractu unico aperto.
Found on the Kentish coast.

19. *b.* Lagenæformes.
lactea. S. testa ovali, tenui, compressiore, venis lacteis.
Walker Test. Min. Rar. t. 1. *f.* 5.
Adams Micr. t. 14. *f.* 4.
Montagu Test. Brit. p. 522. Vermiculum lacteum.
Habitat

Habitat in mari, rarior.
Testa 1¼ lin. longa, pellucida,

Found at Sandwich, by Mr. Boys; and on the Devonshire coast, by Mr. Montagu.

20. *margina-ta.* S. testa compressa, marginata, collo fere nullo.
Walker Test. Min. Rar. t. 1. *f.* 7.
Montagu Test. Brit. p. 524. Vermiculum marginatum.
Habitat in mari.
Testa minuta, alba, pellucida, glabra.

Found at Reculver, Kent, by Mr. Boys; and on the Devonshire coast, by Mr. Montagu.

21. *globosa.* S. testa globosa, lævi, collo fere nullo.
Walker Test. Min. Rar. t. 1. *f.* 8.
Montagu Test. Brit. p. 523. Vermiculum globosum.
Habitat in mari, rarissima.
Testa minuta, alba, pellucida.

Found at Sandwich, by Mr. Boys.

22. *lævis.* S. testa oblonga, lævi, collo productiore.
Walker Test. Min. Rar. t. 1. *f.* 9.
Montagu Test. Brit. p. 524. Vermiculum læve.
Habitat in mari, rarissima.
Testa minuta, vitrea. An varietas præcedentis?

Found at Sandwich, by Mr. Boys.

23. *squamosa.* S. testa subglobosa, squamosa, collo ferè nullo.
Montagu Test. Brit. p. 526. *t.* 14. *f.* 2.
Habitat in mari.
Testa alba, minuta.

Found at Seasalter, Kent.

24.
perlucida. S. testa lævi, costis sex longitudinalibus, æquidistantibus.
Montagu Test. Brit. p. 525. *t.* 14. *f.* 3. Vermiculum perlucidum.
Habitat **in mari.**
Testa **vix** $\frac{1}{10}$ **poll. longa, alba, pellucida, glabra, lagenam vere æmulans.** ***Apertura*** **angustissima.** ***Collum*** **productum, subcylindricum. (*Montagu.*)**
Found at Seasalter, Kent, by Mr. Boys.

25.
striata. S. testa striis plurimis longitudinalibus, collo producto.
Walker Test. Min. Rar. t. 1. *f.* 6.
Adams Micr. t. 14. *f.* 5.
Montagu Test. Brit. p. 523. Vermiculum striatum.
Habitat **in mari, rarior.**
Testa **minuta, alba, pellucida, glabra.** ***Apertura*** **orbicularis.**
Found by Mr. Boys, on the Kentish coast; and by Mr. Montagu, on the shores of Devonshire.

26.
retorta. S. testa rotunda, marginata, cervice curvatim exserta.
Walker Test. Min. Rar. t. 1. *f.* 10.
Montagu Test. Brit. p. 524. Vermiculum retortum.
Habitat **in mari.**
Testa **minuta, alba, opaca.**

27.
Urnæ. S. testa urnæformi, lævi.
Montagu Test. Brit. p. 525. *t.* 14. *f.* 1.
Habitat **in mari.**
Testa **vix 1 lin. longa, alba, glabra, semipellucida, tuberculo ad basin.** ***Apex*** **conicus. (*Montagu.*)**
Found in sand, from Shepey Island, by Mr. Boys.

TEREDO.

TEREDO.

Linn. Syst. Nat. n. 334.

1. *navalis.* T. testa tenuissima, cylindrica, lævi. *Linn. Syst. Nat. p.* 1267. *n.* 807. *Linn. Gmel. p.* 3747.
Vallisn. Op. Fis.-Med. 2. *t.* 4.
Sellii Hist. Nat. Tered. 4. *t.* 1.
Planc. Conch. 17. *n.* 2.
Adans. Seneg. t. 19. *f.* 1.
Martini Conch. 1. *t.* 1. *f.* 11.
Pennant Brit. Zool. 4. *n.* 160.
Da Costa Brit. Conch. p. 21. Serpula Teredo.
Pulteney in Hutch. Dorset. p. 53. *t.* 18. *f.* 21.
Montagu Test. Brit. p. 527.
Donovan Brit. Shells, t. 145.
Home in Act. Angl. 1806. *t.* 12, 13.
Habitat intra lignum *navium* et *palorum marinorum*; calamitas navium ex Indiis in Europam propagata. (*Linn.*)
Testa 4—6 poll., vel magis longa, interdum flexuosa, apice nunc magis nunc minus obtusa.

We venture so far to dissent from the great authority of Linnæus as to exclude from this descriptive catalogue of the British *Testacea* the genus *Sabella.* The animals included under that genus have for their coverings particles of sand agglutinated on the external membrane, and resemble rather the *larvæ* of certain *insects,* than the testaceous *Vermes.* The latter form their calcareous integuments entirely from the secretions of their own surfaces, and are attached to these by cartilaginous processes, so as to render them essential and indispensable

parts of their structure. The coverings of the *Sabellæ* seem to be more of an adventitious nature, and may be considered rather as serving the purposes of habitations, than as being organized *integrals* of the contained animal.—If these ideas be correct, the genus *Sabella* does not come within our pro-

vince.

III. *Some*

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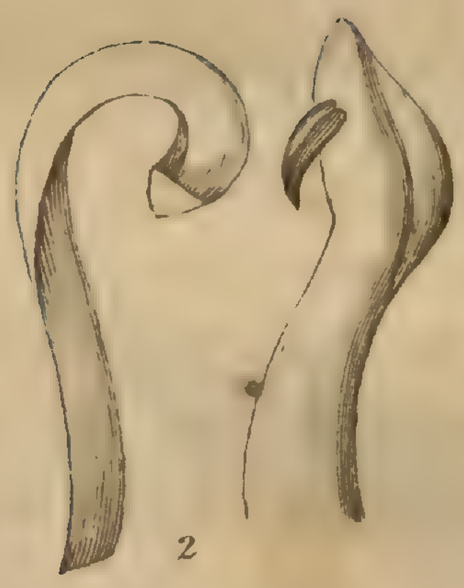
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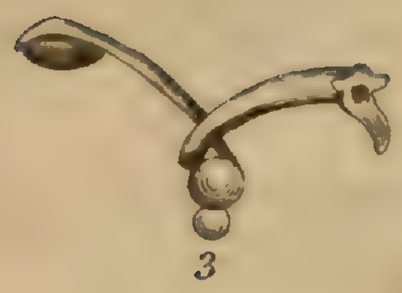
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Linn. Trans. VII. tab. I. p. 250.

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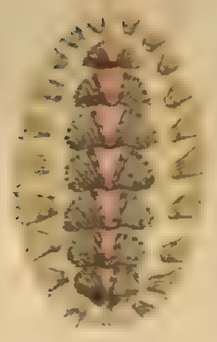

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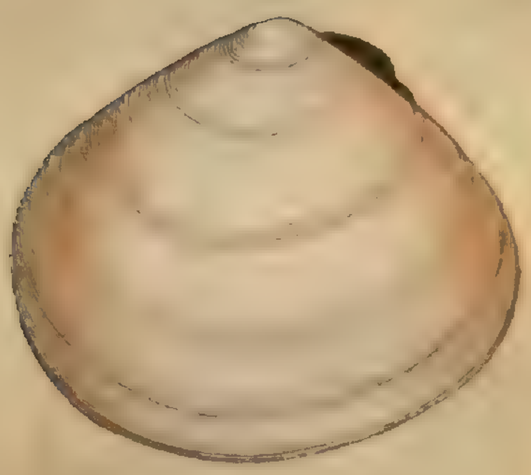

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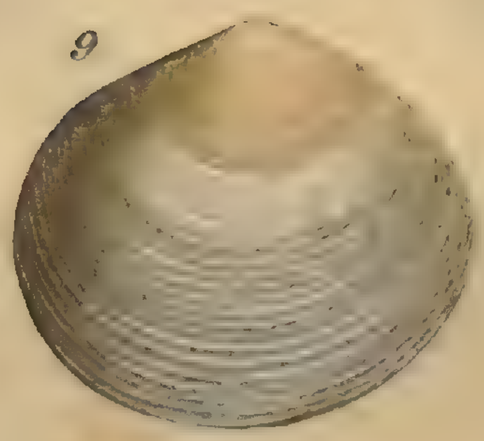

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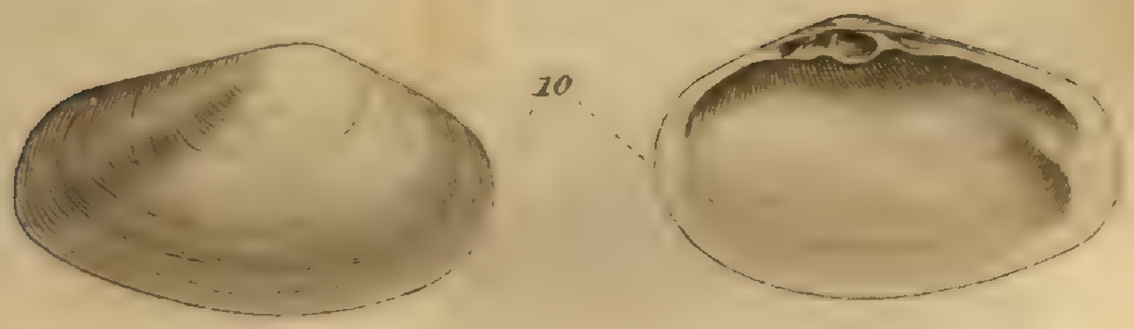

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Linn. Trans. VIII. tab. 2. p. 260.

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Linn Trans. VIII. tab. 3 p. 250.

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Linn. Trans. Vol. 3. b. 3. A. p. 250.

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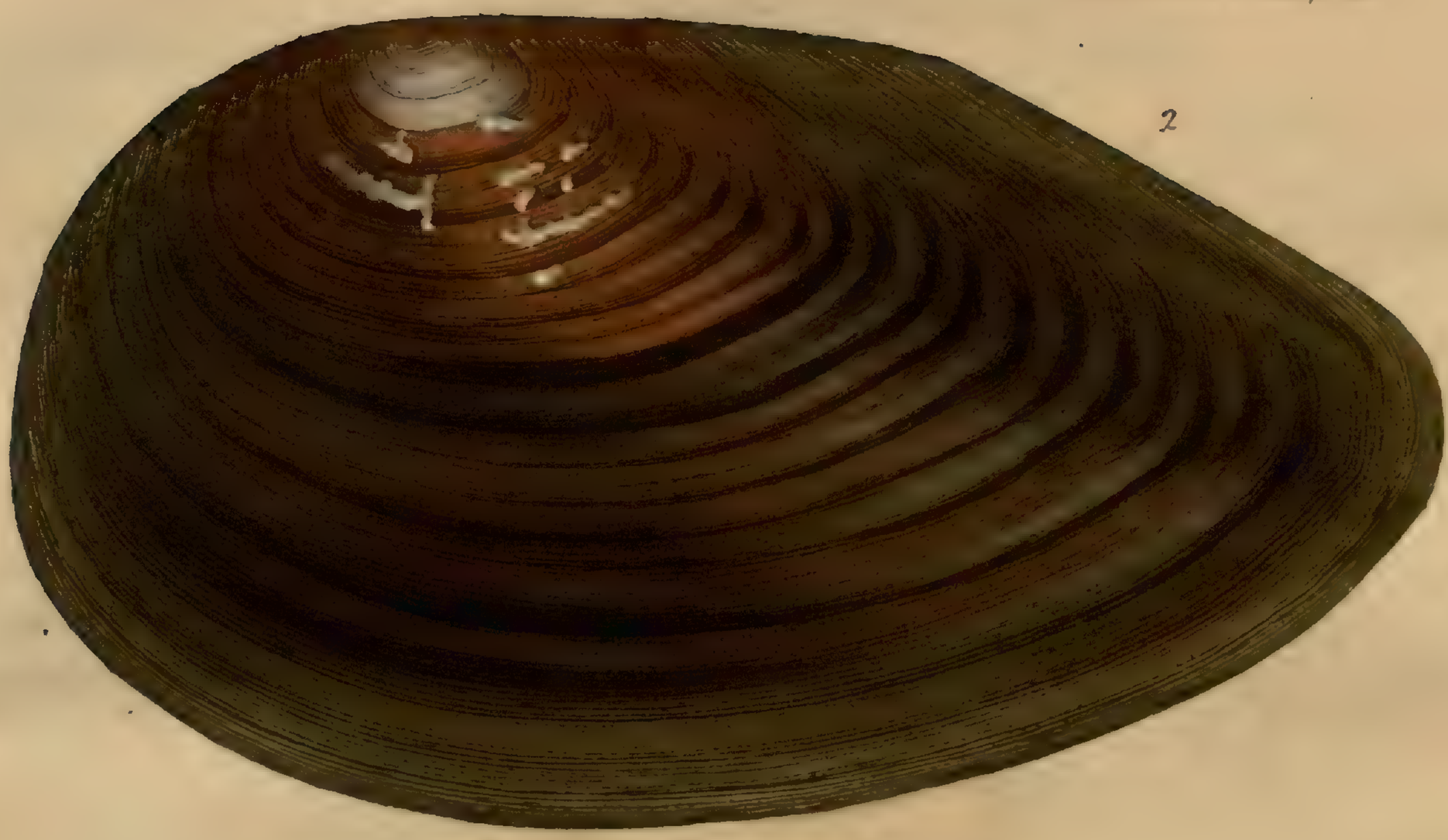

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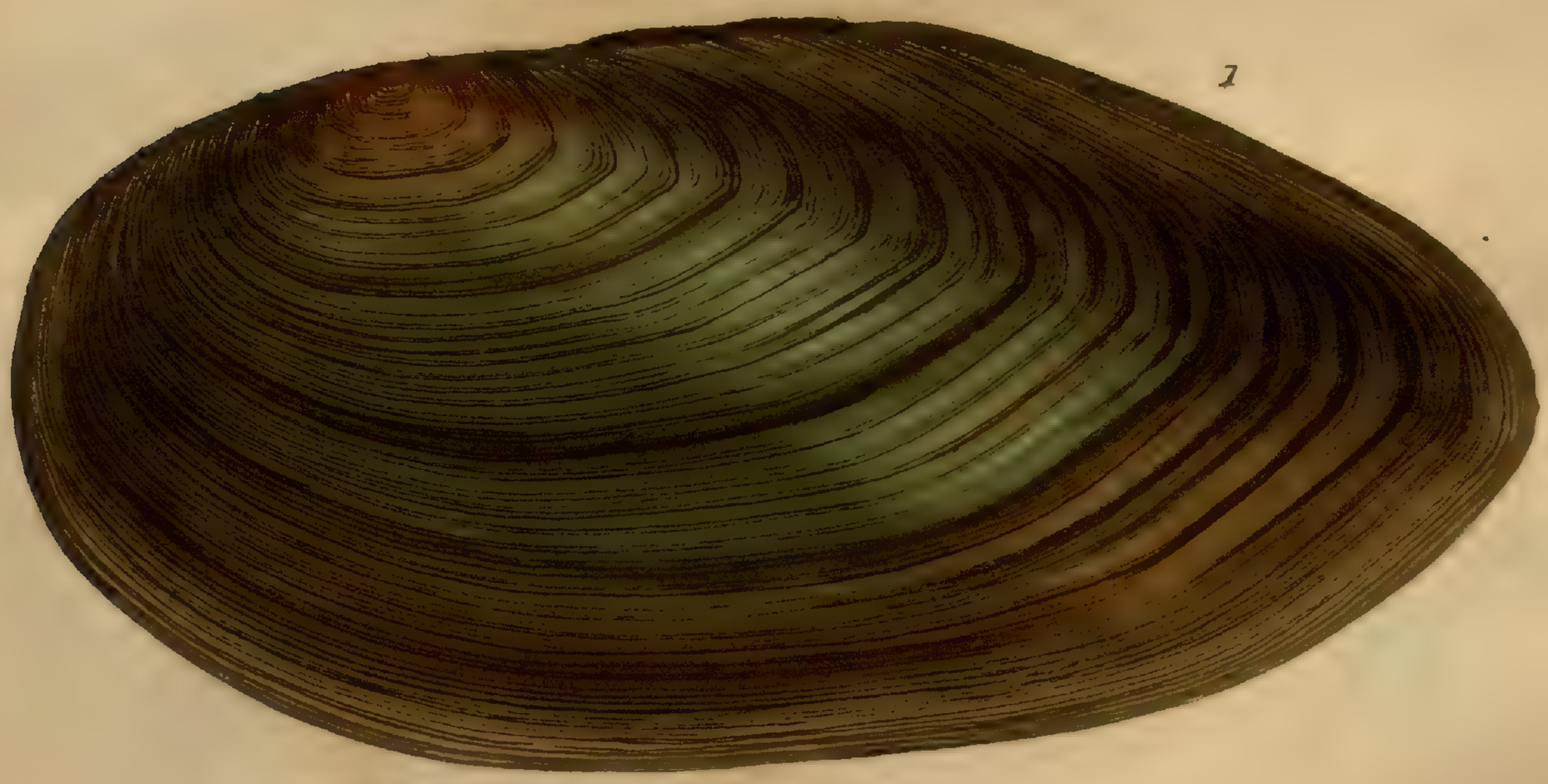

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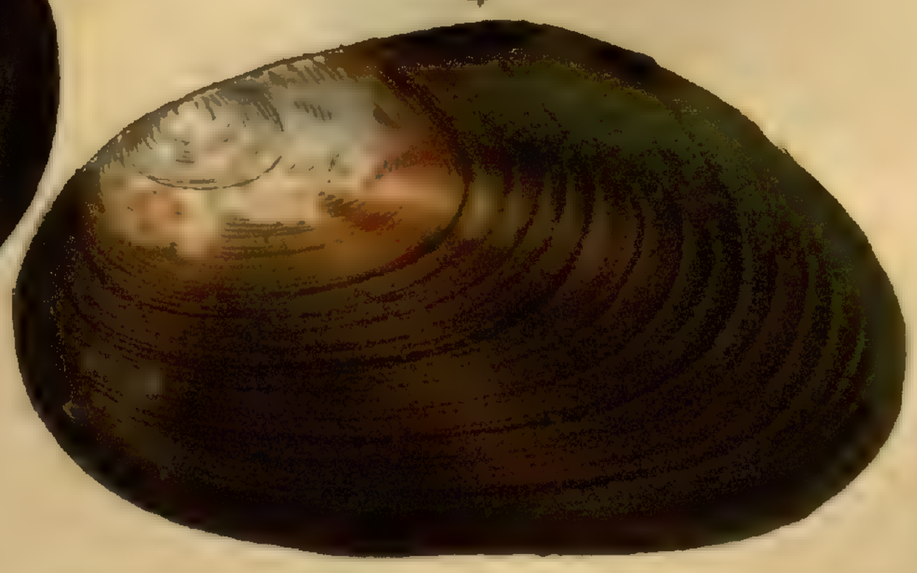
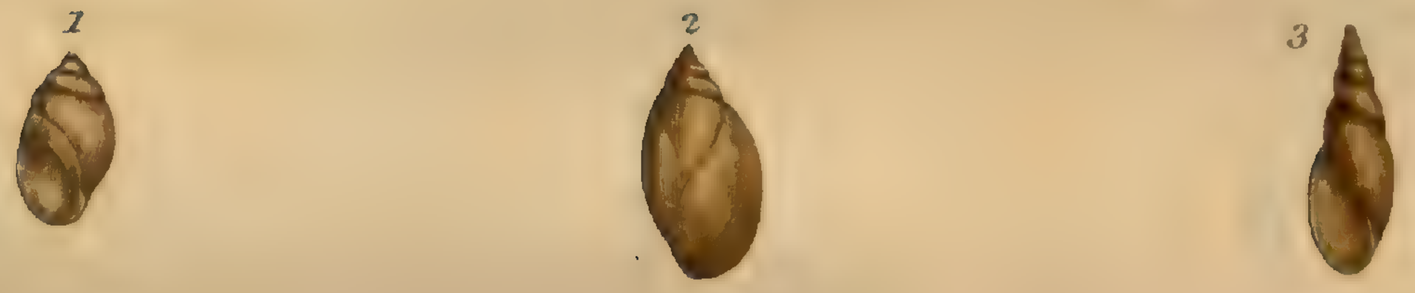


Linn. Trans. VIII. tab. 4. p. 250.



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III. *Some Account of the Pitch-lake in the Island of Trinidad, in two Letters: The first from Samuel Span, Esq. to James Tobin, Esq. F. L. S.; and the other from Mr. Tobin to Charles Hatchett, Esq. F. R. S. & L. S.; with Observations by Mr. Hatchett.*

Read April 17, 1804.

St. Vincent, April 2, 1801.

DEAR SIR,

SINCE my last of the 10th ult. I have been down to *Trinidad*, where I devoted one day to the *pitch-lake*, to procure from thence the different specimens you wished for. They are on board the Union-Island, and I hope will arrive safe, and in good order. I have packed them in two barrels, and delivered them to the care of the captain for you. The first consists of pebbles picked up from the landing-place on the beach, and pieces broken from the rocks on the sea-coast, partly below the surface of the sea, and partly from the same rocks above high-water mark; *but the whole appears to be of the same nature with that of the lake.* The other barrel contains, in separate parcels—a kind of pitch-cinder, which is found in great abundance on the borders of the lake—firm pitch from one side of the lake—pitch from the body of the lake—and pitch taken from the crater of a tumulus rising about two feet above the level of the ground around it, and distant from the lake about a hundred yards: this last is by much the freshest, and indeed appeared but just thrown up, and consists of about half of the whole quantity in this spot, above

the ground within the crater. This lake is situated about a mile from the gulf, on an eminence, as I conceive, of from eighty to one hundred feet above the level of the sea. It is surrounded on all sides by high woods, except where it has been cleared for the cultivation of the sugar-cane; and in those places the soil has universally proved very fertile. It is the highest land in that quarter of the island. The lake is about a mile across, intersected every where by streams of pure, clear water, which abound with small fish. In many places, even in the centre of the lake, on the solid pitch, are spots having the appearance of so many islands, on which grow plants and shrubs of various kinds: among the rest is the wild pine-apple, or the pine in its natural state, in great abundance. Of this latter I have sent home a few plants to Mr. Edwards, who desired me, previous to my departure, to procure and forward him different kinds of pine plants from these islands. The banks of the rivulets are semicircular, thus ⌒ terminating at bottom in a crevice. The water appears ⌐⌐ of various depths, from *two* to *ten* feet; and the channels are continually fluctuating: one of eight or ten feet to-day, may tomorrow be entirely closed up, and others formed where yesterday was a solid mass of pitch. From this it appears, that the pitch itself is supported by a lake of water underneath; but what the thickness or substance of the pitch may be, I can form no idea of. It has, however, evidently been the effect of subterraneous fire. I have been informed that the country on the sea-coast to windward of the lake abounds with *coal*; but I could not collect any information how far these veins extend towards the lake; nor have I ever seen any specimens of this coal.

Dr. Anderson, the superintendant of the botanical garden in St. Vincent, who accompanied me on this expedition, wrote an account

account of this lake about twelve years ago, which was soon afterwards printed: I do not recollect how it made its appearance, but I think it was in the European Magazine:—it is, I believe, the only account of it ever published.

To make use of this pitch, it is necessary to boil it down with one tenth of oil or tallow.

I remain, dear sir, &c. &c.

S. SPAN.

To James Tobin, Esq.
Bristol.

Bristol, Dec. 14, 1801.

DEAR SIR,

THE foregoing is a copy of a letter which I have received from an intelligent friend who has lately made a considerable purchase in the island of Trinidad. It may serve to furnish you with a tolerable idea of the very singular spot, known by the English inhabitants of that large and valuable island by the name of the *Pitch-lake*. I have accompanied this letter with some pieces of the mineral bitumen mentioned in it: they are not, however, the identical specimens therein alluded to (which unfortunately fell into the hands of the Spaniards, by the capture of the ship they were on board of), but others, which Mr. Span collected at the same time, although he did not take the same pains to discriminate them. I have been more immediately induced to trouble you with this communication, as it appears from your very interesting paper in the 4th volume of the Linnean Transactions, that you have bestowed a more than ordinary attention on this particular branch of mineralogy.

I do not feel myself by any means qualified to enter the lists with those naturalists who consider all bituminous substances as originating

originating from organized bodies, once possessed of animal or vegetable life; yet I have no doubt, but the discovery of such an extensive mass of bituminous matter existing in one of our own colonies, situated so near the equator, will contribute, in due time, to throw much additional light on a question of much importance in the natural history of our globe.

From subsequent intelligence which I have procured on the subject, I learn—that this lake (as it is called) is about three or four miles in circumference—that the water which intersects it sometimes forms small pools, as well as rills—that the immediate substratum of all the lands around it, to an unascertained distance, consists of the same bituminous substances, with a covering of from two to four feet thick, of good vegetable mould—that this bitumen runs under its coat of earth, from the borders of the lake to the sea, which in some places is above half a mile, and extends to an unknown distance under the ocean—that the cliffs forming the shore of this part of the gulf, which in some places appear in abrupt precipices, from fifty to a hundred feet high, are composed entirely of this bituminous mineral, in a hard, compact state, but covered with a stratum of earth unequally thick—that, notwithstanding the general opinion of the country gives a volcanic origin to this immense body of bituminous matter, no symptoms of heat are perceptible in any part of the lake; not even in the hollows of the small tumuli (improperly called craters), where this substance seems to have been recently thrown up: nor does there appear to be any thing like scoriæ, or cinders, among the specimens which I have hitherto received.

Under an idea that this information, defective as it is, may prove acceptable to you, until a regular and quiet possession of this newly acquired island will furnish better opportunities to future

ture naturalists of examining so remarkable and interesting a place, with proper leisure and attention,

I remain, dear sir, your most obedient servant,

J. Tobin.

Charles Hatchett, Esq.

Observations by Mr. Hatchett.

From the preceding letters, as well as from the account published by Dr. Anderson in the Philosophical Transactions for 1789, we learn, that the lake of bitumen in the island of Trinidad (known by the name of the Pitch- or Tar-lake, and called by the French La Bray) is of considerable extent, and of an unknown depth *. Moreover, it appears that the general mass which forms this lake has been hitherto considered as simple bitumen more or less indurated. Dr. Anderson, however, observes, that he "could make no impression on its surface without an axe, although at the depth of a foot he found it a little softer, with an oily appearance, in small cells†." This degree of hardness certainly seems much more considerable than that of the unmixed indurated bitumens, and naturally leads to a suspicion, that the greater part of the bituminous mass in Trinidad is not (as has been supposed) simple mineral pitch or asphaltum.

Upon examining the specimens which Mr. Tobin had obligingly sent to me, I found many of them very hard and difficult to break; and when broken, they did not exhibit the lustre nor the conchoidal fracture of the simple bitumens. The remaining specimens also, although easily broken, possessed still less of the

* Philosophical Transactions, 1789, p. 67. † Ibid. p. 67.

pure

pure bituminous characters; for their fracture was earthy, and resembled some of the softer kinds of argillo-ferruginous stones.

The specific gravity, likewise, of these specimens is much superior to that of the unmixed bitumens: two examples will be sufficient:—the specific gravity of the solid dark brown compact bitumen from Trinidad is 1,744, at temperature 65° of Fahrenheit, and that of one of the pale brown earthy specimens is 1,336;—on the contrary, the specific gravity of asphaltum is from 1,023, to 1,104, or 1,165: so that between the first sort and asphaltum (if we take 1,104 for the specific gravity) the difference is ,640; and between the second sort and asphaltum, the difference is ,232.

But even few of the mixed or impure bitumens are of so great a specific gravity; for that of the heaviest of the coals noticed by Mr. Kirwan is 1,426*:—he mentions indeed a spurious coal, the specific gravity of which, he says, is from 1,500 to 1,600, and also a specimen of maltha of the specific gravity of 2,070: but this, from his own account, evidently is a limestone impregnated with bitumen; for a specimen examined by him only yielded 14 per cent. of bitumen, the remainder being "calcareous stone†."

The extraordinary hardness, the specific gravity, and in some measure the general external characters of the specimens which I had received from Mr. Tobin, induced me therefore to believe, that they did not merely consist of mineral pitch, or asphaltum; not but that I had seen others sent from Trinidad, which completely exhibited the various gradations from petroleum to asphaltum; but the characters of the specimens in question were different, and I therefore subjected them to a chemical examination.

* Elements of Mineralogy, vol. ii. p. 53. † Ibid. vol. ii. p. 46.

When

When the dark-brown compact sort was distilled until the bulb of the retort was red hot, the fragments retained their figure;—the same also took place if a piece was kept in a red heat for some time in an open crucible. 250 grains of the original substance thus lost 81 grains, = 32,40 per cent., the greatest part of which was bitumen; and when the pale-brown earthy sort was subjected to the same process, the loss on 250 grains was 91, = 36,40 per cent.;—so that the first left a residuum of 169 grains, and the second 159 grains. This residuum, or stone, was spongy, and easily broken;—in an open fire it assumed an ochraceous appearance, but was internally black, in consequence of the coal resulting from the decomposed bitumen. The stone in both cases was similar, excepting that the first sort was more compact;—100 parts of it afforded

Silica - - - - - - - - - - - - -	60
Alumina - - - - - - - - - - - -	19
Oxide of iron - - - - - - - - - -	10
Carbonaceous matter, by estimation, -	11
	100

I did not, however, repeat the analysis, and therefore shall not state the proportions of the alumina and oxide of iron as exact; but this, in the present case, is not of much importance, as the general nature of the stone was only required to be ascertained. Not the smallest trace of lime could be discovered; so that the stone which is thus impregnated with bitumen is totally different from the bituminous limestones, and such-like substances, which have been heretofore noticed.

The true external characters of this stone must, however, still remain in some degree uncertain, until specimens can be procured which either are unmixed with bitumen, or at least are

only partially impregnated with it: but, as a conjecture, I shall venture to say, that I suspect it to be of the nature of the stone which is found with bitumen in Auvergne, and which is called by Born "a grayish compact lava*."

The analysis of the stone of Trinidad which remains after the separation of the bitumen, accords with the prevalent soil of the island; for Dr. Anderson states that "the soil in general, for some distance round La Bray, is cinders and burned earths; and where not so, it is a strong *argillaceous soil.*" p. 69. In the latter part of the same page he also says, "From every examination I have made, I find the whole island formed of an argillaceous earth, either in its primitive state, (by which he probably means common clay,) or under its different metamorphoses. The bases of the mountains are composed of *Schistus argillaceus* and *Talcum lithomargo.*" In almost all the species of the argillaceous genus, silica is known to predominate; and the stone impregnated with bitumen, which has been mentioned, evidently appertains to that genus, so as in some measure to approach the nature, but not the texture, of the bituminous slates. It is, however, remarkable, that in the more compact specimens of this substance the bitumen so completely disguises the character of the stone, that it may easily be, and indeed has been taken for a variety of asphaltum.

I have already stated, that I have seen specimens from Trinidad which exhibited the various gradations of petroleum into real asphaltum; and from Dr. Anderson's account, the liquid bitumen or petroleum is occasionally found†: but this, as well

* Catalogue de la Collection des Fossiles de Mademoiselle de Raab, tome ii. p. 77.

† "Besides this place (La Bray) where it is found in this solid state, it is found liquid in many parts of the woods; and at the distance of twenty miles from this, about two inches thick, in round holes of three or four inches diameter, and often at cracks or rents.

as the asphaltum, most probably occurs only in certain fissures and cavities; for, from the specimens noticed in the present paper, there is great reason to believe that a considerable part of that mass in Trinidad, which has been hitherto supposed to be pure mineral pitch or asphaltum, is in reality only a porous stone of the argillaceous genus, much impregnated with bitumen*.

rents. This is constantly liquid, and smells stronger of tar than when indurated, and adheres strongly to any thing it touches; grease is the only thing that will divest the hands of it." Philosophical Transactions, 1789, p. 68.

* Having acquainted Mr. Tobin with the result of my experiments, that gentleman in his answer observes, "I have indeed lately had reason to suppose that it could not be a perfect bitumen, from having been assured that it is made use of as *a material for pavements*, and that *it bears exposure to the heat of a tropical sun.*"

IV. *Description of a new Species of Lichen.* *By Dawson Turner, Esq. F.R.S. A.S. and L.S.*

Read April 17, 1804.

Lichen phæocephalus.

Lichen crustâ e granulosâ sub-foliaceâ fuscescente; bacillis nigris; tuberculis rufo-fuscis, margine luteo-albicante.

Tab. VI. Fig. 1.

Innascitur horreorum assibus apud *Bruisyard* in Suffolciâ, et *Lakenham* in Norfolciâ.

Crusta latè effusa, crassiuscula, e granulis sub-gelatinosis, satis magnis, incisis, folia simulantibus, madore dilutè viridi-fuscis, siccitate nigricantibus, densè congestis constans; bacilla nigra, lineam ferè alta, crustam vix, aut ne vix superantia, apice in tuberculum sub-rotundum, pulvere rufo-fusco repletum, et margine tenuissimo, albicante, vel luteolo cinctum, tumescentia. Tuberculorum pulveris marginisque color in siccis madidisque idem.

I should not trouble the Linnean Society with a description and figure of this single lichen, were it not for its close affinity to *L. chrysocephalus*, which I described in a former paper*. I regarded that species as an interesting addition to our Lichenographia; but the present, which I have since been fortunate enough to find in two places, is still more interesting, on account of the singular nature of its crust. In this respect it essentially differs

* Linn. Trans. vol. vii. p. 88.

from

Linn. Trans. VIII. tab. 6. p. 268.

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from every other individual of the tribe, called by Acharius *Calicium*, and seems to afford an intermediate link between these and the very numerous but widely removed varieties of *Lichen pyxidatus*. I am acquainted with no species with which there is a possibility of its being confounded. It grows on the sides of old barns, in large patches, conspicuous to the naked eye at a distance, only from their black, almost sooty appearance, so that it may easily be passed by as *Lichen niger* or *umbrinus*. The peduncles hardly elevate themselves above the crust; the powder with which the tubercles are filled is of a particularly dull though pleasing colour; but their thin, beautifully pale yellow, or whitish margin will not fail to attract attention as soon as the plant is carefully observed. However it may perplex the builder of a system, it is highly pleasing, as well as curious, to observe the gradations of Nature from the *Calicium sessile*, which, having no crust of its own, attaches itself to other species, and when found on *Lichen pertusus* forms the *Lichen gelasinatus* of Withering, to the present species, which, from its fruit, must necessarily be placed in the same subdivision, but at the same time is, in point of crust, almost sufficiently removed to require its being arranged in a different genus. The real observer of Nature, who studies her in the open air, must be prepared at every step to meet with difficulties of this kind, which are unknown indeed to him who frames theories only in his closet, but which, at the same time that they convince him of his ignorance, impress upon his mind the most sublime ideas of the wonders of the creation, and lead him necessarily to the true object of natural history—the adoration of his Maker in the works of His Hand.

Yarmouth, March 31, 1804.

V. *Account*

V. *Account of crystallized Oxalic Acid produced from the Boletus sulphureus. By Robert Scott, M.D. of Dublin. Communicated by Dawson Turner, Esq. F.R.S. A.S. and L.S.*

Read May 1, 1804.

I MET with the *Boletus sulphureus* about the middle of August, in a young state, growing on the trunks of old decaying cherry trees. Having preserved a specimen, I after some time found a singular crystallization on the upper surface, and which may be observed to have ruptured the investing coats of that surface. These needle-like crystals were formed on the fungus, in consequence of its drying only, as none were observable while it remained on the tree. That they are pure oxalic acid, or at least combined with a very small portion of vegetable fixed alkali, is evident from the taste, and by the tests of solutions of lime and barytes. The fungus, after being freed from the saline matter, was distilled in an earthen retort, during which a quantity of watery fluid came over—a thick tar-like extractive matter—carbonic acid gas—carbonated hydrogenous gas—and lastly, hydrogenous gas. It was not observed whether azotic gas was among the first products; but it probably was, as the watery fluid which came over in distillation contained ammonia, which appeared by the odour and the fumes that were exhibited on holding a paper moistened with diluted muriatic acid over a mixture of the former with quick lime. The coaly residuum, when burnt in the open air, afforded by lixiviation some vegetable fixed alkali.

That

That the oxalic acid is produced or evolved in the course of vegetation in many plants of the higher ranks is well known, but that it should be found in any of the fungus tribe, (which have hitherto been supposed to produce only an ammoniacal salt, and on that account considered as a link between vegetables and animals,) is a curious, and, I believe, an isolated fact. How far the production of oxalic acid in this fungus might depend on its place of growth, or soil, as it may be termed, I cannot say; but it is worth while to repeat the observation on other fungi similarly situated.

I have sent to you a specimen of the Boletus, and a portion of the crystallized acid produced from it, in order that you may communicate them to the Linnean Society.

VI. *Observations respecting a Species of Phalarope, and some other rare British Birds. By Mr. T. W. Simmonds. Communicated by Adrian Hardy Haworth, Esq. F.L.S.*

Read June 19, 1804.

The following observations are humbly offered to the Linnean Society, but with sincere regret that they are not either more numerous or important. They were made during a voyage in which I had the honour to accompany Mr. Robert Stevenson, civil engineer, of Edinburgh, on his annual inspection of the northern lighthouses.

Phalaropus Williamsii.

Ph. orbitis albis, capite fusco vel cinereo.

Length 7 inches. Bill $\frac{3}{4}$ inch, tapering, slender, acute, bending downwards at the point. Feet black, compressed. Toes united as far as the first, second, and third joints of the inner, middle, and outermost toes respectively; the remaining part of the toes webbed; the margins of the web scolloped, and somewhat of a pectinated appearance. Claws black. Eyelids white.

Mas.

Head, neck, and back dusky-brown: feathers of the front margined with light rusty and white. Fore part of the neck and breast variegated with cinereous, very pale rusty and white. On each side of the neck a pale ferruginous spot. Chin, throat, belly, and under tail coverts white. The least wing coverts, long

long secondaries, and upper tail coverts, margined with light rusty. Quill feathers black. Greater wing coverts, and secondary quill feathers, tipped with white, thus forming a bar on the wings. Under wing coverts pale, cinereous, or white. Tail feathers ten: two middle feathers longer, black; the others cinereous, tipped, and margined with white, as are also the lateral tail coverts.

Fœmina.

Head dusky black. Throat white. On the fore part of the neck a deep ferruginous red spot, extending upwards, on each side of the neck, towards the head, and thus nearly encircling the neck, but intercepted by a very narrow streak of dark cinereous, which is continued from the head to the back. The dusky streaks on the back much fewer, and more pale; the cinereous colour every where much darker.

From this imperfect description, it may be perceived that the male of this species agrees with the Red Phalarope, var. A. of Dr. Latham, which is figured in the frontispiece of the 5th vol. of his Synopsis. The figure and general description agree exactly; but the words "an irregular large spot of a deep ferruginous colour" seem more applicable to the colour of the neck of the female.

The description of the Red Phalarope differs, as the size of that is greater, and "through the eye, from the base of the bill there is a dusky streak passing backwards," which is not the case with any of these specimens.

It might have been doubted that the female was more beautiful, and even somewhat larger, than the male, had not the size, &c. of the sexual organs been sufficiently evident to prevent the possibility of a mistake.

Six females and two males were dissected. From the small size of the *ovaria*, the thickness and length of the *oviduct* of the female, and large flaccid *testes* of the male, it was concluded that the eggs had not been long laid, and that the males were not young ones, as their less bright plumage at first gave reason to suspect.

From the deficiency of feathers on the belly of the male, from the duller plumage, from the very few that appeared, and from the difficulty which these required to be driven from those tufts where the nests perhaps were, Would it be absurd to suppose that the males alone perform the business of incubation?

These birds were found at the edge of two or three fresh-water lakes in Sanda and North Ronaldsha, the two most northern of the Orkney islands.

In the stomachs of several were found the remains of monoculi and onisci. As none of the inhabitants had observed them before, they had no provincial name, nor was it possible to ascertain whether they frequented any of the other islands. It is much more to be regretted that the search after their nests was not attended with the desired success.

If upon more accurate inquiry this should prove to be a new species, perhaps there would be no objection to the name *Williamsii*, as it is to the liberality of Mr. J. Williams, of Dartford, that I am indebted for the discovery.

TRINGA ALPINA.

Found on the islands of South Ronaldsha and Sanda, and at Loch Strathbeg, near Frazerburgh, Aberdeenshire.

Nest, with *Charadrius hiaticula* and *Tringa vanellus*, composed of dried tufts of *Juncus squarrosus* deposited in a slight hole in the ground. Eggs four, smoky white, irregularly marked with light

light and darker brown blotches, rather more distinct and paler at the smaller end.

Larus parasiticus.

Found on the Isle of Glass, or Scalpa, most plentifully.

Several varieties were examined, and confirmed the remark, that there is no external mark of distinction between the sexes. Nest upon the slope of a marshy hill, composed of dried grass. Eggs very light brown, marked irregularly with deep-seated dark brown blotches.

Larus tridactylus.

On the Isle of Glass, Troup Head, Fowls' heaugh, near Montrose, Isle of Bass, in the Forth.

Nest composed of dried conferva. Eggs white, with black and brown spots. The young are brought to Edinburgh market, with the gannet, and sold as articles of food.

Larus marinus.

Observed on the Isle of Glass.

Larus argentatus.

Plentiful at Lesser Cumbray, in the Firth of Clyde; no other gulls, not even the mottled variety of their own species, on the island.

Larus fuscus.

About a mile South of Troup Head, also on South Ronaldsha, Pentland Skerrie, and Copinsha. On many remote rocks were mottled varieties of gulls, but none any where near the breeding-places.

CHARADRIUS CALIDRIS.

I observed this species at the Mull of Cantire. 2d June.

ANAS MOLLISSIMA.

Most plentiful, it is said, at Papa Westray. I found a nest at Pentland Skerrie, very near the lighthouse.

MERGUS SERRATOR.

On the fresh-water lochs in the Isle of Glass. This specimen agrees with the description of the adult male, except that the head is variegated with dull ferruginous.

The trachea determined the species and sex.

MERGUS MERGANSER.

It will perhaps appear presumption to attempt to remove those doubts respecting this and the Dun-Diver, which have so long existed.

The following reasons seem almost convincing that the *M. Merganser* and *Castor* are merely varieties of the same species, depending upon the age and sex. The tracheæ of the males, the vertebræ of the neck (which vary much in aquatic birds), and the intestines, in structure, number, and dimensions, are exactly similar in both. One specimen, shot last April, resembled in general plumage the *M. Castor*, except that there was little or no crest, and the head was much variegated with black. Two specimens of *M. Merganser*, and two of *M. Castor*, now at Edinburgh, have each only eighteen feathers in the tail.

This bird is not scarce in Scotland during the winter season. It is called the *Skeldrake*, and is confounded probably with *Anas Tadorna*, which is more frequently met with in summer.

Tetrao Tetrix.

The trachea is considerably enlarged at the division of the bronchiæ; the enlargement is not bony, like the labyrinths of some of the *Duck* genus, but soft and pulpy. As Dr. Latham seems to think that there is no peculiarity of structure in the trachea of any of the British *Grous**, perhaps this may be a disease, though it has not much of that appearance; if not, it is a singular lusus naturæ.

* Linn. Trans. vol. iv. p. 100.

VII. *An Account of some remarkable Shells, found in Cavities of a calcareous Stone called by the Stone-masons* Plymouth-rag. *By William George Maton, M.D. V.P.L.S. &c. and the Rev. Thomas Rackett, A.M. F.L.S. &c. With some additional Observations relative to the Mytilus lithophagus, by Mr. James Sowerby, F.L.S.*

Read June 5, 1804.

The specimen of the stone above alluded to, which was lately presented to the Linnean Society by Mr. James Sowerby, and which, from containing some shells that appeared to be of a doubtful species, was referred to us by the President for examination, is of a deep ashen hue, variegated with red, and contains a multitude of smooth regular cavities formed by *Mytilus lithophagus*. It was accidentally noticed by Mr. Sowerby, as it lay for the repair of a road, in the suburbs of London. Making inquiries among the stone-masons in his neighbourhood, he was informed by them that it was brought from Plymouth: but this they seem to have inferred from no other circumstance besides its *resemblance* to a stone procured from a ridge of rocks in the vicinity of that town; and it has not been possible to ascertain positively whence it first came. After we have given some account of the shells contained in it, there will appear a great improbability of its being procured from any part of our own island, (unless indeed from some spot on the coast, where it may have been left after it had served the purpose of ballast,) for but

one

one of these shells has hitherto had any legitimate claim to be considered as a native of Great Britain.

The species which principally attracted the notice of the members present, and which, from its singularity, was the cause of the fragment of stone being presented to the society by Mr. Sowerby, we find, after due examination, to be no other than the *Mytilus lithophagus*, of Linnæus,—a well known shell, and described very fully by many different authors, in consequence of its remarkable property of perforating rocks and other stony bodies. The circumstances which at first seemed to authorise its being considered a distinct species are two beak-like processes, (one from the extremity of each valve), apparently forming a part of the valves themselves, and crossing each other in some degree like the two mandibles of the bird called by Linnæus *Loxia curvirostra*, or *Cross-bill*. On separating the valves, however, these processes prove to be wholly external and adventitious, and the valves to be "*extremitatibus utrinque rotundatis*," the words employed by Linnæus to characterize the true *Mytilus lithophagus*, which thus often acquires an inseparable calcareous coating, during the solvent process it employs for forming cavities in that kind of stone. The shell is very accurately figured with these artificial appendages in the 221st plate of the *Tableau Encyclopédique*, article *Vers Testacées* (fig. 8. *a*. 8. *b*.) One or two of the specimens, however, differ from the ordinary *Mytilus lithophagus* (the shape of which is pretty exactly cylindrical) in having a sort of angular protrusion on one side; this is a deviation from regularity of outline common among the *Mytili*, and does not appear to us to warrant the construction of a new species. It was noticed by Gualtieri, who, in figuring three specimens of *Mytilus lithophagus* (*tab.* 90. *f.* D.) has represented one of the form we allude to.

Some

Some of the fragments of stone in the possession of Mr. Sowerby contain another species of *Mytilus*, which evidently intruded itself into the cavities made by the former, for it does not fit those cavities, any more than the *Ostreæ* hereafter to be described; this species is the *Mytilus bidens* (of the *Syst. Nat.*) figured in Chemnitz's *Conchilien Cabinet*, *t.* 83. *f.* 743. In some of the cavities are valves of *Ostrea Ephippium*, of a very diminutive size however, and to be considered as a variety of that species, for they do not assume the very curved form which gave rise to the trivial name. There are also, among these intruders into the habitations of *Mytilus lithophagus*, the *Mya dubia* of Pennant, and the *Arca reticulata* of Gmelin, besides three other species of *Testacea*, which we at present forbear to make any report upon, not having quite satisfied ourselves whether they be not hitherto undescribed. Suffice it to say, that one of them *approaches* to the *Ostrea Perna* of Linnæus; and there is a species of *Venus* (of a *cardoid* form), which is rather too much worn and damaged to admit of being accurately and perfectly described, but which, from appearing to form a cavity for itself in a manner similar to the other lithophagous *Testacea*, deserves to be particularly examined.

Additional Observations relative to the Mytilus lithophagus, by Mr. Sowerby.

I BEG leave to lay before the Linnean Society a description of the difference that exists between the *Mytilus lithophagus* and the shell of that kind which I lately had the honour to present to the Society.

Gmelin's description of *Mytilus lithophagus* is this:—"*testa nonnunquam*

nonnunquam pollicem lata et ultra 3 *longa, Maris Mediterranei fragili, Indici coriacea, striis transversis arcuatis exarata, nigra, badia aut virescente, intus opalino-cærulescente, albido-argentea, aut margaritacea.*" Linnæus does not mention these *striæ*, and he quotes Rumpfius's figure, which does not express them; but perhaps we may say it is scarcely worth quoting. I had not an immediate opportunity of examining his other quotations. Respecting the shells which I had the honour of presenting to the Society, Dr. Maton, V.P.L.S. and the Rev. Mr. Rackett, F.L.S. have been so good as to give their opinion, in a very learned and ingenious paper, which appears to show that those are varieties of *M. lithophagus.* We do not mean to contradict such great authority; but having the opportunity of comparing them by our usual aid of drawings, we avail ourselves of a vacant space in the Society's labours, leaving the whole to their better judgment.

Three or four years since, I found among some stones (perhaps ballast) at the Wapping-docks, a fragment of a calcareous rock. I detached a piece, to examine the nature of the perforations, and found that the *Mytilus lithophagus* (the striated one here figured) filled some of them. These stones appeared to have lain some time out of their proper element; for the animals had apparently been dissolved by putrefaction so long since, that no smell remained. The shells were mostly mutilated: however, upon diligent search, I found one or two sufficient to examine as to the species, and found them to agree with the description of Gmelin as above, and with his reference to the figure of our accurate countryman Lister. In the spring of 1804, some stones (seemingly ballast stones) were laid in Tothill-fields, where I found those which I presented to the Linnean Society. These, besides a striking appendage, seemingly made independent of

the shell and *epidermis*, are entirely destitute of *striæ*. We say no more on the subject at present, as the knowledge possessed by the two gentlemen mentioned above, renders them more able to add what is further necessary. They will no doubt settle it most ably, and I have promised to assist in making drawings to elucidate their former paper. If the Society should think it useful, I will add more finished drawings of the *Mytilus lithophagus striatus*, by which name I will now distinguish one. The annexed outlines are perhaps sufficient to explain the subject.

TAB. VI.

Fig. 2. *Mytilus lithophagus striatus.*

Fig. 3. A shell without the *striæ*, and with the calcareous appendages at the top.

Fig. 4. One of the same, with the calcareous appendage detached, to show that it has not the transverse *striæ*.

Fig. 5. The inside of the same.

Note by Dr. Maton.

THE *striæ* alluded to by Mr. Sowerby, and described in the *Systema Naturæ*, by Gmelin, did not escape the attention of Linnæus, who, in his description of *Mytilus lithophagus*, in the *Museum Ludovicæ Ulricæ Reginæ*, makes use of the following words, *viz.* "*oblique dimidiato transversim striata.*" These words apply to the striated appearance, much more precisely than his editor's, and indeed are as aptly descriptive of it as possible, which will be discovered by comparing them with Mr. Sowerby's figure

figure (2). The *striæ*, however, do not form any part of the *specific characters*, as given either by Linnæus, or by Gmelin, and do not therefore seem to us to warrant any other scientific distinction being founded on their absence than that of a *variety*, especially as in other particulars all the specimens figured by Mr. Sowerby closely correspond.

VIII. *Account of the Bromus triflorus of Linnæus, in a Letter to Alexander M'Leay, Esq. Sec. L. S. By James Edward Smith, M.D. F.R.S. P.L.S.*

Read December 4, 1804.

Norwich, Dec. 1, 1804.

DEAR SIR,

Mr. Crowe has this autumn discovered a grass on his estate at Saham, Norfolk, about twenty-six miles from Norwich, which is new to our British Flora, and indeed very little known to botanists in general, the *Bromus triflorus* of Linnæus, first mentioned by him in the 2d edition of *Species Plantarum*, 115.

No specimen of this grass is to be found in the Linnæan herbarium. It appears to have been described on the authority of Forskähl, as being found in Denmark. The only synonym is that of Scheuchzer, *p.* 511. *t.* 5. *f.* 19, from which authority it should seem to have been that Germany was also mentioned as its place of growth. Linnæus in his manuscript has added a quotation of *Fl. Danica, t.* 440.

I have Danish specimens, collected by my late friend Mr. Stephen Delessert, jun., which exactly accord with the above-mentioned figures and descriptions, and which are doubtless the *B. triflorus*. Mr. Crowe's specimen no less exactly agrees with mine. I hope to be able another season to obtain a supply for the collection of the Linnean Society and my friends.

Some later synonyms of the grass in question are involved in obscurity. Pollich and Haller are quoted in Reichard's *Systema Plantarum*,

Plantarum, as well as Reyger and Moench. The two latter I have not consulted. Pollich's synonym is doubtful, because he describes the awn of the lowermost floret as springing from the top of the glume, that of the next from the back, and those of the third and fourth florets, if there be more than three, which often happens, from the base. I find them all nearly terminal. This author, though an accurate observer, affords a lamentable example of want of botanical philosophy, as well as neglect of the Linnæan rule, respecting natural genera, which I have often had occasion of late to mention, in saying that the above differences in the insertion of the awns might perhaps serve to mark this grass as a new genus. This circumstance ought rather to have taught him, that the insertion of the awn is not infallible as marking a genus at all; on which subject I have already, in the 4th volume of our Transactions, ventured to offer some hints, proposing the strongly fringed or pectinated inner glume as a much better generic mark of *Bromus*. For this reason I cannot but consider the plant now before us as a *Festuca*, its inner glumes being finely downy at the edge, as in that genus, not fringed, nor are the awns always inserted below the top. Sometimes they are as perfectly terminal as in any *Festuca*.

The synonym of Haller, "*Bromus paniculâ laxâ, locustis quadrifloris, brevissimè aristatis, Hall. Helv.* No. 1511," is adopted by Reichard, on the authority of Moench, but it is pointed out by the suggestion of Haller himself. His description, however, particularly the short awns, and his quotation of Scheuchzer, *t.* 5. *f.* 18, as well as of Ray, evidently belong rather to *Festuca elatior*. I should without scruple have rejected Haller's synonym, but for a specimen in Mr. Davall's herbarium, gathered by his friend Mr. Du Cros, and marked "*Bromus, H.* 1511, *var. minor, longiùs aristata.*" This specimen is *Bromus triflorus*. Probably therefore

therefore the Swiss botanists may have confounded them, though the two plants seen together are extremely unlike each other. I have, in the collection of Mr. Davall, a regular series of Haller's grasses by themselves, all numbered, by what authority I know not, in which No. 1511. is *Festuca elatior*, and No. 1510. *Bromus triflorus*; but the description and synonyms of Haller certainly belong to *B. giganteus* of Linnæus, my *Festuca gigantea*, a plant nearly allied indeed to that of which I have been treating, both in generic and specific characters, but, I think, distinct.

I shall conclude by remarking that the rich and interesting Flora of Switzerland, though admirably illustrated by Haller, as far as his own observation went, requires great corrections with regard to synonyms. To this subject my lamented friend, to whose herbarium I have referred above, had given great attention, but he left it incomplete. When I have made good some prior engagements, I hope to communicate the fruit of Mr. Davall's labours and my own, in some shape or other, to the world.

I remain, dear sir, faithfully yours,

J. E. Smith.

IX. *Description*

Linn. Trans. VIII. tab. 7. p. 279.
J.H. 1802

IX. *Description of a Species of Jerboa, found in the upper Provinces of Hindustan, between Benares and Hurdwar. By Lieut. Col. Thomas Hardwicke, F.L.S.*

Read December 18, 1804.

Dipus indicus.

Dipus palmis tetradactylis, plantis pentadactylis, caudâ elongatâ apice floccosâ fuscâ, corpore fulvo lineolis fuscis.

Tab. VII.

The provincial name of this animal is *Hereena-moos*, alluding to its colour, which is that of the common antelope, so numerous on the plains of Hindustan, and there called *Hereen*. *Moos* is the name for a rat.

It is about the size of the common house-rat; its head large in proportion to the body; ears large, rounded, erect, naked, or very obscurely hairy; nose much rounded, furnished with numerous long fine hairs or whiskers; the upper jaw longer by half an inch than the lower; upper lip slit. In each jaw are two incisores; those of the lower twice the length of the upper ones, which are broader, and longitudinally furrowed. Eyes large and of a shining black; legs unequal in length; the fore legs one-third shorter than the hind ones, with four toes forward, and a small tubercle in the place of a thumb. On the hind feet five toes, the three middle ones twice the length of those of the fore feet; the exterior lateral toe hardly half the length of the middle

dle ones; and the interior toe still shorter. The nails or claws slender, awl-shaped, white; the feet thinly covered with soft hair. Length of the animal from nose to tail six inches and an half; length of the tail seven inches, its form cylindrical, but tapering, thinly covered with short hair to within the last two inches, and ending with a compressed tuft of long dark brown soft hair. The prevailing colour is a bright bay, mixed on the upper parts of the body with pencil-like strokes of dark-brown, longitudinally disposed; the head is of a lighter colour, particularly about the eye and lower parts of the cheeks; all the under parts are white, and the hair at the roots of a soft, silky nature, and ash-coloured.

In weight this animal seldom exceeds five ounces. The figure accompanying this paper is the natural size of a male subject, which weighed 4 ounces 12 drachms, avoirdupoise.

These animals are very numerous about cultivated lands, and particularly destructive to wheat and barley crops, of which they lay up considerable hoards, in spacious burrows, near the scenes of their plunder. They cut the culms of the ripening corn just beneath the ears, and convey them thus entire to one common subterraneous repository, which, when filled, they carefully close, and do not open for use till supplies abroad become distant and scarce. Grain of all kinds is their favourite food; but, in default of this, they have recourse to the roots of grass and other vegetables. About the close of day, they issue from their burrows, and traverse the plains in all directions, to a considerable distance; they run fast, but oftener leap, making bounds of four or five yards at a time, carrying the tail extended in a horizontal direction. When eating, they sit on their hind legs like a squirrel, holding the food between their fore feet. They never appear by day, neither do they commit depredations within doors. I have

have observed their manners by night, in moonlight nights, taking my station on a plain, and remaining for some time with as little motion as possible. I was soon surrounded by hundreds at the distance of a few yards; but on rising from my seat, the whole disappeared in an instant, nor did they venture forth again for ten minutes after, and then with much caution and circumspection.

A tribe of low Hindus, called Kunjers, whose occupation is hunting, go in quest of these animals at proper seasons, to plunder their hoards of grain; and often, within the space of twenty yards square, find as much corn in the ear as could be crammed into a common bushel. They inhabit dry situations, and are often found at the distance of some miles out of the reach of water to drink. In confinement this animal soon becomes reconciled to its situation, and docile; sleeps much in the day, but when awake feeds as freely as by night. The Hindus above mentioned esteem them good and nutritious food.

X. *Characters of three new Species of Boronia. By James Edward Smith, M.D. F.R.S. P.L.S.*

Read December 18, 1804.

Among a number of new or rare plants, with which Mr. Menzies has enriched my herbarium from the western coast of New Holland, are three species of *Boronia*, all hitherto nondescript, of which I beg leave to offer some account to the Linnean Society.

This beautiful genus was first published in my Tracts on Natural History, in 1798, p. 287. Four species are there described and figured, of which the *B. pinnata* alone has been mentioned by any other writer, being the only species hitherto seen alive in Europe. Of this Mr. Andrews has published a figure in his *Botany*, and Mons. Ventenat has also given a figure and description of the same in his *Jardin de la Malmaison*. It is remarkable that *B. serrulata* has not yet been introduced into our gardens, being plentiful, and much admired, at Port Jackson, and probably not difficult to be raised from seed.

The essential generic character of *Boronia*, consisting in the *antheræ* being situated each on a peculiar slender footstalk, quite distinct from the proper filament, and inserted somewhere about the blunt or glandular top of that part, is confirmed by these new species, all of which have the same structure, only differing among each other as species of a good natural genus usually do differ in the particular conformation of that part, whatever it may be, whose general figure marks the generic character.

racter. These three new species, moreover, differ so much among themselves, as well as from the other four, in the form of their leaves, and yet the whole seven have so general a conformity in those organs in some respects, that the most elegant specific characters, as well as specific names, are easily deduced from thence.

It will be best to exhibit the characters of the whole at one view, in order to show how they differ, as well as to make some slight corrections in those species already published.

* *Foliis compositis.*

1. BORONIA *pinnata*, foliis impari-pinnatis integerrimis glabris, pedunculis axillaribus dichotomis, filamentis apice obtusis glandulosis. *Tracts*, *t.* 4. *Andrews*, *t.* 58. *Venten. Malmais. t.* 38.

Gathered near Port Jackson, by Dr. White. ♄.

2. BORONIA *alata*, foliis impari-pinnatis crenatis: rachi pilosâ, pedunculis dichotomis, filamentis obtusis, antheris subterminalibus.

Discovered at King George's Sound, on the west coast of New Holland, latitude 35°, by Mr. Archibald Menzies, F.L.S. ♄.

This appears by the dried specimens to be a larger and somewhat more handsome shrub than even the preceding. It differs in having hairs on the branches, as well as on the common footstalk of the leaves underneath, particularly at the joints. That part is also much more winged. The leaflets, mostly five pair, are broad, elliptical, revolute and crenate, hairy at the back of the nerve. Bunches of flowers nearly terminal, hairy, with fringed bracteæ. Flowers larger than in *B. pinnata*; their petals whitish on the upper side. Filaments fringed all the way up, each terminating in a round knob, nearly on the top of which stands the tender capillary stalk bearing the *antheræ*.

** *Foliis simplicibus.*

3. Boronia *serrulata*, foliis trapeziformibus acutis inæqualiter serrulatis, pedunculis aggregatis terminalibus, filamentis apice cordatis hispidis. *Tracts, t. 5.*

Sent by Dr. White, with coloured drawings, from Port Jackson. ♄.

4. Boronia *crenulata*, foliis obovatis mucronulatis crenulatis, pedunculis axillaribus terminalibusque unifloris, filamentis apice obtusis glandulosis.

Gathered at King George's Sound, by Mr. Menzies. ♄.

At first sight this appears only a small variety of the last, the leaves especially being but about one third the size of those of that species; but, on examination of the flowers, sufficient marks of distinction are to be found. Even the leaves differ essentially in being obovate, obtuse with a small point, and crenulated, not serrated, about the extremity. The flower-stalks are axillary as well as terminal, all situated towards the top of the branches, and all simple and single-flowered. Flowers small, red, with a fringed calyx. Filaments densely fringed, obtuse (by no means inversely heart-shaped, which is so remarkable in *B. serrulata*), glandular, scarcely at all bristly, bent and swelling below the top, the footstalks of the *antheræ* nearly terminal.

5. Boronia *denticulata*, foliis linearibus denticulatis, pedunculis corymbosis, filamentis apice obtusis glandulosis.

Gathered at King George's Sound, by Mr. Menzies. ♄.

This approaches more to the habit of the following, *B. parviflora*, but is larger in all its parts. The leaves are much narrower than in any other known species, being quite linear, about an inch long, smooth, bluntish, though for the most part tipped with a small point, their margins regularly, closely, and finely toothed;

toothed; the base tapers down into a sort of footstalk. The flowers grow in axillary or terminal *corymbi*, with smooth stalks and small deciduous *bracteæ*. Calyx smooth. Petals of a pale rose-colour, with a dark-red rib. Filaments slightly fringed, their top obtuse, glandular, destitute of hairs. *Antheræ* on lateral horizontal stalks.

6. Boronia *parviflora*, foliis obovato-lanceolatis obsoletè crenatis, pedunculis unifloris, filamentis apice oblongis glandulosis. *Tracts*, *t.* 6.

Gathered near Port Jackson, by Dr. White. ♄.

7. Boronia *polygalifolia*, foliis linearí-lanceolatis integerrimis, pedunculis axillaribus solitariis unifloris, filamentis apice abbreviatis obtusis. *Tracts*, *t.* 7.

Gathered near Port Jackson, by Dr. White. ♃.

What is chiefly remarkable in this last species, besides its being herbaceous, is the diversity in the situation of the leaves, some of which, and consequently the flowers, are alternate, others opposite, or even three together, on different branches from the same root. I have remarked other instances in New Holland plants of a similar irregularity, some of which I shall take a future opportunity of mentioning.

Norwich, Dec. 17, 1804.

XI. *An*

XI. *An Account of a Storm of Salt, which fell in January*, 1803. By Richard Anthony Salisbury, Esq. F.R.S. and L.S.

Read February 5, 1805.

Perhaps there never was any period, gentlemen, in which the science of natural history, in all its various branches, received such ample additions, and solid improvements, as during the few years that you have associated for the purpose of promoting it. How rare and valuable your several communications have been, appears from the very high character your Transactions now universally hold, and which allows me to indulge the pleasing fancy, that the genius of that immortal master whose name we are distinguished by, will still hover round us. Professor Swartz, in his Prodromus, has taken a very appropriate motto from the sacred writings, and flatters this country so far as to use the English translation. *Many shall run to and fro, and knowledge shall abound*, is the passage he quotes; but the extraordinary fact which I have now to relate to you, proves that something is yet to be learnt at home.

On the 14th of *January*, 1803, I observed an east window of my house, which had been cleaned a few days before, covered on the outside with an apparent hoar frost. When the servant who was sent to remove it, came and told me it was *salt*, I was astonished, and still more so, upon going out, to find this substance almost as abundantly deposited in the garden and neighbouring fields. I was totally at a loss to account for so curious

and

and unusual a phænomenon, and the next morning, with my gun in my hand, I walked over a circuit of twenty miles, before I ventured to trust the evidence of two of my senses, and bring some branches from the hedges, still salt, to Sir Joseph Banks. He immediately removed most of my difficulties, by suggesting that this *salt* must have been taken up from the sea by the gale of wind, which had blown with great force from the east during most of the preceding week, and he honoured me with his command diligently to examine the effects of this storm upon vegetation the ensuing year: the following are such observations as I was able to make.

The garden at Mill Hill is well sheltered from the east: of course less damage happened to the trees and shrubs in it, than in many that were more exposed. The *Cedars of Libanus* suffered considerably: in one near the house, all the branches on the east side became brown, and continued so till the middle of *May*, when they put forth their new verdure very sparingly, the ends of a great number being entirely destroyed. The *Cembra Pines* and *Pinasters* also looked more than usually brown, losing their old foliage earlier in the summer. Near Hendon there is a row of *Weymouth Pines* and *Spruce Firs*, from 50 to 60 feet high, planted alternately in a rich deep soil: though this spot is particularly sheltered from the east by the opposite woods, the branches of *Weymouth Pines* on that side were defoliated from the bottom to the top, while the *Spruce Firs* remained uninjured. The *Scotch Fir*, when exposed to the full force of this wind, appeared not exempt from damage, and this was no where more conspicuous than upon Hounslow-Heath; but what is remarkable, some of the clumps there wholly escaped, although no obvious reason occurs from their situation, why they should not all have suffered alike. The *Portugal Laurel* seems the next evergreen

green materially injured by this *Salt Wind*, all the leaves exposed to it being more or less scorched, and in some places even the tops of the branches mortified. The *Furze* of our commons, if I may judge from the east side being invariably most decayed, is also affected by it, yet I saw this plant in abundance in Devonshire and Cornwall, where it must perpetually be exposed to such blasts.

The farthest place to the westward that I visited the following summer was Bulstrode, where many of the trees had suffered severely: from thence to the mouth of the Thames, the last place where this wind could have taken up any salt spray, cannot be a less distance than seventy miles. In travelling through part of Essex so late as *September*, the effect of the *Salt Wind* was still more and more evident as the sea was approached. About South End, I was told the *Hollies* had been nearly defoliated, and even the *Oaks* and *Ashes* then appeared to have fewer leaves on their east than west sides. The *Laurustinusses* generally seemed burnt as if by fire, with scarce any symptoms of vegetation in their upper branches. I looked in vain for the *Bay-tree* during my whole ride.

As for the more tender esculent vegetables, few escaped; the first crop, of *Peas*, *Beans*, *Early Radishes*, and young *Lettuces*, being generally destroyed. Of our garden flowers, *Ranunculusses* instantly perished; but their relations in natural affinity, *Winter Aconites* and *Anemonies*, as I have since had an opportunity of remarking, are not at all affected by this wind. *Snowdrops*, *Crocusses*, *Hyacinths*, and *Narcissusses* are also insensible of its influence. Those plants that flourish near the sea were naturally protected. The beautiful *Cypress*, *Red Cedar*, *Evergreen Oak*, *Arbutus*, *Myrtle*, *Phillyrea*, *Alaternus*, *Rosemary*, *Lavender*, and, I believe, *Laurel* are of this number. *Wheat* also escaped,

which

which it is well known thrives in fields immediately open to the sea.

I do not find that any account of these *Salt Winds* has been hitherto recorded, yet I fear they visit us annually. Last year, 1804, I again observed one on the 11th and 12th of *February*, while at Norwich with our President: this also reached Middlesex, most of the *Peas* which had previously survived the cold of 14 degrees of Fahrenheit's thermometer, being on those nights cut off under a much higher temperature.

That it is the *Salt* merely, and not the *Cold*, which produces these deleterious effects upon so great a number of vegetables, is fully confirmed by a similar wind noticed by Sir Joseph Banks, some years ago, in Lincolnshire: it was early in *September*, and blew very steadily for four or five days due east, when every leaf on that side of the trees and hedges became brown. Were a wind thus loaded with the spray of salt-water to blow during the months of *May* and *June*, when vegetation is in activity, it is difficult to calculate the extent of the mischief it would occasion. All persons who have had the care of plants at sea, know that, whenever the wind is strong enough to turn over the tops of the waves into what the sailors call *White Caps*, it is necessary to keep the plants closely covered up, the air being then so impregnated with salt, that, if they be only a short time exposed to it, they will perish.

To the above account I wish I could add any satisfactory explanation of the manner in which *Sea Salt* acts upon the texture of vegetables. Is it by stopping the pores of the leaves, and preventing perspiration? Can the wax which covers so many maritime plants with a fine glaucous hue, or the woolly pubescence so conspicuous upon a still greater number, contribute

tribute to preserve them from the external action of the salt? Is there any analogy between the modes in which salt acts when applied externally to vegetables, and the more imperfect animals, such as slugs and worms? Future observations and judicious experiments will probably throw great light on this matter.

XII. *Description*

XII. *Description of Seven New Species of Plants from New Holland. By Edward Rudge, Esq. F.R.S. and L.S.*

Read March 5, *and April* 16, 1805.

The botany of New Holland is as yet more imperfectly known in proportion to the extent of the country, than that of any other portion of the globe.

The collections which have hitherto found their way from thence to Europe, have been made entirely in the vicinity of the coast, the more interior parts remaining as yet to us a Terra incognita: and from the frequent and determined opposition which the new Settlers in those parts have experienced from the Natives, as appears by the most recent accounts, it must be many years before any accurate knowledge can be acquired of the inland parts.

No General Flora of this extensive country has yet been even attempted *; and all the Genera and Species hitherto described and figured, have been given either in detached parts, or with a view to exhibit a specimen of its vegetable productions. "The Botany of New Holland," some Papers in our Transactions by our learned and esteemed President, a few Species which have unaccountably found their way into Cavanilles' 4th volume of Icones, and some detached figures in the Botanist's Repository, and in the Voyage of La Billardière, constitute the principal part

* Since this paper was read, La Billardière's work on the Plants of New Holland has been published.

of what has hitherto been presented to the Public from this source. I flatter myself, therefore, that the descriptions of the seven following new Species may not be unacceptable to the Linnean Society.

Since this Paper was written, figures of *Tetratheca glandulosa* and *T. ericæfolia* have appeared in *Exotic Botany*, which made me hesitate on the propriety of inserting figures and descriptions of the same plants; but after a comparison, I found a sufficient difference between those figures and mine, to induce me not to alter my original intention.

STYPHELIA AMPLEXICAULIS.

Pentandria Monogynia.

S. corollæ limbo recurvo-patente hirsutissimo; spicis axillaribus longe pedunculatis; foliis alternis, cordatis amplexicaulibus.

TAB. VIII.

Frutex erectus, ramosus: *Rami* longissimi.
Caulis parum flexuosus, villosus, rubescens, striatus.
Gemmæ axillares.
Folia alterna, cordata, amplexicaulia, multinervia, subtus albida, subtus et præcipue margine villosa, oris revolutis.
Flores spicati.
Bracteæ duæ, calyce breviores, acutæ.
Calyx quinquepartitus, *laciniis* lanceolatis acutissimis rigidis.
Corolla tubulosa, brevissima, calyce longior, extus lævis; *limbis* quinque patentibus recurvis intus hirsutissimis.
Nectarium cotyliforme, quinquelobum, læve.
Stamina: *Filamenta* quinque, corollâ multo breviora, tubo inserta: *Antheræ* longæ, versatiles, supernè acutæ, infernè latiores, obtusæ.

Pistillum:

Linn. Trans. VIII. tab. 8. p. 292.

Styphelia amplexicaulis.

Anne Rudge del.

Linn. Trans. VIII. tab. 9. p. 293.

Linn. Trans.

Cyathodes laurina.

Pistillum: *Germen* parvum, globosum, striatum, læve: *Stylus* brevis: *Stigma* obtusum.

Habitat prope Port Jackson in Nova Hollandia.

Fig. 1. Planta magnitudine naturali.
2. Flos integer expansus, magnitudine auctus.
3. Calyx cum bracteis.
4. Corolla aperta.
5. Nectarium. Germen. Stylus.
6. 7. Antheræ a latere et fronte visæ.

Cyathodes laurina.

C. foliis ovali-lanceolatis, integerrimis, glabris, nervosis; spicis gracilibus, terminalibus.

Tab. IX.

Frutex ramosus.

Caulis erectus, gracilis, parum angulatus, lævis.

Gemmæ parvæ, persistentes, supra axillares.

Folia petiolata, frondosa, ovali-lanceolata, integerrima, obtusa, supra glabra, subtus lævia, *nervis* quinque ad septem ut in Corno parallelis, planiuscula.

Petioli breves.

Flores spicis gracilibus, flexuosis præcipuè ante expansionem corollæ, multifloris: *Pedunculis* angulatis, terminalibus, rubescentibus.

Bracteæ tres sub calyce imbricatæ, quarum duæ superiores oppositæ, ovatæ, exquisitè ciliatæ, carinatæ.

Calyx pentaphyllus: Foliola etiam imbricata, et structurâ bracteārum sed magis orbicularia.

Corolla tubulosa, brevis, calyce duplò longior, infundibuliformis,

extus

extus lævis, *laciniis* quinque patentibus, recurvis intus hirsutis.

Nectarium cotyliforme, quinquelobum, læve.

Stamina: *Filamenta* quinque, corollâ breviora, versus apicem incrassata, inter limbi lacinias inserta: *Antheræ* oblongæ, recurvo-deflexæ, obtusæ.

Pistillum: *Germen* ovato-pyramidale, striatum, læve: *Stylus* vix ullus: *Stigma* simplex.

Habitat prope Port Jackson in Nova Hollandia.

Fig. 1. Planta magnitudine naturali.
2. Flos integer expansus magnitudine auctus.
3. Calyx.
4. Corolla aperta.
5. 6. Antheræ a latere et fronte visæ.
7. Nectarium. Germen. Stylus.

TETRATHECA GLANDULOSA.

Octandria Monogynia.

T. foliis ternis linearibus, rarè serrulatis: calyce pericarpioque pilis glandulosis hirsutis.

TAB. X.

T. glandulosa. *Smith Exot. Bot. t.* 21.

Frutex humilis.

Caulis gracilis, erectus, internodiis foliis vix longioribus, parum decompositus vel ramis saltem longis simplicibus.

Folia tenuia, linearia, rarè serrulata apice acuto incurvo, ad lentem scabriuscula.

Flores ex axillis plerisque superioribus solitarii.

Bracteæ ad basin pedunculi solitariæ, minutæ.

Pedunculi

Linn. Trans. VIII. tab. 10. p. 294.

Tetratheca glandulosa

Annie Rudge del.

Linn. Trans. VIII. tab. II. p. 295.

Anne Pratt del.

Tetratheca ericaefolia.

Pedunculi graciles, foliis breviores, versus apicem incrassati, pilis raris glandulosis aspersi.

Calyx profundè 4-fidus, laciniis ovatis, pilis glandulosis aspersus.

Corolla : Petala rosea, obovata, repandula, utrinque lævia.

Stamina : Filamenta octo, brevia lataque, atro-purpurea, linearia, basi imâ dilatatâ, glabra.

Antheræ filamentis confluentes structurâ Congenerum si probe inspicias; loculis quatuor angustis, duobus anterioribus multo brevioribus.

Pericarpium subrotundum, pilis glandulosis inter filamenta præcipue patentibus dense vestitum.

Stylus sensim angustatus.

Stigma simplex.

Habitat prope Port Jackson in Nova Hollandia.

Fig. 1. Planta magnitudine naturali.
2. Flos integer, expansus.
3. Corolla cum calyce facie exteriori exposita.
4. Petalum.
5. Calyx. Stamina.
6. Anthera dorso visa.
7. Eadem transverse secta.
8. Pistillum.

Tetratheca ericæfolia.

T. foliis quaternis quinisve, verticillatis, calyce pericarpioque fere glabris.

Tab. XI.

T. ericifolia. *Smith's Exot. Bot. t.* 20.

Frutex humilis.

Caulis

Caulis gracilis, ramosus, ramis elongatis, basi nudis : Rami floriferi, pilis hirsuti.

Folia quaterna, sæpe quina, verticillata, lineari-lanceolata, margine ad lentem tenuissime serrulata.

Flores solitarii, plurimi, axillares.

Bracteæ ad basin pedunculorum solitariæ, minutæ, subulatæ.

Pedunculi graciles, glabri, foliis longioribus, atropurpurei.

Calyx profunde quadrifidus, pilis rarissimis aspersus : laciniæ ovatæ.

Corolla : Petala rosea, ovalia, utrinque lævia.

Stamina : Filamenta octo, brevissima lataque.

Antheræ filamentis confluentes, interiore parte rubræ, exteriore atropurpureæ ; loculis quatuor angustis, duobus anterioribus multo brevioribus.

Pericarpium subrotundum,glabrum.

Stylus filiformis.

Stigma simplex.

Capsula pendula, obovata, acuta, compressa, bilocularis.

Semina duo, oblonga, obtusa, pedicellata.

Habitat in eodem loco cum præcedenti.

Fig. 1. Planta magnitudine naturali.
2. Calyx. Stamina.
3. Anthera facie interiore exposita.
4. Eadem transversim secta.
5. Pistillum.
6. Capsula.
7. Semen.

Obs. Hæc Species differt a præcedente numero et dispositione foliorum, quæ non serrulata ; petalis majoribus tum pedunculis longissimis qui glabri sunt. Rami floriferi insuper hujus pilis hirsuti, illius glabri.

Linn. Trans. VIII. tab. 12. p. 297.

Bacchea linifolia.

Anne Rudge del.

Bæckea linifolia.

Octandria Monogynia.

B. caule gracili, lævi; foliis longis linearibus glabris, mucronatis.

Tab. XII.

Frutex gracilis.

Caulis teres, cuticulâ membranaceâ tectus, internodiis foliis brevioribus. Rami longi, alterni.

Folia regulariter opposita, linearia, apice acuminata. Petioli brevissimi.

Flores axillares, solitarii, pedunculati, plerumque oppositi, minimi, in ramulis sparsis.

Bracteæ nullæ.

Calyx turbinatus ut in Leptospermo, exquisitè quinquedentatus, laciniis margine et apice attenuatis.

Corolla: Petala quinque, subovata, unguiculata.

Stamina: Filamenta octo receptaculo inserta, brevissima, incurvata, inferne latiora. *Antheræ* subrotundæ, bilobæ.

Stylus corollâ brevior.

Stigma bifidum, capitatum.

Habitat prope Port Jackson in Nova Hollandia.

Fig. 1. Planta magnitudine naturali.
2. Corolla facie interiore exposita, magnitudine aucta.
3. Calyx. Stylus. Stigma.
4. Petalum.
5. Anthera dorso visa.
6. Eadem fronte spectata.
7. Germen. Stylus. Stigma.
8. Semina.

BÆCKEA DIOSMIFOLIA.

B. caule ramoso, scabro; foliis quadrifariam imbricatis, obovato-cuneatis.

TAB. XIII.

Frutex erectus, ramosissimus.

Caulis erectus, ramosus. Rami et ramuli sparsi.

Folia brevia, quadrifariam imbricata, obovato-cuneata, enervia, nitida, glandulis hujusce generis abundantia, serrata, margine ipso membranaceo pellucido.

Flores plurimi, fasciculos simulantes, pedunculati, axillares.

Bracteæ solitariæ, oblongæ, mucronatæ.

Calyx turbinatus, viridis, quinquedentatus, *laciniis* albis cuneatis inæqualiter serratis.

Corolla: Petala quinque, subrotunda, utrinque glabra, unguiculata, concava, alba, margine parum ciliata.

Stamina: Filamenta septem ad octo margine receptaculi inserta, incurva, inferne latiora. *Antheræ* subrotundæ, bilobæ, lobis reniformibus.

Pistillum: Germen subrotundum. *Stylus* corollâ brevior. *Stigma* capitatum.

Habitat in Nova Hollandia.

Fig. 1. Planta magnitudine naturali.
2. Flos integer expansus, magnitudine auctus.
3. Calyx. Stylus. Stigma.
4. Petalum.
5. Antheræ dorso et fronte visæ.

LEP-

Linn Trans. VII. tab. 23. p. 298.

Bäckea diosmæfolia.

Stone Pinxit del.

Linn. Trans. VIII. tab. 14. p. 299.

Leptospermum brevifolium

LEPTOSPERMUM BREVIFOLIUM.

Icosandria Monogynia.

L. foliis brevissimis quadrifariam imbricatis obtusis.

TAB. XIV.

Frutex erectus.

Caulis erectus, ramosus. Rami et ramuli plerumque oppositi, cuticulâ membranaceâ deciduâ tecti.

Folia brevissima et obesa, quadrifariam super ramos imbricata, trigona, apice obtusa, integerrima, punctato-scabra, subtus sulco longitudinali exarata.

Flores solitarii axillares, plurimi, pedunculati.

Bracteæ nullæ.

Calyx turbinatus, punctato-scaber, quinquedentatus, laciniis margine et apice attenuatis.

Corolla: *Petala* quinque suborbicularia, alba, unguiculata, utrinque lævia.

Stamina: *Filamenta* 19—20 margine receptaculi inserta, brevissima, incurva, inferne latiora. *Antheræ* subrotundæ, bilobæ.

Stylus filiformis, corollâ brevior.

Stigma capitatum.

Habitat in Nova Hollandia.

Fig. 1. Planta magnitudine naturali.
2. Corolla facie interiore exposita, magnitudine aucta.
3. Petalum.
4. Receptaculum. Stamina. Stylus.
5. Calyx a latere visus.
6. Anthera.
7. Germen. Stylus. Stigma.

XIII. *Observations on the Genera of Trollius, Eranthis, Helleborus, Coptis, and Isopyrum.* By Richard Anthony Salisbury, *Esq. F.R.S. and L.S.*

Read March 19, 1805.

There is no branch of Botany less attended to by modern authors, or on which the solid advancement of the science more depends, than the Genera of Plants; and to reform many of those already constituted is become almost as necessary, as to describe the new ones which are daily introduced. The study of them is indeed difficult, for it requires a profound knowledge of the whole Natural Order to which they belong; but it covers those who excel with glory. Our first vernal flower, the *Winter Aconite*, which I lately saw in great abundance, has given rise to the above reflections. This plant appears to me a distinct genus, nor can I find any affinity whatever in it, to that in which it has hitherto been placed, beyond the common characters of the order; for the same Nectaria occur in several others.

Linnè, in his *Philosophia Botanica*, has left us a precept which cannot be too often inculcated, "*Characterem non constituere genus, sed genus characterem;*" and he has afterwards said with honest exultation, "*Nectarium ne nomine notum erat antequam idem determinavimus.*" His time indeed was too valuable to be employed in cavilling about terms; but as I still think with him, in opposition to the high authority of Jussieu, that the Nectaria

ria of this Natural Order are not Petals, it is incumbent upon me at least to give my reasons for this opinion.

The general laws of Nature are so uniform, that, if we deviate from them on any other ground than that of actual facts, we meet unsurmountable difficulties. The present question, therefore, can only be determined by reasoning from the analogy of other vegetables, which if closely investigated, I think, refute rather than confirm the doctrine of the French School. Now, in the whole class of *Polyandria*, the Calyx is comparatively of little importance, often coloured and by degrees running into the Petals, or entirely wanting: the Corolla on the contrary is large, showy, almost invariably present, and seldom melliferous. Is it not then surely more philosophical to describe those additional parts, which from their very size and figure seem constituted solely to secrete and hold honey, by the appropriate name of Nectaria, than to raise them to the proud and exclusive dignity of the Petals, degrading these last into a mere outer cover? Has it never occurred to Jussieu, that the same reasoning by which he admits these Nectaria to be Petals, would alone overturn his favourite hypothesis of Monocotyledonous plants having no Petals? for there is no difference in this respect between the calcarated Nectaria of *Orchis* and *Aquilegia*.

Vaillant seems to have been the first botanist who suggested the idea that the production of honey was an essential characteristic of the Corolla, referring the other parts of the flower usually so called, to the Calyx. Linnè, as if endowed with a prophetic spirit of the inconsistencies that would spring up from such a definition, has shown its fallacy by an unusual number of examples: first, where Calyx, Corolla, and Nectarium all exist separately in the same flower: secondly, where the Nectarium is attached to the Corolla, both in monopetalous and polypetalous

lypetalous flowers: thirdly, where it resides in the Calyx only: fourthly, where it is placed either on the Filaments, or the Anthers, or the Ovarium, or the Receptacle: lastly, where its structure is quite different from that of every other part, and anomalous. He might also have added instances of the Herba producing melliferous glands, as in *Gossypium*, *Mimosa*, and *Prunus*. There can be no doubt that the Nectaria of this Natural Order are much nearer allied to the Corolla than the Calyx, especially in *Nigella*, *Delphinium*, and *Aconitum*; but it by no means follows, that they are the sole and legitimate Petals, nor will any subtilty reconcile the incongruity of calling one and the same part in *Trollius* and *Caltha*, by two different appellations.

I now proceed to state the characters of the beautiful little plant first mentioned, and some of its neighbouring genera, taking them as I think they should follow each other in a natural series.

RANUNCULACEÆ *Juss.*

Sect. 2. *Pericarpia polysperma.*

TROLLIUS.

Corolla 5—12-petala, decidua. Nectaria 9—17, petalis minora, ligularia. Pericarpia 30—60, sessilia, dense imbricata. *Stipulæ a basibus petiolorum dilatatis vaginales. Folia plura radicalia, digitata, inciso-dentata, herbacea; caulina brevius petiolata. Flores lutei, flavi, vel aurantiaci, terminales*, 1—5, *rarè paniculati.*

sphæricus. Petala arcte conniventia. Nectaria angusta sub staminibus recondita. Stigmata brevissima.

T. europæus. *Smith in Engl. Bot. n.* 28. *cum Ic.*

T. europæus. *Linn. Syst. Veg. ed.* 14. *p.* 518.

Helleborus caule &c. *Linn. Fl. Lapp. p.* 226.

sertiflorus.

sertiflorus. Petala incurvo-patentia, obtusa. Nectaria longe ultra stamina serto posita.
T. asiaticus. *Curt. in Bot. Mag. n.* 235. *cum Ic.*
T. asiaticus. *Pall. Reis. v.* 2. *p.* 528. T. asiaticus. *Linn. Syst. Veg. ed.* 14. *p.* 518.

laxus. Petala incurvo-horizontalia, retusa, crispula. Nectaria parum ultra stamina.
Sponte nascentem prope *Lancaster* in Pensylvania legit H. E. Muhlenberg.
Ni fallor legitima species est: flores flavi, nec aurantiaci, etiam minores quam in præcedente.

patulus. Petala quinque vel sex, incurvo-horizontalia, obtusa. Nectaria parum ultra stamina.
Helleborus ranunculinus. *Smith Pl. Ic. ined. n.* 37. Helleborus niger orientalis, Ranunculi flore &c. *Tourn. Cor. p.* 20. T. humilis flore patulo. *Buxb. Cent.* 1. *p.* 15 *&* 22.
Figuram suam ad specimen Herbarii Tournefortiani delineavit Præses, et fructus in exemplari Banksiano deest: si stipitatus, ad proximum genus referenda erit hæc planta, certe non ad Helleborum ob corollam deciduam.

Eranthis.

Corolla 6—7-petala, decidua. Nectaria 5—7, petalis longe minora, cucullata. Pericarpia 3—11, stipitata, dum pauciora stellata. *Stipulæ parvæ, radicales. Folia* 1—2, *radicalia, digitata, inciso-dentata, herbacea. Flos luteus, disco folii sessilis.*
Nomen ab *εραω amo ανθος flos:* floribus tempestate inclementi amabilibus.

hyemalis.

hyemalis. Petiolus lucidus, æquatus.
Helleborus hyemalis. *Curt. in Bot. Mag. n.* 3. *cum Ic.* Helleborus hyemalis. *Jacq. Fl. Austr. v.* 3. *p.* 1. *t.* 202. Helleborus hyemalis. *Linn. Sp. Pl. ed.* 2. *p.* 783. Aconitum hyemale. *Camerar. Epit. p.* 725.
Petala sæpius 6, interdum 7, nunquam 5 vidi.

HELLEBORUS.

Corolla 5-petala, persistens. Nectaria 5—12, petalis longe minora, cucullata. Pericarpia 2—9, stipitata basibus plus minus coadunatis, dum pauciora stellata. *Stipulæ nunc radicales, nunc e basibus petiolorum dilatatis. Folia 3-nata, palmata, vel pedata, radicalia vel caulina, coriacea. Flores solitarii paniculative, pedicellis unibracteatis, sæpius virescentes.*

* *Pedunculus ante folia radicalis.*

grandiflorus. Folia pedata. Pedunculus 1—2-florus. Bracteæ ovales.
H. niger. *Curt. in Bot. Mag. n.* 8. *cum Ic. optimâ.* H. niger. *Jacq. Fl. Austr. v.* 3. *p.* 1. *t.* 201. H. niger. *Linn. Sp. Pl. ed.* 2. *p.* 783. Elleborus niger, legitimus. *Clus. Hist. Pl. p.* 274.
Flos albus cum rubore aliquo, speciosus: titulus e colore radicis omnibus speciebus competit.

viridis. Folia vix pedata, digitata. Pedunculus 2—5-florus. Bracteæ 5—3-fidæ.
H. viridis. *Smith in Engl. Bot. n.* 200. *cum Ic.* H. viridis. *Jacq. Fl. Austr. v.* 2. *p.* 4. *t.* 106. H. viridis. *Linn. Mant. p.* 408. H. viridis. *Linn. Sp. Pl. ed.* 2. *p.* 784.
Flos totus pallide viridis, etiam nectaria.

officinalis.

officinalis. Folia pedata, laminis latis. Pedunculus multiflorus. Petala acuminulata.
H. orientalis. *Lam. in Encycl. v.* 3. *p.* 96. H. niger orientalis amplissimo folio, &c. *Tourn. Cor. p.* 20.
Flos viridi-purpureus: proculdubio est planta officinalis antiquorum.

** *Pedunculus ultra folia terminalis.*

lividus. Folia glauca, ternata. Petala patentia.
H. lividus. *Curt. in Bot. Mag. n.* 72. *cum Ic.* bonâ.
H. lividus. *Soland. in Ait. Hort. Kew. v.* 2. *p.* 272.
H. niger trifoliatus. *Ald. Hort. Fam. p.* 93. *t.* 92.
Flos sordide purpureus.

fœtidus. Folia viridia, pedata, laminis angustis. Petala in poculum curva.
H. fœtidus. *Smith in Engl. Bot. n.* 613. *cum Ic.* H. fœtidus. *Linn. Sp. Pl. ed.* 2. *p.* 784. H. ramosus &c. *Hall. Hist. v.* 2. *p.* 1193.
Flos viridis margine demum atro-rubro.

Coptis.

Corolla 5—6-petala, caduca. Nectaria 5—6, petalis minora, cucullata. Pericarpia 6—10, stipitata, stellata. *Stipulæ* 2, *radicales. Folia pauca, radicalia,* 1—2-*ternata, spinulose dentata, rigida. Flores albi, solitarii* 2-*native, terminales.*
Nomen ab herbâ incisâ: *κοπτω scindo.*

trifolia. Folia ternata. Pedunculus 1-florus.
Helleborus trifolius. *Michaux Fl. Bor.-Amer. v.* 1. *p.* 325. Helleborus trifolius. *Fl. Dan. t.* 566. Helle-

borus trifolius. *Linn. Sp. Pl. ed.* 2. *p.* 784. Helleborus trifolius. *Linn. Amœn. Acad. v.* 2. *p.* 356. *t.* 4. *f.* 18.

Flos *Trientali* haud absimilis.

asplenii-folia. Folia biternata, laminis subpinnatifidis. Pedunculus 2-florus.

Sponte nascentem in oris occidentalibus *Americæ Borealis* legit A. Menzies.

Petala, quantum e specimine Banksiano sicco patet, multo longiora quam præcedentis, et lineari-attenuata. Pedunculus quasi bifurcus ramis in fructu elongatis. Antheræ orbiculares apice retuso.

Isopyrum.

Corolla 5—6-petala, caduca. Nect. 5—6, petalis minora, cucullata. Pericarpia 3—17, sessilia, dum pauciora stellata. Stipulæ 2, e basibus petiolorum dilatatis. *Folia radicalia pauca, caulina plura et sensim minora, 2-ternata 3-natave, late dentata, herbacea. Flores albi luteive, solitarii 2-nive, axillares.*

thalictri-folium. Stipulæ latæ. Folia laminis inciso-3-fidis. Pericarpia 2—4.

I. thalictroides. *Jacq. Fl. Austr. v.* 2. *p.* 3. *t.* 105. I. thalictroides. *Linn. Sp. Pl. ed.* 2. *p.* 783. Thalictrum batrachioides, &c. *Bocc. Mus. p.* 84. *t.* 79. *f.* 1.

Flores albi.

fumariæ-folium. Stipulæ augustæ. Folia laminis pinnatifidis. Pericarpia 9—17.

I. fuma-

I. fumarioides. *Linn. Sp. Pl. ed. 2. p.* 783. I. stipulis subulatis, &c. *Will. Obs. n.* 44. Helleborus fumariæ folsiis. *Amm. Stirp. Ruth. p.* 74. *t.* 12. bona.

Pericarpia stellata descripsit Willich: sic profecto sunt exteriora, reliqua vero dense imbricata.

XIV. *The Characters of several Genera in the Natural Order of Coniferæ: with Remarks on their Stigmata, and Cotyledons. By Richard Anthony Salisbury, Esq. F.R.S. and L.S.*

Read April 2, 1805.

The science of Botany does not consist so much in knowing a parcel of names and technical terms, as a great variety of immutable facts respecting Vegetables, all of which have more or less connection with each other, and which the philosophical student stores up to use, when he meets with what is new and strange: the detail of the following discovery therefore, if not entertaining, is at least so far important, that some curious analogies and differences occur in it.

Two years ago, when the author of that superb work on *Pinus*, the figures of which may be regarded as a national honour, showed me his manuscript, and asked my opinion respecting the fecundation of this genus, I was induced to examine several species with more care than usual, that I might, if possible, thoroughly understand it: but I could neither find any traces of a stigma in the female flower, nor any vestige of the insertion of the seeds in the receptacle, notwithstanding there appeared, as I then thought, a very evident cicatrix at the base of each seed, where it had been attached. For a fruit to be impregnated by the same channel in which it receives nourishment appeared so very extraordinary, that I resolved to watch a female flower from the

the very first expansion of the bud: accordingly I climbed to the top of a *Cembra Pine* every morning for near a fortnight. In the mean while I remarked female flowers upon an old *Cypress*; and the moment I examined them, I then first suspected what proved to be the truth; namely, that each of the seeds in *Pinus* was impregnated separately, and that what I had hitherto supposed to be a cicatrix of their insertion in the receptacle, was in fact the remains of the true stigma. About a week afterwards I was highly gratified with the most clear and full view of this process in the *Cembra Pine*. The little squamæ of the future fruit with their dorsal bracteæ are at that period all quite separate from each other, and horizontally arched, as if to protect the long crimson stigmata which project out in the vacant interstices: but as soon as ever impregnation takes place, the bracteæ and squamæ change their direction, and become closely imbricated, immediately assuming the appearance of a Strobilus. In the *Spruce Fir* this circumstance takes place so rapidly that the lower squamæ become quite erect, while the upper ones are still arched. The next species I examined was the *Scotch Fir*, then the *Balm of Gilead Fir*, *Silver Fir*, *Pinaster* and *Weymouth Pine*, in all which the structure of the stigma differs very little: that of the *Larch*, on the contrary, I found the following year had no resemblance in figure to the others; it comes much nearer the stigma of *Cupressus*, and consists entirely of a thick pubescence at first convex, but finally concave, and not unlike a bird's nest in miniature.

I believe the stigma in this genus has never before been described: some vestiges of it, however, have been faithfully represented by Mr. Ferdinand Bauer in his dissections of the *Spruce Fir* and *Virginian Pine*: also by Gleichen in those of the *Scotch Fir*. The last author, nevertheless, supposes fecundation to take place

place by the squamæ, as will appear from his own words. "*La fleur femelle est composée de plusieurs ecailles sur les quelles il y a des pointes rouges en forme de griffes. A l'autre extremité inferieure de ces on remarque au cote exterieur des ecailles une eminence en forme de levres d'un rouge clair. Comme j'ai observé sur ces levres plusieurs vesicules et glandules, je les prens pour le mammelon, ou l'orifice du conduit de germe, à quoi elles me semblent être beaucoup plus propres que les pointes rouges en forme de griffes, qui sont dures et seches.*" Respecting these vesicles and glands I have only to observe, that the former are nothing but pollen, which is discharged in great abundance over every part of the flower, and the latter the proper pubescence of the squamæ. No botanist appears to have attended to this subject except Jussieu, who, probably having observed the stigmata only after fecundation, describes them as glands, and, with that diffidence which is so often the concomitant of deep learning, then inquires whether the squamæ dorsales ought not rather to be considered as styles, and the squamæ interiores as germina in the Linnæan sense of the term. This question it is presumed is now fully answered.

It has been remarked by our President, that the errors of eminent writers are alone worth pointing out; it becomes therefore here necessary to notice what I conceive to be a fundamental mistake in the great man above mentioned, respecting the cotyledons of *Pinus*; more especially as he is implicitly copied by Michaux, Poiret, and Ventenat. Nay, the last author has gone so far as to make Redouté draw the figure after Jussieu's description, instead of the object before him, as Miller did more than once in his Illustration of the Sexual System. The draughtsmen whom we are all so proud to number as fellows of this society, will, I trust, never suffer any authority, however great or powerful, to mislead them in this manner. Jussieu says in his observations

at

at the end of Coniferæ, "*Semen vere bilobum extat, scissura duplici opposita profundiore lobos definiente; sed iidem in germinatione partiti et radiatim patentes divisuris linearibus verticillum mentiuntur polyphyllum involucro umbellifero æmulum, unde quædam Coniferæ, et præcipue Pinus, polycotyledones dicuntur.*" I have examined with the most scrupulous nicety the embryos of the *Norway Spruce Fir*, *Black Spruce*, *Silver Fir*, *Balm of Gilead Fir*, *Scotch Fir*, *Larch*, *and Cedar of Libanus*, both before and after germination, without ever being able to find two opposite divisions deeper than the rest: so that there is not the smallest doubt they are truly polycotyledonous. The number of cotyledons, moreover, is by no means constant, even in the same species, and they approach the succeeding leaves in structure much nearer than any we are yet acquainted with, being, like them, biennial.

Having now found a sufficient character in the flower of *Larix*, to distinguish it from *Abies* and *Pinus*; being also favoured by the liberality of Sir Joseph Banks with specimens of the *Chinese Fir*, the *Chili Pine*, the *Norfolk Island Pine*, and that still more curious tree the *Dammar* of Amboina, which he long since pointed out to me in Rumphius's work, as being a true *Conifera*, I shall finish this paper with the characters of all these seven Genera.

Coniferæ. *Juss.*

Sect. 2. *Pericarpia obversa, nec ut in Cupresso erecta, juxta basin squamarum stigmatigera.*

Agathis.

Masc. Squamæ crassæ, in Amentum ovale imbricatæ. Anthera multilocularis. Fœm. Squamæ in Strobilum magnitudine ovi anserini subrotundum imbricatæ, dorso nudæ nec bracteatæ,

bracteatæ, superne incrassatæ, persistentes, monogynæ. Pericarpium lateri interiori squamæ adnatum, margine alatum, durum, strobilo dehiscente deciduum. Embryo 2-cotyledoneus. *Arbor excelsa, resiniflua, a reliquis facie abludens: ramis oppositis sparsisque: ramulis subancipitibus. Gemmæ hinc inde supra axillares terminalesque, caryophylli figurâ. Folia opposita vel subopposita,* 1½—3 *pollices longa,* 1 *pollicem lata, interdum angustiora, ovali-lanceolata, integerrima nervis parallelis. Flores ramulis lateralibus terminales.*

Nomen dixi ab *αγαθις glomus*; floribus in glomos collectis.

loranthifolia. Folia breviter petiolata laminis ovali-lanceolatis, obtusis.

Tab. XV.

Pinus Dammara. *Lamb. Pin. p.* 61. *t.* 38. Arbor javanensis Visci foliis &c. *Raij Hist. v.* 3. *Dendr. p.* 130. auctoritate Herbarii Sherardiani.

Dammara alba. *Rumph. Amb. v.* 2. *p.* 174. *t.* 57.

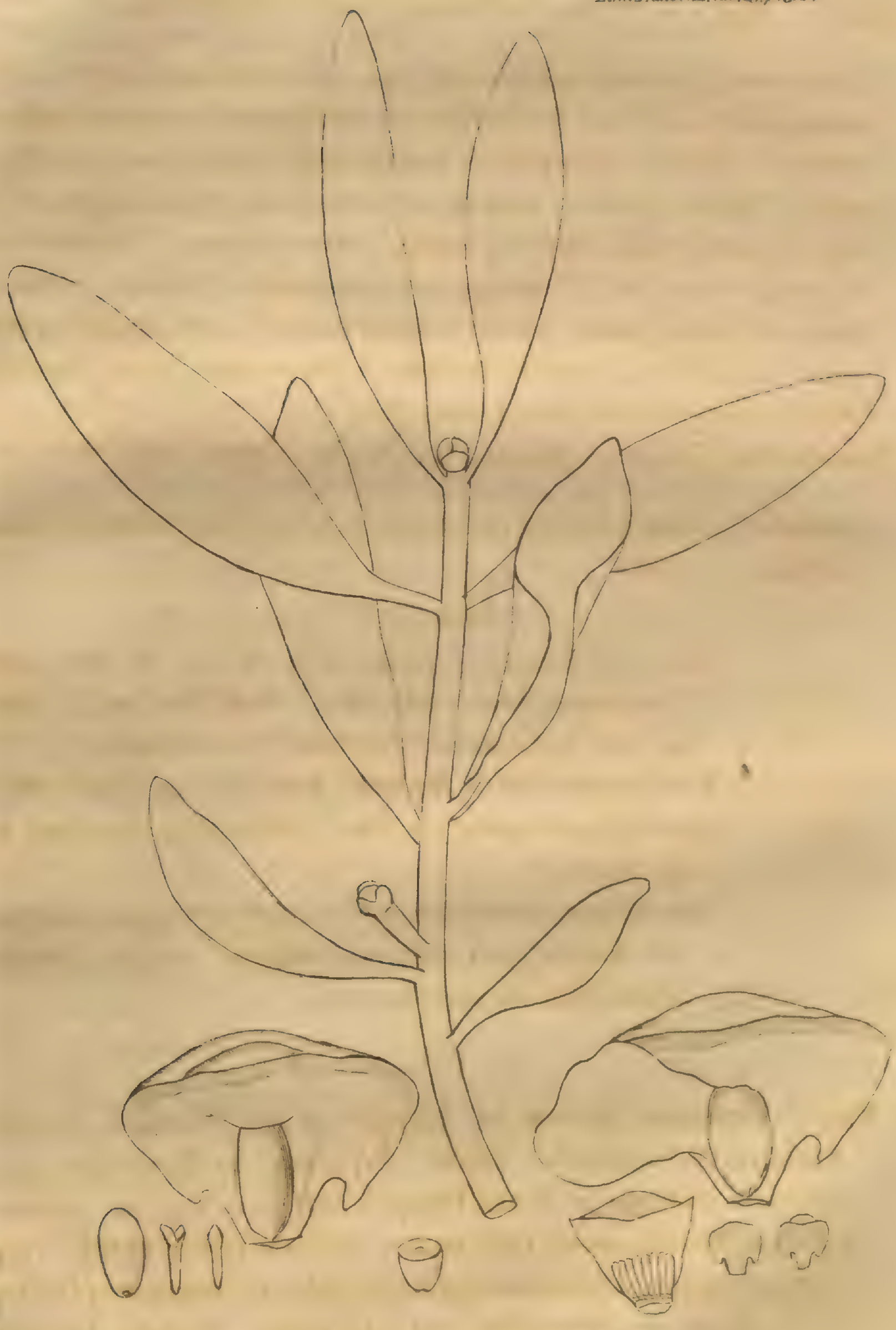
Sponte nascentem in Ins. *Amboina* nuperrime legit C. Smith.

Specimina completa in Sp. vini servata communicavit Banks, qui omnium primus veram Coniferam *Pino* affinem esse monuit.

Pinus.

Masc. Squamæ tenues, in Amenta plura lateralia imbricatæ. Antheræ 2-loculares. Fœm. Squamæ in Strobilum sæpius conicum imbricatæ, dorso Bracteâ suffultæ, superne incrassatæ cicatrice apicis haud raro caduci relictâ, persistentes, digynæ. Pericarpia lateri interiori Squamæ adnata, margine plus minus alata, dura, strobilo dehiscente decidua. Stigma 2—3-fidum laciniis

Linn Trans. VIII. tab. 14. p. 312.



R. J. Salisbury del.

Agathis Cunninghamii.

laciniis caudatis. Embryo 4—8-cotyledoneus. *Arbores quarum plures excelsæ, conicæ: ramis verticillatis: ramulis cylindraceis, interdum sparsis. Gemmæ grandes. Folia* 2—5, *in fasciculis alternis vaginâ basi cinctis ramos undique vestientibus, acerosa et interdum longissima, biennia. Antheræ in Pino, Abiete, et Larice, ex analogiâ potius solitariæ et 2-loculares mihi videntur quam binæ et* 1*-loculares.*

Nomen antiquum: a πιων *pinguis*, quia abundat resinâ, derivatum vult Schrevelius.

* *Folia gemina.*

sylvestris. Folia 2-pollicaria. Strobili conici, squamarum exteriorum apicibus præcipue inferioribus valde pyramidatis. Antherarum squama vix cristata.
P. sylvestris. *Lamb. Pin. p.* 1. *t.* 1. cum pluribus notissimis speciebus.

Larix.

Masc. Squamæ tenues in Amentum terminale imbricatæ. Antheræ 2-loculares. Fœm. Squamæ in Strobilum subrotundum imbricatæ, dorso Bracteâ suffultæ, superne attenuatæ, persistentes, digynæ. Pericarpia lateri interiori Squamæ adnata, margine alata, dura, strobilo dehiscente decidua. Stigma hemisphæricum disco mox cavo, glanduloso-pubescens. Embryo 5—9-cotyledoneus. *Arbores excelsæ, pyramidales: ramis alternis, longe attenuatis, caudatis: ramellulis incrassatis, brevissimis. Gemmæ parvæ nec ut in Pino et Abiete tumidæ. Folia alterna; in ramellulis circulo annotino densissima fasciculum simulantia; acerosa, annua vel biennia. Flores ramellulis lateralibus terminales.*

Nomen antiquum Græcum: a λα *valde*, ῥεω *fluo*, derivarem, ob balsamum terebinthinum.

* *Folia annua, autumno decidua.*

pyramidalis. Strobili pollicares, anguste ovati; squamis margine patulis repandisque. Bracteæ panduræformes.
Pinus Larix. *Lamb. Pin. p.* 53. *t.* 35. incomparabilis ut pene omnes. Pinus Larix. *Linn. Sp. Pl. ed.* 2. *p.* 1420. Larix decidua. *Mill. Dict. ed.* 7. *n.* 1.

pendula. Strobili vix pollicares, oblongi; squamis margine incurvis, obtusis. Bracteæ panduræformes.
Pinus pendula. *Lamb. Pin. p.* 56. *t.* 36. Pinus pendula. *Soland. in Ait. Hort. Kew. v.* 3. *p.* 369.
Sponte nascentem in *Canada* montibus frigidis, legit *G. Bartram.*

tenuifolia. Strobili semipollicares, ovales; squamis margine incurvis obtusis. Bracteæ ovales.
Pinus microcarpa. *Lamb. Pin. p.* 58. *t.* 37. Pinus laricina. *Du Roi Harb. ed. Pott. v.* 2. *p.* 117.
Sponte nascentem in *Canada*, legit *G. Bartram.*

* *Folia 2-ennia, vere decidua.*

patula. Strobili tripollicares, late ovales; squamis margine erectis, truncatis. Bracteæ in fructu evanidæ.
Pinus Cedrus. *Linn. Sp. Pl. ed.* 2. *p.* 1420. Cedrus foliis &c. *Trew Ehret. p.* 1. *et* 28. *t.* 1. 60, 61.
Flores fœmineos diu post anthesin tantum vidi: an Stigma præcedentium?

ABIES.

Omnia ut in *Larice* præter Habitum et Stigma: in hoc *Pino* convenit, foliis autem solitariis et strobilorum squamis superne attenuatis facile dignoscendum genus. Stigma 2—3-fidum laciniis

ciniis caudatis. Embryo 3—9-cotyledoneus. *Arbores excelsæ, conicæ, pyramidales vel etiam pendulæ; ramis alternis aut verticillatis, cylindraceis. Gemmæ grandes. Folia alterna, in ramis lateralibus disticha, vix acerosa, sæpius nonnihil dilatata, biennia. Flores ramulis terminales.*

Nomen antiquum: a voce ἀθιος *robustus*, legitimum reddam, ligno in multis valido.

* *Folia tetragona.*

excelsa. Strobili digitiformes; squamis rhombeis, retusis. Bracteæ minutæ.

Pinus Abies. *Lamb. Pin. p.* 37. *t.* 25. P. Abies. *Linn. Sp. Pl. ed.* 2. *p.* 1421. A. Picea. *Mill. Dict. ed.* 7. *n.* 2. A. foliis &c. *Linn. Fl. Lapp. p.* 341.

curvifolia. Strobili anguste conici: squamis obovatis, integerrimis. Bracteæ minutæ.

Pinus alba. *Lamb. Pin. p.* 39. *t.* 26. Pinus laxa. *Ehr. Beitr. v.* 3. *p.* 24. Pinus canadensis. *Wang. Beytr.* 5. *t.* 1. *f.* 2.

Sponte nascentem in *Canada*, legit *J. Bartram.*

Alias species vide in opere Lambertiano.

Belis.

Masc. Squamæ tenues, in Amentum parvum gemmiforme imbricatæ. Antheræ 2-loculares. Fœm. Squamæ in Strobilum lupuliformem imbricatæ, brevissimæ margine cristato, dorso Bracteâ multo ampliore et acutâ suffultæ, persistentes, 3-gynæ. Pericarpia lateri interiori squamæ adnata, duo auricularia, medium cuneiforme, vix alata, dura, strobilo dehiscente decidua. Stigma et Embryonem nondum vidi. *Arbor sinensis resiniflua:*

siniflua: ramis subverticillatis sparsisque. Folia alterna, sessilia, anguste lanceolato-cuneata, serrulata, pungentia. Flores terminales, fœminei in ramellulis lateralibus.

Nomen dixi a figura Herbæ: βελος *jaculum.*

jaculifolia. Folia deflexa, subtus glauca.

Pinus lanceolata. *Lamb. Pin. p.* 34. *t.* 28. Abies major sinensis &c. *Pluken. Amalth. Bot.* 1. *t.* 351. *f.* 1.

Sponte nascentem in *Chekiangh*, legit G. L. Staunton, Baronettus.

EUTASSA.

Masc. non vidi. Fœm. Squamæ in Strobilum globosum imbricatæ, dorso Bracteâ longiore fere totæ connatæ, post florescentiam valde ampliatæ, obcuneatæ, lateribus alatis samariformes, lignosæ, deciduæ, monogynæ. Pericarpium inter squamam bracteamque immersum et conforme. Embryo cotyledonibus 4, pollicem longis, Loranthi folium referentibus.

Arbor ad 200 *pedes pyramidalis, sempervirens, heterophylla: dum junior facie Abietum ramis verticillatis, foliisque verticalibus acerosis; postea Gnidiis vel Proteis quibusdam similior, ramis tunc sparsis, foliisque rectis dense imbricatis, ovatis. Flores terminales.*

Nomen a ramis foliisque quasi artificiose collocatis: ευ *bene*, ταττω *ordino.*

heterophylla. Folia ramorum juniorum divaricata, valde falcata.

Sponte nascentem in Insula *Norfolk*, legit *P. G. King.*

Strobilus magnitudine pugni, apice bractearum cuneato persistente exasperatus. Specimina in Insula

sula *New Caledonia* lectâ, quæ Cupressus columnaris *Forst. Prodr. p.* 67. gaudent ramulis gracilioribus vix crassitie calami anserini, an specie distinguenda?

Columbea.

Masc. Squamæ in Amentum dipsaciforme imbricatæ. Anthera basi dependens, multilocularis. Fœm. Squamæ in Strobilum grande imbricatæ, dorso Bracteâ acuminata fere totæ connatæ, capsulæformes, anguste obconicæ collo compresso, inde alatæ, deciduæ, monogynæ. Pericarpium inter squamam bracteamque immersum et conforme. Embryo 2-cotyledoneus. *Arbor excelsa, pyramidalis, resiniflua : ramis superioribus quadrifariis. Folia sessilia, alterna, dense imbricata, instar Alo-ium squamiformia, pungentia, perennia. Flores terminales.*

Nomen a voce Græcâ κολυμβαω *nato :* ob materiam navium malis peridoneam.

quadrifaria. Dombeya chilensis. *Lam. in Encycl. Bot. v.* 2. *p.* 301. *t.* 828. Araucaria. *Juss. Gen. p.* 413. Pinus Araucaria. *Molin. Hist. Chil. p.* 182.

Herbam optime delineavit Redouté: in descriptione Stigmatis tantum hallucinatus est Lamarck, cujus reliquiæ juxta insertionem squamæ maxime evidentes in fructubus a D. Menzies allatis. Ramulum forte alius speciei juxta *Rio Janeiro* anno 1769, legit ipse Celeberrimus Banks : in quo Folia videntur glauca et brevius mucronata.

XV. *Description of a New Species of Macropus from New Holland. By Aylmer Bourke Lambert, Esq. F.R.S. V.P.L.S.*

Read April 16, 1805.

Macropus elegans.

Macropus argenteus auriculis subobtusis, pedibus anticis pentadactylis.

Tab. XVI.

The account of this animal, and the drawing which I here offer to the Society, were taken from a living specimen lately brought from New South Wales, and now in the possession of Mr. Pidcock of Exeter 'Change. It is distinguished by the Settlers in that country, by the name of the *Silver* or *Brush Kangaroo*, and by the Natives is called *Ba-ga-ree*. It appears to be a very distinct species from the first discovered one, which Dr. Shaw in his *General Zoology* * has named *Macropus major*, differing from that, not only in colour, but also in being much smaller, and of a more handsome shape. The colour is a beautiful silver-gray; and, upon the whole, it is one of the most elegant animals I ever saw. It is also very docile.

Dr. White, who so long resided in New South Wales, informs me that this species is very scarce, and that its habits are very different from those of the common Kangaroo, it being always found

* Shaw's General Zoology, vol. i. p. 505.

Linn. Trans. VIII. tab. 16. p. 318.

found solitary, whereas the other is found in herds of forty or fifty together. Among the numerous Drawings of Natural History which Dr. White brought home from that country, and are now in my possession, this animal is wanting, owing, no doubt, to the difficulty of procuring a specimen.

The measurement of the animal above described, is as follows:

	Inches.
Length from the tip of the nose to the end of the tail	$62\frac{7}{10}$
From the tip of the nose to the eye - -	$2\frac{8}{10}$
From the tip of the nose to the back part of the skull	$5\frac{7}{10}$
From the back part of the skull to the tip of the tail	57
Length of the tail - - - - -	$26\frac{8}{10}$
Length of the ears - - - - -	$3\frac{8}{10}$
From the tip of the fore claw to the top of the shoulder	$12\frac{6}{10}$
Length of the fore leg from the claw to the knee -	8
From the tip of the hind claw to the top of the thigh	24
Length of the hind leg from the claw to the knee	10
Girth at the widest part, three inches before the hind legs - - - - - -	28
Girth three inches behind the fore legs - -	19

XVI. *Ex-*

XVI. *Experiments upon a Substance called Dapéche from South America. By William Allen, Esq. F.L.S.*

Read May 7, 1805.

The worthy Vice-president of this Society, Jonas Dryander, Esq. favoured me with a specimen of a substance sent to Sir Joseph Banks from South America, by Humboldt. It is said to be found at the depth of two or three feet from the surface of the earth. In appearance it very much resembles a dried Fungus, having the same spongy texture: internally it is nearly white; and although in its external character so different from Caoutchouc, the results of a variety of experiments leave no room to doubt that it is a modification of the same substance. The milky juice of the *Hawea Caoutchouc* and *Jatropha elastica*, from which the Caoutchouc or common Indian rubber is obtained, undergoes a considerable change on exposure to atmospheric air: like blood recently drawn from the veins, it separates into two parts, viz. an aqueous fluid, and the concrete substance called Elastic Gum.

The specimen appears to have been produced by successive deposits of milky juice; but on account of its peculiar situation, the changes have probably not taken place in the same order, nor to the same extent, as when completely exposed to the powerful agency of atmospheric air.

The Dapéche burns freely when held to the candle; it removes black-lead marks with the same facility as Caoutchouc; and in

like

like manner exhibits signs of electricity, by causing dry paper which has been rubbed with it to attract pith balls.

I made parallel experiments with equal quantities of Caoutchouc and Dapéche in the sulphuric, nitric, muriatic, and strong acetic acids, also with a mixture of nitric and muriatic acids: they were performed in a temperature between 32° and 42° of Fahrenheit, and there was a striking similarity in the results.

Nitric acid, even without the application of heat, dissolved both these substances almost entirely; and on the addition of water to the clear solutions, copious precipitates were afforded, which, being washed and dried, amounted to exactly one half of the original weight.

The *precipitate* from Caoutchouc was dissolved by boiling alcohol; that from Dapéche nearly so: but alcohol produces no effect upon Caoutchouc itself, and only renders Dapéche more elastic.

The mixture of nitric and muriatic acids did not appear to dissolve any part of these substances; but they had evidently undergone a change, and had increased in weight—the Dapéche particularly: they no longer melted on exposure to heat, but were converted into a dense coal.

By distillation to dryness in glass retorts, the following results were obtained:

Caoutchouc 100 *parts.*

A brown empyreumatic oil containing no trace of acid	92
14 cubic inches of gas (probably carburetted hydrogen)	2
Carbonaceous residuum	6
	100

Dapéche in 100 *parts.*

A brown empyreumatic oil - - - - -	80
Water slightly acid - - - - - -	2
Carburetted hydrogen - - - - -	2
Carbonaceous residuum - - - - -	16
	100

I did not observe any trace of ammonia, though it is generally stated to be one of the products.

XVII. *Account*

XVII. *Account of a new British Species of Caltha. By Thomas Furly Forster, Esq. F.L.S.*

Read June 4, 1805.

The figure which accompanies this paper is of a new *Caltha*, which I had some time ago from Scotland by the kindness of my friend Mr. James Dickson, who, when he gave it to me, was of opinion that it would prove a new Species, which I am now well convinced it is, having cultivated it for several years. It differs from the *Caltha palustris* in having a creeping stalk, shooting forth roots at the joints; leaves triangular, very sharply crenated; and the petals smaller, narrower, wedge-shaped and patent. It cannot be the *Caltha natans* of Gmelin and Willdenow, which has a white flower, procumbent stalk, and floats on the water; nor *Caltha minor* of *Miller's Dict.* (*palustris* β Willdenow) which does not appear to differ from *C. palustris* in any respect but size. In Dr. Solander's MSS. in Sir Joseph Banks's library, are two other species described and named, and in the herbarium there are specimens of three others from the North-west coast of America, where they were found by Mr. A. Menzies, who I hope will soon give us descriptions of them. The following may serve for the specific differences of the *Calthæ* already known, excepting those found by Mr. Menzies.

Caltha.

1. *palustris.* C. caule erecto, foliis orbiculato-cordatis.

 Hab.

Hab. in humidiusculis Europæ, Asiæ, et Americæ borealis. 4 v.

2. *multicapsularis.* C. caule erecto, foliis ovato-sagittatis.
Hab. prope rivulos in *Success Bay* Americæ meridionalis. *Solander MSS.* in Bibl. Banksiana.

3. *paradoxa.* C. caule erecto, foliis cuneiformibus trifidis.
Hab. in collibus subalpinis, *Terra del Fuego. Sol. MSS.*

4. *natans.* C. caule procumbente natante, foliis cordato-reniformibus.
Hab. in aquis stagnantibus Siberiæ circa urbem *Ircutiam. Gmelin.*

5. *radicans.* C. caule repente, foliis cordato-triangularibus acute-crenatis.

TAB. XVII.

Hab. in Scotiâ. *J. Dickson.*

Caltha radicans.

XVIII. *Description of a new Genus in the Natural Order of Rubiaceæ, called Rudgea. By Richard Anthony Salisbury, Esq. F.R.S. and L.S.*

Read February 4, 1806.

Perhaps one of the most interesting modern additions to our knowledge of the Natural Affinities of Vegetables, has been made among the *Rubiaceæ*. I presume to call it modern; for though Bernard de Jussieu arranged the plants of this order in the Trianon garden with great purity, so long ago as 1759, other botanists continued to mix several discordant genera with it, till his nephew's incomparable work appeared, shining like the morning star, the harbinger of day. By his labours, those genera which really belong to it are now clearly defined; and as far as what little knowledge I have gained of them enables me to judge, his artificial sections rarely break the links of that natural chain by which they hang together.

Some useful corollaries may be deduced by the botanist who studies the various organizations of this extensive tribe of plants philosophically. From a comparison of the most anomalous, it appears to me that the general rule laid down by Linnè respecting genera, must be still more closely adhered to in natural orders. I would say, *characterem fluere e ordine non ordinem e charactere*, in the strongest sense of the words: for there cannot be the smallest doubt that *Usteria*, which has Pericarpium superum, belongs to the *Rubiaceæ*, though it is the only genus of them yet discovered with such a character. Our great master, indeed, in his

his Classes Plantarum has long since taught us "*nulla his valet regula a priori, nec una vel altera pars fructificationis, sed sola simplex symmetria omnium partium*:" and the excellent canons of the French school may yet be improved, by a stricter attention to his principles on this head.

Among the primary characters of every Natural Order, stipulation is one of the most constant; nevertheless, in some of the verticillated genera of *Rubiaceæ*, *Galium* for instance, there is none at all. Linnè, to get over this difficulty, supposed that its stipules were converted into leaves: that this is not the case, however, is evidently proved not only by *Hamelia*, and other verticillated genera with real stipules corresponding in number to their leaves, but by *Galium* itself, in several species of which the uppermost leaves near the flowers are reduced to two, without any intervening stipule, as in the *Apocinēæ*. Whether their joints are ever terminated by any of these glandular bristles so remarkable in some *Apocinēæ*, I am yet ignorant; but the peduncles of many *Galiums* are reflexed when in fruit, presenting another point of resemblance between the two orders.

The affinity of the curious genus now described is fortunately indubitable. It belongs to the 7th section of *Rubiaceæ*; and if mere number of parts is omitted in subdividing this family, as possibly it may be in future, it will stand next *Frölichia* of Vahl. I have not seen the ripe fruit, but when young it is bilocular, with a single seed in each cell: very soon after the flowers drop off, the seeds become long and narrow; and as the stipulation is so different from that of every known genus, I have named it after Edward Rudge, Esq. F.L.S., a botanist who has illustrated some of the plants of the country in which it grows wild, by the most accurate dissections ever yet given to the public from dried specimens.

RUDGEA.

Linn trans Vol VIII. tab.18.p.327.

R. A. Salisbury delineabat ad exemplar siccum.

Rudgea Lanceæfolia.

Warner sc.

Rudgea.

Ordo Naturalis.

Rubiaceæ *Juss. Gen. p.* 196.

Sect. VII. Fructus inferus, bilocularis loculis monospermis. Stamina quinque. Arbores aut Frutices foliis oppositis.

Calyx profunde 5-fidus. Corollæ Tubus gracilis, longissimus: Limbus 5-partitus, laciniis e dorso apicis uncinatis. Filamenta fauce tubi inserta, antheris breviora. Pericarpium (in teneris) 2-loculare, loculis 1-spermis. Stigma 2-partitum, laciniis oblongis. *Caulis teretiusculus, brachiatus. Stipulæ grandes, intus ni fallor ut in* Apocinēis *quibusdam pectinato-setaceæ ipso apice in nostris exemplaribus forsan caduco. Folia ampla paribus æqualibus. Flores paniculis densissimis terminalibus, sicci nigrescentes. Convenit cum* Frölichiâ *et* Schraderâ *laciniis corollæ dorso uncinatis: reliquæ partes multùm abludunt.*

lanceæfolia. 1. R. foliorum laminis lanceolatis, acuminatis: corolla 2 pollices longa.

Tab. XVIII.

Sponte nascentem in *La Guiane,* legit D. Martin.

Caulis cinereus, vix tetragonus. Stipulæ interfoliaceæ erectæ, ovatæ, pectinato-setaceæ oris pallidioribus quasi sphacelatis vero apice forsan jam caduco, ad ultima folia sub florescentiam nondum decidua. Foliorum Petioli angusti, 5—6 lineas longi, dum juniores pube fuscâ vestiti, concavi: Laminæ 3½—4 pollices latæ, circiter 10 pollices longæ, patentissimæ, lanceolatæ, integerrimæ, acuminatæ, adultæ supra glabræ pa-

ginâ

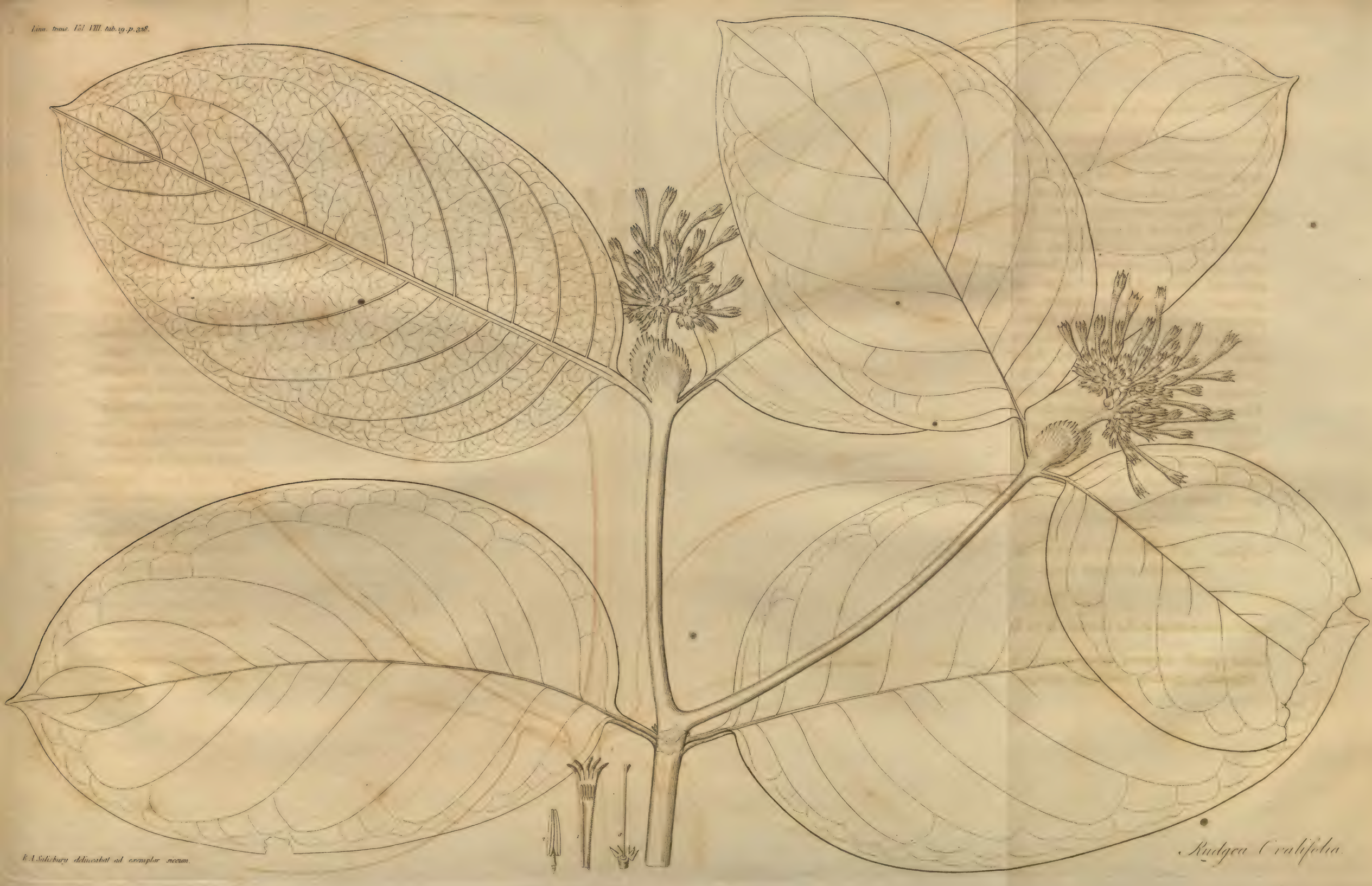
ginâ inferiore lævi, planiusculæ: Nervi plurimi, subtus fusci et prominentes, tenuiores sæpe ad angulum rectum cum primariis confluentes. Flores paniculis densissimis terminalibus, ipsi sessiles. Pedunculus solitarius, crassiusculus; ramis primis verticillatis, inde oppositis et, ni fallor, dichotomis; pubescens. Bracteæ ad singulos ramos solitariæ, inferiores longissime acuminatæ, basi dilatatæ, densè pubescentes. Calyx apice pericarpii insertus, $1\frac{1}{2}$ lineam longus, monophyllus, profunde 5-fidus: Laciniæ recurvo-patentes, cuneatæ, integerrimæ; extus densè pubescens, persistens. Corolla apice pericarpii inserta, monopetala, 2 pollices longa: Tubus gracilis, cylindraceus apice angustè infundibuliformi: Limbus tubo multò brevior, recurvus, 5-partitus; Laciniæ sublineares, integerrimæ, obtusæ, e dorso apicis unguem longum teretiusculum exserentes: extus densè pubescens, decidua. Filamenta 5, brevissima, parum decurrentia. Antheræ erectæ, sublineares, 2-loculares, facie dehiscentes. Pericarpium inferum; adhuc castum (germen Linn.) obconicum, intra corollam nectario tumido coronatum, 2-loculare loculis 1-spermis; gravidum non vidi. Stylus gracilis, longitudine tubi. Stigma stylo multò latius, 2-partitum; laciniis recurvo-patentibus, obtusis, convexiusculis.

ovalifolia. 2. R. foliorum laminis ovalibus, breviter acuminatis: corollâ pollicem longâ.

Tab. XIX.

Sponte nascentem in *La Guiane,* legit D. Martin.

Caulis paulò crassior quam præcedentis, ramis proculdubio oppositis, gemma enim in utrâque axillâ adest. Stipulæ grandes,



R. A. Salisbury delineabat ad exemplar siccum.

Rudgea Cordifolia.

grandes, magis obovatæ, pariter pectinato-setaceæ rigidæ persistentesque. Foliorum Petioli 6 lineas longi, crassiusculi, tenelli pube vestiti aliquâ vel in adultis relictâ: Laminæ $4\frac{1}{2}$—5 pollices latæ, 7—8 pollices longæ, horizontales, ovales, integerrimæ, parum seu breviter acuminatæ, supra glabræ, subtus lævis: Nervi crassiores quam in *R. lanceæfoliâ*. Flores paniculis densissime congestis. Pedunculus brevis: ramis inferioribus brevissimis, superioribus vix distinguendis et forsan dichotomis. Bracteæ ad singulos ramos solitariæ, latè cuneatæ, densè pubescentes. Calyx et corolla extus densè pubescentes.

Locus generis in Systemate Sexuali est *Pentandria Monogynia* post *Psychotriam*. Inflorescentia in vivis accuratius describenda, specimina enim rarissima dilacerare nolui: inde forsan generis affinitas certius innotescat.

EXPLANATION OF THE PLATES.

Tab. XVIII.

Rudgea *lanceæfolia*.

Fig. 1. A flower, magnified.
2. Limb of the corolla, more magnified.
3. The pistillum, magnified.
4. A stamen in two views, exceedingly magnified.
5. Young fruit cut transversely, magnified.
6. A seed not yet impregnated, magnified.

Tab. XIX.

Rudgea *ovalifolia*.

Fig. 1. A flower, magnified.
2. A stamen, exceedingly magnified.
3. The pistillum, magnified.

XIX. *A New Arrangement of the Plants of the Monandrian Class usually called Scitamineæ. By William Roscoe, Esq. M.P. F.L.S.*

Read April 15, *and May* 6, 1806.

The Scitaminean Plants, so called on account of their aromatic or spicy qualities, occupy the greater portion of the first, or *Monandrian* class, in the Linnæan system of vegetables. They are a tribe of great beauty and considerable utility; natives of warm climates, where they are mostly found in moist situations. The chief part of them have been discovered in the East-Indies; a few in Africa; and still fewer in America.

The first attempt to reduce these plants to their proper genera, appears to have been made by Linnæus, in the *Musa Cliffortiana*.—In his Fragments of a Natural Order, he has united them with the *Musæ*; to which, in the more important parts of their fructification, they bear but little affinity.

The disadvantages which attended the study of these plants in the time of Linnæus were, in fact, too great to be surmounted. His descriptions could only have been formed, for the most part, on the labours of preceding botanists; the figures of *Van Rheede*, *Rumphius*, and others; and in some instances, from dried specimens. In establishing the different genera, he has relied chiefly on the number and form of the petals; without sufficiently attending to those more important parts of the fructification on which the rest of his system is chiefly founded.

After having completed his labours on this subject, so sensible was he of their insufficiency, as expressly to admonish his readers,

readers, that the characters of many of these plants still remained to be more accurately determined, by those who might have an opportunity of inspecting living specimens; an admonition which every subsequent editor of his works has found it necessary to repeat*.

About the year 1783, a very considerable addition was made to the order of Scitaminean plants, by the labours of *Kœnig*; who, in his researches through various parts of the East, discovered many plants of this tribe, of which he communicated full descriptions to his friend Retzius, who published them in the third fasciculus of his *Observationes Botanicæ.* Retzius, being well aware of the imperfections of the Linnæan arrangement of these plants †, thought it necessary to attempt a new one, from the descriptions of his friend; although he had never seen even the dried specimens ‡. The result is such as might have been expected; and he candidly confesses his own doubts, as to the expediency of the method proposed by him §; which has, however, been recognised by Willdenow, as the latest improvement on this class.

In one respect Retzius is entitled to commendation, as he seems to have been the first to remark the great importance of the *Anthera*, and its appendages, in the proper distinction of these

* "Character *Amomi, Alpiniæ, Curcumæ, Thaliæ*, ab autoptis, in plantis vivis, accuratius describendus est." *Willd. Sp. Pl. Berol.* 1797. *v.* 1. 16.

† "Lectores facili negotio discere possunt characteres generum immortalis a Linné, quæ *Scitamineas Monandras* plurimas spectant, omninò insufficientes esse." &c. *Retzii Obs. Bot. Fasc. III.* 47.

‡ "Quid certi ego determinem, qui plantas has nequidem siccatas vidi." *Ibid.*

§ "Sed fateor multa mihi superesse dubia, quin hanc divisionem optimam credam.—Probe video, nihil absolute certi de horum generum characteribus determinari posse, antequam reliquæ Scitamineæ, uti *Zingiber, Zedoaria, Cardamoma varia, Galangæ, Curcuma rotunda*, &c., descriptæ sunt." *Ibid.* 48.

plants; a discovery which, however, he has not sufficiently prosecuted, either in the work before referred to, or in his subsequent attempt, in his sixth fasciculus, to establish new genera of these plants.

Since the publications of Retzius, some additions and corrections of the genera and species have been made by Swartz, in his *Observationes Botanicæ*; but without any attempt at a systematic order. He concludes his remarks with asserting that "the genera of the Scitaminean plants are so nearly related, that they can scarcely be distinguished by characters *."

If we turn from Linnæus and his followers to those who profess to have arranged the individuals of the vegetable kingdom by their natural affinities, we shall discover little further light thrown on the subject. The Scitaminean plants form, indeed, a natural order; and Bernard de Jussieu, in his *Ordines Naturales*, has implicitly adopted the arrangement, without adding to the number of the genera of Linnæus †. In the *Genera Plantarum* of A. L. de Jussieu, a few additions are made to those genera ‡; but the more essential parts of the fructification, on which the generic distinctions chiefly depend, are often wholly omitted in his descriptions. Like the rest who have attempted to characterize these plants, he remarks—"that the construction of the various parts of the flower, has induced a variety of opinions as to their denomination and use;" and, "that further observa-

* "Scitaminearum genera adeo affinia, ut characteribus vix distingui queant." *Swartz. Obs.* 9.

† These consisted of eight genera promiscuously noticed.

Canna.	Maranta.
Amomum.	Curcuma.
Costus.	Kæmpferia.
Alpinia.	Thalia.

‡ Viz. Catimbium (Globba or Renealmia) and Globba, both taken from Linnæus.

tions

tions on living plants are still requisite, in order to form proper distinctive characters*."

Such is the brief and unsatisfactory history of these plants: but some circumstances have of late occurred more favourable to the prosecution of these inquiries. Amidst the great number of plants lately brought into this country, those of the Scitaminean tribe have not been neglected. Many of these have produced their flowers; from which, and from the accurate figures given of others in the excellent botanical works lately published, as well in this country as on the continent, it seems not impracticable to form an arrangement, which may contribute in some degree to remove the inconveniencies of which there has hitherto been but too much reason to complain, and which are the more to be regretted, as they present themselves to the student on the very opening of the Linnæan system.

From the result of observations made on this subject for some years past, I have been led to conclude, that the true generic character of these plants consists in the situation, form and appendages of the anthera, and its petal-like or incrassated filament. In several of the genera which compose this class, the anthera is entire; but in the truly Scitaminean plants it is always double, and is either more or less divided to receive the style, which it closely embraces †. This anthera is supported by an erect strong filament, which Swartz contends is improperly so called, being in fact the upper lip of the nectary; al-

* "Non facilis floralium distinctio partium; quarum forma plurimùm varia diversam induxit autorum sententiam de earundem nomine et usu. Ulterius ergo conferenda in vivis pleraque ordinis genera; ut consimilia in his et illis organa pateant, et conformis omnium character eruatur." *A. L. de Jussieu Gen. Pl.* 64.

† "In omnibus fere Scitamineis, anthera magis minusve partita, ut quasi duplex interdum inveniatur." *Swartz. Obs.* 9.

though

though he admits that it performs the office of that part*. In some instances this filament terminates with the anthera; but in others is extended beyond it, either in a subulate, ovate, bilobate, or other peculiar form, which I have always found characteristic of the genus; and which, after the great distinction of a single or a double anthera, I consider as the chief generic distinction of these plants.

The first result of this system will be found to be the separation of the true Scitaminean plants from those which, although of the same order, possess neither their peculiar construction nor their inherent qualities. The latter of these may perhaps be properly denominated *Cannæ*; a name applied by Jussieu to the whole tribe; whilst the appellation of *Scitamineæ* should be reserved for the true aromatic plants only. Other important changes will also be indispensably necessary. The genus *Amomum* appears to include two genera, as distinct from each other in their growth, habits, and qualities, as in their generic characters. To one of these, which comprehends the plants of the Ginger tribe, I have given the name of *Zingiber*,—restricting that of *Amomum* to the proper Cardamom plants. By the same method, the *Amomum zedoaria* appears to be a *Curcuma*; the *Alpinia comosa*, and *Alpinia spiralis* of Jacquin are evidently of

* "Lacinia cui anthera adfixa vel inserta impropriè *filamentum* dicitur, sed vices ejusdem præbet; *labium superius nectarii* appellari debet." *Swartz. Obs.* 9.

This is also the opinion of Mr. Dryander, which on this subject, as on all others connected with natural history, is entitled to the highest respect; and Dr. Swartz probably learnt it at Sir Joseph Banks's when in England. In fact, this organ, like many others, both in the animal and vegetable œconomy, performs two offices, and is both the filament supporting the anthera, and the upper lip of the nectary; but I have preferred the denomination of *filament* for the sake of consistency with the other plants of this order, which have a proper filament, to which I have also been induced by the consideration that by this term my meaning is defined in a single word.

the

the genus *Costus*; and the *Hellenia* of Willdenow (*Heritiera* of Retzius) and the *Renealmias* figured in Andrews's Botanist's Repository unite themselves with the genus *Alpinia*.

In forming the generic characters of these plants, I have chiefly relied on the more immediate organs of fructification; without resorting to the exterior parts of the flower, respecting which great confusion has arisen among the writers on this subject.—That part which by some is called the corolla *, is by others denominated the inner calyx †; the outer one being short and sitting close upon the germen. By some the interior limb of the corolla, when it consists only of one petal, is called the nectary ‡, whilst others apply that name to both the interior petal and its opposite anthera-bearing filament, considering the nectary as bilabiate §. Other authors have considered the glandular appendages at the base of the corolla as the nectary ‖; and the descriptions of these have been mistaken for what has been called the interior limb of the corolla ¶. That I may not increase this confusion, I think it necessary to state, that independent of the anthera-bearing filament and style, I consider the flower of a true Scitaminean plant as consisting of an exterior bractea or scale, a proper calyx, a corolla mostly divided into three lobes or sections, enclosing an interior limb, which has sometimes two or three segments, but invariably a petal-like nectary, which generally terminates in a large pendulous coloured lip, and forms the most conspicuous and ornamental part of the flower.

I must however observe that none of these last-mentioned parts can be relied on for generic distinctions, as they frequently differ greatly in the different species of the same genus. But

* Linnæus and his editors, &c. † Jussieu.
‡ Jacquin frequently, but not invariably. § Swartz. ‖ Retzius. ¶ Willdenow.

this

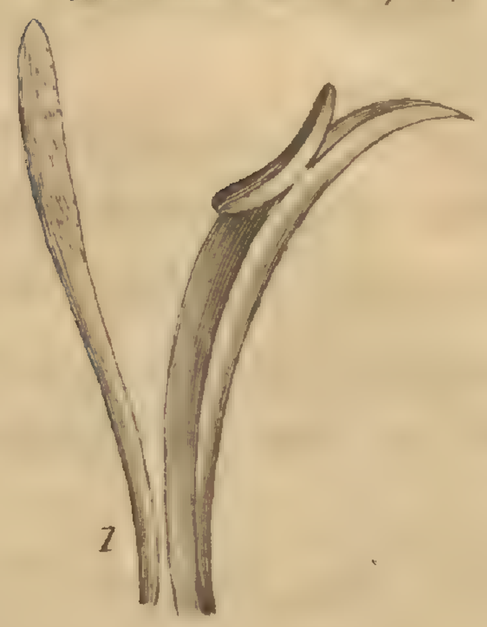
this very circumstance renders them of the greatest use in determining the specific characters of these plants; which are not always obtained without difficulty from the general habit and leaves. Of these facts whoever examines the parts of fructification of the *Cannas*, the *Zingibers*, or the *Kæmpferias*, will be fully convinced.

I must further observe that in the true Scitaminean plants, the stigma is almost uniformly hollow and cup-like, frequently compressed, with the edges of the cup finely ciliated. The style is thread-like and flaccid, but so elastic, when stretched, as to bear a considerable tension. But these parts, which are often of so much importance in determining the generic characters, afford in this instance but little assistance.

The principal distinctions on which it is proposed to found the genera of these plants will appear in the following synoptical table; to which I shall add a brief notice of each genus, and an examination of the species, as far as either the plants, or good and authentic figures and descriptions of them, have enabled me to ascertain them with tolerable accuracy.

MONAN-

Linn. Trans. VIII. tab. 20. p. 337.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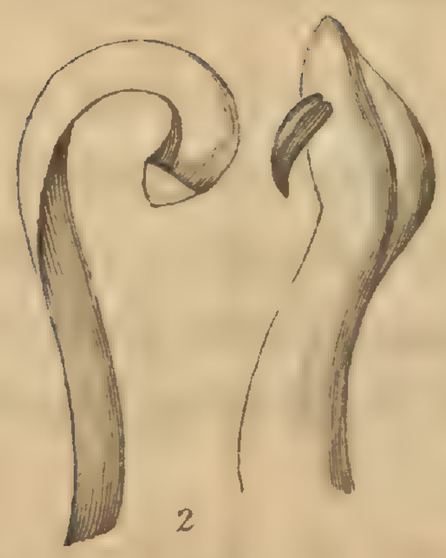
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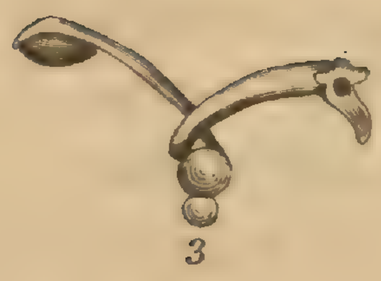
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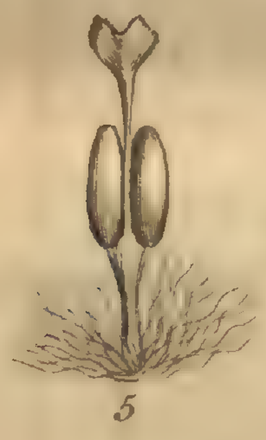
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MONANDRIA.

MONOGYNIA.

- **Anthera simplex, Stylus erectus, liber.** *CANNÆ*
  - Anthera filamento petaloideo adnata,
    - Stylus claviformis ; stigma obtusum. - - - - - - CANNA.
    - Stylus petaliformis ; stigma trigonum. - - - - - - MARANTA.
  - Anthera filamento proprio innixa.
    - Stylus depressus ; stigma depressum, perforatum, ringens. - - - THALIA.
    - Filamentum subulatum, breve; stylus crassus, versus antheram inclinatus. PHRYNIUM.
    - Stylus crassus, depressus, longitudinaliter fissus ; stigma dehiscens. - - MYROSMA.
- **Anthera duplex, Stylus in sulco antheræ receptus.** *SCITAMINEÆ*
  - Filamentum extra antheram non elongatum.
    - ad basim lanuginosum ; stylus crassus, erectus ; stigma capitatum. - PHILYDRUM.
    - geniculatum ; stylus filamento antherifero duplò longior. - - - HEDYCHIUM.
    - Stylus erectus, longitudine filamenti antheriferi. - - - - ALPINIA.
  - Filamentum extra antheram elongatum.
    - Apice subulato, sulcato. - - - - - - - - - ZINGIBER.
    - Apice ovato, plano. - - - - - - - - - COSTUS.
    - Apice bilobato. - - - - - - - - - KÆMPFERIA.
    - Apice trilobato.
      - Filamentum ad basim appendiculatum. - - AMOMUM.
      - Lacinia media antherifera. - - - - - CURCUMA.
    - Apice appendiculato ; Stylus longissimus. - - - - - GLOBBA.

CANNA.

Anthera simplex, filamenti margini adnata. *Stylus* crassus, claviformis. *Stigma* obtusum. *Capsula* trilocularis. *Semina* globosa, numerosa.

Tab. XX. *Fig.* 1.

This genus is one of the most definite and certain of the Monandrian plants. The species of which it is composed are not of extraordinary rarity, and produce their flowers freely. The essential character consists in the single anthera, attached to the margin of the petal-like filament; and in the strong erect club-shaped style.

C. indica. Corollæ limbo interiore trifido; laciniis lanceolatis acuminatis strictis.

Canna indica, *var.* rubra (α) *Aiton. Hort. Kew.*
Fig. *Gærtner.* 1. 37. *tab.* 12.
Botanic Garden, Liverpool.

C. coccinea. Corollæ limbo interiore trifido; laciniis emarginatis strictis.

Canna indica *var.* coccinea (γ) *Aiton. Hort. Kew.*
Fig. *Curt. Bot. Mag. tab.* 454.
Bot. Gard. Liverpool.

C. patens. Corollæ limbo interiore trifido; laciniis reflexis.

Canna indica, *var.* patens (δ) *Aiton. Hort. Kew.*

C. lutea. Corollæ limbo interiore bifido.

Canna indica, *var.* lutea (β) *Aiton. Hort. Kew.*
Bot. Gard. Liverpool.

C. glauca. Corollæ limbo interiore trifido; laciniis ovatis strictis, nectario trilobato fimbriato.
Fig. *Dillen. Hort. Elth.* 69. *tab.* 59. *fig.* 69.
Bot. Gard. Liverpool.

C. flaccida. Corollæ limbo interiore trifido; laciniis flaccidis.
Fig. *Salisb. Ic. tab.* 2.
Bot. Gard. Liverpool.

MARANTA.

Anthera simplex, filamento adnata. *Stylus* petaliformis. *Stigma* subtrigonum. *Semen* unicum.

Tab. XX. Fig. 2.

Maranta agrees with *Canna* in the single anthera being attached to the petal-like filament; but is sufficiently distinguished by the broad, petal-like, reflected style, terminated by an angular stigma.

It is surprising that any difficulty should have arisen in distinguishing the plants of this genus from those of *Alpinia*; which are true Scitaminean plants, with the filiform style supported by the furrow of the double anthera; whilst in *Maranta* the anthera is single, and the style is perfectly free.

M. arundinacea. Culmo ramoso herbaceo, foliis ovato-lanceolatis subtùs pilosiusculis. *Willd. Sp. Pl.* 1. 13.
Fig. *Martyn. Cent.* 39. *tab.* 39.
Bot. Gard. Liverpool.

M. lutea. Culmo ramoso nodoso, foliis ovatis, floribus spicatis, bracteis coloratis.
Fig. *Jac. Ic. Rar. v.* 2. *tab.* 101. *Collect. v.* 4. 117.

M. comosa. ? *Linn. Suppl.* 80.
Communicated by Dr. Smith from the Linnæan Herbarium.—*An novum genus?*

M. sylvatica. ?—*Bot. Gard. Liverpool*; but has not yet flowered.

THALIA.

Anthera simplex, ovata, filamento proprio depresso innixa. *Stylus* brevis, ab antherâ deflexus. *Stigma* perforatum, ringens. *Capsula* bilocularis. *Semina* duo, glabra, splendentia.

Tab. XX. *Fig.* 3.

This genus, although considered by Swartz as obscure, and founded by Linnæus on the figure of Plumier only, is well distinguished from the rest of the order, and confirmed by the discovery of additional species. In their habit, these plants nearly approach *Maranta*, but differ greatly in their fructification; having a proper stamen and style, reflexed in opposite directions.

T. geniculata. Calyce unifloro, culmo ramoso, petiolis ganglionosis.
Fig. *Plum. Amer.* 98. *tab.* 108.

T. dealbata. calyce bifloro, culmo arundinaceo pulverulento, foliis apice revolutis.
Fig. *Fraser Ic.*
Bot. Gard. Liverpool.

PHRY-

PHRYNIUM.

Anthera simplex. *Filamentum* subulatum, breve. *Stylus* crassus, brevis, antheram versùs inclinatus. *Capsula* trilocularis. *Semen* unicum, ovatum, læve.

From the *Phyllodes placentaria* of Loureiro, Willdenow has constituted this genus, which he has referred to the *Hort. Mal. v.* 11. *tab.* 34. This figure was considered as the *Pontederia ovata* of Linnæus; but Swartz, in his *Obs.*, *p.* 123, has observed that it is of the Monandrian class, nearly allied to *Thalia*, and perhaps a species of that genus.

The full description given by Loureiro enables us to characterize it as a genus, with tolerable accuracy; and its singular mode of inflorescence, from the petiole of the flowering leaf, distinguishes it from all the rest of the Monandrian plants.

P. capitatum. Willd. Sp. Pl. v. 1. 17.

Fig. *Rheede, Hort. Mal. v.* 11. *tab.* 34.

MYROSMA.

Anthera simplex. *Stylus* crassus, depressus, longitudinaliter fissus, brevis. *Stigma* dehiscens. *Capsula* trigona, trilocularis, polysperma.

Tab. XX. *Fig.* 4.

In stamen and style this genus resembles *Thalia*, from which it differs in having a trilocular capsule with many seeds. Willdenow observes that it is likewise allied to *Phrynium*, but differs also in the fruit.

M. cannæformis. Willd. Sp. Pl. v. 1. 13.

M. can-

M. cannæfolia. *Linn. Suppl.* 80.

Erroneously referred by Linnæus to Rheede, *Hort. Mal. v.* 11. *tab.* 34. (*Phrynium capitatum*) to which figure Gmelin has also referred his *Maranta Allovia*, and *Pontederia ovata*.

PHILYDRUM.

Anthera duplex. *Filamentum* ad basin lanuginosum, extra antheram non elongatum. *Stylus* erectus, in sulco antheræ receptus. *Stigma* capitatum. *Capsula* trilocularis. *Semina* numerosissima, minutissima, scabrata.

Tab. XX. *Fig.* 5.

From the plant named by Loureiro *Garcinia cochinchinensis*, this genus was formed by Sir Joseph Banks, (who found the plant in New Holland) and has been adopted by Gærtner and Willdenow. Although differing greatly in its habit from the rest of the order, it appears to be a true Scitaminean plant; the anthera embracing the style, and the dried flowers, when immersed in boiling water, emitting a strong aromatic odour.

P. lanuginosum. Wild. Sp. Pl. v. 1. 17.
Fig. *Curt. Bot. Mag. t.* 783. *Gærtn. v.* 1. 62. *tab.* 16. *fig.* 10.

HEDYCHIUM.

Anthera duplex. *Filamentum* geniculatum, extra antheram non elongatum. *Stylus* filamento duplò longior, filiformis, tenacissimus, in sulco antheræ receptus.

Tab. XX. *Fig.* 6.

The observation of Retzius, repeated by Jussieu, that *Hedychium* is

is nearly allied to *Kæmpferia*, seems not to have been founded on any actual inspection of the plants, which differ no less in their habit than in their fructification. Not to mention the long linear segments of the exterior limb of the corolla, by which *Kæmpferia* is distinguished from every other genus, the difference between it and *Hedychium* is strongly marked by the anthera-bearing filament; which in *Kæmpferia* extends beyond the anthera, and diverges into two foliaceous lobes, whilst in *Hedychium* the anthera is terminal, naked, and affixed to each margin of the filament.

To *Alpinia*, *Hedychium* is more nearly related; but is sufficiently distinguished by its long tube and interior trifid corolla. It may also be observed that in *Alpinia*, the double anthera is attached in two adjacent lobes to the front of the filament, and not to the revolute margins, as in *Hedychium*.

H. coronarium. Willd. Sp. Pl. v. 1. 10.
Fig. *Curt. Bot. Mag.* 708.
Bot. Gard. Liverpool.

ALPINIA.

Anthera duplex. *Filamentum* extra antheram non elongatum. *Stylus* longitudine filamenti, in sulco antheræ receptus. *Stigma* obsoletè trigonum. *Capsula* carnosa.

Tab. XX. *Fig.* 7.

The genus *Alpinia* is founded on the plant figured by Plumier, *Americ. tab.* 20. the *Alpinia racemosa* of Linnæus; of which a specimen remains in his herbarium, which I have had an opportunity of examining, by the favour of its present liberal possessor, and which well agrees with the description. Its first cha-

charácteristic is its simple uncrowned filament, terminating with the anthera which it supports; a distinction which separates it from all the rest of the tribe, except *Philydrum* and *Hedychium*; from the first of which it is distinguished by the absence of the woolly appendage at the base of the tube; from the latter, by the anthera not being placed marginally on the filament; and from both by its corolla, which (independent of the large-lobed lip of the nectarium) consists of only three segments, without any interior limb.

I have no hesitation in referring to this genus the *Hellenia* of Willdenow *, *(Heretiera Retzii)* and the plants given as *Renealmias* in Andrews's Botanists Repository (*fig.* 360 and 421). These plants all agree with *Alpinia* both in habit and fructification. The growth is caulescent, the inflorescence terminal, the anthera flat and naked, the corolla has no interior limb (except the large petal-like nectarium may be so called)—circumstances of coincidence which surely forbid their being considered as different genera.

But although the genus *Hellenia* of Willdenow, and the Renealmias of Andrews's Bot. Rep., will thus be absorbed in the genus *Alpinia*, this may not be the case with the *Renealmia exaltata*, the plant on which the genus *Renealmia* was founded by the younger Linnæus; the racemus of which is described as not

* The name of *Hellenia* was first proposed by Retzius, in honour of professor *Hellenius* of Abo, and applied to designate the plant now called *Costus speciosus*, which had before been named by Kœnig *Banksia speciosa*, and which Retzius had before intended to name *Swartzia*, but found that two genera had already been named by different persons after the eminent botanist to whom that appellation alludes. Willdenow being aware that this plant was the *Costus speciosus*, abolished the name of *Hellenia* as applied to it, but gave the same name to another tribe of Monandrian plants, the *Languas* of Kœnig; which Retzius had before, in his sixth Fasciculus, named *Heritiera*; that appellation having also been pre-occupied.

terminal,

terminal, but is said to rise from the trunk near the root. It must, however, be observed, that this part of the description was adopted, as Dr. Smith informs me, from the figures of Rumphius, *v.* 6. *fig.* 62, 63. which are now ascertained to be wrong; and the synonym is consequently rejected by Willdenow. Whether the *Renealmia exaltata* may be found to be an *Alpinia* *, I have had no opportunity of determining. On this subject the observations of Mr. Haworth in the Bot. Rep. p. 421. are entitled to particular attention.

A. racemosa. Nectario trifido, foliis ovato-lanceolatis apice revolutis, capsulis striatis.
Fig. *Plum. Amer. tab.* 20.

A. Galanga. Nectario emarginato, foliis lanceolatis enervibus, capsulâ trigono-ovatâ glabrâ.
Maranta Galanga. *Linn.*
Amomum Galanga. *Lour. Fl. Coch.* 5.
Fig. *Rumph. Amb. v.* 5. *tab.* 63.

A. occidentalis. Swartz Prodr.
Nectario emarginato, foliis lanceolato-ovatis glaberrimis.
Dr. Smith has communicated a flower of this species from a West Indian specimen.

A. malaccensis. Nectario apice denticulato, culmo simplici, foliis oblongis petiolatis subtùs sericeo-pubescentibus. *Willd.*
Maranta malaccensis. *Willd. Sp. Pl. v.* 1. 14.
Fig. *Rumph. Amb. v.* 5. 177. *tab.* 71. *fig.* 1.

* Dr. Smith is of opinion, that the parts of its flower precisely agree with those of *Renealmia nutans*, which is certainly an *Alpinia*.

A. Allughas. Nectario bilobato, foliis lanceolatis integerrimis, capsulis subspongiosis.

Hellenia Allughas. *Willd. Sp. Pl. v.* 1. 4.
Heritiera Allughas. *Retz.*
Fig. *Retz. Obs. fasc.* 6. 17. *tab.* 1. Anne *Hort. Mal. v.* 11. *tab.* 14. ?

A. alba. Nectario bilobato, foliis integerrimis margine callosis albicantibus ciliatis, capsulâ obsoletè angulosâ coloratâ.

Hellenia alba. *Willd. Sp. Pl. v.* 1. 5.
Languas vulgare. *Kœnig. in Retz. Obs. fasc.* 3. 64.
Heritiera alba. *Retz. Obs. fasc.* 6. 18.

A. chinensis. Nectario margine denticulato, foliis oblongis subciliatis apice recurvatis.

Hellenia chinensis. *Willd. Sp. Pl. v.* 1. 5.
Heritiera chinensis. *Retz. Obs. fasc.* 6. 18.

A. aquatica. Nectario obcordato quadridentato, foliis acutis denticulatis, capsulâ glabrâ, seminibus quinis pluribusve.

Hellenia aquatica. *Willd. Sp. Pl. v.* 1. 5.
Heritiera aquatica. *Retz. Obs. fasc.* 6. 18.

A. nutans. Nectario obsoletè trilobato margine involuto, foliis lanceolatis, capsulâ membranaceâ lanuginosâ.

Globba nutans. *Linn. Mant.* 2. 170.
Fig. *Andr. Bot. Rep. tab.* 360.
Bot. Gard. Liverpool.

A. calcarata. Nectario ovato-oblongo apice semibifido, foliis ensiformibus, capsulâ hirtâ.
Fig. *Andr. Bot. Rep. tab.* 421.

A. maculata? Foliis ovatis maculatis.
Bot. Gard. Liverpool.

ZINGIBER.

Anthera duplex. *Filamentum* extra antheram elongatum; apice subulatum, sulcatum. *Stylus* in sulco antheræ receptus.

Tab. XX. *Fig.* 8.

It has been well remarked by Jussieu, that the *Zingibers* flower in a dense spike near to the stem, the *Cardamoms* in a lax panicle at the base of the stem *. Such an uniform natural distinction in the habit of these plants gave great reason to suppose that by a closer examination sufficient generic distinctions would be ascertained. This expectation has been fully confirmed. In the plants of the Ginger tribe, it appears that the anthera-bearing filament is extended beyond the anthera, and terminates in an awl-shaped appendage, with a groove or furrow to receive the style after it has passed between the lobes of the anthera, and which terminates with the stigma a little beyond the extremity of the filament; but in the plants of the Cardamom or proper *Amomum* tribe, the anthera-bearing filament terminates in an appendage of three or more lobes, and differs also in other respects, as will be more particularly noticed under the genus *Amomum*.

* Flores in *Zingiberibus* densè spicati, spicâ radicali propè caulem; in *Cardamomis* paniculati, ad basim caulis. *Juss. Gen.* 63.

In adopting the name of *Zingiber*, I may be supposed to have followed Gærtner; but it must be observed, that Gærtner seems merely to have changed the name of *Amomum* for that of *Zingiber*. At least, the plants described by him under that name are all of the Cardamom tribe.

Z. officinale. Bracteis ovato-lanceolatis, laciniis corollæ revolutis, nectario trilobato.
Amomum Zingiber. *Willd. Sp. Pl. v.* 1. 6.
Fig. *Jacq. Hort. Vind. v.* 1. *t.* 75.
Bot. Gard. Liverpool.

Z. Zerumbet. Bracteis ovatis obtusis, laciniis corollæ erectis acutis, nectario bilobato.
Amomum Zerumbet. *Willd. Sp. Pl. v.* 1. 6.
Zingiber Spurium. *Kœnig.*
Dryander in *Trans. of Linn. Soc. v.* 2. 213.
Fig. *Jacq. Hort. Vind. v.* 3. *t.* 54.
Bot. Gard. Liverpool.

Z. Mioga. Laciniis corollæ acutis concavis æqualibus, nectario ovato concavo.
Fig. *Banks. Ic. Kæmpf. tab.* 1.

Z. roseum. Bracteis lanceolatis coloratis, laciniis corollæ revolutis, nectario ovato plano.
Fig. *Roxb. Pl. Corom. v.* 2. *t.* 126.

Z. purpureum. Bracteis ovatis coloratis, laciniis corollæ erectis, nectario bilobato.
Bot. Gard. Liverpool.

To

To the foregoing species several others may perhaps be added. I have two plants not hitherto described, which have not yet flowered; but which I conceive to be of this genus. The leaves of both, when rubbed, emit a strong cinnamon-like odour; but they are probably specifically distinct from each other, the leaves of the one being ovate, and of the other lanceolate.

COSTUS.

Anthera duplex. *Filamentum* extra antheram elongatum, apice ovato-lanceolatum, planum. *Capsula* trilocularis, extùs dehiscens. *Semina* numerosa.

Tab. XX. *Fig.* 9.

Although highly ornamental plants, the part on which the generic distinction is chiefly founded is more simple in these than in almost any others of the tribe; the filament being petal-like, linear, flat, extending beyond the anthera, and terminating in an ovato-lanceolate apex. In their natural habit these plants are distinguished from the rest of the order by their inclined and spiral stem, which is frequently hirsute and sometimes frutescent.

C. speciosus. Nectario obsoletè trilobato undulato fimbriato, foliis subtùs sericeo-villosis.

Costus speciosus. *Smith in Trans. of Linn. Soc. v.* 1. 249.
Fig. *Jacq. Pl. Rar. v.* 1. *tab.* 1.
Bot. Gard. Liverpool.

C. arabicus. Nectario ovato integerrimo, foliis utrinque glabris.
Fig. *Rheede Hort. Mal. v.* 11. *tab.* 8 ?

C. spicatus.

C. spicatus. *Willd. Sp. Pl. v.* 1. 10.
Nectario undulato sub-trifido, foliis acuminatis integerrimis nitidis basi attenuatis.
Alpinia spicata. *Jacq.*
Fig. *Jacq. Amer. tab.* 1.

C. comosus. Nectario crasso oblongo canaliculato erecto apice quinquedentato, foliis lanceolatis undulatis utrinque subvillosis.
Alpinia comosa. *Willd. Sp. Pl. v.* 1. 12.
Fig. *Jacq. Pl. Rar. v.* 2. *tab.* 202.

C. spiralis. Nectario concavo integerrimo, foliis elongato-ellipticis coriaceis nitidis.
Alpinia spiralis. *Jacq.*
Fig. *Jacq. Hort. Schonb. v.* 1. *tab.* 1.

KÆMPFERIA.

Anthera duplex. *Filamentum* extra antheram elongatum, apice bilobatum. *Corollæ* laciniæ lineares, acutæ.

Tab. XX. *Fig.* 10.

By the two-lobed apex of the anthera-bearing filament this genus is sufficiently distinguished from the rest of the tribe. It is not however without other striking characters; among which the long linear segments of the exterior limb of the corolla are the most remarkable. The fructification of these plants arises without either scape or stem, from a general involucrum or spatha, closely sessile on the root; containing a considerable number of flowers, each rising in succession, and furnished with a proper calyx.

K. rotunda.

K. rotunda. Nectarii laciniis dorsalibus lanceolatis acutis; anticâ bipartitâ: lacinulis obovatis, foliis oblongis subtùs coloratis.

Kæmpferia rotunda. *Linn. Sp. Pl. ed.* 2. 3.
Fig. *Rheede Hort. Mal. v.* 11. *t.* 9. *Jacq. Hort. Schonb. v.* 3. *tab.* 317. *Curt. Mag. t.* 920.
Bot. Gard. Liverpool.

K. Galanga. Nectarii laciniis dorsalibus obtusis, obsoletè trilobatis; anticâ bilobâ undulatâ, foliis ovatis subtùs pallidis.

Alpinia sessilis. *Retz. Obs. fasc.* 3. 62.
Fig. *Rheede Hort. Mal. v.* 11. *t.* 41.
Bot. Gard. Liverpool.

K. angustifolia. Nectarii laciniis dorsalibus linearibus obtusis; anticâ emarginatâ, foliis lanceolatis subtùs pallescentibus.

Bot. Gard. Liverpool.

K. ovata. Nectario lanceolato, foliis ovatis.

Kæmpferia rotunda. *Donn. Hort. Cantab.* 1.
Fig. *Rheede Hort. Mal. v.* 11. *tab.* 10. Referred to by Linn. as *Curcuma rotunda.*

AMOMUM.

Anthera duplex. *Filamentum* extra antheram elongatum, apice trilobatum, basi utrinque appendiculatum.

Tab. XX. *Fig.* 11.

Although sufficient be known of the Cardamoms to distinguish them from the Zingibers, with which they have been hitherto

hitherto united under the common name of *Amomum*, yet further observations on living plants will be necessary to ascertain their specific distinctions. A specimen of the plant on which the genus *Amomum* was founded by Linnæus is preserved in his herbarium; the flower of which I have, by the favour of Dr. Smith, had an opportunity of examining; and have no hesitation in considering it as a distinct genus from *Zingiber*, and as agreeing in its generic distinctions with the *Amomum angustifolium* of Sonnerat, and with several others which will be enumerated amongst the species. In the trilobate apex of the filament this genus may be thought to resemble *Curcuma*; but the difference between them consists in the anthera being placed in *Curcuma* on the middle segment of the filament; whilst in *Amomum* it occupies the entire filament; and in the Linnæan specimen the two lobes of the anthera seem to be placed near the margins of the filament, and only to approach each other by their being rolled in to receive the style. To this it may be added that the middle segment of the filament is in some species of *Amomum* bifid.

A. cardamomum. Ex Herb. Linn.

Spica radicali sessili obovata, foliis obovato-ellipticis cuspidatis. *Willd. Sp. Pl. v.* 1. 8.
Amomum verum. *Ger. emac.* 1548. *f.* 6.
Amomo legitimo degli antichi. *Pona Baldo.* 50.
Cardamomum minus. *Rumph. Amb. v.* 5. 122. *tab.* 65. *f.* 1. *Bont. Hist. Nat.* 126. cum icone (exclusâ capsulâ, quæ Cardamomi medii est).
Zingiber minus. *Gært. tab.* 12.*

* These synonyms have been settled by Dr. Smith from a comparison of authentic specimens.

angus-

A. angustifolium. Scapo nudo brevissimo, spicâ capitatâ, foliis linear-lanceolatis. *Willd. Sp. Pl. v.* 1. 8.
Amomum angustifolium. *Sonnerat Ind. Orn. v.* 2. 242. *t.* 137.
Cardamomum majus. *Offic.*
Zingiber Meleguetta. *Gærtn. tab.* 12. *fig.* 1.

A. repens *. Scapo ramoso decumbente, foliis lanceolatis. *Willd. Sp. Pl. v.* 1. 9.
Amomum repens. *Sonnerat Ind. Orn. v.* 2. 240. *t.* 136.
Fig. *Rheede Hort. Mal. v.* 11. *tab.* 4. 5.
Bot. Gard. Liverpool; but has not flowered.

A. Grana Paradisi. Scapo ramoso laxo, foliis ovatis. *Willd. Sp. Pl. v.* 1. 9.
Fig. *Rheede Hort. Mal. v.* 11. *tab.* 6?

A. villosum. Scapo vaginato brevissimo, spicâ subrotundâ, bracteis lanceolatis flore longioribus. *Willd. Sp. Pl. v.* 1. 8.
Fig. *Rumph. Amb. v.* 6. 137. *tab.* 61. *fig.* 2.

A. uliginosum. Floribus pedunculatis, caulibus remotis, foliis acutis, capsulis globosis echinatis. *Retz. Obs. fasc.* 3. 56.

A. echinatum. Spicâ radicali sessili subglobosâ, capsulis sulcatis echinatis globosis. *Willd. Sp. Pl. v.* 1. 8.
Amomum, n. 2. *Retz. Obs. fasc.* 3. 50.
Fig. *Rumph. Amb. v.* 6. 137. *tab.* 61. *fig.* 1.

* Dr. Smith is persuaded that this species, which affords the common Lesser Cardamom of the shops, is really an *Alpinia*.

A. Afzelii. Scapo brevissimo, floribus aggregatis, foliis distantibus ovato-acuminatis integerrimis glabris.
Amomum exscapum. *Sims.*
Fig. *Annals of Botany, No.* 3. *tab.* 13.

CURCUMA.

Anthera duplex, bicalcarata. *Filamentum* petaliforme, trilobatum, medio antheriferum.

Tab. XX. *Fig.* 12.

This genus is not less distinguished from *Amomum* and *Zingiber* (with which it has often been confounded) by its general habit and inflorescence, than by the parts of its fructification. In all the species the leaves are radical; but *Zingiber* and *Amomum* are both caulescent. *Curcuma* flowers from a simple scapus. The flowers are enveloped in large loose bracteæ, and not in compact scales as in *Zingiber*. From some circumstance, not easy to be accounted for, Linnæus has characterized this genus as having four barren stamina and one fertile stamen; a peculiarity which no subsequent inquirer has been able to discover. Mr. Dryander supposes that the generic character of Linnæus was derived from his *Curcuma rotunda*, the *Manja Kua* of the Hortus Malabaricus*, which I have already referred to as *Kæmpferia ovata*.

C. Zedoaria. Foliis ovatis acuminatis, bracteis emarginatis.
Amomun Zedoaria. *Willd. Sp. Pl. v.* 1. 7.
Fig. *Rheede Hort. Mal. v.* 11. *tab.* 7.
Swartz *Obs. p.* 8. supposes the above figure to be the

* *Trans. of Linn. Soc. vol.* 2. 212.

Amomum

Amomum Curcuma or *Curcuma longa*; and Jacquin (*Hort. Vind. tom.* 3. 7.) considers it as at least of the same genus.

C. montana. Foliis ovatis acuminatis, bracteis lanceolatis apice coloratis.
Fig. *Roxb. Pl. Corom. v.* 2. *tab.* 151.

C. longa. Foliis ovato-lanceolatis, bracteis spatulatis.
Amomum Curcuma. *Jacq.*
Fig. *Jacq. Hort. Vind. v.* 3. *tab.* 4.
Bot. Gard. Liverpool.

The *Curcuma rotunda* of Willd. referred to the fig. in Hort. Mal. v. 11. tab. 10. is a *Kæmpferia*, as above mentioned.

GLOBBA.

Anthera duplex. *Filamentum* lineare, incurvatum, longissimum, appendiculatum. *Stylus* laxus, filiformis, in medio antheræ receptus. *Stigma* incrassatum. *Nectarium* utrinque bifidum.

Tab. XX. *Fig.* 13.

No genus in the whole order is more beautifully distinguished by its generic characters than *Globba*, of which one species only has been introduced, and that very recently, into this country. Its chief peculiarity consists in its anthera-bearing filament, which is of a very uncommon length, and terminates in an appendage resembling, in one species at least, two crescents or half-moons united to each other with the horns or points in opposite directions. At the union of these is placed the double anthera supporting the long filiform style, which frequently appears like a

loose thread appended from the top of the anthera-bearing filament to the corolla below. The whole flower is of a bright yellow, and the tube and corolla somewhat hirsute.

G. marantina. Filamenti appendiculo bilunato, spicâ foliis breviore, bracteis latè ellipticis calyce longioribus.
Linn. Mant. 2. 170. *Sm. Exot. Bot. v.* 2. 85. *t.* 103.
Colebrookea bulbifera. *Donn. Hort. Cant.* 1.
Bot. Gard. Liverpool. Flowered in October 1805, but not freely. It is often viviparous, producing bulbs instead of flowers.

ADDITIONAL NOTE.

Since the foregoing paper was read to the Society it has been discovered by Dr. Smith, from a comparison of a living specimen with that preserved in the Linnæan Herbarium, that the plant lately introduced into this country under the name of *Colebrookea bulbifera* is in fact the *Globba marantina* of Linnæus, and the only species of the genus which Linnæus professes to have seen. How this plant, which is truly scitamineous, with the double anthera supported by a single filament and embracing the style, could be referred by Linnæus to the class *Diandria*, whilst the rest of its congeners were included under *Monandria*, it is difficult to conceive; as well as to reconcile his description in other respects with the appearance of the plant. The most probable causes of such a series of errors are stated by Dr. Smith, *Exot. Bot. vol.* 2. *p.* 85. *tab.* 103. In consequence of this discovery I have adopted the name of *Globba*, which genus should be removed from *Diandria* to *Monandria*.

This

This alteration will excite the less regret, as the other Linnæan species of *Globba* are very different plants, and will probably be referred either to some of the present genera of *Monandria*, or will form new genera not yet described. The heterogeneous assemblage of which the *Diandrian* genus of *Globba* now consists, cannot in the present rapid progress of the science long remain united.

But whilst the *Monandrian* genus *Globba* will thus necessarily exclude many of the plants at present erroneously enumerated as species, it will admit several others of which specimens exist in Sir Joseph Banks's and Dr. Buchanan's collections; and among the rest the *Hura Siamensium* of Retzius; a plant which it has been hitherto found impracticable to reduce to any determinate genus. For this information I am also indebted to Dr. Smith; from whose further researches, aided by the excellent figures of Mr. Sowerby in Exotic Botany, we may shortly hope for a full elucidation of this very difficult subject; my acknowledgments are also due to Mr. Dryander, whose intimate acquaintance with this tribe of plants is well known, and who has done me the honour of perusing the preceding arrangement, since it was read before the Society, and of suggesting several valuable remarks.

XX. Extracts *from the* Minute-Book *of the Linnean Society of London.*

Feb. 21. 1804. The Right Honourable Sir Joseph Banks communicated an account of the *Centriscus Scolopax* having lately been driven on the shore of a fishing cove belonging to Philip Rashleigh, Esq., at Menabilly near Fowey, Cornwall, whose letter on the subject to Sir Joseph, accompanied by a coloured drawing, was laid before the Society*.

Nov. 6. Read a letter from the President containing the following remarks on British plants:

The *Sonchus alpinus* of Hudson, *cæruleus* of *Sm. Fl. Brit.*, introduced into the list of British plants on the authority of Wallis's History of Northumberland, proves to be nothing more than *Cichorium Intybus*, according to the observations of Mr. Winch in the places where Wallis reports it to grow. Dr. Smith has however received from Mr. George Don a specimen of the real *Sonchus cæruleus*, gathered on the Scottish mountain of Lochnagore, so that it is still entitled to a place in the *Flora Britannica*.

The *Lonicera Xylosteum* of Wallis is found also by Mr. Winch to be only a dwarf maritime variety of

* A figure of this fish has been published by Mr. Donovan in his *Nat. Hist. of British Fishes, tab.* 63.

L. Peri-

L. Periclymenum, and his *Cistus marifolius* to be *C. Helianthemum.*

Ligusticum scoticum was found in July 1804, near Dunstanbrough castle, Northumberland, by Mr. Winch, for the first time in England.

Juncus Forsteri was observed this summer in a wood between Hall Place and Harley-ford, Berkshire, by Mr. W. F. Drake.

An error in the last page of *Fl. Brit. vol.* 3. requires correction. *Bartramia gracilis* is to be struck out of the Irish Flora only, Mr. Dickson's Scottish plant, given to Dr. Smith in 1788, being perfectly right.

Jan. 21. 1806. Read a letter from the President, stating that *Buxbaumia aphylla* has lately been found growing at Sprowston near Norwich.

CATA-

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Continued from Page 313 of Vol. VII. of the Society's Transactions.

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589. BANKS'S (Sir Joseph) Short Account of the Cause of the Disease in Corn called Blight, Mildew, and Rust. London, 1805, 4to.

590. Biot (J. B.) Relation d'un Voyage fait dans le Departement de l'Orne. Paris, 1804, 4to.

591. Brotero (F. A.) Flora Lusitanica, vol. 2. Olissiponæ, 1804, 8vo.

592. ———————— Phytographia Lusitaniæ selectior, fasc. 1. Olissiponæ, 1800, 4to.

593. Camper (M. A. G.) Notice de la Vie et des Ecrits de Pierre Camper. Paris, 1803, 8vo.

594. Chevalier's (T.) Treatise on Gun-shot Wounds. London, 1804, 8vo.

595. De Geer (C.) Mémoires pour servir à l'Histoire des Insectes, tom. 7. Stockholm, 1752—78, 4to.

538. Dillwyn's (L. W.) Synopsis of British Confervæ, fasc. 5—11. London, 1803—6, 4to.

596. Galpine's (J.) Synoptical Compend of British Botany. Salisbury, 1806, 8vo.

597. Haworth (A. H.) On the Ægyptian Lotus. London, 1804, 4to.

598. Hill's (J.) Vegetable System, 24 vols. London, fol.

599. Hyacinthus (P. F. C.) Index Plantarum Horti Botanici Melitensis. 1806, 12mo.

600. Koeler (G. L.) Sur les Boutons et Ramifications des Plantes. Mayence, 1805, 4to.

554. Konig (C.) and J. Sims's Annals of Botany, No. 2—5. London, 1804—5, 8vo.

601. Lace-

601. Linnei (C.) Genera Plantarum cur. Reichard. Francofurti ad Mœnum, 1778, 8vo.
602. Lyons (J.) Fasciculus Plantarum circa Cantabrigiam nascentium. Lond. 1763, 8vo.
603. Maton's (W. G.) General View of the Writings of Linneus by Pulteney, with Corrections, Additions, and Memoirs of the Author. London, 1805, 4to.
346. Roxburgh's (W.) Plants of the Coast of Coromandel, vol. 2. part 4. London, fol.
604. Rudge (E.) Plantarum Guianæ rariorum Icones et Descriptiones, vol. 1. London, 1805, fol.
605. Schumacher (C. F.) Enumeratio Plantarum Seelandiæ Septentrionalis et Orientalis, 2 vol. Hafniæ, 1801—3, 12mo.
606. Smith's (J. E.) Natural History of the rarer Lepidopterous Insects of Georgia, from the Observations of John Abbot. 2 vols. London, 1797, 4to.
377. Smith (J. E.) and Sowerby's English Botany, vol. 20—23. London, 1804—6, 8vo.
607. Smith (J. E.) and Sowerby's Exotic Botany, No. 1—22. London, 1804—6, 4to.
568. Sowerby's (J.) British Mineralogy, No. 20—40. London, 1804—6, 8vo.
608. ——————— British Miscellany, No. 1—12. London, 1804—6, 8vo.
609. Thunberg (C. P.) Icones Plantarum Japonicarum decas 5ta. Upsaliæ, 1805, fol.

——————— Præside, Dissertationes academicæ :

610. Antholyza.
611. Blæria.
612. Phylica.
613. Thesium.
614. Remedia Sternutatoria.
615. Horti Upsaliensis Plantæ cultæ.
399. Museum Naturalium Academiæ Upsaliensis, pars 26.

616. Turner (D.) and L. W. Dillwyn's Botanist's Guide through England and Wales, 2 vol. London, 1805, 8vo.
617. Wade (W.) Plantæ rariores in Hibernia inventæ. Dublin. 1804, 8vo.
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619. Weber (F.) & M. H. Mohr, Naturhistorische Reise durch einen Thiel Schwedens. Gottingen, 1804, 8vo.
438. Philosophical Transactions of the Royal Society of London for 1804—6. London, 4to.
439. Transactions of the Society for the Encouragement of Arts, Manufactures, and Commerce, vol. 22—23. London, 8vo.
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585. Transactions of the American Philosophical Society, vol. 6, part 1. Philadelphia, 1804, 4to.
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621. Nova Acta Academiæ Scientiarum Imperialis Petropolitanæ, vol. 1—6. Petropoli, 4to.
622. Essais sur les Montagnes, 2 tom. Amsterdam, 1805, 8vo.
623. Il Giardino Botanico dello Zerbino. Genova, 1804, 12mo.
624. Report of a Committee of the Horticultural Society of London, 4to.
625. Report of a Medical Committee on the Cases of supposed Small Pox after Vaccination. London, 1804, 8vo.

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DIREC-

DIRECTIONS FOR PLACING THE PLATES

OF THE

EIGHTH VOLUME.

TAB. 1. 2. 3. 3. A. 4. 5. British Shells - - - - - - - - - - to face page 250

6 Lichen phæocephalus, &c. - - - - - - - - - - - - - - 260
7. Dipus indicus - - - - - - - - - - - - - - - - - 279
8. Styphelia amplexicaulis - - - - - - - - - - - - - 292
9. Cyathodes laurina - - - - - - - - - - - - - - - 293
10. Tetratheca glandulosa - - - - - - - - - - - - - 294
11. Tetratheca Ericæfolia - - - - - - - - - - - - - 295
12. Bæckea linifolia - - - - - - - - - - - - - - - 297
13. Bæckea Diosmifolia - - - - - - - - - - - - - - 298
14. Leptospermum brevifolium - - - - - - - - - - - - 299
15. Agathis loranthifolia - - - - - - - - - - - - - 312
16. Macropus elegans - - - - - - - - - - - - - - - 318
17. Caltha radicans - - - - - - - - - - - - - - - - 324
18. Rudgea lanceæfolia - - - - - - - - - - - - - - 327
19. Rudgea ovalifolia - - - - - - - - - - - - - - - 328
20. Generic Characters of Scitaminean Plants - - - - - - - 337

ADDENDA ET CORRIGENDA.

Page 2, *l.* 26, for *de Serres* read *de Serra.*

17, 18, } at the bottom, for *Linn. Trans. vol. vi.* read *Linn. Trans. vol. vii.*

23, *l.* 13,
24, *l.* 4,
— *l.* 31,
26, last line, } for *Nat. Hist. of Shells* read *Brit. Shells.*

24, between lines 8 and 9 from the bottom, insert *Pulteney in Hutch. Dorset. t.* 2. *f.* 9.

27, *l.* 7 from the bottom, for *p.* read *n.*

28, *l.* 9 from the bottom, for *subtriangulari* read *compressa;* and add, after the word "*lævi,*" the words *pedunculo insidente.*

34, *l.* 3 from the bottom, for 2125 read 2127.

36, *l.* 9, for *f.* 8. read *f.* 2.

— *l.* 16, for *posterius hiante* read *postice hians.*

50, above line 2 insert ** *Ovatæ, compressæ.*

52, *l.* 13, for *substriata* read *subrostrata.*

54, *l.* 2 from the bottom, for *rectiuscula* read *rectiusculo.*

56, *l.* 2 from the bottom, for *subgloboso-tenerrima* read *subglobosa, tenerrima.*

71, margin, for *f.* 10. read *f.* 11.

78, *l.* 7, for *muticæ* read *mutica.*

87, *l.* 2 from the bottom, for *f.* 14. read *f.* 13.

92, *l.* 10, for 117. read 517.

To the references for *Arca minuta* add *Pulteney in Hutch. Dorset. t.* 1. *f.* 16.

95, *l.* 5 from the bottom, dele the word *inæquivalvis.*

96, *l.* 13, after the word *testa* insert *inæquivalvi.*

97, *l.* 5 and 6 from the bottom, for *compresso-carinatis* read *compressis, echinatis.*

98, *l.* 14, dele the words *striis compressis echinatis.*

— *l.* 18, after the word *testa* insert *inæquivalvi.*

99, *l.* 11, 101, *l.* 7, } make the same insertion.

106, *l.* 16, for *affixa* read *affixus.*

111, *l.* 17, for *epidermide* read *epidermidi.*

118, *l.* 9, after the word *testa* insert *recta.*

122, *l.* 12 from the bottom, for *aperta* read *apertæ.*

225, *l.* 9 from the bottom, for *f.* 13. read *f.* 12.

128, transfer the reference to *Pulteney,* placed under *Bulla retusa,* to *B. obtusa;* and for *f.* 13. read *f.* 14.

137. *l.* 13 from the bottom, for *vulgaris* read *vulgare.*

138, *l.* 12, for *f.* 19. read *f.* 23.

—— *l.* 11 from the bottom, for β. read B.

ADDENDA ET CORRIGENDA.

Page 140, *l.* 7 from the bottom, after the word *An* insert *species?*

149, *l.* 4 from the bottom, after the word *anfractibus* insert *crenulatis.*

151, *l.* 5 from the bottom, for *f.* 11. read *f.* 1.

152, *l.* 19, for the words *has been described and figured only*, read *was first described and figured as British.*

158, last line, for *frequentissima* read *frequentissimus.*

161, dele lines 5, 6, and 18.

162, *l.* 8 from the bottom, for *rarissima* read *rarissimus.*

—— *l.* 12 from the bottom, for *labrum* read *labium.*

164, *l.* 18, for *f.* 12. read *f.* 11.

172, *l.* 8,
175, *l.* 7,
176, *l.* 17,
181, *l.* 2,
—— *l.* 2 from the bottom,
} for *rarissima* read *rarissimus.*

182, *l.* 14, for *rara* read *rarus.*

183, *l.* 14 from the bottom, for *f.* 12. read *f.* 12.*

184, *l.* 2 from the bottom, dele the words *3d volume of.*

192, at the bottom, for *t.* 9. read *t.* 19.

193, margin, for *t.* 4. read *t.* 5.

195, *l.* 10 from the bottom, for 36.40, read 3640.

200, *l.* 4 from the bottom, for the words *sub umbilicum* read the word *subumbilicum.*

208, *l.* 14 from the bottom, for *aspera* read *aspersa.*

209, to the reference for *H. decussata* add *Pulteney in Hutch. Dorset. t.* 19. *f.* 17.

213, *l.* 5, for *in* read *on.*

214, *l.* 8, for *f.* 5. read *f.* 7.

217, *l.* 2, before the word *Intus* insert *Color.*

—— to the reference for *H. fossaria* add *Pulteney in Hutch. Dorset. t.* 19. *f.* 17.

223, margin, for *Bulloides* read *Bullaides.*

229, *l.* 2 from the bottom, for *indentatus* read *crenatus.*

241, *l.* 8, for *S. sinistrorsa* read *S. heterostropha.*

—— for *Lesser* read *Lessers* passim.

319, *l.* 5, for *are now* read *which are now.*

360, direction word, for *Lace-* read *Lin-*

END OF THE EIGHTH VOLUME.

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