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# **NATURALIST'S REPOSITORY,**

OR

## **Monthly Miscellany**

OF

### **EXOTIC NATURAL HISTORY :**

CONSISTING OF

ELEGANTLY COLOURED PLATES WITH APPROPRIATE SCIENTIFIC  
AND GENERAL DESCRIPTIONS

OF THE MOST CURIOUS, SCARCE, AND BEAUTIFUL

#### **PRODUCTIONS OF NATURE**

THAT HAVE BEEN RECENTLY DISCOVERED

IN VARIOUS PARTS OF THE WORLD ;

AND MORE ESPECIALLY SUCH

#### **NOVELTIES**

As from their extreme Rarity remain entirely undescribed, or which have not been  
duly noticed by any preceding Naturalists,

THE WHOLE COMPOSED ACCORDING TO

THE LATEST IMPROVEMENTS IN THE VARIOUS DEPARTMENTS OF

#### **The Science,**

AND FORMING COLLECTIVELY A TRULY VALUABLE

COMPENDIUM OF THE MOST IMPORTANT DISCOVERIES

OF

QUADRUPEDS, BIRDS, FISHES, INSECTS, SHELLS,  
MARINE PRODUCTIONS,

AND EVERY OTHER INTERESTING OBJECT OF NATURAL HISTORY,

THE PRODUCE OF FOREIGN CLIMATES.

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BY E. DONOVAN, F. L. S. W. S. &c.

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VOL. V.

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1827.





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### Errata.

THE numerals on the following plates are correct, but the numbers in the running title of the descriptions require emendation, occasioned, as it appears, by the omission of the description of Plate 165, *Papilio Bixæ*. This description is now given, and must be inserted next after that of Plate 164, *Isis Hippuris*; and beyond this, in the titles of the text correct the following numerals, without altering the numbers on the plates.

For plate 165, *Papilio Vanessa*, read plate 166.

Plate 166, *Spongia truncata*, read plate 167.

Plate 164, (intended for 167) *Buccinum maculatum*, read plate 168.

Plate 168, *Echinus pictus*, (next following) read plate 169.

Plate 169, *Conus bicinctus*, read plate 170.

The succeeding descriptions, after plate 170, will be found to correspond with the engraved numbers on the plates.







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THE

NATURALIST'S REPOSITORY,

&c. &c. &c.

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ENTOMOLOGY.

PLATE CXLV.

FULGORA DIADEMA

CORONATED LANTERN-CARRIER, OR FIRE-FLY

HEMIPTERA.

GENERIC CHARACTER.

Mouth rostrated and lengthened : vagina five-jointed : antennæ short, and terminated in a knob : consists of two or three joints, and are situated under the eyes : legs formed for walking.

SPECIFIC CHARACTER

AND

SYNONYMS.

Rostrated front muricated, the tip trifold : wings black, spotted with red.

**FULGORA DIADEMA** : fronte, rostrata muricata, apice trifido, alis nigris rubro maculatis. *Linn. Syst. Nat.*, 2. 703. 2.—*Fabr. Ent. Syst.* t. 4. 2. 3.—*Mant. Ins.* t. 2. 260.—*Seba, t. 4. tab.* 77. *fig.* 7. 8.

**Fulgora Armata** : *Drury Ins.* 3. t. 50. f. 4.

## PLATE CXLV.

In the space of many years an example of this extraordinary species of the *Fulgora* genus remained unique among the entomological cabinets of this country; the example alluded to was a specimen preserved in the rich collection of Mr. Drury, the author of "Exotic Entomology," and which, from his original manuscripts in our library, we learn came into his possession in the year 1779. This circumstance, however trivial it may appear, is not unworthy of mention in relating the history of an insect so uncommon, and this the more especially, because it has been omitted in the description of the species printed subsequently by Mr. Drury in the third volume of his publication. From that period till very recently, we have reason to believe it had remained an insect of excessive rarity, if not unique. Among our latest acquisitions, we now however possess no less than two examples of the species, so that including the first mentioned specimen, that of Mr. Drury, and which is now in the cabinet of Alex. Macleay, Esq. we know of three specimens in the collections of this country.

Previously to the time of Linnæus, we find this curious insect among the rarities of Seba's museum; Linnæus expressly refers to that work, and may have relied upon it chiefly for the description that he has given in his *Systema Naturæ*. Fabricius copies that description, only adding thereto, the synonyma of two or three authors by whom it has been noticed since the time of Seba and Linnæus.

Some confusion appears to have arisen respecting the native place of this remarkable object of curiosity. Fabricius, and Linnæus before him, speak of it as a native of India, but the manuscripts of Mr. Drury state it to be Cayenne, and afford the same information in his own hand-writing that is to be met with in the printed pages

## ENTOMOLOGY.

of his work : "It came," he tells us, "from Cayenne, with several others" described in the work, "and were collected by M. Mallouet, who sent them to Europe, but in their passage were taken by the Shaftesbury privateer, and afterwards sold by public auction, where I purchased them;" and he further adds, "it is an undoubted non-descript." "Seba, in his fourth volume, plate 77, fig. 7, 8, figures one somewhat like this, but perfectly distinct."—Vide p. 76, vol. 3, Drury's "Exotic Insects."

With respect to the native place of this remarkable species, we are convinced that the information upon which Mr. Drury speaks is perfectly correct ; it is a native of South America, not of India ; and this opinion is confirmed by the circumstance of the two specimens before mentioned in our own possession having been taken in Brazil. Mr. Drury is obviously mistaken, however, in conceiving his insect to be different from that of Seba's, and consequently in describing it as a new species. When he called it *Fulgora armata*, in allusion to the spinous processes with which the snout is armed, he was not aware that Linnæus had previously distinguished it by the name of *Fulgora diadema*.

We should not omit to mention, the appearance of distortion as well in the display, or as the practical entomologist would term it, the "setting" of the insect, originally in the possession of Mr. Drury, as in the form of the wings, and elytra, or wing-cases. In Mr. Drury's specimen, the extremity or tips appear somewhat elongated, owing, as we apprehend, to some accidental contraction of their breadth in drying; in the specimens we possess, those parts terminate obtusely, or as if truncated, agreeing in this respect with the unique species des-

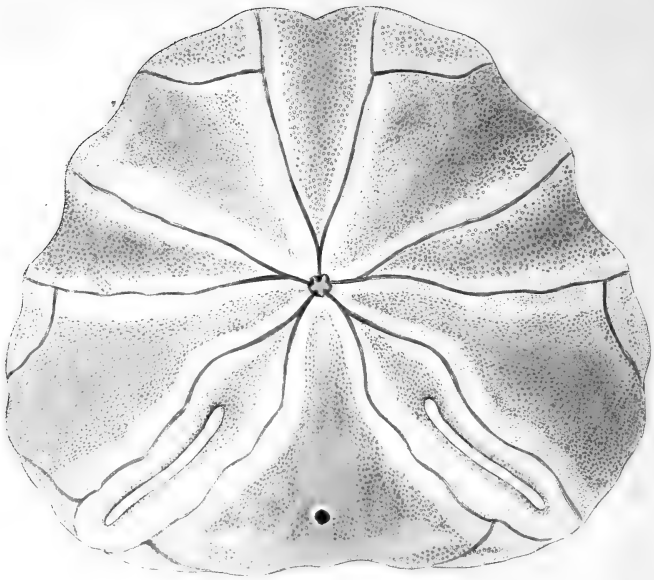
## PLATE CXLV.

cribed in our former work (the Insects of India), under the name of *Fulgora Pyrorhynchus*, the fiery-beaked *Fulgora* of Coromandel, and other insects of this family and its analogous genera.

The entomologist need not be reminded that this is one of those very extraordinary insects which in addition to the novelty of their appearance by day-light, exhibit a brilliant phosphorescent light in the night-time, when the darkness favours their luminous emanations. It is generally believed, that this luminous property exists in the hollow elongated trunk or snout in the front of the head, and this is currently admitted upon the testimony of Mad. Merian to be the case with regard to the largest species of the tribe, *Fulgora laternaria*. The idea may be correct, but we cannot avoid remarking, that in *Fulgora laternaria*, as well as in the species now before us, and some few others that are acknowledged to possess this luminous property, there is a strong indication of such appearance not being entirely confined to that part of the insect: we may remark, that on the body, above and beneath, and on the wings, the head, and limbs, as well as on the trunk of the head itself, a fine white powder more or less abundantly sprinkled on the surface, and in which this luminous property, or at least some portion of it, may also reside; it has much the appearance of an exudation from within, and may be a natural secretion thrown out upon the surface for some useful purpose in the economy of the species, which has hitherto escaped the intelligence of the philosopher. The "*Lampyrus noctiluca*," and other species of the glow-worm genus are luminous in the pairing season, and it may be the same with the insects of the *Fulgora* tribe.







**VERMIOLOGY.**

**PLATE CXLVI.**

**ECHINUS BIFORIS**

**BIFOROUS, OR TWO-HOLED ECHINUS**

**VERM. MOLLUSCA**

**GENERIC CHARACTER.**

Body roundish, covered with a bony sutured crust, and generally furnished with moveable spines: mouth placed beneath, consisting usually of five valves.

† Flat on both sides: the avenues resembling petals, mouth central, flat, dentated: crown with four pores.

† Margin sinuate: surface perforated.

**SPECIFIC CHARACTER**

**AND**

**SYNONYMS.**

Base with five grooves, and ten flexuous radiate lines: near the vent two oblong perforations.

PLATE CXLVI.

**ECHINUS BIFORIS** : basi sulcis quinque lineisque flexuosis radiatis decem exarata foraminibus oblongis ad anum duobus. *Leske apud Klein Echinod, p. 169. t. 21. A. B.*—*Gmel. Linn. Syst. Nat. t. 1. p. 6. n. 3188. 64.*

**SCUTELLA BIFORA** : obtusé trigona, depressa ; foraminibus duobus oblongis, ad disci partem posticum : ano ab ore remoto. *Lamarck, t. 3. p. 10. n. 7.*

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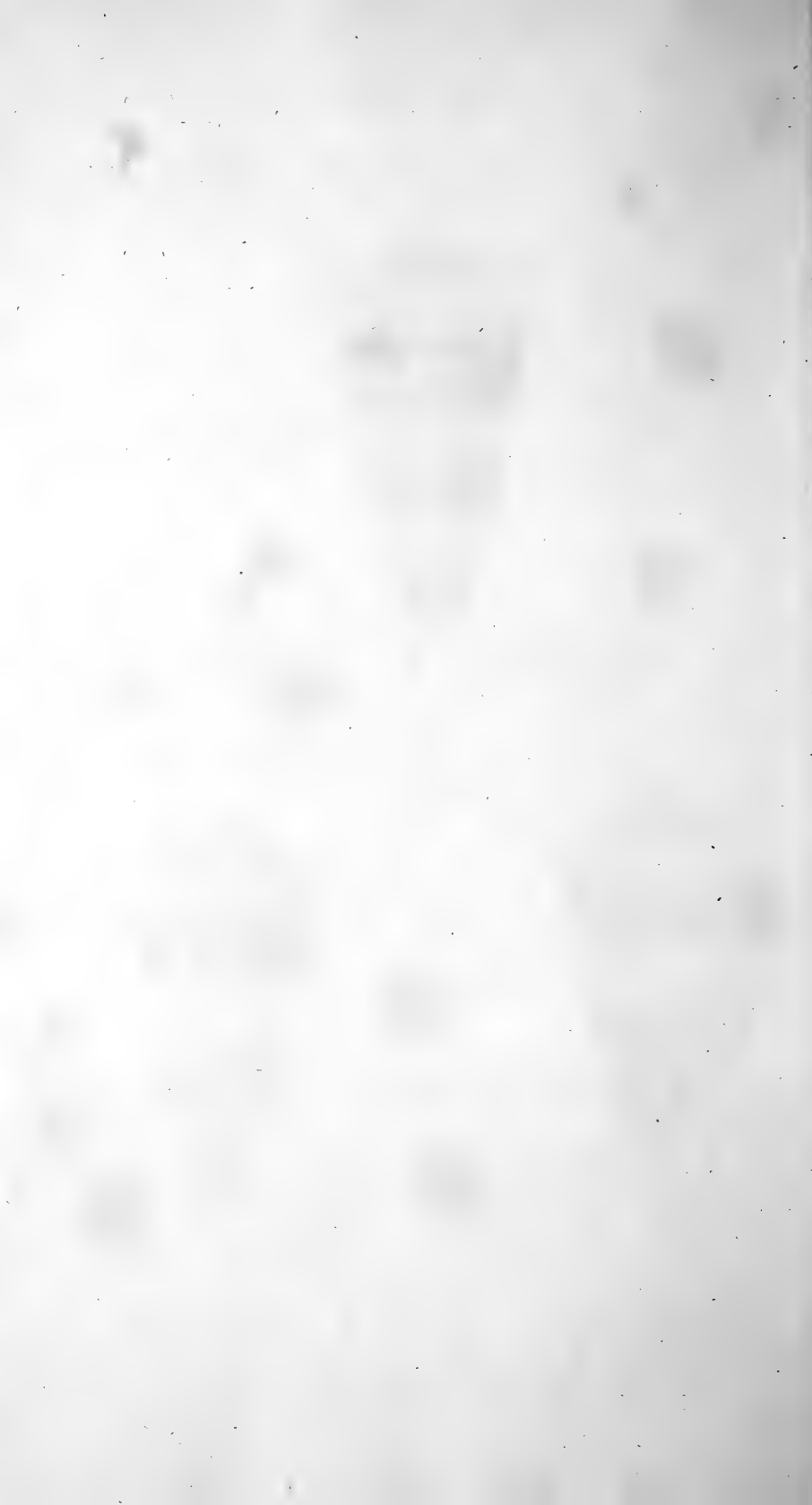
Among the innumerable bodies endowed with life and the visible exercise of all the vital functions, there are perhaps few more extraordinary in their exterior aspect, or their internal organization, than the tribe of animated beings of which the Placenta formed Echini constitute a family ; they appear to be scarcely more than a thin plate or lamina, the depression or flatness being in many species so very considerable that unless broken they could hardly be supposed to consist of an upper and lower crust, with an intervening space in which the vital parts of the animal could be lodged. Many of the Linnæan families of the Echinus genus occur with numerous moveable spines or processes, appendices with which the animal is enabled to move with more or less facility from one place to another, those spines answering the purposes of feet : such are all the rounded or rotundate kinds ; but in the Placenta-formed Echini the spines are very small, being little more than asperities or pustules just obvious to the touch, and which cannot therefore be supposed to constitute members of equal use in facilitating its movements like

## VERMIOLOGY:

the larger spines of the other species. Hence the Echini furnished with moveable spines of a moderate size are distinguished for their greater power of activity; those with spines of an inferior size are more quiescent, and this is precisely accurate with regard to those fragile beings, the Placenta-formed Echini. With this exception, the manners of life are in all the same; the latter lie more dormant or secrete in their marine abodes among the weeds, tang, and corals, or other bodies at the bottom of the waters, because they are less capable of exertion or of resistance when annoyed by enemies, but like the other kinds they prey also upon all the minor tribes of marine creatures, and their mouth being armed with teeth of sufficient strength to crush and destroy the testaceous coverings of the smaller kinds of shell-protected animals, they prove far more formidable to that class of beings than might be generally imagined.

The species now before us, the *Echinus biforis* of authors, is distinguished by having two singular apertures or perforations of an elongated oblong form entirely through the body, and being therefore equally conspicuous in the upper as in the lower surface. The dried specimens vary much in colour, being sometimes ashen grey, tinged in parts with ochraceous, sometimes flushed with purple, and occasionally being of a fine purplish red colour.

It seems remarkable, that although this species is described by several authors, its habitat is not mentioned by any one of them. We have understood that several of the species are from the Indian seas, and that the species *E. Biforis* is one among their number.









# CONCHOLOGY.

## PLATE CXLVII.

### CONUS AUGUR

#### DOTTED DOUBLE-BANDED BOX-WOOD CONE

#### UNIVALVE.

#### GENERIC CHARACTER.

Shell convolute, turbinate ; aperture effuse, longitudinal, linear, without teeth, entire at the base ; pillar smooth.

\* Elongated, and rounded at the base ; the cylinder twice the length of the spire, or more.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Shell somewhat conic, yellowish, with two bands of fuscous or fulvous, and transverse streaks or girdles of rufous dots : spire obtuse and striated.

**CONUS AUGUR** : testa subconica flavescente fasciis duabus fuscis vel fulvis punctisque rufis transversim seriatis ; spira obtusa striata.

PLATE CXLVII.

CONUS PUNCTATUS : *Gmel. n. 3389. 40.*—*Knorr. Vergr. 6. t. 13. f. 6.*

CONUS AUGUR : Cone picoté : testa turbinata albido-flavescente fasciis duabus fulvo nigricantibus punctisque rufis transversim seriatis ; spira obtusa striata. *Lamarck An. sans Vert. t. 7. n. 487. 93.*

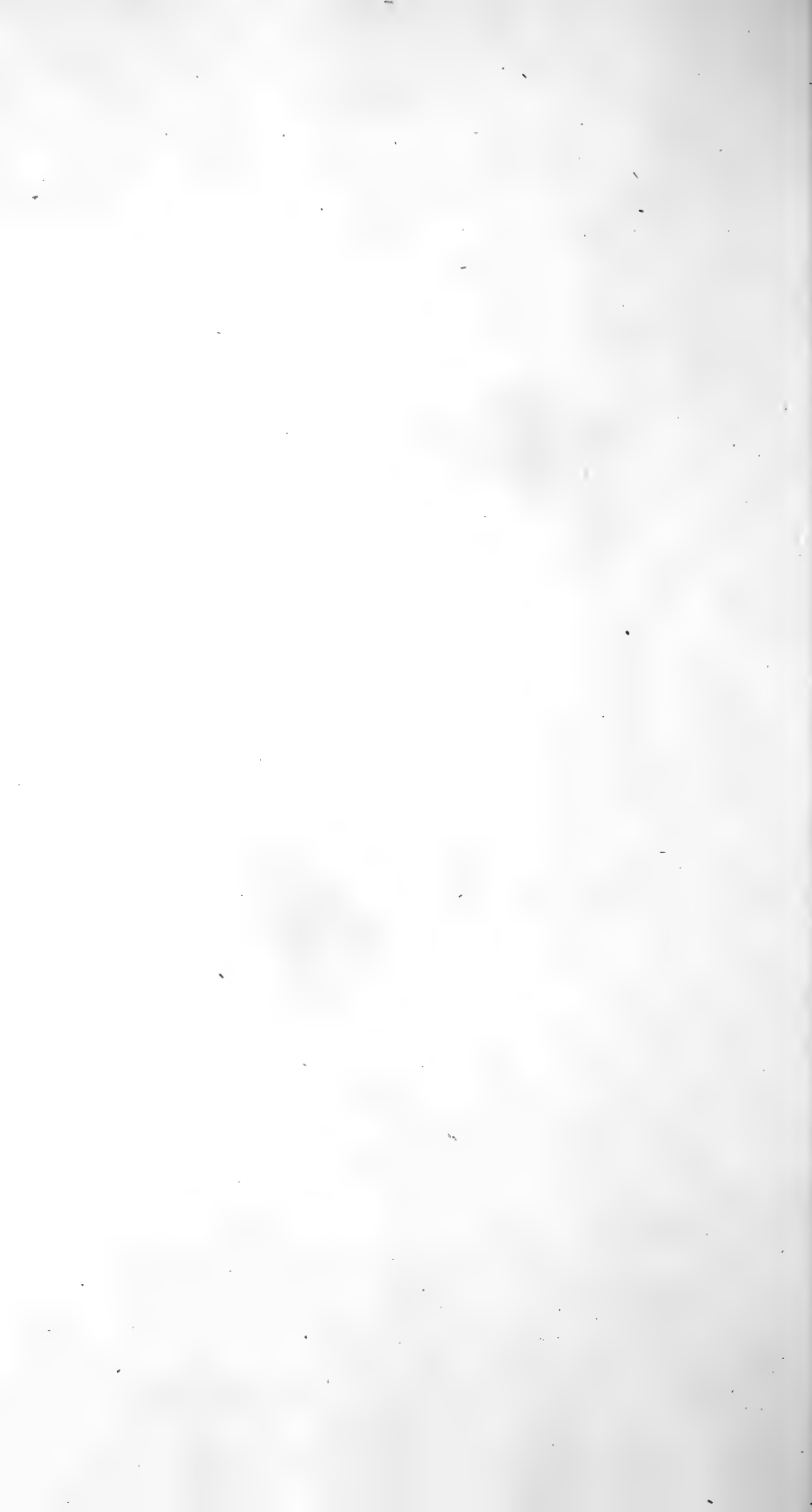
CONUS AUGUR : *Soland. MSS. Portland Catalogue, p. 44. lot 1046.*—*Dillwyn Catalogue, Shells, v. 1. p. 421.*

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This species of the *Conus* tribe is a native of the coast of Ceylon, according to Bruguiere: and it is believed also of other parts of the Asiatic seas, as intimated by Lamarck and others; where, however, it appears to be of rare occurrence upon the testimony of those who have described the species. In the Portland Catalogue referred to among the synonyms, it is denominated "very rare." This was published at the time of the public sale of that museum by auction in the year 1786, and it has not from that period to the present become so far abundant as to have lost its estimation as a rarity. From the manuscript additions made in one of those Catalogues, in our possession, we learn that this lot, containing two specimens of *Conus Augur*, was purchased by Mrs. Hall, a lady of distinguished taste, well known as an amateur in the science of Conchology at that period, and who made the purchase at no very considerable cost. A fine specimen of the shell is at this period valued at about a guinea; or rather less.

## CONCHOLOGY.

When this shell is in fine condition, the ground colour is pretty deeply tinged with a yellowish hue ; sometimes the colour is whitish, but, generally speaking, this tint is rather the indication of a shell having the enamel of the outer surface more or less worn away ; most commonly there are two bands of deep fuscous brown, which are variously interrupted or broken into spots surrounding the shell : sometimes the lower point of the shell is also fuscous, and it then appears to have three bands of that colour instead of two. We have seen some few specimens with fulvous, instead of a fuscous band, but those are scarce. The encircling lines of fuscous dots which appear on the intermediate or light spaces between the dark broad bands of fuscous or fulvous are very characteristic, but these, though never large, are sometimes extremely minute, and in shells much worn and injured are liable to be entirely obliterated.









# ENTOMOLOGY.

## PLATE CXLVIII.

### PAPILIO BÆTICUS BÆTICUS BUTTERFLY

#### LEPIDOPTERA

#### GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club : wings erect when at rest. Fly by day.

*Papilio rurales.* *Linn.*

*Hesperia rurales.* *Fabr.*

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Wings tailed, blueish, beneath fulvous with white waved lines : anal angle with two ocellar spots.

PAPILIO BÆTICUS : alis caudatis cœrulescentibus subtus fulvis  
albo undatis : angulo ani ocellis duobus.

PLATE CXLVIII.

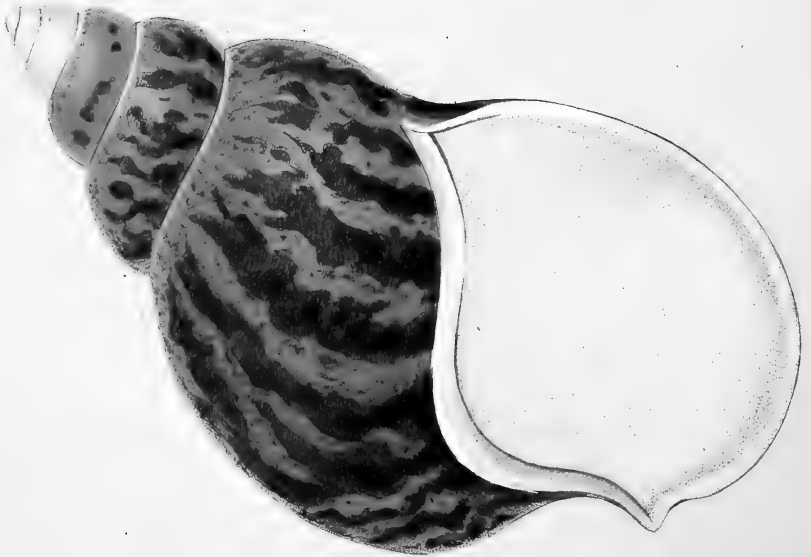
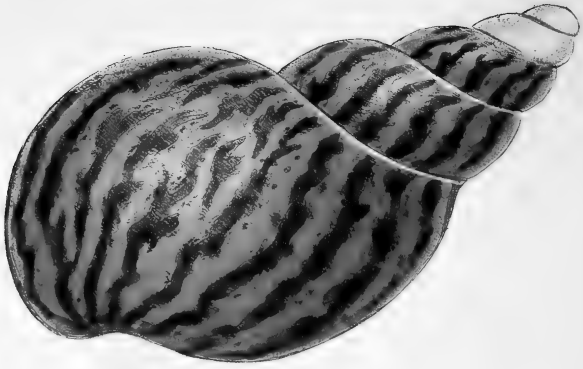
**PAPILIO BÆTICUS** : alis caudatis cœrulescentibus subtus cinereis  
albo undatis : angulo ani ocello gemino aurato.  
*Linn. Syst. Nat.* 2. 789. 226.

**HESPERIA BÆTICA** : alis caudatis fusco cœrulescentibus, subtus  
cinerascentibus albido andulatis : angulo ani  
ocellis duobus. *Fabr. Sp. Ins.* 2. p. 119. n. 529.  
*Mant. Ins.* 2. p. 69. n. 657.

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The upper and lower surface of this elegant butterfly are both delineated in the annexed plate ; the figures are from the drawings of the late W. Jones, Esq. of Manor Place, Chelsea, and the specimen from which the drawing was taken, according to Mr. Jones, was at that time in the possession of Dr. Gray, one of the curators of the natural history department of the British Museum. Subsequently to the death of Dr. Gray, which happened some years ago, the collection of that distinguished naturalist passed into the hands of Dr. Hunter, and is at this time in the Museum of Glasgow. The insect in Dr. Gray's cabinet was from Barbary ; the species occurs chiefly in the South of Europe.





# CONCHOLOGY.

## PLATE CXLIX.

### BULLA ACHATINA, *var.* MARGINATA

#### MARGINATE PARTRIDGE BULLA

#### UNIVALVE.

#### GENERIC CHARACTER.

Shell convolute unarmed or toothless : aperture somewhat coarctate, oblong longitudinal and very entire at the base : pillar oblique and smooth.

#### SPECIFIC CHARACTER.

Shell ovate-oblong, ventricose, tip rosy, fulvous with longitudinal chesnut-coloured waves : pillar lip violet purple : lip within white.

**BULLA ACHATINA** : testa ovato oblonga, ventricosa, apice rosea ; fulva flammis longitudinalibus undulatis spadicis ; columella purpurea violacea ; labro albo.

**BULLA ACHATINA** : testa ovata : apertura obovata apice sanguineis columella truncata.—*Linn. Mus. Lud. Ulr.* 589. n. 225.—*Gmel. Syst. Nat.* 3431. *Sp.* 32.  
*Seba Mus.* 3. 71. *f.* 1.—5. *et* 7.—10.

**ACHATINA PERDIX** : *Lamarck An. s. Vert. t.* 6. n. 2. p. 127. 1.

## PLATE CXLXI.

The shell before us presents one of those anomalies which oftentimes interfere with and distract the arrangements of those naturalists who, however proficient in other respects, are too prone to indulge in the formation of new genera, where nature seems herself to point out the propriety of being less diffuse; and not unfrequently it may be added, evince the necessity of closer circumspection. We are led to this reflection, from tracing the various changes that have taken place among naturalists in the generical disposition of the shell, which we conceive to be a near analogy to that selected in this place for observation. The shell adverted to is one of the largest and most striking in its appearance of the tribe of land shells with which we are acquainted; a shell known from the time of Bonanni, Lister, and Seba, and which yet has never been disposed with a sufficient degree of precision in any of the genera established by systematists from the time of Linnæus to the present period. This shell is denominated in the Linnæan Catalogue of the rarities of the Museum of Ulrica, the Queen of Sweden, his patroness, *Bulla Achatina*. We are adverse to innovation where it can be avoided, but we must confess the appropriation of this shell to the *Bulla* genus does not well accord with our ideas, although perhaps there is no other in the Linnæan system to which it can with more propriety be referred. With Muller this shell is a *Buccinum*, which in some respects may be better. It is the *Helix Achatina* of Daubenton, and to the genus *Helix* it has also some claim. With Bruguiere it is *Bulimus Achatinus*, and with the *Bulimus* genus as laid down by that author it has a near affinity, but again it differs from *Bulimus* as characterized by others: and lastly, we find it in the arrangement of Lamarck as the first species of his genus *Achatina*; and under the name of *Achatina Perdix* it is now distinguished by those who follow



## CONCHOLOGY.

in preference to other systems, that proposed by Lamarck. It will have been perceived that our observations, so far, have been confined chiefly to that conspicuous shell described by Linnæus under the name of *Bulla Achatina*, and that the most we have ventured to advance respecting the shell which constitutes the subject of the present plate, has been to intimate that it appeared analogous to the *Bulla Achatina*; we shall now be more explicit, it is either a species immediately approximating to that shell, or a variety possessing a peculiarity in the formation of the aperture or opening of the mouth, not usually observable in that species, namely, the reflected margin of the lip, and that in this respect it is at variance with the characters assigned by every author to the *Bulla Achatina* of Linnæus, under whatever name they have described or mentioned it.

Lamarck in establishing his genus *Achatina*, the genus to which this shell approaches nearer than to any other, thus defines its essential character: "Shell ovate or oblong, aperture entire, longitudinally longer than broad: lip acute, and not reflected; pillar smooth and truncated at the base." But, in the shell we are considering, the lip is distinctly marginate, and reflected or turned back, notwithstanding which, its near affinity to the *Achatina* tribe of Lamarck, has induced some collectors to name it as a new species, *Achatina Marginata*, the *Marginate Achatina*. But, how is this, it may be demanded, to be reconciled with the express character laid down by Lamarck himself, "*labro acuto nunquam reflexo*," or as repeated again in the language of his country, "*à bord droit tranchant jamais réfléchi*;" and it will really appear upon inspection of the lip of the shell *Bulla Achatina*, that it is perfectly acute at the edge,

## PLATE CXLIX.

or without any trace of the marginate edge so conspicuous in the shell at this time before us. We are not, however, to forget, that the progressive growth of many well known species of the shell tribe is to be distinguished by the changes that take place in the form of the lip, such as its greater expansion or dilation, and not unfrequently in the formation and elongation of distinct processes, of which examples occur in the genus *Strombus*; examples in which the younger shells have an acute simple edge, while in the adult shell the lip is furnished with a range of elongated processes of very striking figure as well as magnitude. The lip also of shells of other tribes are known to increase in thickness as the animal inhabitant becomes older, and where there is no other indication of its increasing growth, except that which becomes apparent from the increasing bulk of the shell itself.

Upon the whole, therefore, for those reasons we are rather inclined to admit this new conchological acquisition, for such it really appears to be, as a variety of the Linnæan *Bulla Achatina*, than as a species distinct from that shell. The deviation it presents in its reflected lip is certainly worthy of consideration: we must regard it as a novelty, and were it not for this peculiarity we should from the general aspect of the shell be more inclined to place it in the genus *Achatina* of Lamarck than with the *Bullæ* of Linnæus; at the same time it must be allowed, that this anomaly could not be justified, or that at least the definition of the genus, must in that case be first qualified by the omission of the words “*labro acuto, nunquam reflexo* ;” and we therefore place it in the *Bulla* genus, as a variety of the Linnæan *Bulla Achatina*.

## CONCHOLOGY.

With respect to the general appearance of this shell, the marginate variety of *Bulla Achatina*, if such it really be, it accords more closely in its colours and markings with *Bulla Achatina* than with another shell that has been sometimes confounded with it, the *Bulla Zebra*; the varieties of *Bulla Zebra* are variable, but it may be generally observed, that it may be easily distinguished by the far greater number of its longitudinal lines, these being numerous, linear, and more distinctly separate, while the dark rays of *Bulla Achatina* are comparatively few in number, broader, and in parts more confluent, and sometimes even vagariously running into one another. Usually also the *B. Zebra* is of a paler colour, more fragile, and has the column or pillar lip white, while in *Achatina* it is more or less purple; the inside of the mouth in *Zebra* is also white, while in *B. Achatina* it is purple, but those latter characters are not always constant, and the intensity or brightness of the colors depends much upon the greater or less perfect condition of the specimen.

*Bulla Achatina* is a native of South America, whence also we understand our presumed variety with a reflected lip has been obtained: it is however rare, and esteemed valuable. This shell, like its analogies, is supposed to inhabit the herbage growing in aquatic places, and the animal inhabitant to be furnished with four tentacula, two of which are largest, and that it has two eyes, one of which is situated upon the summit of each of the larger tentacula.







# ENTOMOLOGY.

## PLATE CL.

### PAPILIO COCHRUS

### COCHRUS BUTTERFLY

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club: wings erect when at rest. Fly by day.

#### DAN. FEST.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Wings entire: anterior wings fuscous, posterior ones deep black with a macular white band: abdomen sanguineous with a deep black band.

**PAPILIO COCHRUS**: alis integerrimis, anticis fuscis: posticis atris fascia maculari alba, abdomine sanguineo cingulis atris.

**PAPILIO COCHRUS**: alis integerrimis concoloribus atris: fascia maculari alba, abdomine sanguineo cingulis atris.  
*Fabr. Ent. Syst. t. . p. 1. n. 42. sp. 125.*

## PLATE CL.

We have no reason to believe that this very rare and curious insect has hitherto been figured in the works of any author. The species is described by Fabricius from the drawings of Mr. Jones, and those figures are repeated for the first time in the plate now submitted to our readers. The original specimens, from whence those drawings were taken, occurred to Mr. Jones in the museum of Dr. Hunter, as referred to by Fabricius. Its native country is unknown.

From the description of this species, to be found in the Fabrician writings, the entomologist would be led to conceive that all the wings are of a deep black : this is not correct, for the anterior wings are of a fuscous colour ; it is only the posterior wings that are of a deep black : this error it must be of some importance to correct ; in all other respects the Fabrician description is very accurate.







# ENTOMOLOGY.

## PLATE CLI.

### PAPILIO FURCULA

### FURCULA BUTTERFLY

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club : wings erect when at rest. Fly by day.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Wings tailed, fuscous, at the base fulvous : anterior pair with a blue band across the middle.

PAPILIO FURCULA : alis caudatis fuscis basi fulvis : anticis fascia cœrulea. *Fabr. Ent. Syst. t. 3. p. 1. p. 79. n. 246.*

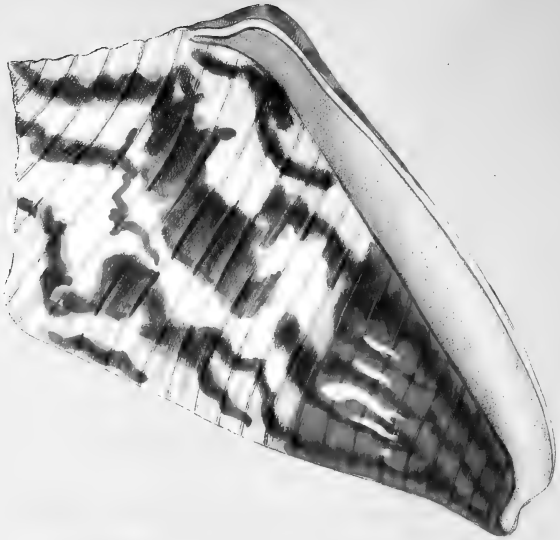
PAPILIO FURCULA : *Jon. fig. pict. 3. t. 79. f. 1.*

## PLATE CLI.

A native of Jamaica. The example figured in the drawings of Mr. Jones, to which Fabricius refers for a type of this species, once formed a portion of the rich cabinet of Mr. Drury, and it is from those drawings that our present delineation of the species is taken. We have occasionally seen the species in some other entomological collections, but we believe it is by no means common.

The characteristic peculiarities of this curious *Papilio* are very dissimilar from those of any other species, those of the upper surface in particular : the anterior wings are of three colours, being at the base orange, at the extremity fuscous, and having those two colours distinctly divided from each other by a broad band of vivid blue. The lower wings are orange at the base, with the extreme half fuscous, but the blue stripe or band so conspicuous across the middle of the anterior wings does not extend to the lower ones, it terminates abruptly at the posterior margin of the first pair.





# CONCHOLOGY.

## PLATE CLII.

### CONUS VEXILLUM

### STREAMER CONE

#### UNIVALVE.

#### GENERIC CHARACTER.

Shell convolute, turbinate ; aperture effuse longitudinal linear, without teeth : entire at the base ; pillar smooth.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Shell fulvous or fuscous with irregular longitudinal white waves : spire obtuse, variegated with white and fuscous.

**CONUS VEXILLUM** : testa fulva aut fusca flammis undulatis albis, spira obtusa albo fuscoque variegata.

**CONUS VEXILLUM** : testa fusca albo obumbrata : fascia alba interrupta. *Gmel. Linn. Syst.* 3397. n. 68.

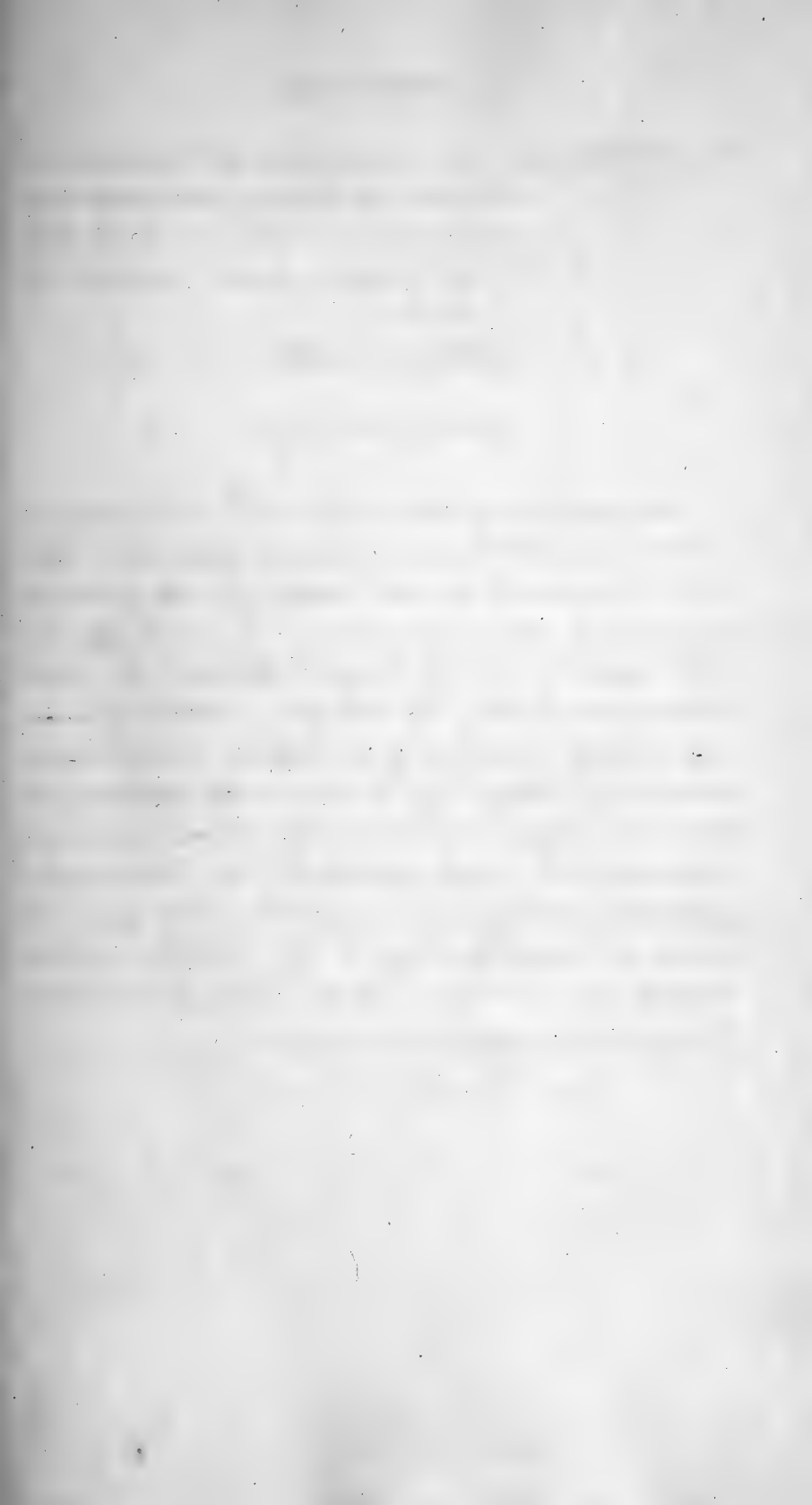
PLATE CLII.

CONUS VEXILLUM: testa turbinatâ, fulvâ aut fulvo-virescente, alba fasciatâ, basi nigricante, lineis irregularibus longitudinalibus venulatâ, spirâ obtusa, albo fulvoque variegata. *Lamarck An. sans Vert. t. 7. 471. 65.*  
*Seba Mus. t. 3. t. 44. f. 8—11.*

---

This species of the Cone tribe is found in the Asiatic and Southern Seas, where it occurs occasionally in some plenty. The varieties are numerous, the colour varying from dark chesnut to fuscous, fulvous, and sometimes partaking of a greenish hue. In some examples the middle of the shell is girt round with a broad white band, but generally this band appears confused, and is not unfrequently so interwoven with the streams of white with which the shell is longitudinally waved as to become very indistinct; and hence those longitudinal waves may be considered much more characteristic of the species than the middle band, which is usually associated with other characters in the definition of the species. It may be also added, that the tint of white with which the shell is fasciated is more or less pure in different specimens; in the example before us it appears tinged with a roseate hue.







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VERMIOLOGY.

PLATE CLIII.

ISIS OCHRACEA

OCHRACEOUS ISIS

OR

JOINTED INDIAN CORAL

ZOOPHYTA.

GENERIC CHARACTER.

Animal growing in the form of a plant : stem stony, jointed, the joints longitudinally striated, united by lapideous, spongy, or horny junctures, and covered by a soft porous cellular flesh or bark : mouths beset with oviparous polypes.

SPECIFIC CHARACTER

AND

SYNONYMS.

Stem coralline : joints decorticated : junctures knotty.

ISIS OCHRACEA : stirpe corallina : articulis decorticatis, geniculis nodosis. *Gmel. Linn. Syst. Nat. 3793. n. 3.*

## PLATE CLII.

**ISIS OCHRACEA** : stirpe croso-striata lapidea rubra dichotoma explanata ramosissima articulata, geniculis nodosis spongiosis fulvis, carne flavescente, oculis stellatis, polypos octotentaculatos obducentibus. *Ellis and Soland. Zooph. p. 105.*

---

This truly elegant and very beautiful shrub-like Coral is a native of the Indian seas, occurring in some plenty and in high perfection in the vicinity of the Spice Islands. Its usual places of growth are the recesses of the reefs of coral rocks so abundant in those seas, where it resides just below the surface, and is only seen emerging to view above water when the tide is at the ebb.

In point of size, this remarkable object of curiosity varies materially; it is seldom more than six or eight inches in height, sometimes twelve inches, but occasionally we have seen it completely of a bush-like form, and three feet or more in height, and in such instances, as it may be conceived, the branches of the main stems become of a greater proportionate thickness, to render them capable of supporting and sustaining in their true form the lesser branches, that expand laterally from the greater ones.

When in the living state, this coral is covered with a flesh of a somewhat pulpy texture, and of a yellow or orange colour, or rarely white, and has the whole surface sprinkled with numerous little apertures or perforations of a deep red colour; these latter are the cells in which the polypes reside. When divested of the flesh, and

## VERMIOLOGY.

we rarely seen it in any other state, owing to the perishable nature or friability of the flesh when dried, the joints are red, varying from a pale carnation to scarlet, with the connecting articulations yellowish. Sometimes the joints are white, sometimes white tinged with luteous, sometimes pale purple, and in all such instances the connecting articulations are usually darker. The example we have represented is one of peculiar delicacy, the osseous joints being more linear or gracile than usual, and the colour of a vivid brightness: this delicacy of structure we conceive to be an indication of its early growth, for, as before observed, when the coral increases in magnitude, the main stems thicken or become more robust in proportion, the better to sustain the weight of the minor branches.

From the very close similitude in appearance of those shrub-like corals, it is generally known that the elder botanists did not hesitate to describe them as genuine plants: they are the "Stony-plants" of those botanists, and the species now before us is described as such by Clifford, under the name of *Lithoxylon*. . But since that period it has appeared under various other designations in the nomenclature of naturalists: by Linnæus and Pallas, and in the "Zoophytes" of Ellis, it is deemed an *Isis*; previous to that time it bore the name of *Corallium rubrum indicum*, and is so called by Ellis in his paper on the subject in the Transactions of the Royal Society: in the work of Morison it is denominated an *Hippuris*; by Rumphius and Seba, *Acca-baar*; and by Ray, *Pseudocorallium croceum*: and lastly, we should mention that Lamoureux, at the instigation of Lamarck, and subsequently Lamarck himself, has separated this species and two or three other of its analogies from the genus *Isis*, where Linnæus had placed it, to his newly-instituted

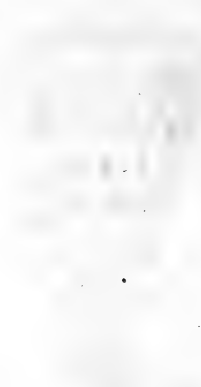
## PLATE CLIII.

genus *Melitæa*, where it now occurs under the name of *Melitæa Ochracea*. This separation of our present species from the *Isis* genus, we must allow, does not appear to be altogether unjustifiable; we regret only the paucity of actual observation on those curious tribes of beings denominated *Zoophytes*, when in a living state, to afford us accurate information as to their natural history in general, and the habits of the species of *Isis* in particular; for, if upon the ground assumed by these writers, those two genera should stand confirmed by future naturalists, it is more than probable we must advance yet further, and constitute more than two new genera of the *Isis* genus, as proposed by Linnæus. One particular distinction of the *Melitæa* and the *Isis*, according to those naturalists, is obviously striking: in the *Isis*, the intermediate or connecting junctures, by which the true or lapideous joints are united together, is of a horny or somewhat cartilaginous nature, and constitute articulations of a more slender form than the true joint or bone; in *Melitæa*, those connecting articulations or junctures, on the contrary, are larger than the true joint, and are of a stony nature, more or less porous and striated. This distinction is worthy of notice; the comparative magnitude of those joints is less materially deserving of attention, as a generical distinction, than the substance of which they are composed. We are not to forget, however, that there are examples among the marine tribes of beings, in which the cartilaginous substances of the living body become in some degree ossified after death; examples in which the ligatures of certain shells, which are decidedly cartilaginous, become afterwards of a stony nature; and there are besides those, some other appearances in nature that might be noticed as somewhat analogous, although they may not precisely bear upon the point before us.

## VERMIOLOGY.

It is obvious to every observer, that the stem or connecting junctures of the *Isis Hippuris*, the type of the *Melitæa* genus is cartilaginous, yet we observe upon dissection, immediately down the centre, the appearance of a linear filament, which, to say the least, has much the aspect of an osseous substance ; and should it really prove to be of that nature, the difference will be less considerable between those two families than might be at first conceived. We are certainly speaking of the dried specimens of our cabinets, and in which the indications may be deceptive : they nevertheless deserve enquiry. We readily allow, with some exceptions of this doubtful nature, the distinction of the two presumed genera may be very accurate, we only wish to render them explicit, and at the same time to express a hope that they may become objects of investigation in the hands of some future naturalist, whose opportunities can afford him the means of examining those particulars in their native seas, and in a living state. The example before us in the meanwhile must be regarded as a characteristic specimen of the new genus *Melitæa*, and the *Isis Hippuris*, which will form the subject of a future plate, the type of the *Isis* Genus, according the determination of the last mentioned authors.

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# CONCHOLOGY.

## PLATE CLIV.

### CONUS CAPITANEUS

### CAPTAIN CONE

### UNIVALVE.

#### GENERIC CHARACTER.

Shell convolute, turbinate ; aperture effuse, longitudinal, linear, without teeth ; entire at the base ; pillar smooth.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Shell turbinated : olivaceous yellowish, or pale yellowish brown, with two white bands spotted with fuscous : transverse lines dotted : spire convex with fuscous spots.

**CONUS CAPITANEUS** : testa turbinata, olivaceo-flavida : fasciis duabus albis fusco-maculatis ; lineis transversis punctatis ; spira convexa, fusco maculata.—  
*Lamarck An. sans Vert. v. 7. p. 469.*

PLATE CLIV.

CONUS CAPITANEUS : testa conica glabra basi fusca : spira convexiuscula. *Linn. Mus. Lud. Utr.* 552. n. 155.  
*Gmel.* 3376, n. 6.

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A native of the Asiatic Seas, where it occurs in great variety of colour and markings. The examples figured in the annexed plate may be regarded as sufficiently explanatory of the species.





# ENTOMOLOGY.

## PLATE CLV.

### PAPILIO ARCADIUS ARCADIUS BUTTERFLY

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a knob: wings erect when at rest. Fly by day.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Wings entire: anterior pair black, spotted with blue and white; posterior pair brown beneath.

**PAPILIO ARCADIUS:** alis integerrimis; anticis nigris cœruleo alboque maculatis, posticis fuscis subtus brunneis.

*Fabr. Ent. Syst. T. 3. p. 1. p. 151.*

*Jon. fig. pict. 5. tab. 38. fig. 1.*

## PLATE CLV.

A species of rather considerable magnitude, and of figure and appearance sufficiently attractive to arrest attention. A specimen of this curious species did once occur to our notice amongst a parcel of insects collected in Africa, about four hundred miles towards the interior from the coast of Sierra Leone, and with the sight of which we were accidentally favoured. From this circumstance we feel a confidence in speaking of it as a native of Africa; but with this exception, the only positive identity of its existence as a species within our knowledge, we must confess, depends exclusively upon the authority of the late William Jones, Esq. of Manor Place, Chelsea: it had been met with by that gentleman in some cabinet about half a century ago, the fate of which is probably no longer known. It was among the drawings of Mr. Jones only as it appears from the writings of Fabricius that this distinguished entomologist had ascertained it: his description is taken from those drawings, and it is to this original source of information that we are indebted for the figures that are now submitted to the reader; as it has been already for many unique articles of indubitable interest to the scientific world, that have been from time to time produced in our present undertaking.







# VERMIOLOGY:

## PLATE CLVI.

### SPONGIA TUBULOSA

### TUBULAR SPONGE

#### ZOOPHYTES.

#### GENERIC CHARACTER.

Animal fixed, flexile, torpid, of various forms, composed either of reticulate fibres, or masses of small spines interwoven together and cloathed with gelatinous flesh, which is full of small mouths on its surface, by which it absorbs and rejects water.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Tubular, branched tough, the tubes produced from one side of the stem, erect and becoming slender at the tops.

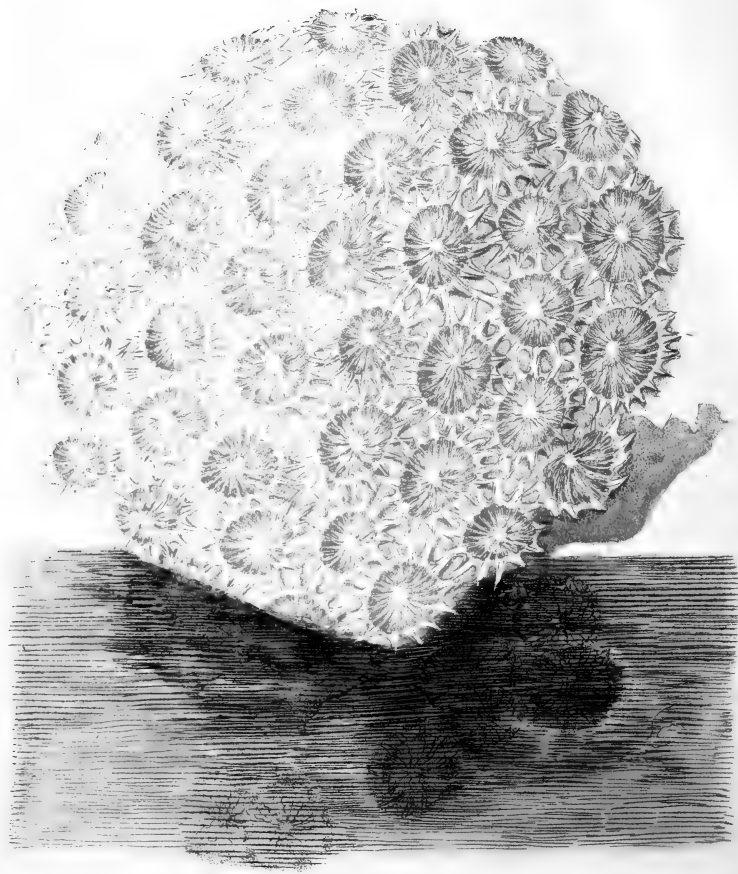
SPONGIA TUBULOSA: tubulosa ramosa tenax, tubulis secundis arrectis, apicibus attenuatis. *Ellis and Soland.*  
*Zooph. p. 189.*

## PLATE CLVI.

This, like many other of the *Spongia* tribe when in a living state, or fresh gathered from the sea, is of a fine orange colour. The sombrous brown, or sordid tints which it subsequently assumes, is the natural effects of the extinction of its vitality, and it is therefore only in a recent or living state that we can form any just idea of the species that compose this curious tribe of beings.

The species is a native of various seas.





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# VERMIOLOGY.

## PLATE CLVII.

### MADREPORA RADIATA

### RADIATED MADREPORE

#### ZOOPHYTES.

\*\* *Composed of numerous Stars.*

#### GENERIC CHARACTER.

Coral, with lamellate star-shaped cavities.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Stars orbicular, concave, with elevated margin, plates denticula and furrowed down the middle.

**MADREPORA RADIATA** : *stellis orbiculatis, concavis margine elevatis; lamellis sulcato radiatis.*

**MADREPORA RADIATA** : *aggregata stellis cylindriaceis margine elevatis: intersticiis latis concavis sulcato radiatis.*

*Ellis and Soland. Zooph. n. 167. tab. 47. f. 8.*

*Astrea Radiata* : *Lamarck An. sans Vert. v. 2. p. 258.*

## PLATE CLVII.

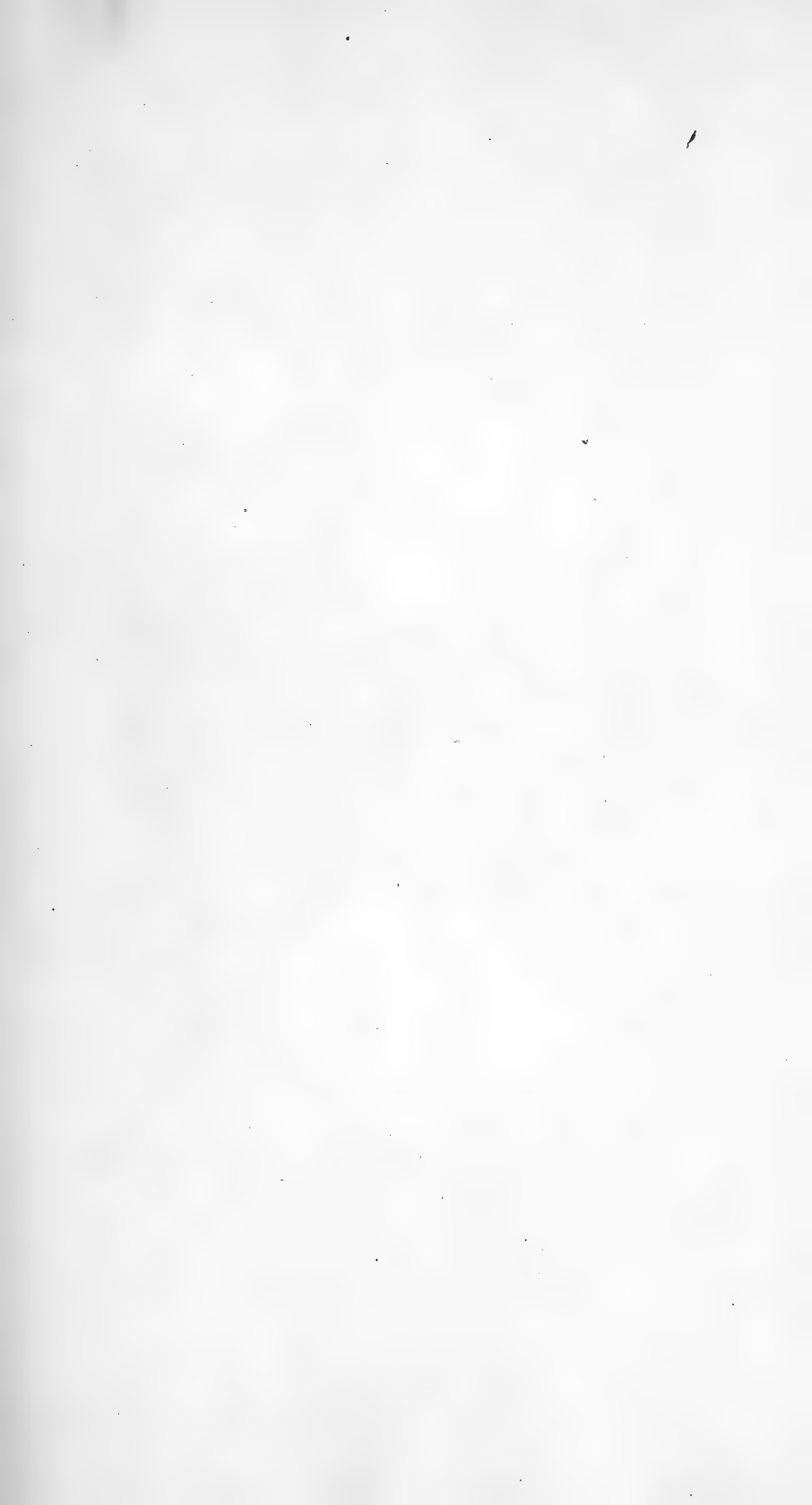
We are under no difficulty in identifying this curious Coral body with the Madrepora, specifically denominated by Mr. Ellis "radiata," excepting only that the specimen now before us is in a more perfect state than the example represented in the work of Zoophytes published by Solander, from the papers and drawings of that acute and ingenious naturalist.

The near affinity of this species with *Madrepora favosa* will be perceived : its characteristic distinctions are however prominent, and leave no doubt upon the mind that they are really distinct. In *Madrepora favosa* the stars on the surface are crowded, and in some degree intertexted ; in this they are distinct, even from the base, and though placed contiguous to each other, appear conspicuously separate upon the upper surface, as well as in the transverse section of the base ; a pretty deep avenue surrounds each star, the centre or disk is concave and rather deep, and in the centre appears a little elevation, the prominent focus in which the lamellous plates unite, and whence they diverge like rays, rising gradually towards the margin and forming on its loftiest elevation a distinct circle of pointed processes : from this margin or circle of points, each of the plates of which they are formed decline outwardly upon the avenues which surround the cells, and thus renders its stellated figure complete. It should be also added, that each of the plates, when viewed perpendicularly as they lie in the cavity of the cell, appear to consist of two plates united laterally, the edge of each being marked down the centre with a small sulcation or furrow.

We have been the more minute in the detail of those particulars, the species being rare, and the example described and figured by Mr. Ellis, as before intimated, a very imperfect or injured specimen.

This species is a native of the American seas.







# ENTOMOLOGY.

## PLATE CLVIII.

### PAPILIO DRYASIS

### DRYASIS BUTTERFLY

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ thicker towards the tips, and usually terminating in a club: wings erect when at rest. Fly by day.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Wings entire, fuscous; above, on the anterior wings, two white spots; beneath all the wings spotted.

**PAPILIO DRYASIS**: alis integerrimis fuscis: anticis punctis duobus, subtus omnibus plurimis albis.—*Fabr. Ent. Syst. n. 117.*—*Jon. fig. pict. 3. 85. f. 1.*

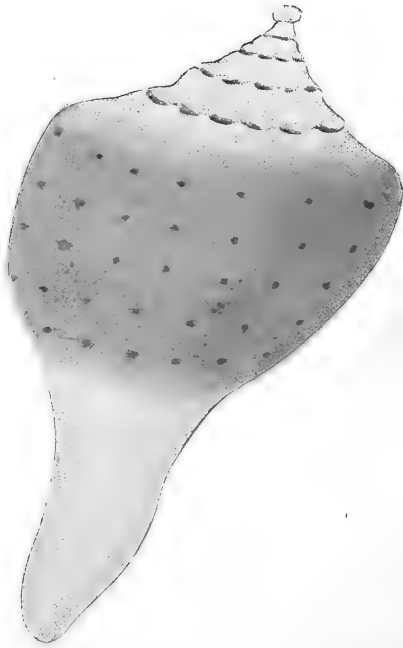
## PLATE CLVIII.

An example of this very remarkable insect was observed by Fabricius in the British Museum, some time anterior to the year 1793, and previously to that period the specimen had been copied into the drawings of Mr. Jones: whether it is now extant or not appears to be uncertain, nor have we any recollection of having met with it in any other cabinet. Those circumstances can scarcely fail to render its figure acceptable, and this the more especially when it is added, that the only figure of the species is that preserved in the unpublished drawings of Mr. Jones, and that the copy now submitted to the naturalist presents a faithful transcript of that original design.

In point of size, *Papilio Dryasis* deserves attention: it is inferior to none of its peculiar tribe of *Papiliones*, and although its colours are not remarkable for their vivid tints, it is not devoid at least of some attractive peculiarity. The prevailing colour is rufous brown; the upper surface is distinguished by two white spots, both of which are situated on the first pair of wings, the largest in the middle, and the smaller nearer the anterior margin. On the lower surface all the wings are spotted with white, but the spots are smaller: eight of those white spots are situated in the disk of the anterior pair, and five in the posterior ones.

Native country unknown.





# CONCHOLOGY.

## PLATE CLIX.

### VOLUTA PYRUM

### PEAR VOLUTE

### UNIVALVE.

#### GENERIC CHARACTER.

Spiral; aperture without a beak, and somewhat effuse: pillar twisted or plaited, generally without lips or perforations.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Shell ovate and slightly tailed, with striated whorls on the spire: tip produced and glabrous: pillar with three or four plaits.

\* The younger shells whitish fulvous, with punctiform chesnut coloured spots.

**VOLUTA PYRUM:** testa obovata subcaudata spiræ anfractibus striatis; apice producto glaberrimo, columella triplicata. *Gmel. Syst. Nat. T. 1. p. 6. 8463.*  
102.

## PLATE CLIX.

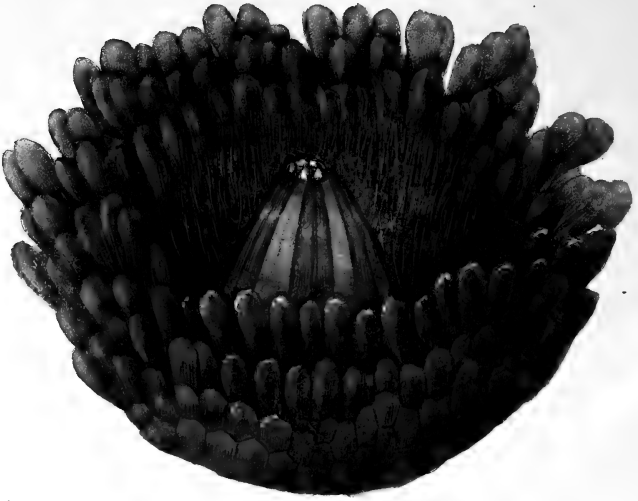
**TURBINELLA PYRUM** : testa supernè ventricoso-clavatâ pyriformi caudata , albido fulvâ, maculis spadiceis punctiformibus pictâ ; spirâ parvâ, mucrone tenui terminatâ : apice mamillato ; cauda longiusculâ striata ; columella quadruplicatâ. *Lamarck An. sans Vert. T. 7. p. 107.*

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In an early part of the present publication (plate 22) will be found a figure and description of that very rare and highly appreciated testaceological production, the sacred Chank shell of the Asiatic Indians. That shell is a reverse growth of the kind now before us, and in a more advanced or adult state ; when young, its colours, instead of being a sordid or yellowish white, inclines to fulvous, and the larger wreath is marked with regular equidistant circles of chesnut-coloured dots, as represented in the annexed plate. Some remains of the fulvous colour of this shell, and traces of the chesnut coloured spots by which it is encircled, are perceptible in the examples of larger growth, but the shell appears in those respects to less advantage in the adult than in the younger state, and it has for this reason been deemed adviseable to introduce the present figures of its early growth, in order to render the history of that highly estimated curiosity, the Indian Chank shell, as complete as might be desired. It will be borne in mind, that the Chank shell is one of that kind which conchologists denominate reverse shells, that is, having the mouth on the left side of the shell, and the wreaths originating from the mouth in consequence turning the reverse way from the generality of turbinated shells : the example now before us presents one of ordinary growth, having the mouth placed on the right side instead of the left.







VERMIOLOGY.

PLATE CLX.

ECHINUS ATRATUS

VIOLACEOUS-BLACK ECHINUS

ZOOPHYTES.

GENERIC CHARACTER.

Body roundish, covered with a bony sutured crust and usually furnished with moveable spines: mouth placed beneath and generally five valved.

SPECIFIC CHARACTER

AND

SYNONYMS.

Hemispherical oval and slightly depressed; with very short obtuse truncated spines, those round the margin club-formed and depressed.

ECHINUS ATRATUS: hæmispherico-ovalis depressiusculus: spinis truncatis brevissimis obtusissimis: marginalibus clavatis depressis. *Gmel. Linn. Syst. Nat.* 3177. 11.

## PLATE CLX.

An Echinus, or sea egg, of very singular appearance, the whole surface of the dorsal region being tessellated or divided into hexagonal spaces, formed by the obtuse terminations of the clavated spines. Those spines, as will appear from the figure, approximate very closely to each other on the upper surface, and being of an uniform height, present very nearly a level surface, but the length of those on the descent towards the margin is greater, and those which surround the margin of the lower disk are yet longer than the latter. This is the appearance of the dorsal surface; the Echinus inverted so as to shew the inferior surface presents an aspect much resembling an expanded multipetalous flower, the corolla being formed of the marginal series of spines, and the remarkable apparatus of its five-rayed mouth, rising in the centre like the stigma of certain blossoms, in addition to the numerous filamentous spines by which it is surrounded, contributing materially to render its resemblance more complete.

The colour of this curious production of the marine element is a deep blackish violet with a velvety surface. It is an inhabitant of the Indian seas.





ENTOMOLOGY.

PLATE CLXI.

PAPILIO PROTUMNUS

PROTUMNUS BUTTERFLY

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tips, and usually terminating in a club : wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, yellowish brown with fuscous spots : beneath clouded hoary.

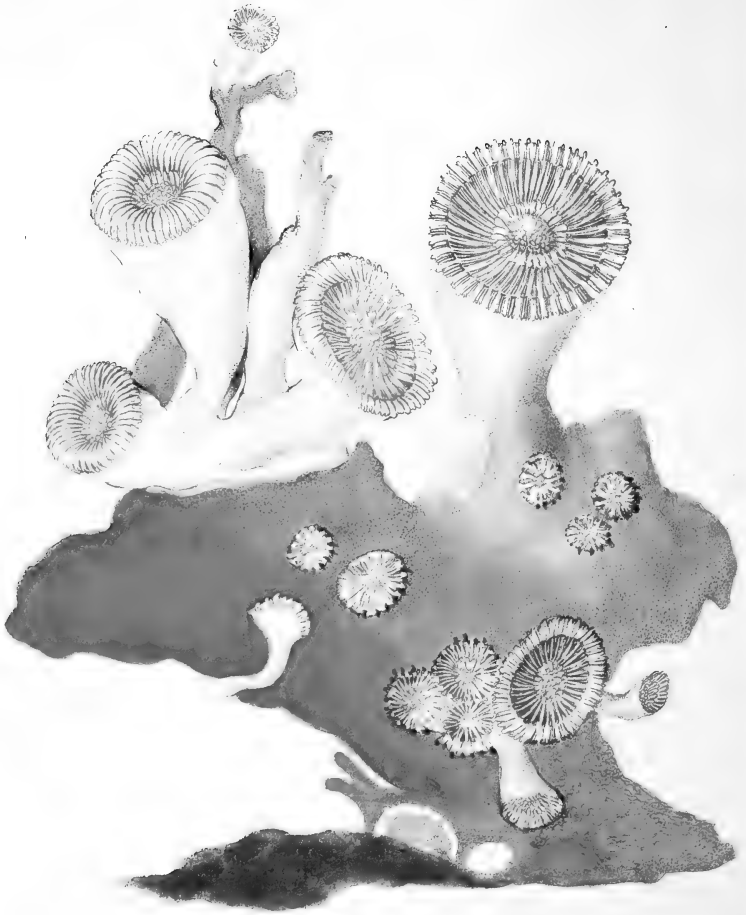
PAPILIO PROTUMNUS : alis integerrimis lutescentibus fusco contaminatis subtus canescentibus nebulosis. *Linn. Lud. Ultr.* 240.—*Gmel. Linn. Syst.* 2263. n. 258.

## PLATE CLXI.

The Linnæan entomologist will learn with pleasure that the figure now presented affords an accurate representation of one of the hitherto unfigured rarities of the Linnæan cabinet, a collection at the present time the property of Sir J. E. Smith, the very worthy president of the Linnæan Society. The description of this truly interesting article occurs in more than one or two of the writings of Linnæus, but we have every reason to believe the figure of the species does not occur in the work of any author. There is no reference to a figure by Linnæus; he refers only to the cabinet of the Queen of Sweden for the specimen described, and informs us it is a native of the Cape of Good Hope. We rest persuaded, that although this insect is one of the smaller size, and not particularly remarkable for its beauty, the entomologist will receive with no small degree of gratification an illustration of a species, which, for the before mentioned reasons could have been only hitherto imperfectly understood; from the writings of Linnæus it must have been known that such an insect did exist; at the same time it must be confessed, that his description cannot possibly convey such an exact idea of the object itself as the figure now submitted to the reader.







# VERMIOLOGY.

## PLATE CLXII.

### MADREPORA CYATHUS

### CUP-FORMED MADREPORA

#### GENERIC CHARACTER.

Coral, with lamellate star-shaped cavities.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Clavate, turbinate with a tapering base: star obconic with a doubled prominent jagged centre.

**MADREPORA CYATHUS**: clavato-turbinata basi attenuata: stella obconica; centro-prominulo exeso duplicato.  
*Soland. and Ellis Coral*, p. 150. n. 3. t. 28. f. 7.  
*Gmel. T. 1. p. 6. 3757. 6.*

---

Some of the late French writers have instituted a new genus of the Madrepor tribe, to which the present Coral appertains, under the name of Caryophyllia. The species of this particular tribe are

-PLATE CLXII.

those which from their exterior bell-shaped form, and depression or crater-like hollow within, had previously obtained the name of "*Le Gobelet*," and of which genus the present object, *Madrepora Cyathus* of Linnæus, constitutes the type and first species. But, besides this species, it comprehends also as well those which are solitary as those which are fasciculated, and thus the character becomes too general in our opinion to be implicitly adopted. The distinction of the stem being simple, can scarcely bear a sufficient definition where some species are single and others fasciculate. Lamarck defines the genus thus, "*Tiges simple soit solitaires soit fasciculées.*"

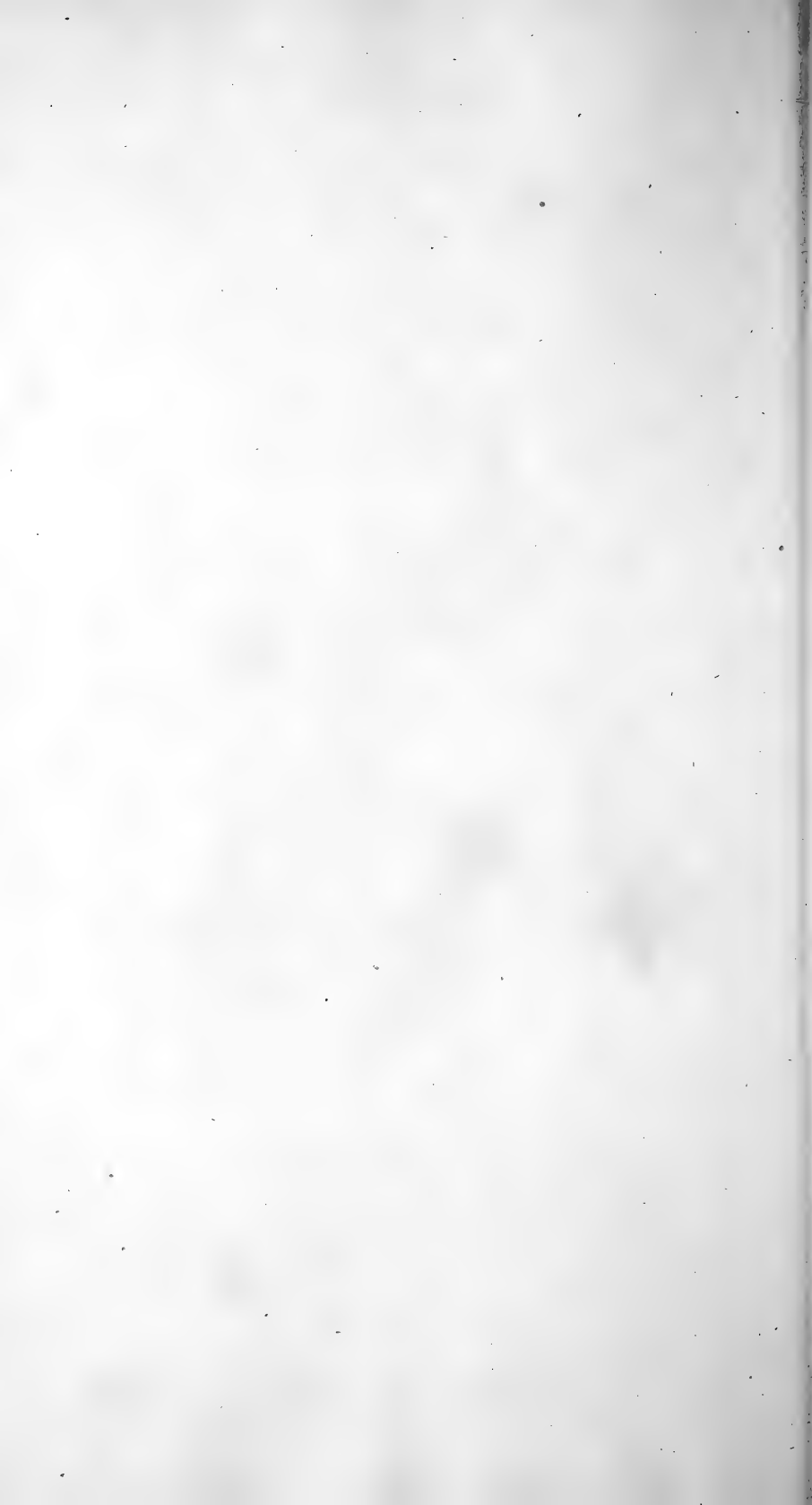
The resemblance which this curious and very elegantly-shaped *Madrepora* bears in form to certain infundibuliform or bell-shaped flowers, is not very remote, and if we except the lamellous appearance of the interior, the assimilation is rather intimate. We are to remember also, that the *Agarics* and other orders of the *Fungi* family are really furnished with gills, and may afford us, in their inverted position, an approximation in their general structure yet nearer than the exterior form. The ancient botanists, the naturalist is aware, considered those Coral bodies as beings of vegetable origin; they were the "flowers of the sea" among those writers, and really while the form and not the substance of which they are composed was alone considered, these writers were in some small measure at least excuseable for this assimilation.

The species named by Linnæus *Madrepora Cyathus* is not the only species of its genus that possesses this habit or character of a flower, rising upon a pedicle or footstalk, by means of which it

## VERMIOLOGY.

affixes itself to the rocks : there are one or two other species described, but which are not apparently very accurately defined ; some are fasciculate, and ought not therefore, as before observed, to be included in this family of solitary corals. Of those with simple and single stems, the present appears to be the most abundant and the best determined.

It is a native of the Mediterranean sea, upon the sandy shore of which the detached examples are not unusually found in plenty. Affixed upon its native bed of rocks, the species occurs more sparingly, for as each particular individual or specimen stands apart from the rest, however numerous they may be upon a single stone, they find no protection from each other like those coral bodies which aggregate in groups, and this insulation, in addition to the fragile texture of the coral itself, renders them very liable to be broken by the least commotion of the waves, so that a group of them is rarely seen. The example represented in the annexed plate was found at some depth among the recesses of the rocks below the level of the ebbing tide, and were affixed to, or growing upon a coarse piece of the common red coral, *Gorgonia nobilis* ; and it may be added in conclusion, that it is chiefly upon the masses of that highly prized article of merchandize that we have usually observed the *Madrepora cyathus* : many of the detached specimens occur upon fragments of this red coral, to which their base is naturally affixed and with which it appears most frequently to associate.









CONCHOLOGY.

PLATE CLXIII.

TURBO AUSTRALIS

AUSTRALASIAN TURBO

UNIVALVE.

GENERIC CHARACTER.

Shell univalve, spiral solid : aperture contracted, orbicular, entire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell turreted, gracile, apice obtuse, white, ribs smooth, very straight, first or greater whorl angulated.

**TURBO AUSTRALIS** : testa turrata, gracile, apice obtusa, alba ; costis lævibus rectissimis, ultimo basi angulato.

**SCALARIA AUSTRALIS** : testa turrata, gracile apice obtusa alba ; costis lævibus rectissimis, infra ultimum anfractus supra carinam impositis : suturis vix excavatis. *Lamarck An. sans Vert. T. 6. p. 2. 6.*

## PLATE CLXIII.

This shell, denominated by M. Lamarck from its native region *Scalaria Australis* or Southern Wentletrap (Staircase shell) is a species for which that writer was indebted to a communication of the late secretary of the Linnæan Society, Alex. Mc. Leay, Esq. and who had received it from New Holland some years before; and we have also, since that period, received the same species from Van Dieman's land, through the hands of Mr. George Humphrey.

The description of this curious shell by M. Lamarck is very accurate and satisfactory, but at the same time it must be acknowledged that few readers are competent to form an exact conception of a shell, or indeed of any object of natural history, unaccompanied by a figure, so clearly as when accompanied by such an illustration; for in the latter case, the language of science, jointly with the delineation of the pencil, becomes at once obvious, and leaves nothing to be supplied by the imagination, either as to its appearance in form, size, or colour; it is, for this reason, we must presume, that although the shell before us has nothing so materially interesting in its appearance as to command attention, it will be deemed of sufficient consequence to merit the elucidation we have bestowed upon it, as an acquisition to the conchologist. Lamarck, aware of its being a non-descript shell, has deemed it worthy of a long and very minute description, and assuredly, therefore, we may be allowed to trust that the figures in the annexed plate, the first that have appeared, can scarcely fail to be considered useful as a further illustration of the species.

It will not escape the observation of the conchologist, that Lamarck has placed this new shell in his system as a species of

## VERMIOLOGY:

Scalaria, the type of which genus is *Scalaria pretiosa*, figured in a former part of this work, a shell, valued in former days at a vast price: at forty or fifty guineas, and, indeed we have seen a specimen, only a few years ago, realize at the public hammer more than thirty pounds. But the true *Scalaria* does not precisely agree with our present shell, even generically considered: the chief distinction of that highly appreciated object of curiosity consists in the body of the shell forming throughout, from its mouth to the apex, a spiral tube, like some of the *Serpulæ* or worm-shell tribe, while in every true turbinated shell, all the wreaths are in contact; the anfractal line of the whorl of the second wreath, resting upon and being united with the first, and thus continuing to the tip or extreme point, of the spire. In the true *Wentletrap*, the volutions of the tube are distinctly unconnected, but it is at the same time traversed longitudinally, from the mouth to the apex, by several lateral ridges or plates, which touch the convexity of every volution in its progress throughout, and thus serve to strengthen and sustain the shell unbroken. Thus, it will appear, that destitute of those lateral supports, the shell would be no other than a spiral tube, like the *Serpulæ*, and not a turbinated shell. From this form, so evident in the true *Scalaria*, there are, however, transitions that approximate with or blend into the turbinated shell, and thus, in some degree unite the character of both; those are the turbinated shells which have the sutures of the whorls connected, at the same time that they possess also the lateral longitudinal ridges or plates, although not absolutely requisite for the support of the shell, as in the true *Scalariæ*. The latter shells are the bastard or false *Wentletraps* of English collectors, of which the *Turbo Clathratus* of our own shores afford a very illustrative example, and which moreover assi-

## PLATE CLXIII.

milates so very closely with the *Scalaria Australis* that it is impossible to consider the two shells as generically distinct ; indeed, those two shells, so far from being generically different, approximate so nearly to each other, that few observers, unaccustomed to those minute distinctions which attract the regard of the naturalist, would perceive any difference between them. In size, in form, and colour they are alike, and yet at the same time they possess a character that can leave no doubt of the two shells being really different. The principal distinction consists in the angular form or ridge by which the lower part of the greater whorl is traversed : while in *Turbo clathratus* this convexity of the greater whorl is rounded, in *T. Australis* it is angulated, and this distinction prevails in all the examples of both species that have hitherto occurred. This circumstance is more important to be observed than may be at first conceived, for it clearly shews, that however nearly the testaceous productions of that portion of the globe in which the British Isles are situated, resemble those of the Antipodes and its vicinity in the Southern Seas, there is yet a difference, which considered duly, must assure us that the beings of those regions, though apparently similar, ought not to be confounded with those of our climes. This acute angulation, or carina, which characterises the lower whorl of the spire of *T. Australis*, will be distinctly understood from the figures in the annexed plate, in which the front as well as dorsal views of the Australasian species are delineated. We need scarcely add that those shells are inhabitants of the sea.





VERMIOLOGY.

PLATE CLXIV.

ISIS HIUPPURIS

BLACK AND WHITE JOINTED CORAL

ZOOPHYTA.

GENERIC CHARACTER.

Animal growing in the form of a plant: stem stony, jointed, the joints longitudinally striated, united by lapideous, spongy, or horny junctures, and covered with soft porous cellular flesh or bark: mouth beset with oviparous polypes.

SPECIFIC CHARACTER

AND

SYNONYMS.

White with striated joints and black junctures.

ISIS HIPURIS: stirpe corallina: articulis striatis, geniculis a tenuatis. *Linn. Fn. Suec.* 2220.—*Gmel. Syst. Nat.* 1. p. 6. 3792. 340. n. 1.

## PLATE CLXIV.

The *Isis Hippuris*, the species of Coral now submitted to the reader, is intended to constitute an appropriate sequel to the description and figure of *Isis Ochracea*, the subject of plate 153 of the present work, where the species has been adverted to, and a promise made of its future introduction.

This elegant coral is not uncommon in the Indian seas, and specimens of it, divested of its flesh, are very usual in cabinets; with the flesh on, it is, however, rare, for in the dried state it is extremely friable; and in spirits, the only state of preparation in which it can be distinctly understood, unless we could observe them in a living state, examples are very rare. In the annexed plate will be found the delineation of a very elegant branch of this beautiful and truly interesting object, having some of its limbs clothed with the flesh, and others denudated and displaying the articulated bony process, which constitutes the true skeleton of this extraordinary multiple animal fabrication. The coral, devoid of flesh, being of a white colour, and connected by means of black joints, has obtained for this curious object the familiar name of the "*Magpie Coral*;" the flesh, when recent, is of a fine orange externally, and pale, inclining to reddish within; the animal inhabitants are of the Polype tribe, they are, as usual in that family, beings furnished with eight arms or feelers, and reside within the flesh, with which the bone of this anomalous structure is covered. Each of those polypes occupy a little independant cellular receptacle, whose opening is at the surface, from whence they are seen, when immersed in their native element the sea, protruding and expanding their limbs with great activity in quest of the host of aquatic beings with which in Indian climates that element abounds. The situation of those cells is easily discovered in the dried specimens by the pore or cell remaining unclosed.







# ENTOMOLOGY.

## PLATE CLXV.

### PAPILIO BIXÆ

### BIXA BUTTERFLY

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club : wings erect when at rest. Fly by day.

\* *HESPERIA URBICOLA.* *Fabr.*

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Wings rounded brown, base greenish : posterior wings with a pale yellow band.

**PAPILIO BIXÆ** : alis rotundatis fuscis basi virescentibus : posticis subtus fascia lutea. *Linn. Nat.* 2. 594. 264.—*Mus. Lud. Ulr.* 335.—*Fabr. Syst. Ent.* T. 3. p. 1. 344. 307.

## PLATE CLXV.

A native of South America. In its general aspect there is nothing very remarkable in this species of *Papilio* except in the highly bronzed glosses with which its upper surface is enriched when in a perfect state, and the very singular appearance of the eyes: the latter are of a dark or deep brown colour, surrounded by a radiation of white and black hairs or down, which alternate in tufts or stripes, and thus express a black star of several distinct rays, upon a circumference of pure snowy white.





# VERMIOLOGY:

## PLATE CLXVI.

### SPONGIA TRUNCATA CUT-MOUTHED SPONGE

#### ZOOPHYTES.

##### GENERIC CHARACTER.

Animal fixed, flexile, torpid, of various forms ; composed either of reticulate fibres, or masses of small spines interwoven together, and clothed with gelatinous flesh, which is full of small mouths on its surface, and by which it absorbs and rejects water.

##### SPECIFIC CHARACTER

AND

##### SYNONYMS.

Aggregate, thick, rigid, tubular, the branches nearly of equal height ; the tips truncate, opening terminal, and somewhat triangular.

**SPONGIA TRUNCATA** : aggregata, crassa, rigida, tubulosa ; ramis subfastigiatis truncatis, foramine terminali subtriangularibus.

**SPONGIA** : *Seba, T. 3. t. 97. f. 2.?*

## PLATE CLXVI.

A species of the sponge tribe of rare occurrence, and of which the *habitat* is apparently not very precisely known. The example represented in the annexed plate, we found among the Spongiæ, in the collection of the late Mr. George Humphreys, without any reference to its native country. There is in the great work of Seba, plate 97, fig. 2, a kind of sponge which we suspect may be a variety of the present species: it resembles it in having tubular branches with the openings terminal and somewhat triangular, and furthermore, we conclude, from the appearance of the figure, in the truncated mouth; but it is smaller, the branches more regular, longer and more distinctly fastigate or rising to an equal height. The correspondence is however so near, that we conceive it may be a smaller growth of the present species, and if so, it is presumed to be the kind denominated by Pallas, *S. Fastigiata*, or a species nearly approximate.

Now that we are speaking of the *Spongia fastigiata* of Pallas, it may not be amiss to observe, that Professor Gmelin has placed this Pallasian species as a variety of *Spongia tubulosa*, a kind with which we can by no means reconcile it, the *S. tubulosa* having the tips of the branches somewhat attenuated or pointed, as described and figured by Ellis and Solander, the very reverse of which, as it was before observed, is obvious in the species now before us; the openings in this kind, instead of being pointed or inclining to that form, are broad and somewhat expanded, and the truncated margin of the aperture so distinctly characteristic, that the casual observer might be readily inclined to conceive they had been cut with a knife or other similar instrument, and that consequently this truncation must be the work of art instead of nature; that it is the true character of its



## VERMIOLOGY.

natural growth, without the adventitious aid of art or accident, may however be relied upon.

The colour of the Sponge in its present state is brown, and we have no authority for improving that dusky colour to a warmer or more lively tint; at the same time it should be observed, since many of the sponge tribe in the living state, are of a fine orange colour, this particular species may also have partaken of that hue in its recent state, and we are inclined to think it really has.

This sponge, as before remarked, is throughout tubular, and besides the larger or central hollow, which we trace from the base to the terminal summits, the margin of the truncated lip is perforated with little cells which descend perpendicularly, and are consequently placed parallel to the larger opening in the substance of the sponge. Some few of these cells or perforations have their aperture of an obcordate form, but are more usually rotundate. The texture of this sponge is close, the fibres being intimately interwoven; to the touch rigid and rather wiry.







CONCHOLOGY.

PLATE CLXIV.

BUCCINUM MACULATUM

SPOTTED BUCCINUM

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, gibbous: aperture ovate, terminating in a short canal leaning to the right with a retuse beak or projection: pillar lip expanded.

\*\* Tapering subulate and smooth.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell somewhat fusiform or spindle-shaped, with smooth undivided and very entire whorls.

PLATE CLXVII.

**BUCCINUM MACULATUM** : testa subfusiformi : anfractibus laevibus indivisis integerrimis. *Linn. Mus. Lud. Ulr.* 613. n. 269. *Gmel.* p. 3499. 130.

**Terebra Maculata**, Vis tachée : *Lamarck t. 7. p. 284.*—*List. Conch. t. 846. f. 74.*—*Rumph. Mus. t. 30. fig. A.*—*Seba Mus. t. 56. f. 4. 6.*—*Martini Conch. 4. t. 153. f. 1440.*

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This large and very beautiful shell, a species that scarcely ever fails to occur in the cabinet of every conchologist, is a native of the seas of India and Africa, and is also stated to have been met with in the vicinity of Owyhee and other Islands of the Great Southern or Pacific Ocean. In the Linnæan system it is arranged as one of the Buccinum tribe. Some writers of the present day retain it as a Terebra.







VERMIOLOGY:

PLATE CLXVIII.

ECHINUS PICTUS

PURPLE-LEAVED ECHINUS

OR

SEA EGG

ZOOPHYTES.

GENERIC CHARACTER.

Body roundish, covered with a bony sutured crust, and usually furnished with moveable spines: mouth placed beneath, and generally five valved.

SPECIFIC CHARACTER

AND

SYNONYMS.

Cinereous, hemispherical, depressed subangular, with ten avenues of pores, larger middle spaces, with a serrate suture down the center, and transverse subangular alternate purple spots.

**ECHINUS PICTUS:** Cinereis, hemispherico, depressus, subangulosus ambulacris denis, areis majoribus sutura media serrata maculis transversis subangularibus alternis purpureis.

**ECHINUS BASTERI:** *Klein tab. 43. f. 3. 5.?*

Cidarite. — *Cidarite. Encycl. Methodique. pl. 142. fig. 4. 5? mala? pl. 198. f. c.*

## PLATE CLXVIII.

We can feel little confidence in adding any synonyms to the species of *Echinus* now before us. As an object of interesting curiosity to the naturalist, and one of no very rare occurrence, it cannot but be familiar to most collectors, and may possibly have been intended by certain figures in the work of Klein, to which we have above adverted, and perhaps some others, but if this idea be correct, we must confess that both the figures and the descriptions by which they are accompanied are too indefinite to authorise any precise conclusion on the subject. We have indeed sometimes thought that in one of the representations of *Echinus Basteri*, in the work of Klein, to which we have referred, that we could trace the lineaments of the very remarkable sprig of alternate triangular leaf-like purple spots, so conspicuous in the examples before us, at the same time that it must be allowed that the representation is confessedly too remote, or too imperfect to be relied upon. There are several other species of this tribe, which assimilate very nearly to this, and it may be therefore possible that some other kind has been intended, rather than the species now the subject of our consideration.

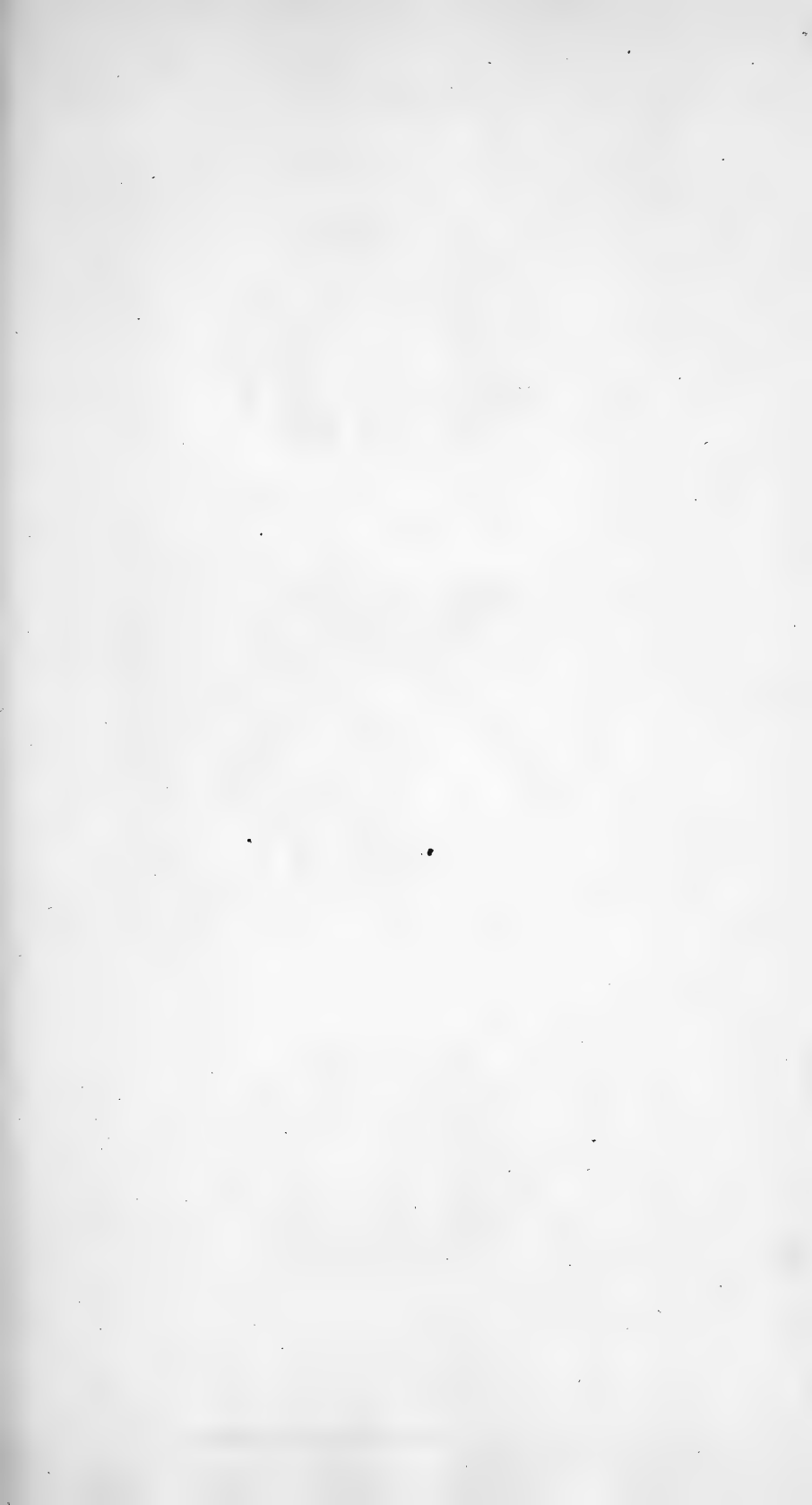
We should not omit to mention that the figures of *Echinus Basteri*, figured by Klein in his *Echinodermata*, have been repeated in one of the plates of the *Encyclopædie Methodique*, and yet so little were the editors satisfied with those figures, if really intended for our present species, that they caused a new figure to be engraved for that work: this latter may be seen in the supplemental plate 198, the former figures from Klein in plate 142, f. 5, 6. This figure, besides differing in some few minor characters from the specimens in our possession is, as usual, devoid of colours, and can therefore, it is presumed, in no manner render our present representation needless or unimportant.

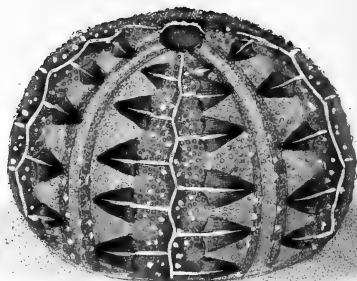
## VERMIOLOGY.

In the Linnæan arrangement it may be added this species, distinctly appertains to the Echinus tribe. According to Lamarck's system, it is one of his Cidarites: but if described by Lamarck, his description has escaped our reading, although we have sought for it repeatedly in the publications of that author.

We have received this species from the Atlantic Seas.









**CONCHOLOGY.**

**PLATE CLXIX.**

**CONUS BICINCTUS**  
**TWO-BANDED CONE**

**UNIVALVE.**

**GENERIC CHARACTER.**

Shell convolute, turbinate : aperture effuse, longitudinal, linear, without teeth, entire at the base : pillar smooth.

**SPECIFIC CHARACTER.**

Shell somewhat cylindrical, white and fuscous clouded ; with transverse lines dotted with black, and two orange belts : lip within fulvous.

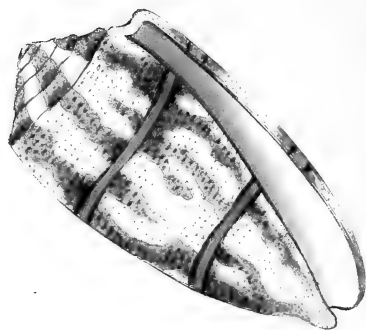
**CONUS BICINCTUS** : testa subcylindrica alba fusco nebulosa, lineis transversis nigro punctatis cingulis duabus aurantiis : labro intus fulva.

## PLATE CLXIX.

A native of the Indian seas. This shell is very nearly allied to several of the presumed varieties of *Conus Rusticus* of Linnæus and Gmelin, *Conus Cinereus* of Lamarck and others. We cannot, however, precisely identify it with either of the varieties already noticed by authors, nor with those of some other analogous species of the *Conus* genus, which in size, contour, and more especially in the markings, approximate towards it, and therefore upon the whole it appears that it may be rather considered as a shell that has escaped at least the definitive observation of authors, than as one which has already been described. The nodulous margin of the spiral line of the summit, removes it from several species of the *Conus* tribe with which it may in other characters be found to correspond.











# ENTOMOLOGY.

## PLATE CLXXI.

### PAPILIO CHARMIONE CHARMIONE BUTTERFLY

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club : wings erect when at rest. Fly by day.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS:

Wings rounded, entire, above and beneath white, with a black border ; that of the anterior wings with two yellow spots, and on the border of the posterior wings one.

PAPILIO CHARMIONE : alis rotundatis integerrimis concoloribus albis : limbo nigro ; anticarum maculis duabus flavis, posticarum unica.. *Fabr. Syst. Ent. T. 3. p. 1. 205. 641.*

PAPILIO CHARMIONE : *Jon. fig. pict. 2. tab. 1. fig. 2.*

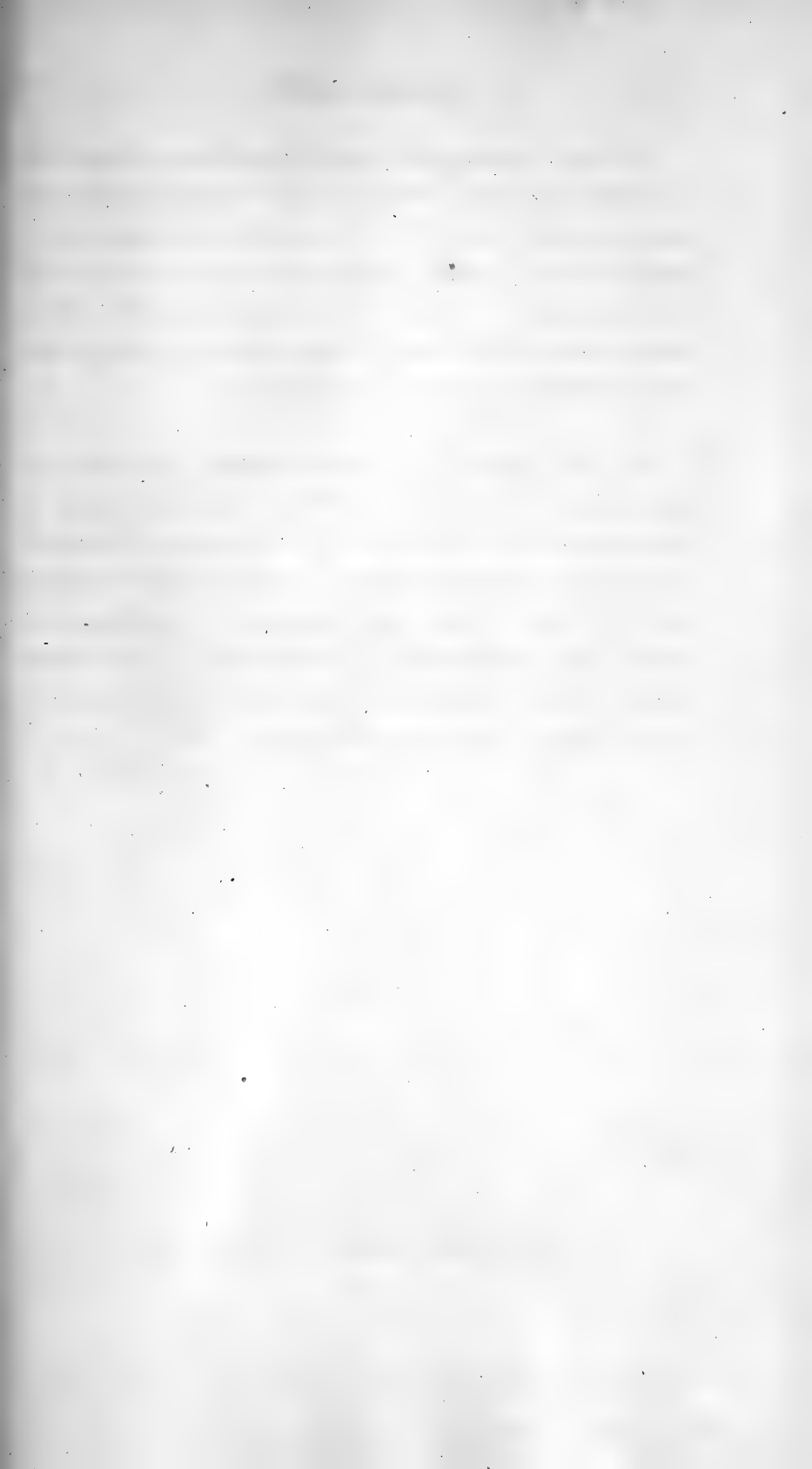
## PLATE CLXXI.

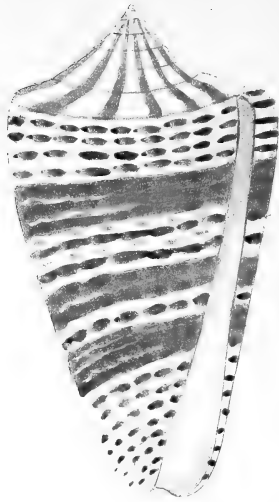
A highly interesting entomological acquisition, not figured by any author, and which is known only to the learned world through the writings of Fabricius. The representation of this curious insect occurs among the original drawings of the late Mr. Jones, to which Fabricius refers for his authority, and it need scarcely be added, that the figure depicted in the annexed plate is copied from that individual drawing to which Fabricius adverts.

Fabricius speaks of the original specimen; from which the drawings by Mr. Jones were taken, being extant in his time in the collection of Mr. Drury, and that it came from the island of Johanna\*. We, however, perceive in our copy of the *Entomologia Systematica*, that this habitat is erased, a correction made by ourselves many years ago upon the authority of Mr. Jones himself. Referring from thence to the manuscripts of Mr. Drury, now in our own possession, we find nothing satisfactory on this subject.

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\* "Habitat in insula Johanna." Drury Mus. Dom.







# CONCHOLOGY.

## PLATE CLXXII.

### CONUS TESSELATUS

### MOSAIC PAVEMENT CONE

#### UNIVALVE.

#### GENERIC CHARACTER.

Shell convolute, turbinate; aperture effuse, longitudinal, linear, without teeth; entire at the base; pillar smooth.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

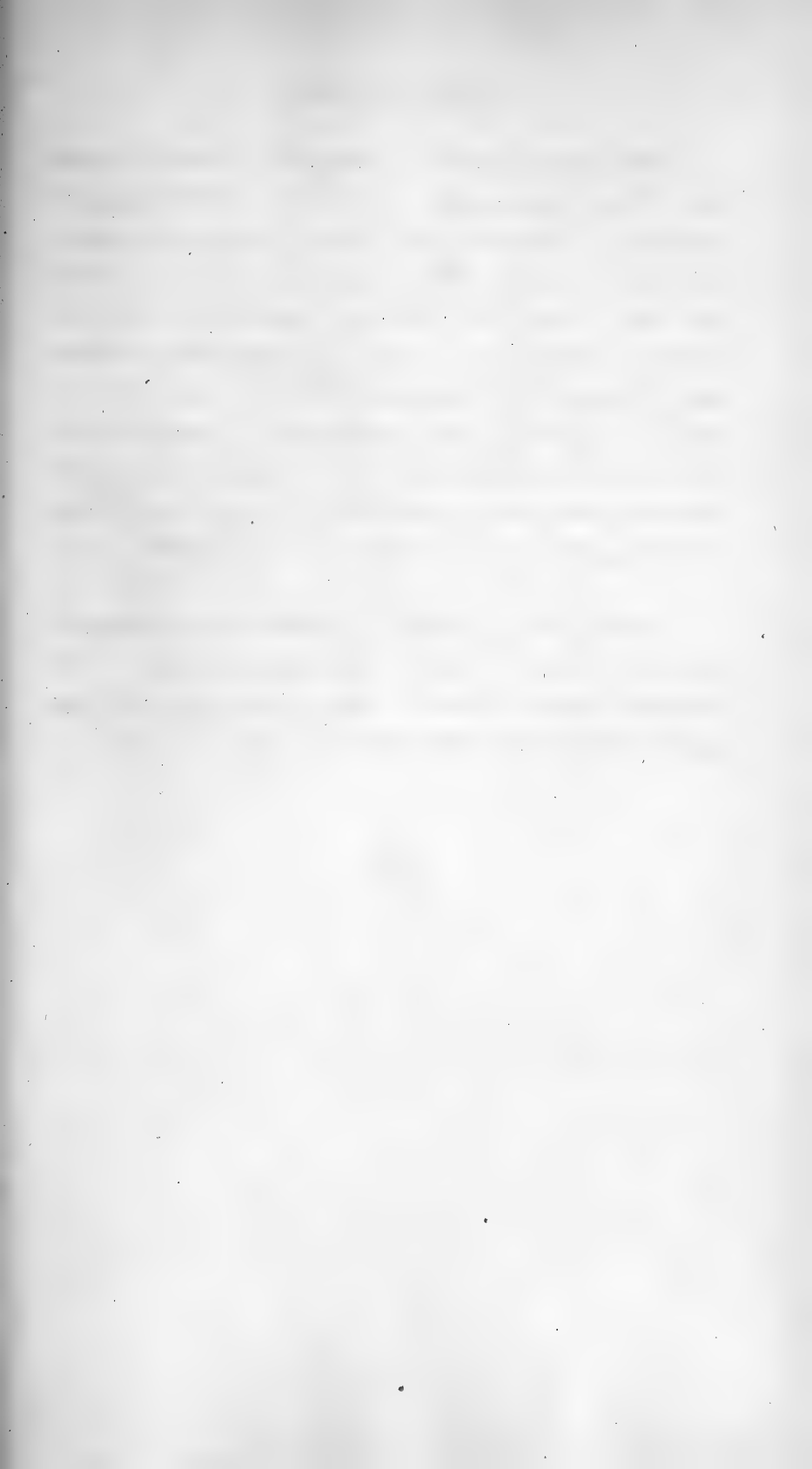
Shell turbinate, white, with quadrangular scarlet spots, disposed in series; base sulcate, violaceous: spire plano-obtuse and pointed.

**CONUS TESSELATUS**: testa turbinata, alba; maculis coccineis quadrangulis seriatis; basi sulcata, violacea, spira plano-obtusa, acuminata. *Lamarck An. sans Vert. T. 7. 464. 48.*

## PLATE CLXXII.

Inhabits the Indian Ocean. The shell is of a whitish or milky hue, with about sixteen girdles or belts composed of quadrangular scarlet spots, which vary a little in different examples of the shell in point of size, and somewhat also in the tint of colour, but these spots most usually incline to orange; those across the middle are sometimes confluent, so as to form conspicuously one or two broad bands of spots, and not unfrequently, where two such bands occur, they are separated by a pale or whitish band, upon which a single line of equidistant spots appear. Such distinct lines of spots are disposed circularly in other parts of the shell also, as well as on the intervening pale one which divides the two broader bands.

This shell, from the singular disposition of its quadrangular spots, has obtained the name of the mosaic pavement. *Conus Tessellatus* does not frequently attain to the size of the larger specimen figured in the annexed plate.





# ENTOMOLOGY.

## PLATE CLXXIII.

### BOMBYX ARGUS

### LONG-TAILED ARGUS BOMBYX

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ gradually tapering from the base to the tip: tongue spiral: wings, when at rest, generally deflected. Fly by night.

\* Wings expanded.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Wings tailed, pale ferruginous with numerous transparent ocellar dots: tails very long.

**BOMBYX ARGUS**: alis patentibus caudatis pallide ferrugineis: punctis ocellaribus fenestratis numerosis caudis longissimis. *Fabr. Syst. Ent. t. 3. p. 1. p. 414, 24.*

**BOMBYX BRACHYURA**: *Drury Ins. 3. pl. 29.*

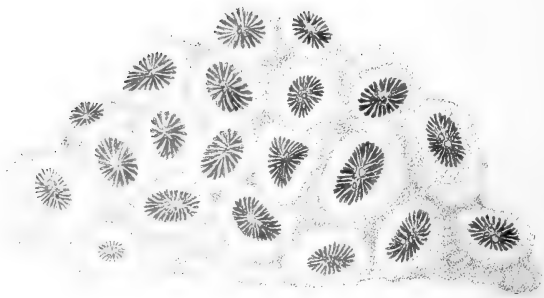
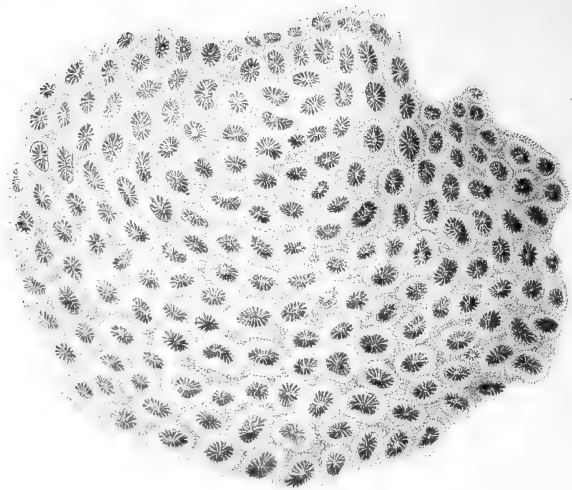
*Phalena Brachyura*: *Cramer Ins. 3. tab. 29. fig. 1.*

## PLATE CLXXIII.

Delineated from a fine example of this very extraordinary and curious species preserved in the cabinet of the late Sir Joseph Banks, Bart. and which is now the property of the Linnæan Society.

For this interesting addition to the entomological cabinet the naturalist was originally indebted to the assiduity of that ingenious collector, Mr. Smeathman; he visited Sierra Leona in the year 1775, and brought several of this species with him on his return to Europe. There was one pair in the cabinet of the late Mr. Drury, which, after his death, came into our possession, and some few other specimens passed into different continental cabinets, all which, however, so far as we can learn, were those collected by Mr. Smeathman at the time before mentioned. We are not aware of the species having occurred in any other part of Africa, neither have we understood that any other collector since Mr. Smeathman had met with the species at Sierra Leona, the locality in which we are assured it had occurred to him.







**VERMIOLOGY:**

**PLATE CLXXIV.**

**MADREPORA ANANAS**

**ANANAS MADREPORE**

**GENERIC CHARACTER.**

Coral, with lamellate star-shaped cavities.

**SPECIFIC CHARACTER**

**AND**

**SYNONYMS.**

Aggregate, stars subangular, unequal, of many rays, the margins convex and lamellate, the plates denticulato-crenate: stars concave in the disk.

**MADREPORA ANANAS:** aggregata, stellis subangulatis inæqualibus multiradiatis: marginibus convexis lamellosis, lamellis denticulato-crenatis, interstitiis concavis.  
*Ellis and Soland. Zooph. p. 168. t. 47. 6.*

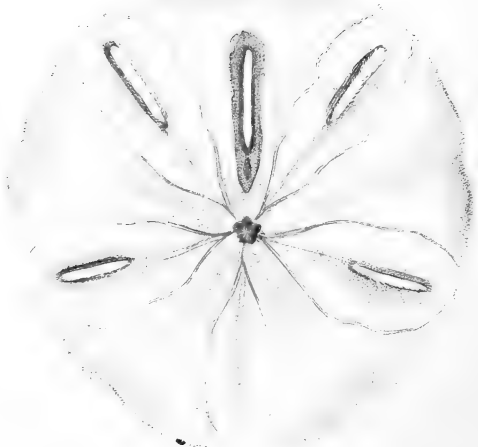
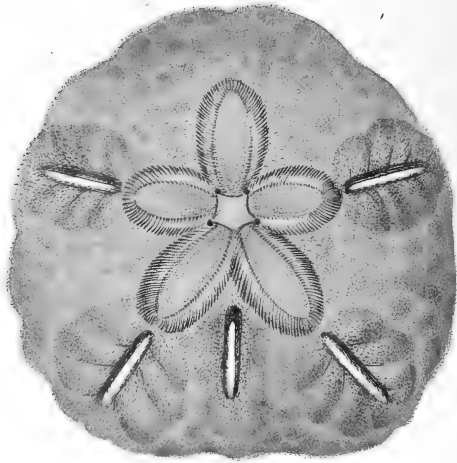
**MADREPORA ANANAS:** stellis angulosis convexis disco concavis.  
*Linn. Amoen. Acad. 1. p. 92. t. 4. f. 8. 2. 9.*

## PLATE CLXXIV.

An elegantly-formed Madrepora, of a delicate white colour, faintly tinted with a lacteous or milky hue: the starry cells are somewhat angular, and are disposed in some degree irregularly, but not so vaguely as to destroy or injure the effect of their general symmetry. The species inhabits the American seas.

It has been stated by Linnæus and others, that this species occurs in a fossil state—in a *buried* state it may; the term fossilized is much too indefinite in the present era: it is possible, and indeed not improbable, that by some recent convulsion the earth has undergone, this species of Madrepora may have been deposited in the ground, or left in lands deserted by its former seas, but this, in the language of science, cannot deserve the appellation of being fossil. We have no idea of the species existing in a mineralized state.





# VERMIOLOGY.

## PLATE CLXXV.

### ECHINUS PENTAPHORUS

### PENTAPHOROUS, OR FIVE-HOLED FLAT ECHINUS

#### VERM. MOLLUSCA.

#### GENERIC CHARACTER.

Body roundish, covered with a bony sutured crust, and generally furnished with moveable spines : mouth placed beneath, and consisting usually of five valves.

† Flat on both sides : the avenues resembling petals, mouth central, flat, dentated : crown with four pores.

† Margin sinuate : surface perforated.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Orbiculate, depressed : perforations five, oblong, vent near the mouth.

PLATE CLXXV.

**ECHINUS PENTAPHORUS** : orbiculata depressa, foraminibus quinque oblongis ; ano ori proximo.

Echinus pentaphorus ambulacris apice emarginatis, ano ori proximo : foraminibus quinque. *Leske apud plein echinod. p. 197.*—*Gmel. Syst. Nat. T. 1. p. 6. 3189. 65.*

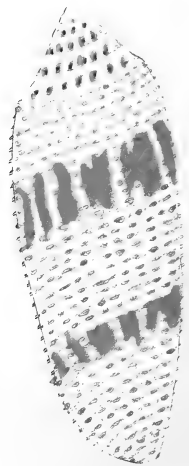
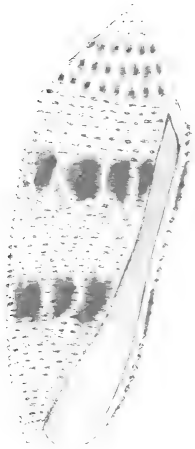
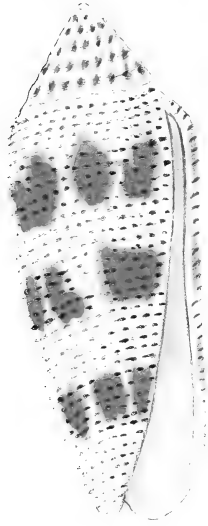
**SCUTELLA QUINQUEFORA**, Scutelle à cinq trous. *Lamarck An. sans Vert. t. 3. p. 9. 4.*

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This curious species of the depressed or flat kind of the Echinus tribe bears such a near approximation to the species *hexaphorus*, or six-holed Echinus, that some naturalists have conceived they are both of the same species, differing only in this particular.

We are not, however, entirely assured of the accuracy of this opinion ; we have both kinds now before us, and have some hesitation in acceding to that opinion. Echinus Pentaphorus is smaller, and our specimens of the latter is of a more rounded form than the other ; we have indeed seen the same kind more dilated across the middle, and consequently the circular figure of its contour is not so constant as to form a positive character. The species distinguished by having six perforations is known to be a native of the Indian and American seas ; the habitat of that with five perforations is yet doubtful, although it is believed to be the same as that of the preceding.







# CONCHOLOGY.

## PLATE CLXXVI.

### CONUS NUSSATELLA

### NUSSATELLO CONE

#### UNIVALVE.

#### GENERIC CHARACTER.

Shell convolute, turbinate ; aperture effuse, longitudinal, linear without teeth ; entire at the base : pillar smooth.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Shell subcylindrical, elongated, striated transversely, white clouded with fulvous or orange, and rough with dots of fuscous or fulvous, disposed in numerous encircling striæ round the shell : spire raised and convex.

**CONUS NUSSATELLA** : testa subcylindrica elongata, transversim striata, alba, fulvo, vel aurantio nebulata, punctis fuscis aut fulvis, seriatim cincta ; spirâ convexo-exserta. *Lamarck An. sans Vert.* 7. p. 5. 15.

PLATE CLXXVI.

CONUS NUSSATELLA : testa subcylindrica rubra inermi striis  
tuberculatis scabra. *Gmel. Linn. Syst. Nat.*  
8390. 43.

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A rare shell, of a singular elongated form and colour, variable from pale to red or orange, clouded with white and rarely white entirely. The transverse striæ are granulated and marked with dusky at the tips.

This kind inhabits the sea near the island of Nussatello in Asia, whence its name ; it is, however, not confined to this locality, as it is found on the coasts of China, Amboyna, the Philippine Islands, and New Guinea, according to Favanne, Lamarck, and Dillwyn.





**ENTOMOLOGY.**

**PLATE CLXXVII.**

**PAPILIO HECTORIDES**

**HECTORIDE BUTTERFLY**

**LEPIDOPTERA.**

**GENERIC CHARACTER.**

Antennæ thicker towards the tips and usually terminating in a club : wings erect when at rest. Fly by day.

**SPECIFIC CHARACTER**

**AND**

**SYNONYMS.**

Wings tailed, above and beneath black : on the first wings a linear white band : posterior pair with a white spot in the disk, and marginal series of red lunules.

**PAPILIO HECTORIDES** : alis caudatis concoloribus nigris ; primoribus fascia lineari alba ; posticis macula disci alba ; lunulis marginalibus rubris.

## PLATE CLXXVII.

In the entomological collection of the late H. Fuesli, Esq. a collection of no small extent, and which, after his death, was submitted particularly to our investigation, we found, among other tracts of material interest, an exemplaire of a new work in the Latin and German languages, in which the curious insect now before us is figured and described. This Prodrômus of a new work on Exotic Entomology, for such it appears to be, we are inclined to regard as the portion of a publication on the subject that was not continued. We are thus precise respecting it, because we were not aware till the occurrence of this fragment, that the insect now before us, and which we obtained from a cabinet of insects collected in India, had been before made public. The author of the tract adverted to, has named this insect from its general resemblance to the well known species *Papilio Hector*, *Papilio Hectorides*, and since this name has appeared anterior to our publication, it would be uncandid to object to it; we shall for this reason adopt the name, and also the specific character which he assigns to it.

We should furthermore observe, that the author of this tract, whose name we have yet to learn, refers for a specimen of this curious and very rare species to the collection of Mr. Gerning, of Frankfort on the Mayne, a cabinet of much celebrity, but which we have been informed has been since dispersed by public sale.

Our readers may recollect that in the preceding volume of the present work, we presented them with the figure and description of a new species of the *Papilio* tribe under the name of *P. Latreillii*, an insect of Nepaul, not before made known, and which had been obligingly communicated by its worthy proprietor, Alexander

## ENTOMOLOGY.

Mc. Leay, Esq. formerly S. L. S. and now Secretary to the colony of New South Wales. We advert once more to this circumstance, because, from the great similitude that interesting acquisition bears to the present, some idea might arise of their near approximation.

That there is some resemblance between the two insects must be admitted, at the same time that every observer will be assured, upon the most cursory comparison, that they are specifically distinct. Those differences will be best perceived by comparing the two plates together, and if this comparison be made with due attention, we cannot hesitate for a moment to believe, that further remark upon this subject, in addition to those advanced already in the description of *Papilio Latreillii*, must be totally unnecessary \*.

This very curious, and we may also add, extremely scarce species, *Papilio Hectorides*, is, as before observed, a native of India, and is the only example of its kind that has occurred to our observation. The two figures in the annexed plate represent the upper and lower surface of the same insect. The specimen is of the male sex.

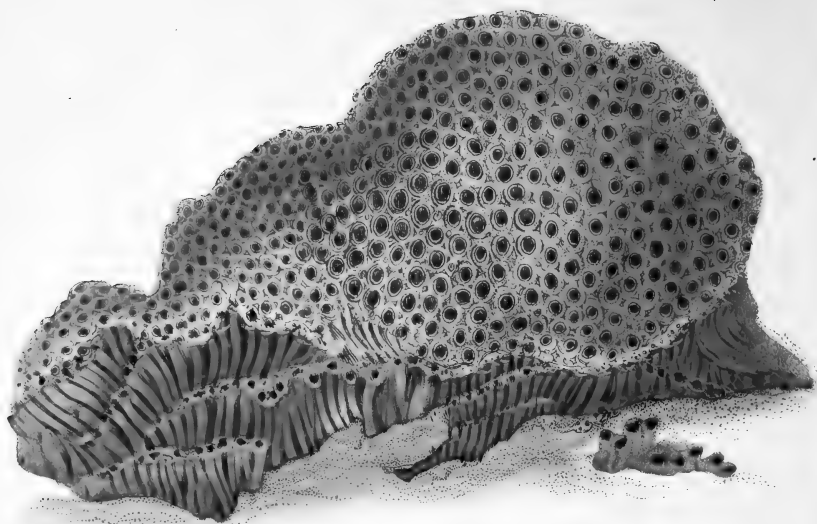
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\* Vide Description and Plate CXL. of this work.









**VERMIOLOGY:**

**PLATE CLXXVIII.**

**TUBIPORA MUSICA.**

**ORGAN-PIPE CORAL**

**ZOOPHYTA.**

**GENERIC CHARACTER.**

Coral consisting of erect hollow cylindrical parallel aggregate tubes.

**SPECIFIC CHARACTER**

**AND**

**SYNONYMS.**

With fasciculate connected tubes : dissepiments transverse, distant, and membranaceous.

**TUBIPORA MUSICA** : tubis fasciculatis combinatis : dissepimentis transversis membranaceis distantibus.—*Gmel.*  
**3753. 336. 1.**

## PLATE CLXXVIII.

A curious species of Coral, of a brilliant red or crimson colour, and in its general formation not inaptly resembling the connected perpendicular pipes of an organ, whence the name of the organ-pipe coral. It occurs, affixed to rocks about low water mark, in the American and Indian seas. Some writers regard it as an antidote, applied in a pulverized state, to the bite of venomous creatures, and it is employed, it is said with efficacy, by the Indians for this purpose.

This kind occurs on the shores of certain islands in the Pacific Ocean, where our navigators met with it covered with a gelatinous substance of a very slippery nature, and dangerous to walk upon.





ENTOMOLOGY.

PLATE CLXXIX.

PAPILIO ZENOBIA

ZENOBIA BUTTERFLY

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club : wings erect when at rest. Fly by day.

SPECIFIC CHARACTER.

Wings indented, black with a common white band and marginal series of white spots : posterior wings beneath yellow striated with black.

PAPILIO ZENOBIA : alis dentatis nigris : fascia communi maculis que marginalibus albis, posticis subtus basi flavis nigro striatis. *Fabr. Syst. Ent. T. 3. p. 1. 37.*  
*Jon. fig. pict. 1. tab. 68.*

## PLATE CLXXIX.

A splendid *Papilio*, represented in the drawings of Mr. Jones, as adverted to by Fabricius. Our figure is, however, from the specimen itself in the cabinet of Sir Joseph Banks, Bart. and was copied during the lifetime, and by the express permission of its very worthy possessor. The species inhabits Sierra Leona in Africa, and is one of unquestionable rarity.

This fine insect is represented on a variegated geranium of Africa, obligingly communicated by W. Aiton, Esq. of his Majesty's Royal Gardens, Kew.







ENTOMOLOGY.

PLATE CLXXX.

VOLUTA SCABRIUSCULA

SCABROUS VOLUTE

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, aperture without a beak, and somewhat effuse :  
pillar twisted or plaited, generally without lips or perforation.

\* MITRA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell fusiform, striated longitudinally, transversely rugose :  
whorl convex : pillar lip quadruplicate, and perforated : pillar lip  
crenulate.

PLATE CLXXX.

**VOLUTA SCABRIUSCULA** : testa fusiformi, longitudinaliter striata,  
transverse rugosa, anfractibus convexis: colu-  
mella quadriplicata, perforata, labro crenulato.

*Voluta Scabriuscula.* *Linn. Gmel. p. 3450. n. 48.*

*Mitra Scabriuscula.* *Lamarck. An. p. 203. n. 8.*

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A shell of great rarity, and which, when in a fine and perfect state, is regarded as an acquisition of no mean importance in every conchological cabinet. The most choice example we have ever seen is that from which the drawings of the annexed plate are taken: it was originally preserved in the museum of Sir Ashton Lever, and at the sale of that collection realized a sum of between four and five pounds. Small specimens of the same species do sometimes occur in the Indian seas, and it is presumed that our example is from the same locality.

THE END.

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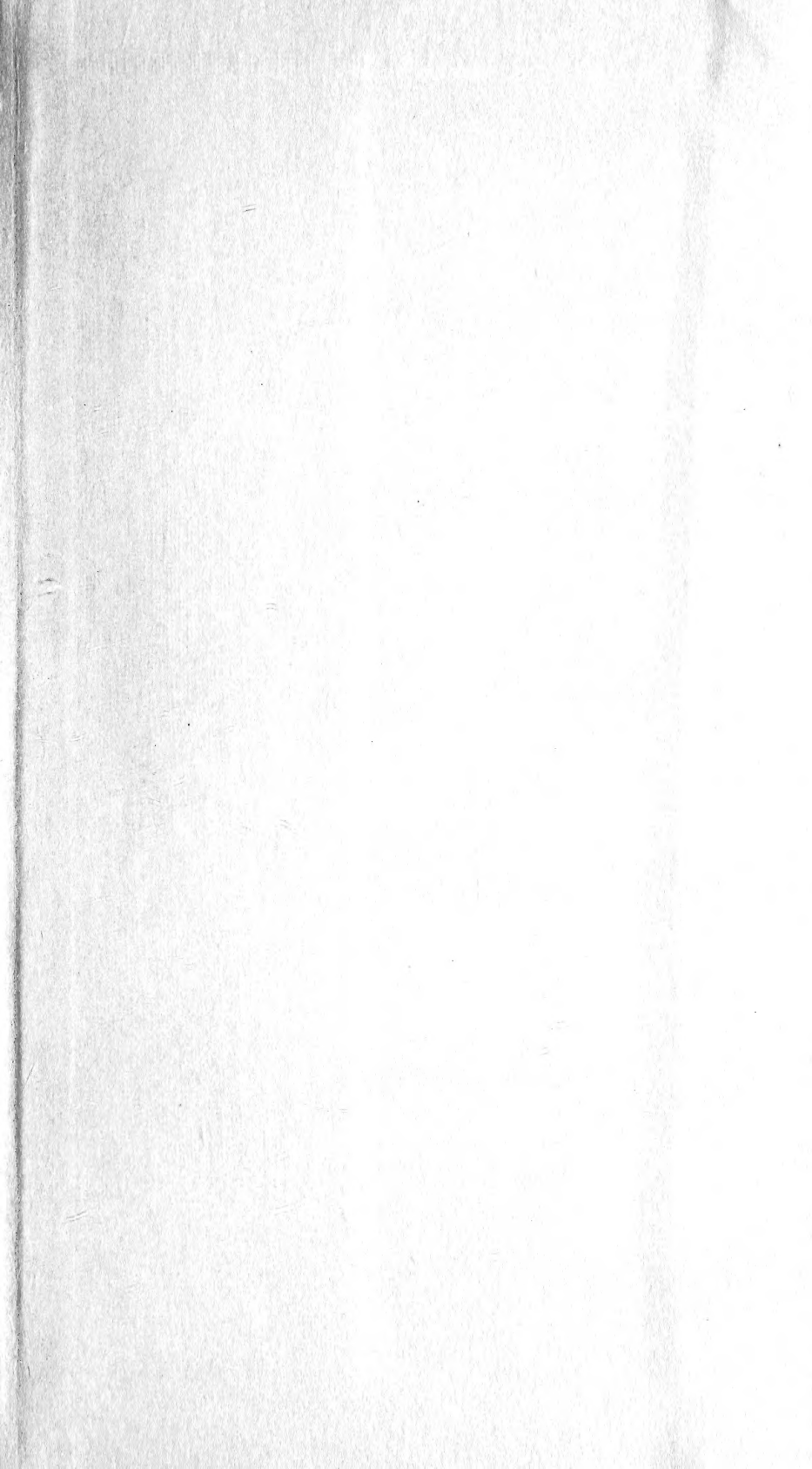












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