

CELEBERRIMÆ
ACADEMIÆ CANTABRIGIENSI,
ARTIUM OMNIUM HUMANIORUM
PATROCINIUM
AMICISSIME SUSCIPIENTI,
OCTAVUM HUNC
NATURÆ VIVARII
FASCICULUM,
D. D. D.
GEORGIUS SHAW,
FREDERICUS P. NODDER.

TO
THE UNIVERSITY
OF
CAMBRIDGE,
THE
FRIEND AND PATRONESS
OF
SCIENCE,
THIS EIGHTH VOLUME
OF THE
NATURALIST'S MISCELLANY,
IS
MOST RESPECTFULLY INSCRIBED,
BY
GEORGE SHAW,
FREDERICK P. NODDER.



ANAS LOBATA.



CHARACTER GENERICUS.

Rostrum lamellofo-dentatum, convexum, obtusum.

Lingua ciliata, obtusa.

Lin. Syst. Nat. p. 194.

CHARACTER SPECIFICUS.

ANAS NIGRICANS, transversim griseo-lineata,
subtus pallidior, rostro subtus lobato.

Distinguitur hæc avis, jam primo descripta, vultu non tam venusto quam novo et sibi peculiari. Color ejus generalis cinereus est, collo et inferioribus partibus longe pallidioribus, huc illuc obscure maculatis. Per dorsum fusco-nigricans et quasi fuliginium transverse ducuntur lineæ plurimæ albidæ, atomique innumeri concolores, ut cernere est in Caprimulgo Europæo. Præcipuam autem habet avis distinctionis notam, carunculam nigram, planam, orbiculatam, magnam, quæ longitudinalis dependet a mandibula inferiore. Rostri nigri lata est basis, marginibus admodum pectinatis. Nigrant quoque pedes. Cauda acuminata. Rarissima hæc avis in Australasia innascitur, eamque in Britanniam intulit

intulit Dominus Archibaldus Menzies, qui una cum Domino Vancouver iter nauticum nuperrime perfecit, explorationis causa. Magnitudo est quasi Anatis Boschadis. Affervatur specimen in Museo Britannico.



A.N.

London, Published Apr. 1817, by F. & C. Dodder & Co. N. 15, Brewer Street.

THE
LOBATED DUCK.



GENERIC CHARACTER.

Bill broad and flattened; the edges marked with sharp lamellæ.

Tongue broad and ciliated at the edges.

SPECIFIC CHARACTER.

BLACKISH DUCK, lineated tranversely with greyish, paler beneath: the under mandible lobated beneath.

This bird, which is an entirely new and hitherto undescribed species, is less remarkable for the beauty than the singularity of its appearance. Its general colour is cinereous, which on the neck and lower parts is much lighter than on the upper, as well as marked obscurely by several dusky spots. The back is of a very deep ash-colour, or fuliginous blackish; marked with numerous tranverse whitish lines, together with innumerable freckles of a similar colour, not unlike those on the back and wings of the common Goatsucker, or *Caprimulgus Europæus*; but the most singular character of the bird is a large, black, flat, orbicular flap or wattle, seated longitudinally

tudinally beneath the lower mandible. The bill is broad at the base; much pectinated at the edges, and black: the legs are also of the same colour: the tail is of a sharpened form. This curious species is a native of New Holland, and is about the size of a common Duck. The specimen is preserved in the British Museum, and was brought over by Mr. Archibald Menzies, who accompanied Captain Vancouver in his late voyage.

BUPRESTIS GIGANTEA.



CHARACTER GENERICUS.

Antennæ filiformes, ferratæ, longitudine thoracis.

Palpi quatuor, filiformes; articulo ultimo obtuso truncato.

Caput dimidium intra thoracem retractum.

Lin. Syst. Nat. Gmel. p. 1926.

CHARACTER SPECIFICUS.

BUPRESTIS elytris fastigiatis, bidentatis, rugosis, thorace marginato lævi, corpore inaurato.

Lin. Syst. Nat. p. 659.

CERAMBYX INDIÆ orientalis maximus.

Grew. mus. 165. t. 13.

CANTHARIS maxima elytris cuprei coloris fulcatis.

Sloan. jam. 2. p. 210. t. 236. f. 1. 2.

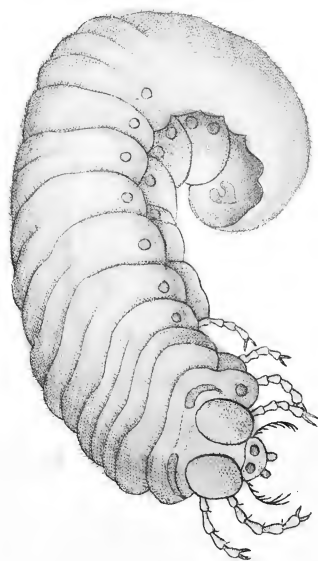
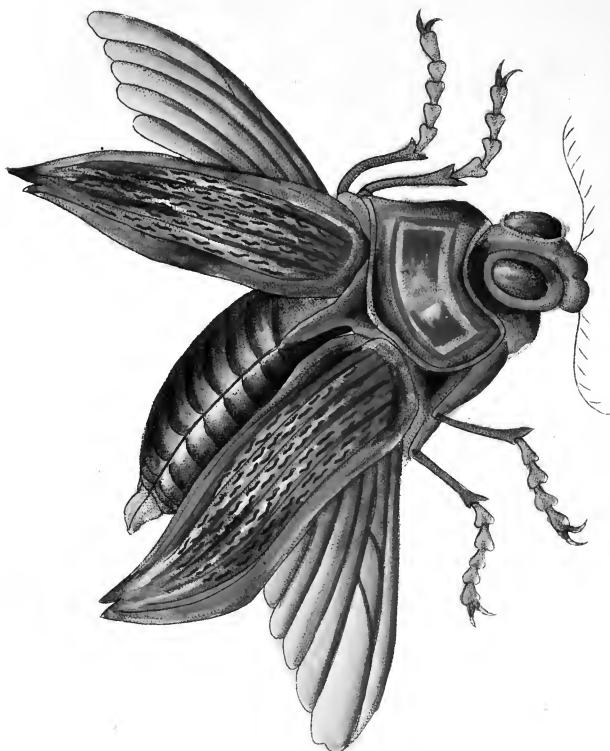
BUPRESTIS GIGANTEA.

Degeer. inf. 4. p. 134. n. 1.

Buprestidis generi peculiaris est quidam et quasi metallicus splendor, qui in nonnullis speciebus, exoticis

ticis præcipue, adeo dominatur, ut aurum cuprumve summa arte politum æmuletur. Tinguntur quædam species colore aureo-viridi, cui cedit longe quicquid pigmenti est aut vernicis. Illam de qua jam agitur vincunt multæ fulgido colore, nullæ magnitudine; cumque larvam ejus notaverit et eleganter depinxerit Domina Merian, visum est ut melius explicetur genus, illam ipsam una cum insecto inspiciendam offerre. Larva ad magnitudinem qua depingitur crescere, et prope radices plantarum degere solet. Plene aucta dormit ad tempus cava sub humo, cutemque exteriore exuta, in pupam seu chrysalidem mutatur, e qua, elapso quodam spatio, emergit insectum perfectum; cujus color generalis est quasi cupri politi, thoracis elytrorumque marginibus plus minus viridi tinctis. Elytrorum superficies est paulum scabrosa et rugosa, striis aliquot in longitudinem ductis quasi costata.

Notandum est antennas Buprestidis giganteæ non mere setaceas esse, ut plerisque ejusdem generis, sed lamellis paululum pectinari. Americam Australem incolit pulcherrimum hoc insectum.



THE
GREAT BUPRESTIS.



GENERIC CHARACTER.

Antennæ filiform, and sometimes ferrated; of the length of thorax.

Feelers or *Palpi* filiform: with the last joint obtuse or truncated.

Head partly retracted under the thorax.

SPECIFIC CHARACTER.

COPPER-COLOURED BUPRESTIS with a gloss of green-gold; the wing-shells wrinkled, and bidentated at the extremities.

The GREAT COPPER-COLOURED BUPRESTIS.

The GREAT GOGGLE-EYED BEETLE.

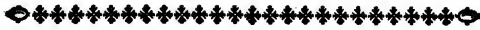
Grew's Museum Reg. Soc.

Merian Sur. pl. 50.

The genus *Buprestis* is remarkable for the metallic splendor by which most of the exotic species are distinguished; and which in some is so great as to equal the appearance of the most highly-polished gold

gold or copper : others are ornamented with a tinge of golden green, which far exceeds the appearance of all artificial painting or varnish. The present species, though less rich in colour than several others, is the largest of the whole genus ; and as its larva has been observed and well figured by Madam Merian, I have thought it not improper, as an elucidation of the genus, to add the larva as represented by that lady, to the figure of the complete insect. This larva grows to the size represented, and resides near the roots of plants : when fully grown, it lies dormant for some time in a small cavity beneath the surface of the ground, and, casting its exterior skin, becomes a pupa or chrysalis, out of which, after a certain space, proceeds the perfect insect. Its general colour is that of highly-polished copper ; the edges of the thorax and wing-cases tinged more or less with green. The wing-cases are of a roughish or wrinkled surface, and slightly ribbed longitudinally. It is to be also observed that the antennæ, which in most of the genus are simply setaceous, are in the present species of a somewhat lamellated or pectinated appearance. This beautiful insect is a native of South America.

CHITON SQUAMOSUS.



CHARACTER GENERICUS.

Animal Doris.

Testæ plures, longitudinaliter digestæ dorso incumbentes.

Lin. Syst. Nat. p. 1106.

CHARACTER SPECIFICUS, &c.

CHITON testæ octovalvi femistriata, margine squamuloso.

CHITON testæ octovalvi femistriata, corpore squamuloso.

Lin. Mus. Utr. 465.

CHITON squamosus, testæ septemvalvi.

Chemn. Chiton. t. 1. f. 4.

Rupibus adhæret, ut plurimum, genus *Chiton*, patellarum more; continetque species satis numerosas, quibus si negarit natura pulchritudinem, miram certe concessit conformationem, e plurimis quasi zonis testaceis constantem. Oras incolit Americanas species quam depinximus, inter maximas habitas
fui

fui generis: color ejus cæruleo-virefcens venulis atomisque obfcursoribus variatur.

Suave est philofopho contemplari generalem quandam fimilitudinem, quæ interdum mira et manifesta est in animalibus penitus diverfis, nec ulla affinitate inter fe conjunctis. In hoc ipfo fcilicet *Cbitonis* genere, tefta qua obducitur animal loricæ fimillima est qua muniuntur *Dafypodes*. Quod contigit quoque infectis quæ continet *Onifci* genus; quorum species communis, quæ et officinalis dicitur, hanc ipfam ob caufam nomine Linnæano *Onifcus Armadillo* nuncupatur.



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THE
SCALY CHITON.



GENERIC CHARACTER.

Animal resembling a Doris.

Shell consisting of several segments disposed longitudinally in the back.

SPECIFIC CHARACTER.

CHITON with the shell commonly consisting of eight valves; the margin scaly.

The genus Chiton is generally found adhering to rocks, like some of the Lepades. The species, which are pretty numerous, are less remarkable for beauty than for singularity of structure; being composed of several distinct shelly bounds. The species here represented is one of the largest, and is a native of the American coasts. Its general color is a blueish green, variegated with veins and specks of darker and lighter colors. It is curious to contemplate the similarity in point of general form, which sometimes takes place between animals of the most distant tribes, and which have no real affinity to each other. Thus in the present genus, the inhabiting animals are covered with an armour resembling that
of

of the Dasypodes or Armadillos amongst quadrupeds; and the insects of the genus Oniscus are formed on a similar plan; the officinal or common species in particular, which has obtained its trivial name from this very circumstance.

PSITTACUS PALLIDUS.



CHARACTER GENERICUS.

Rostrum aduncum: mandibula inferiore mobili;
cera instructa.

Nares in rostri basi.

Lingua carnosae, obtusa, integra.

Pedes scanforii.

Lin. Syst. Nat. p. 139.

CHARACTER SPECIFICUS, &c.

PSITTACUS FLAVUS, alis albidis rosaceo le-
viter tinctis, virescenteque, pro luce, variatis.

In Australasia innascitur nova hæc species, cujus
vera magnitudo in tabula depingitur.

THE
PALE PARRAKEET.



GENERIC CHARACTER.

Bill hooked: upper mandible moveable.
Nostrils round, placed in the base of the bill.
Tongue fleshy, broad, blunt at the end.
Legs short. Toes formed for climbing, viz.
two toes forward, and two backward.

SPECIFIC CHARACTER.

YELLOW PARRAKEET with whitish wings,
slightly tintured with rose-color, and with
a cast of greenish according to the direction
of the light.

This bird, which is a native of Australasia, is
entirely new, and is represented in its natural size.



MEDUSA ANDROMEDA.



CHARACTER GENERICUS.

Corpus gelatinosum, orbiculatum, depresso.

Os subtus, centrale.

Lin. Syst. Nat. p. 1096.

CHARACTER SPECIFICUS.

MEDUSA fusco-pallens, brachiis subtus octo
ramosissimis foliaceis.

MEDUSA hemisphærica, marginis brachiis nul-
lis, brachiis octo teretibus ramosissimis infe-
rius foliaceis.

Lin. Syst. Nat. Gmel. p. 3157.

Foršk. F. Ægypt. Arab. p. 106. n. 18.

Major sæpenumero est Medusa Andromeda, quam hæc quæ in tabula ostenditur. Color communis est subflavo-fuscus, habens interdum aliquid subcærulei. Pellucet fere totum animal; nec modicam ei affert pulchritudinem artuum seu tentaculorum e medio corpore provenientium quasi ramulosa divisio. In mari rubro invenitur.

THE
EGYPTIAN MEDUSA.



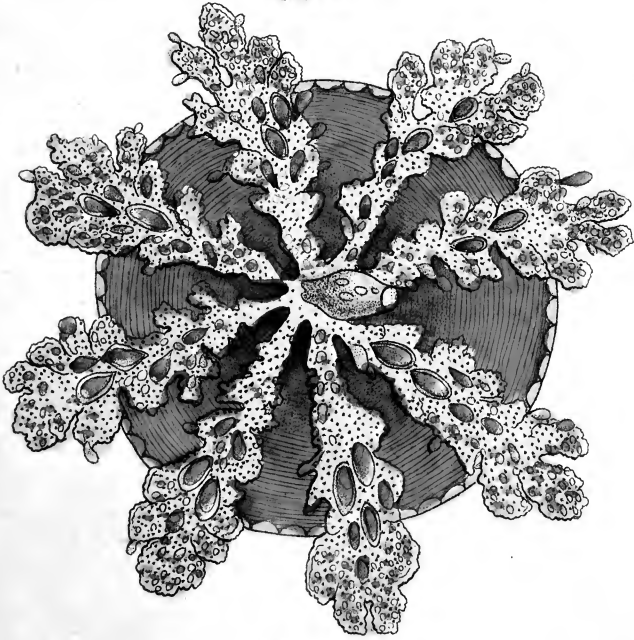
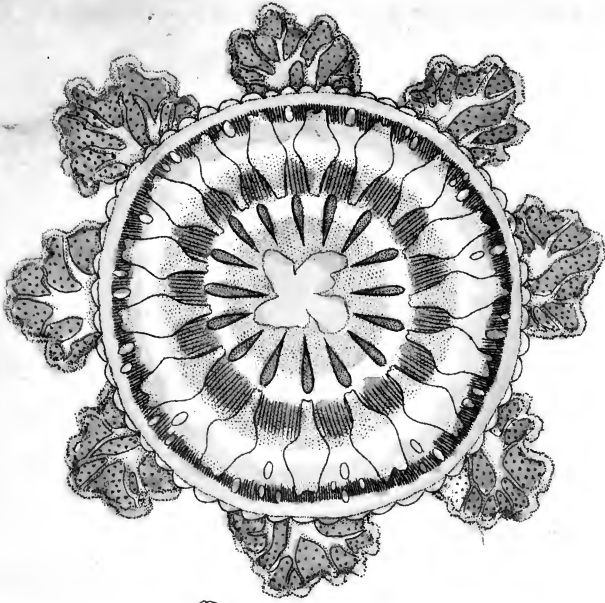
GENERIC CHARACTER.

Body gelatinous, orbicular, commonly depressed.
Mouth central, beneath.

SPECIFIC CHARACTER.

PALE-BROWN MEDUSA, with eight rami-
fied foliaceous tentacula beneath.

The Medusa Andromeda is frequently found considerably larger than represented on the present plate. Its general color is a pale yellowish-brown, sometimes inclining to blueish. The whole animal has a considerable degree of transparency, and is remarkable for the elegantly ramified subdivisions or processes of the limbs or tentacula proceeding from the lower part of the body. It is a native of the Red sea.



HOLOTHURIA INHÆRENS.



CHARACTER GENERICUS.

Corpus liberum, nudum, gibbum, ano terminali.

Tentacula plura in altera extremitate.

Os inter tentacula.

Lin. Syst. Nat. p. 1089.

CHARACTER SPECIFICUS.

HOLOTHURIA fusca, tentaculis duodenis, corpore lineis longitudinalibus pallidis.

HOLOTHURIA tentaculis duodenis, corpore papilloso sexfarjam lineato.

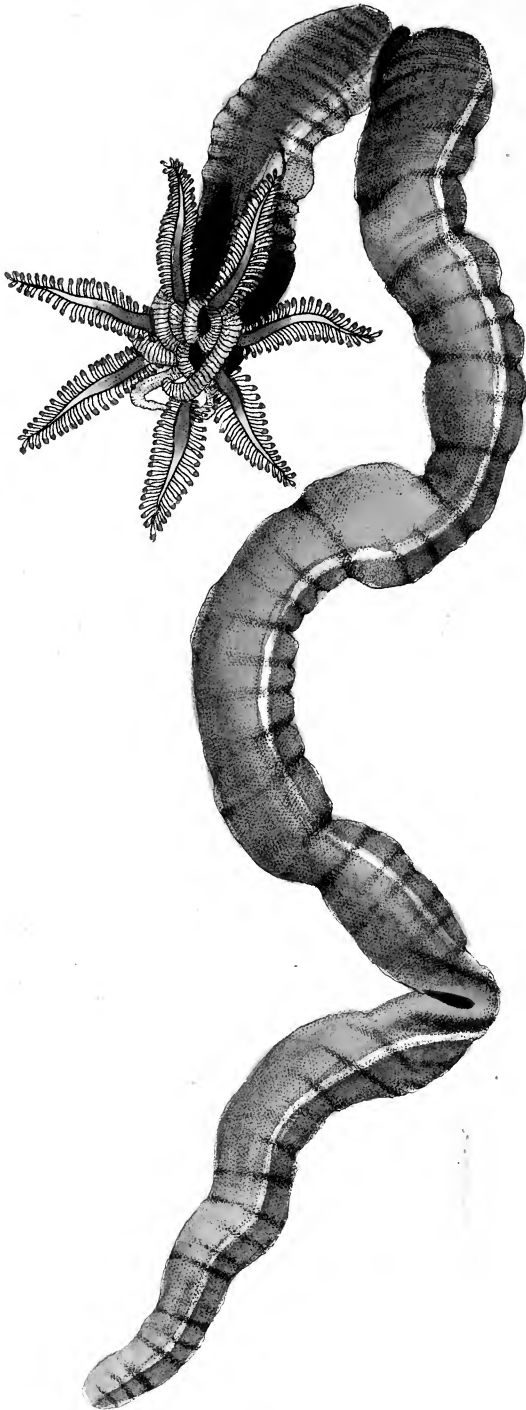
Lin. Syst. Nat. Gmel. p. 3141.

FISTULARIA RECIPROCANS.

Forsk. F. Ægypt. Arab. p. 121. t. 38. f. A.

Differt a cæteris plerisque congeneribus hæc *Holothuria*, quod longior multo fit et gracilior. Color plerumque fusco-saturator, in longitudinem ductis pluribus lineis pallidioribus, non semper tamen clare conspicuis. Aspergitur superficies totius animalis papillis seu tuberculis innumeris minutissimis,
fine

fine vitro optico ægre cernendis; quorum ope tangentis manus arcte adeo adhæret, ut ab ea non sine labore possit sejungi. Generant hanc Holóthuriam plagæ orientales.



2

BROWN HOLOTHURIA.



GENERIC CHARACTER.

Body unfixed, naked, gibbous, with an open extremity.

Tentacula numerous, furrounding one extremity.

Mouth situated amidst the tentacula.

SPECIFIC CHARACTER.

BROWN HOLOTHURIA with twelve red tentacula: the body marked with longitudinal pale stripes.

This species is of a much longer and slenderer form than most others of the genus: its color is commonly a darkish brown, with several longitudinal stripes of a lighter cast, and which are not always distinctly visible. The surface of the whole animal is closely beset with innumerable papillæ, scarcely visible without the assistance of a glass. By means of these it adheres tenaciously to the hand on touching, so as with difficulty to be separated from the skin. It is a native of the Eastern parts of the world.



MOTACILLA SIALIS.



CHARACTER GENERICUS.

Rostrum subulatum, rectum: mandibulis subæqualibus.

Nares obovatæ.

Lingua lacero-emarginata.

Lin. Syst. Nat. p. 328.

CHARACTER SPECIFICUS, &c.

MOTACILLA cærulea, subtus rufa.

MOTACILLA cærulea, subtus tota rubra, abdomine albo.

Lin. Syst. Nat. p. 336.

Lin. Syst. Nat. Gmel. p. 989.

RUBECULA CAROLINENSIS.

Briss. av. 3. p. 423.

AVIS CÆRULEA.

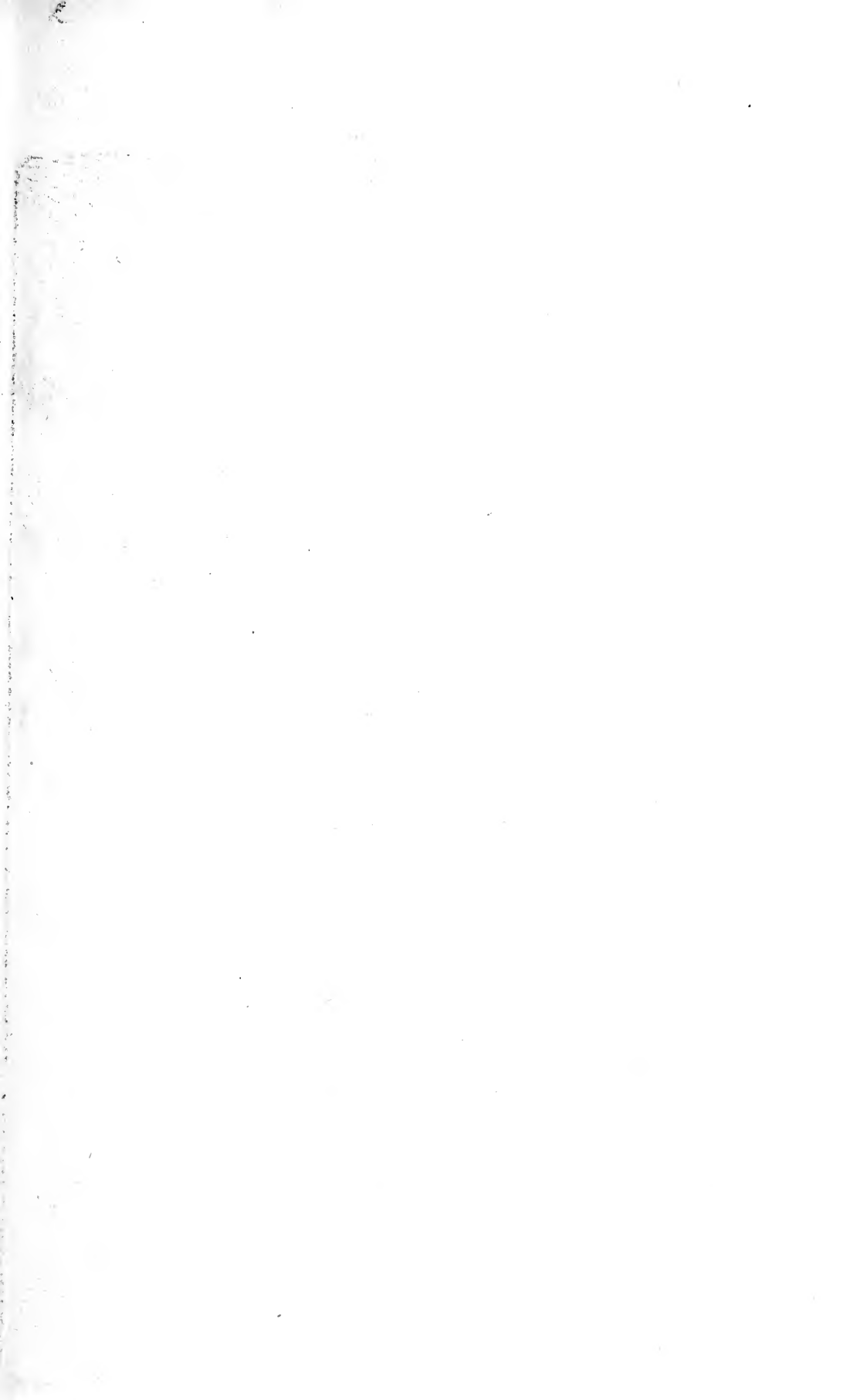
Kalm. it. 3. p. 30.

RUBECULA AMERICANA CÆRULEA.

Catesb. 1. p. 47. t. 47.

NATIONAL MUSEUM OF VICTORIA

Motacilla Sialis, eadem quasi magnitudine ac Motacilla Rubecula, aut paulo ampliore, Americam septentrionalem inhabitat; præcipue Carolinam. Tota avis amoene cærulea est, exceptis pectore et abdomine leviter rubentibus, remigibusque alarum primoribus apice fere nigricantibus. Rostrum nigrum. Pedes fusci. Insectis vescitur more reliqui generis.



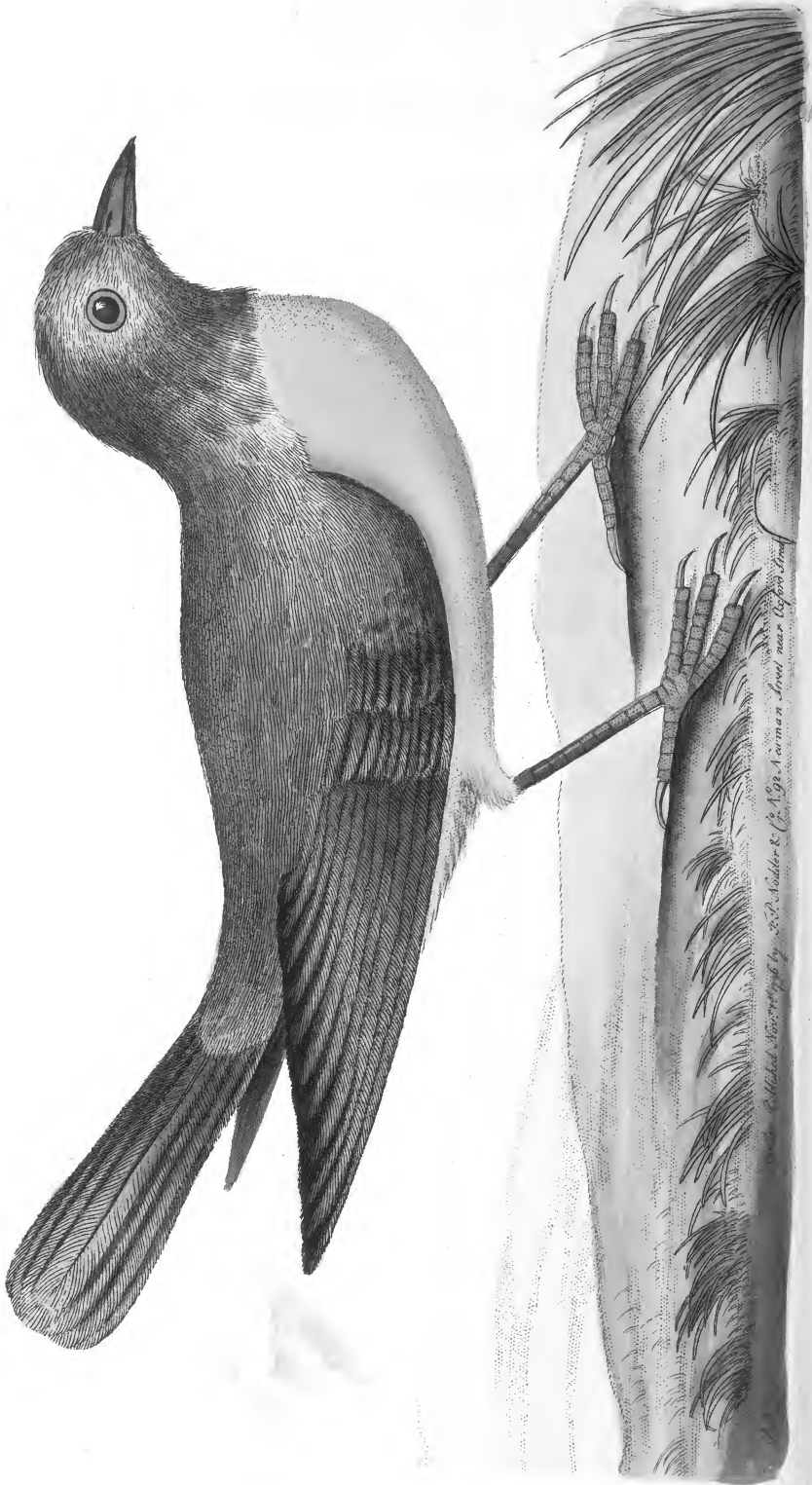


Illustration of a Mated Sparrow by J.P. Silliman, 1892, *Aurora Journal*, near Oregon, Ill.

THE
BLUE REDBREAST.



GENERIC CHARACTER.

Bill fubulate, ftrait ; mandibles nearly equal.

Nostrils nearly oval.

Tongue jagged or lacerated towards the tip.

SPECIFIC CHARACTER, &c.

BLUE MOTACILLA, rufous beneath.

The BLUE WARBLER.

Lath. Syn. 4. p. 446.

Penn. Arct. Zool. 2. No. 282.

The BLUE REDBREAST.

Edw. 1. pl. 24.

This bird, which is about the fame fize with the common Redbreast, or rather larger, is an inhabitant of North America, and is principally feen in Carolina: the whole bird is of a fine blue, the breast and abdomen excepted, which are of a light red, and the tips of the principal wing-feathers, which are dusky; the bill is black, and the legs brown. It feeds on insects, like the rest of this genus.

THE
TELESCOPE CARP.



GENERIC CHARACTER.

Mouth (in most species) toothless.

Gill-membrane with three rays.

Body smooth.

SPECIFIC CHARACTER, &c.

SCARLET CARP, with protuberant eyes, all the fins half white ; the tail trifold.

The SCARLET CARP.

The GOGGLE-EYED CARP.

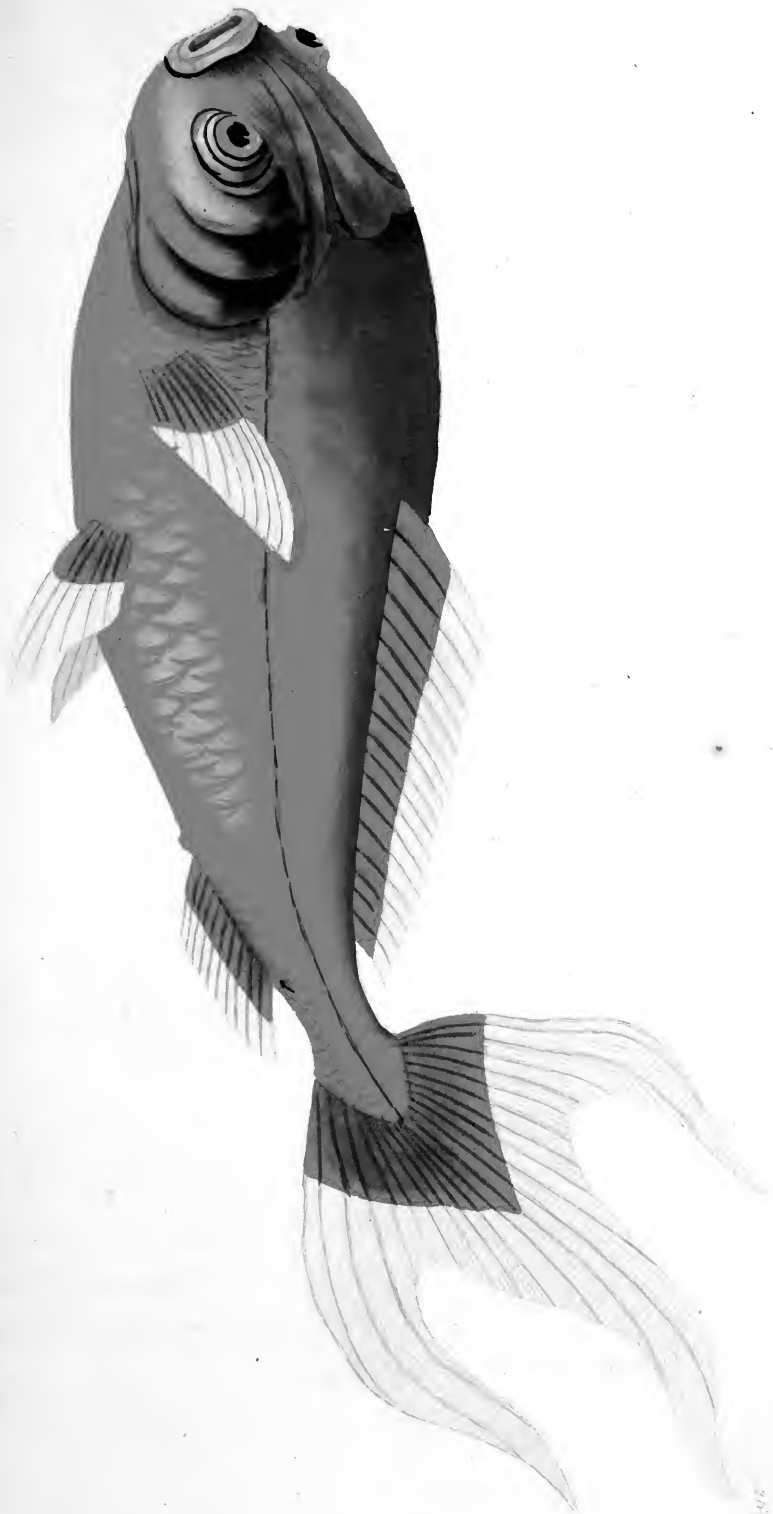
The TELESCOPE.

OEIL de DRAGONS.

Sauvigny, Hist. Nat. des Dorades,
pl. 10, 11, 12, &c.

The scarlet Carp, so remarkable for its brilliant color, is a native of China, and is equal, if not superior, in size to the common gold-fish, to which it is extremely nearly allied.

24.1



24.1

PHALÆNA LUNA.



CHARACTER GENERICUS.

Antennæ setaceæ, a basi ad apicem sensim attenuatæ.

Alæ (sedentis) sæpius deflexæ. (Volatu nocturno.)
Lin. Syst. Nat. p. 808.

CHARACTER SPECIFICUS, &c.

PHALÆNA alis viridi-pallentibus, inferioribus caudatis; omnibus ocello disci lunato.

PHALÆNA alis caudatis concoloribus virentibus; ocello disci lunato.
Lin. Syst. Nat. Gmel. p. 2404.

PHALÆNA LUNA.

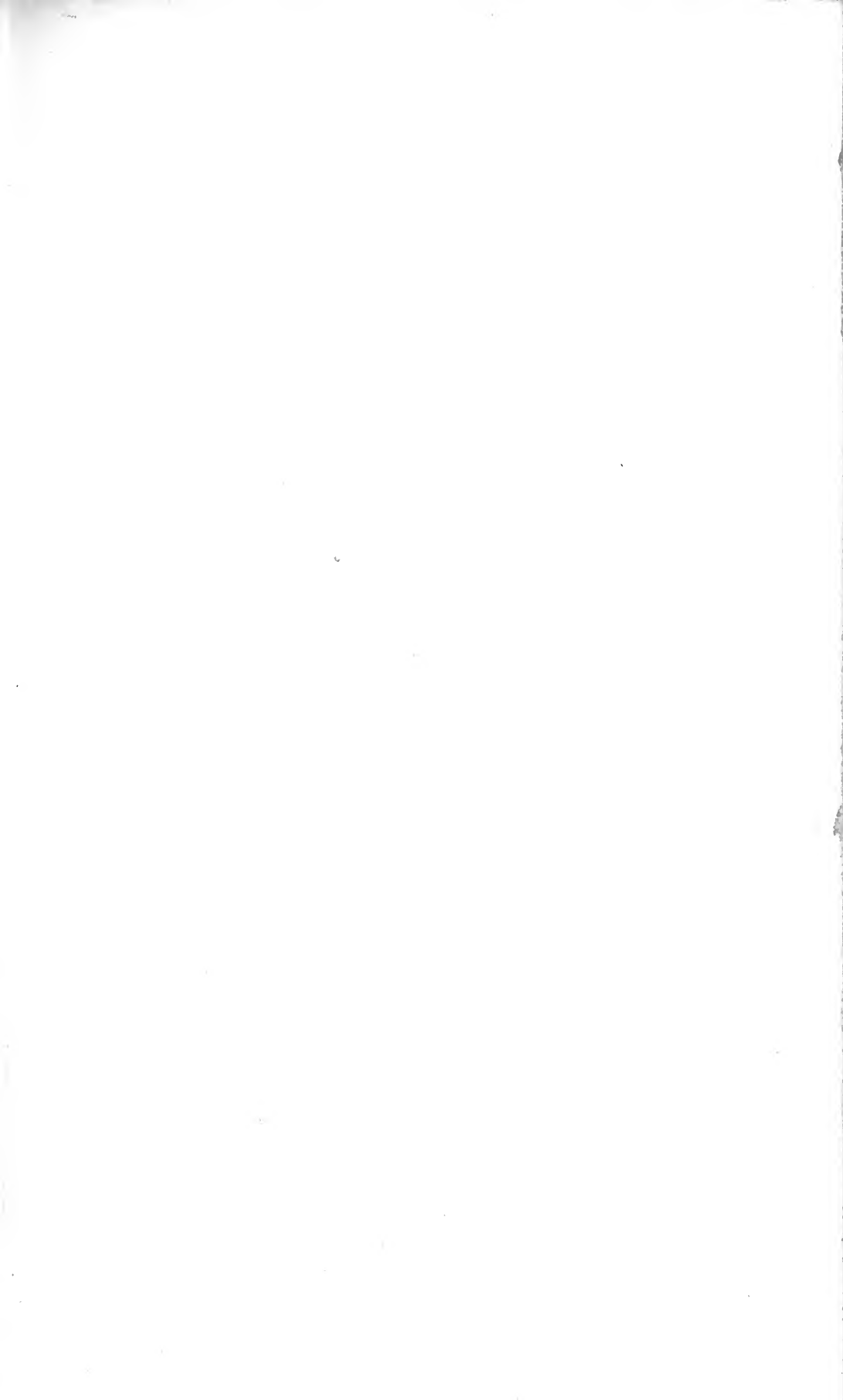
Lin. Syst. Nat. p. 810.

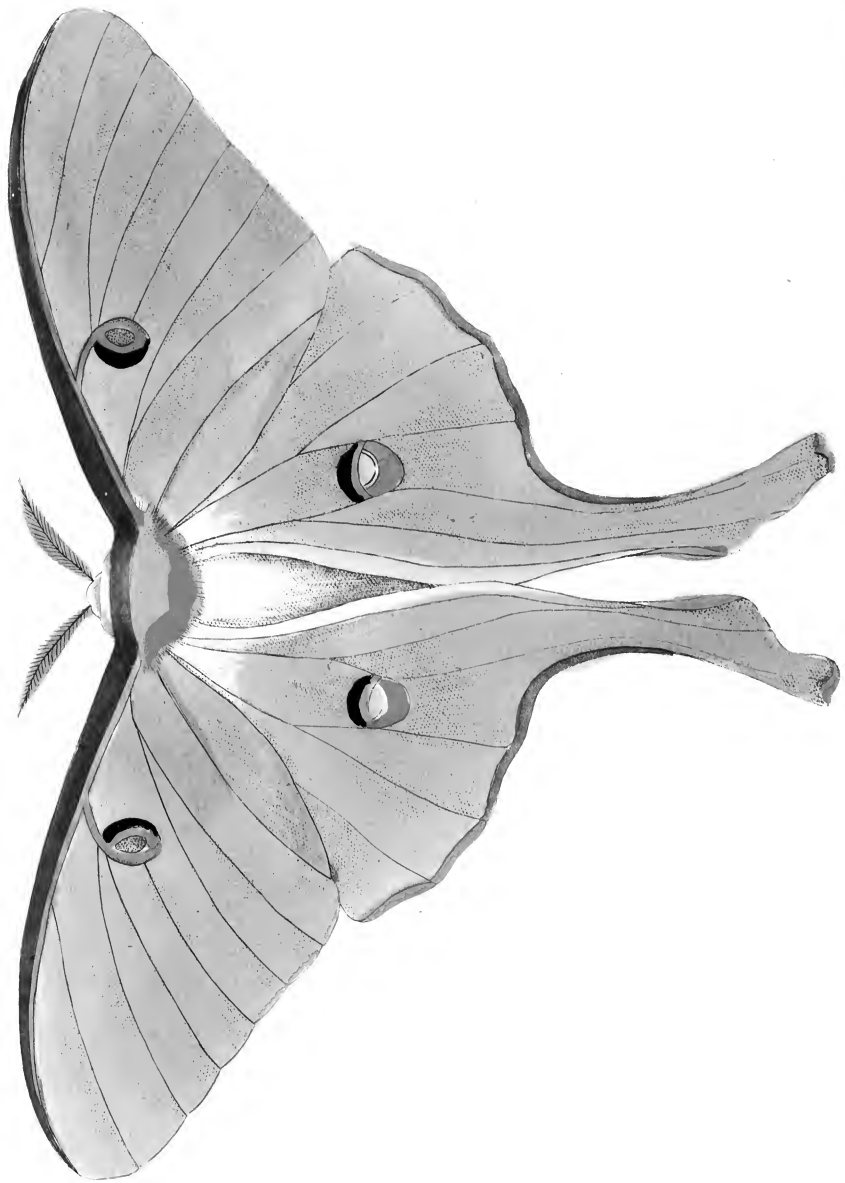
Cramer. 1. t. 2. A. & 3. t. 31. A. B.

Drury inf. 1. t. 24.

Infolitæ est pulchritudinis Phalæna Luna, alis omnibus pulcherrime viridi-pallentibus, superiorum margine antico fusco-purpureo. Alæ posticæ excurrunt quasi in caudas. Alarum omnium mediam partem

partem ornat macula hyalina, non abfimilis oculo.
Generat phalænam Lunam America feptentrionalis,
variæque partes provinciæ Britannicarum, nu-
perrime fœderatarum.





L U N A.



GENERIC CHARACTER.

Antennæ or *Horns* setaceous, decreasing in size from the base to the point.

Wings, when at rest, generally deflected.

Flight mostly nocturnal.

SPECIFIC CHARACTER, &c.

LARGE PEA-GREEN PHALÆNA, with the lower wings tailed, and a lunated transparent spot on each wing.

The large caudated pea-green PHALÆNA.

The pea-green CAROLINA MOTH.

The *Phalæna Luna* is an insect of unusual elegance. The wings are of a beautiful pea-green; the upper edge of the superior pair marked by a band of purplish-brown: the lower ones are terminated by a pair of lengthened processes or tails, and in the middle of each wing is a transparent spot, resembling an eye. It is a native of North America, and is found in many parts of the United British States.



GORGONIA SANGUINOLENTA.



CHARACTER GENERICUS.

Animal crescens plantæ facie.
Stirps cornea, offea, vel lapidea.
Cortex mollis, osculis polypiferis.

CHARACTER SPECIFICUS, &c.

GORGONIA depressa ramosissima dichotomopinnata, corticis flavi poris distichis purpureis.

Pall. el. zooph. p. 175.

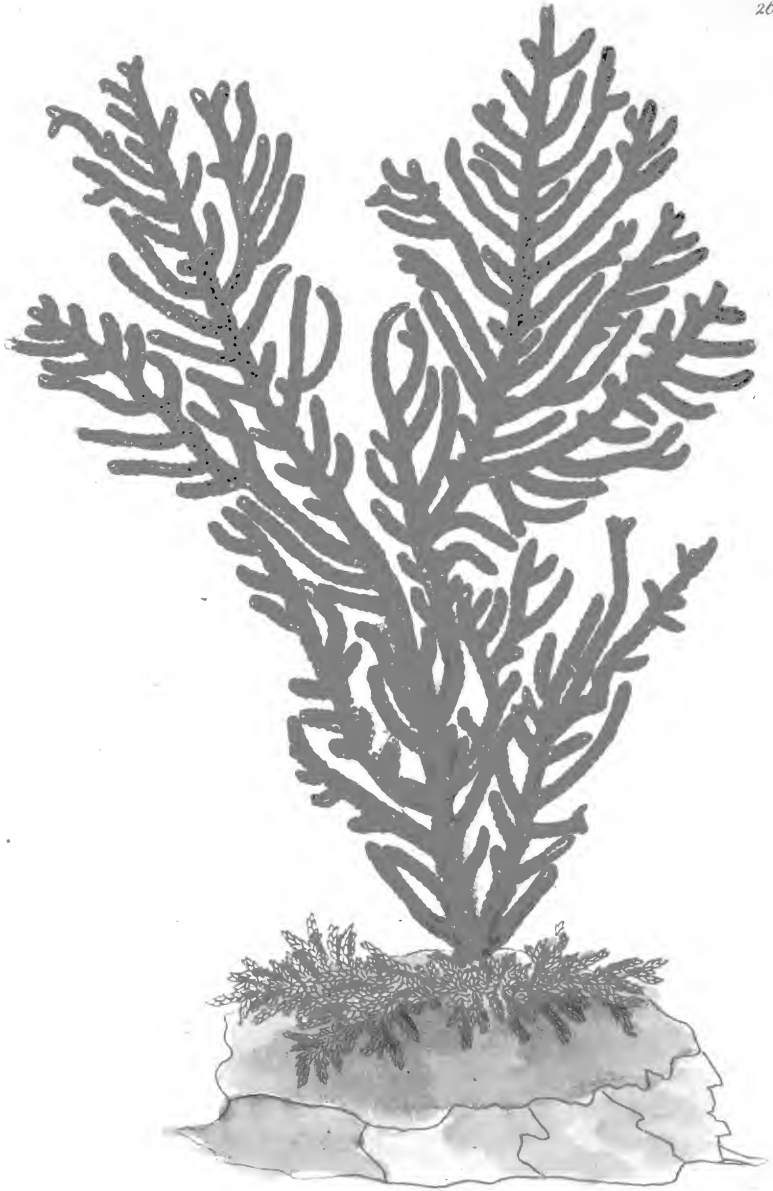
GORGONIA SANGUINOLENTA.

Lin. Syst. Nat. Gmel. p. 3087.

Luculente adeo et accurate explicuit hanc speciem celeberrimus Pallas in opere cui titulus *Elenchus Zoophytorum* ut ipsissima auctoris verba sine ulla immutatione transcribere non dubitaverim.

“ *Magnitudo* pedalis vel ultra, multa tamen specimina palmo non altiora occurrunt. *Truncus* in eodem constanter palmo ramosus; *Rami* pinnati, *ramulis* passim sine ordine dichotomis, subdivisis,
sæpe

fæpe fastigiatis. *Stirps* tota depresso-plana. *Lignum* corneum, colore et substantia. *Cortex* calcareus, citrinus, extus lævis. *Pori* crebri, ramulis prominuli, in marginibus ramorum duplici utrinque serie dispositi, sparsive, halone ruberrime roseo inclusi. Pumila specimina pinnata, procera ramifiora sunt.”



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PURPLE-SIDED GORGONIA.



GENERIC CHARACTER.

Animal growing in the form of a plant.

Stem of a horny, osseous, or even lapideous substance.

Bark soft, marked with numerous polype-cells.

SPECIFIC CHARACTER, &c.

Flat, branched, pinnated GORGONIA, with yellow bark and double-rowed purple pores.

Purple-spotted yellow GORGONIA.

The description of this Gorgonia, by Dr. Pallas, is so accurate, that it is unnecessary to add any thing to the account given by that celebrated Naturalist, who informs us that it sometimes grows to the height of a foot or more; though specimens often occur of much inferior size. The trunk is always branched a flat direction, with the branches pinnated; the smaller ones occasionally subdivided and dichotomous. The body or wood is of a horny substance and color; the bark yellow and smooth; the pores numerous, and projecting in the form of tubercles, disposed

disposed in a double series on the margins of the branches, each being surrounded by a very bright rose-coloured or purple border. The smaller specimens are commonly pinnate; the larger ones more ramified. This elegant coral is a native of the Atlantic and of the American seas.



CAPRIMULGUS LONGIPENNIS.



CHARACTER GENERICUS.

Rostrum modice incurvum, minimum, fubulatum,
basi depreffum.

Vibriffæ ad os ferie ciliari.

Rictus ampliffimus.

Lingua acuta, integerrima.

Lin. Syft. Nat. p. 118.

CHARACTER SPECIFICUS.

CAPRIMULGUS GRISEO-VARIUS, alis rufo
fufcoque maculatis, penna utrinque humerali
denudata longiffima.

Conari pro certo dicere quid fibi voluerit arcanum
Naturæ confilium in anomala nonnullorum anima-
lium conformatione, opus effet immenfum et omnino
inexplicabile. Enormis Phoenicopteri colli cru-
rumque longitudo, rostrum Avocettæ flexile et re-
curvum, nec non Pinguinariarum alæ breves et velut
fquamatæ; hæc omnia facile fatis referri poffunt ad
vitæ rationem quæ hifce avibus peculiaris eft et ac-
commodata. Frufta autem torquebimur quærendo,

D

cuinam

cuinam ufui inferviant pennæ nudæ et prælongæ quas utrinque gerit collum Paradifeæ auratæ; illæve quæ proveniunt a lateribus Paradifeæ apodæ; feu alarum Grylli qui monftrofus dicitur gyri et volumina; aut immodici proceffus alarum Phalænæ macrouræ. Nec felicius inquiramus quo animo dederit Natura avi quam cernere est in tabula pennam longiffimam, denudatam, quæ ab humero utroque e medio tectricum minorum exoritur, bis faltem fuperans longitudinem totius avis. Extremitates folæ plumatæ funt, penna ipfa nigra leviffime per totam longitudinem barbata; apicibus plumatis nigricantibus, ter quater cinereo tranfverfe fasciatis.

Color avis generalis obfcure cinereus, maculis atomifque nigris, rufis, albidifque belle guttatus. Alæ ferrugineæ fasciis confertis nigricantibus notantur, exceptis tectricibus minoribus. Vertex capitis nigrior reliquo copore. Pectus et abdomen ferrugineo-pallida ftrias habent maculasque plurimas nigricantes tranfverfim ductas. Collum pofticum cingit quafi collare ferrugineum. Alæ paulo longiores cauda cinerea, fasciis atomifque nigricantibus diftincta. Pedes exigui; unguis intermediæ latere fortiter ferrato. Nova proculdubio eft avis, nec antea defcripta. A Sierra Leona delatum eft fpecimen quod depinximus. Magnitudo eft quafi Sturni vulgaris.





THE
LEONA GOATSUCKER.



GENERIC CHARACTER.

Bill very small, depressed at the base, slightly hooked.

Mouth extremely wide; the sides furnished with a series of bristles.

SPECIFIC CHARACTER.

VARIEGATED GREY GOATSUCKER,
with wings spotted rufous and black, with a very long naked-shafted feather on each shoulder.

In the formation of some animals we meet with particulars so inexplicable as to baffle all attempts at pointing out the purposes for which Nature intended them.

The immoderate length of neck and legs in the Flamingo, the recurved and flexible bill of the Avocet, the short and scaly wings of the Penguin, are evidently calculated for the well-known manner

of life in the respective animals: but it would be in vain to enquire into the particular use of the long, shaft-like feathers which project from each side the neck of the *Paradisea aurata*, or those which hang from the sides of the *Paradisea apoda*: for the strange and uncouth convolutions in the wings of the *Gryllus monstrosus*; or the extravagant processes which terminate those of the *Phalæna macroura*. The bird which forms the subject of the present plate may also be adduced as an equally singular example of the above inexplicable formation; its principal character consisting in the excessively long naked shafts projecting from the upper part of each shoulder, in the midst of the smaller coverts. These remarkable feathers are at least twice the length of the whole bird, and are webbed only at their extremities: the naked or shafted part is black, very slightly bearded on each side the whole length; and the webbed or plumed ends are dusky or blackish with three or four obscure cinereous transverse bars. The general color of the bird is a blackish grey, elegantly variegated with specks of black, rufous, and whitish: the wings are ferruginous, all the feathers, except the smaller coverts, being marked with numerous blackish bars: the top of the head is darker than the rest of the bird: the under parts are pale ferruginous, dashed with dusky bars and patches, and round the back of the neck runs a sort of ferruginous collar or band. The wings reach beyond the tail, which is cinereous, with blackish bars and freckles: the feet are very small, with the
middle

middle claw very strongly ferrated on the interior side. This bird is an undoubted non-descript, and is a native of Sierra Leona, from whence the specimen here figured was recently imported. Its size is that of a Starling.

proculdubio est coluber fasciatus inter formosissimos
sui generis. Reperiri præcipue dicitur in Carolina,
et in numero esse serpentum prorsus innocuorum.



THE
FASCIATED SNAKE.



GENERIC CHARACTER.

Transverse *Lamellæ* under the abdomen.
Broad alternate *Scales* under the tail.

SPECIFIC CHARACTER, &c.

BLUE SNAKE, paler and variegated with
brighter blue beneath.

The WAMPUM SNAKE.

Catesb. Car. 2. t. 58.

It will readily be perceived by those who are conversant in natural history, that the elegant snake represented on the present plate is in reality copied from Catesby, with the variation only of posture: it is commonly considered as the *coluber fasciatus* of Linnæus, and is thus quoted, though not without a mark of uncertainty, in the *Systema Naturæ*. If the colours of the living animal are really such as expressed by Catesby, it must certainly be regarded as
one

THE
HAMMER-HEADED SHARK.



GENERIC CHARACTER.

Spiracula five on each side the neck.

Body oblong, somewhat cylindric.

Mouth situated beneath, in the fore part of the head.

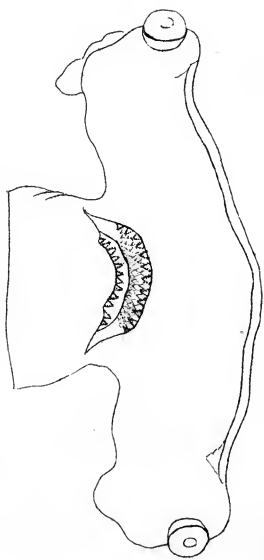
SPECIFIC CHARACTER, &c.

SHARK with transverse hammer-shaped head,

The ZYGÆNA.

The BALANCE-FISH.

This fish is readily distinguished from all others by the strange and uncouth shape of its head. It sometimes grows to the length of six feet, and is principally seen in the Mediterranean.





BULLA VIRGINEA.



CHARACTER GENERICUS.

Animal limax.

Testa univalvis, convoluta, inermis.

Apertura subcoarctata, oblonga, longitudinalis.

Columella obliqua, lævis.

Lin. Syst. Nat. p. 1181.

CHARACTER SPECIFICUS, &c.

BULLA ALBA, fasciis versicoloribus duplicatis,
columella truncata purpurea.

BULLA TESTA subturrita erecta, columella
truncata sanguinea.

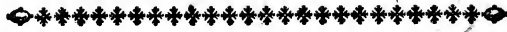
Lin. Syst. Nat. p. 1186.

BUCCINUM VIRGINEUM.

Lin. Mus. Lud. Ulr. n. 267.

In Asiæ fluviis præcipue reperta sedem sibi vindicat hæc concha inter pulcherrimas sui generis. Colore interdum variat; notas tamen semper retinet certas adeo et constantes, ut de specie non possit dubitari.

THE
RIBBAND BULLA.



GENERIC CHARACTER.

Animal resembling a Limax or Slug.

Shell univalve, convoluted.

Aperture somewhat straitened, oblong, longitudinal, entire at the base.

Column oblique and smooth.

SPECIFIC CHARACTER, &c.

WHITE BULLA, with particoloured double bands, and purple truncated column.

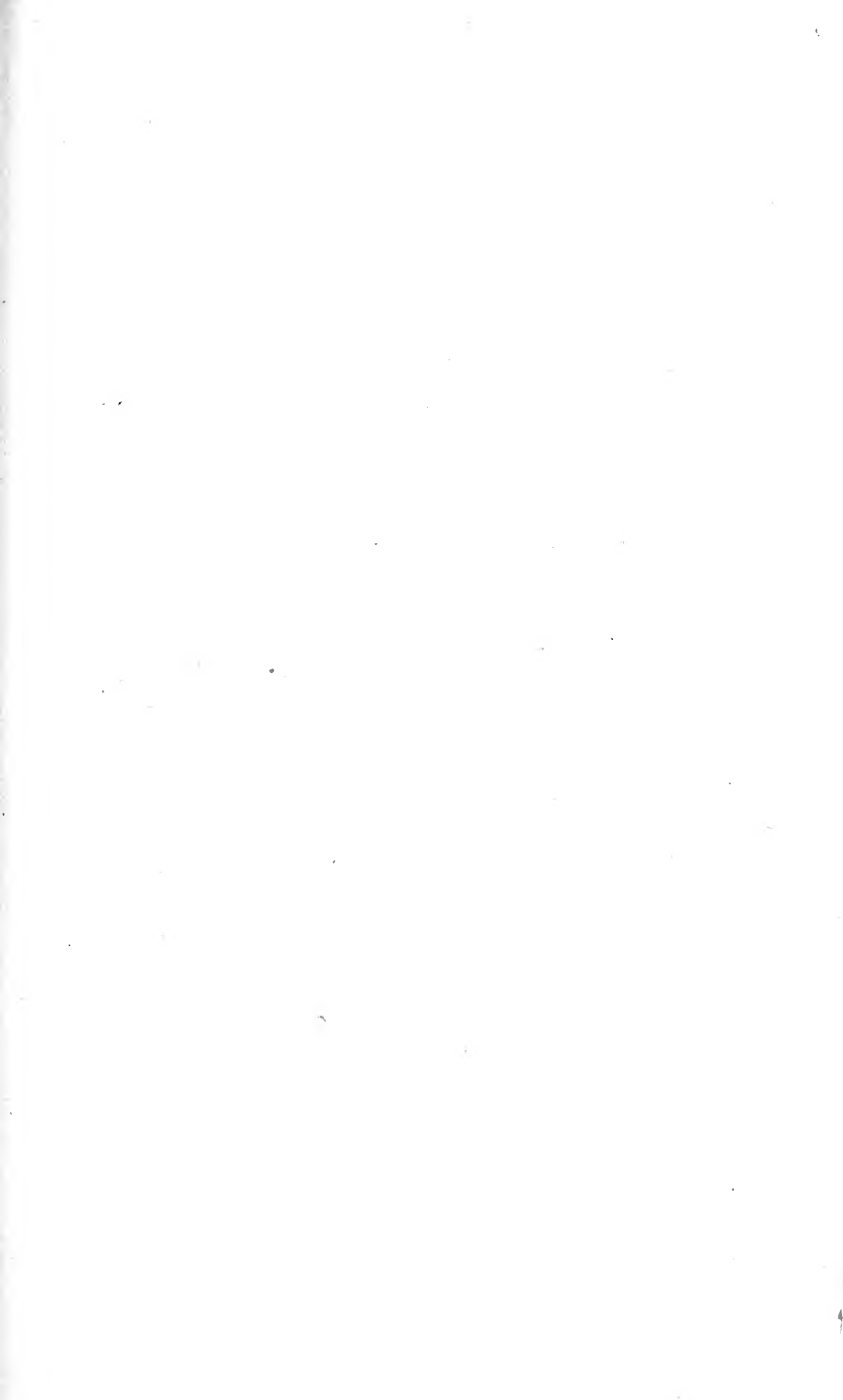
The STRIPED BULLA.

The PAINTED BULLA.

This beautiful shell, which is justly considered as one of the most elegant of the genus, is principally found in the rivers of Asia. It varies sometimes in its colors, but always retains characters sufficiently clear to determine the species.



ar





ALCEDO CÆRULEA.



CHARACTER GENERICUS.

Rostrum trigonum, crassum, rectum, longum.

Lingua carnosæ, brevissima, plana, acuta.

Pedes gressorii *plerisque*.

Lin. Syst. Nat. p. 178.

CHARACTER SPECIFICUS, &c.

ALCEDO CÆRULEA, subtus rufa, humeris
uropygioque viridibus, superciliis et torque
albis.

ALCEDO CÆRULEA, subtus rufa, superciliis
et torque albis.

Lin. Syst. Nat. Gmel. p. 454.

ALCEDO CÆRULEA.

Lath. ind. orn. p. 249.

ISPIDA INDICA torquata.

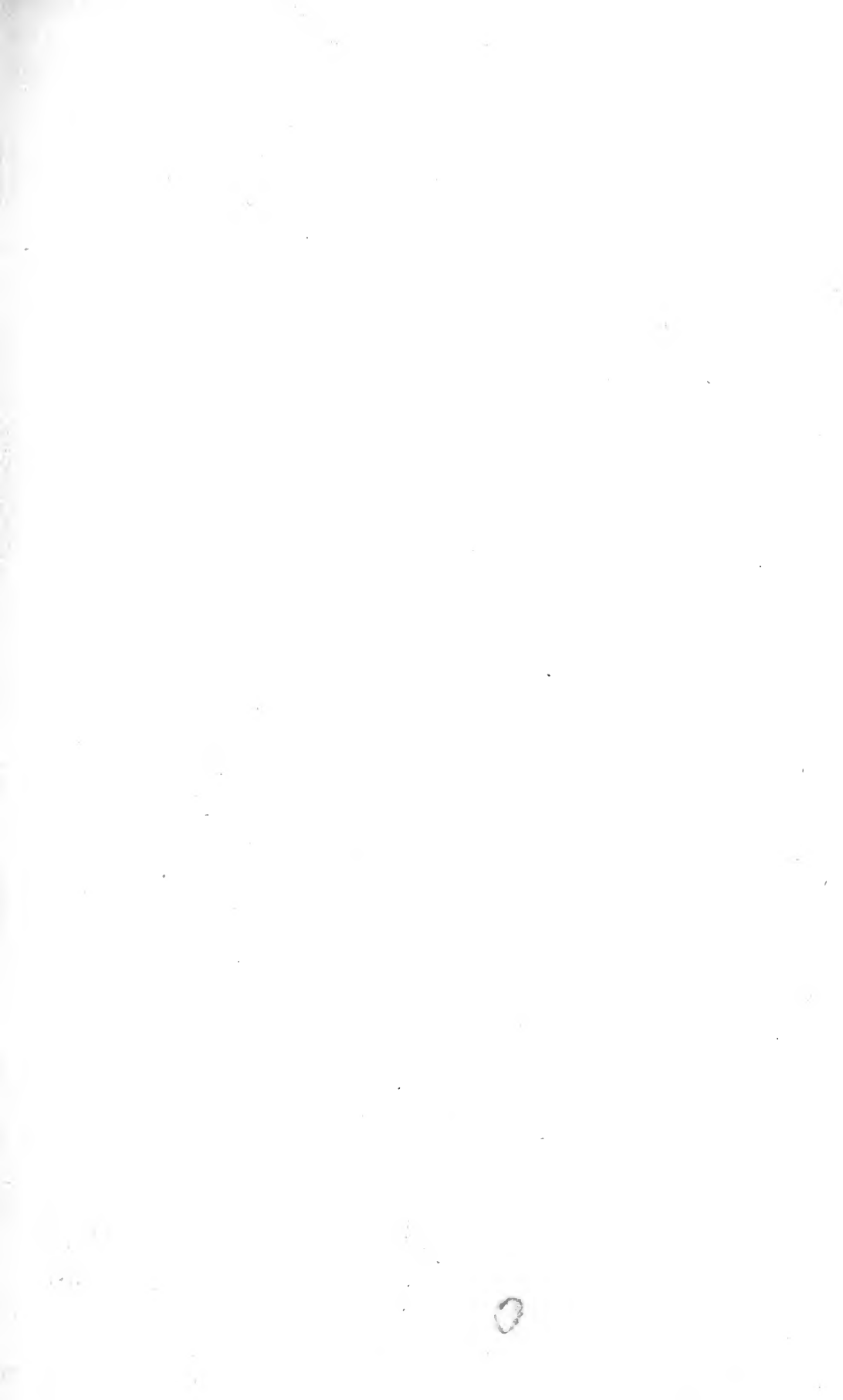
Bris. 4. p. 481. t. 37. f. 2. A.

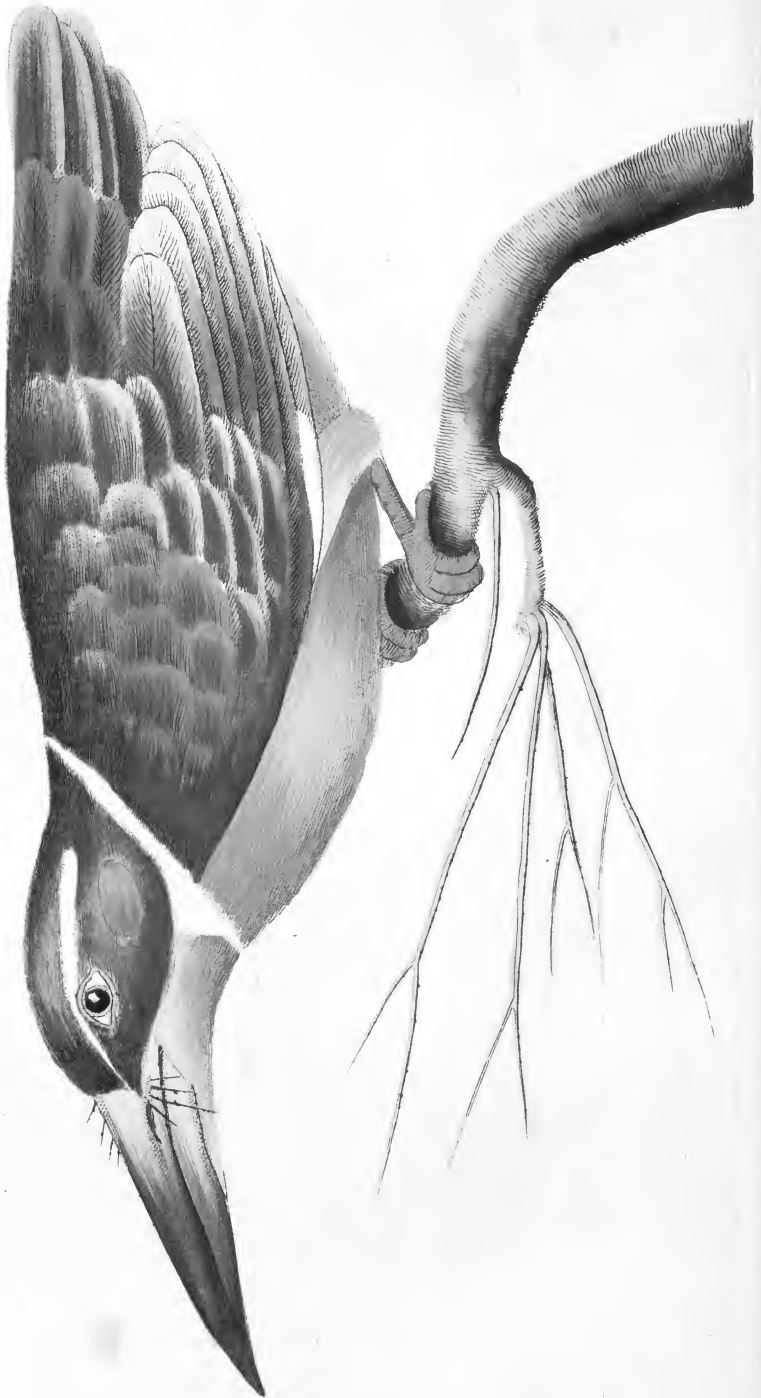
In India innascitur Alcedo cærulea, Alcedinem
Europæam seu Ispidam magnitudine superans: caput

E

dorsum-

dorsumque vestiunt pennæ cæruleæ splendidissimæ;
alarum tectrices minores uropygiumque pulchre vi-
rent; pectus et abdomen rufescunt; rostrum pedes-
que nigricant.





THE
WHITE-COLLARED KINGFISHER.



GENERIC CHARACTER.

Bill trigonal, thick, strait, long, sharp-pointed.

Tongue fleshy, very short, flat, sharp-pointed.

Feet (in most species) gressorial.

SPECIFIC CHARACTER, &c.

BLUE KINGFISHER, rufous beneath, with green shoulders and rump, a white collar round the neck, and a white streak over the eyes.

WHITE-COLLARED KINGFISHER.

Lath. syn. p. 620.

The white-collared Kingfisher is a native of India: in size it exceeds the common or European Kingfisher: the head and back are of a rich and beautiful blue: the shoulder-feathers or smaller wing-coverts and the rump of a bright green: the breast and abdomen rufous; the bill and feet dusky.

NAIS SERPENTINA.



CHARACTER GENERICUS.

Corpus repens, longum, lineare, pellucidum, de-
preffum.

Pedunculi fetis simplicibus.

Tentacula nulla.

Oculi duo aut nulli.

Lin. Syst. Nat. Gmel. p. 3120.

CHARACTER SPECIFICUS, &c.

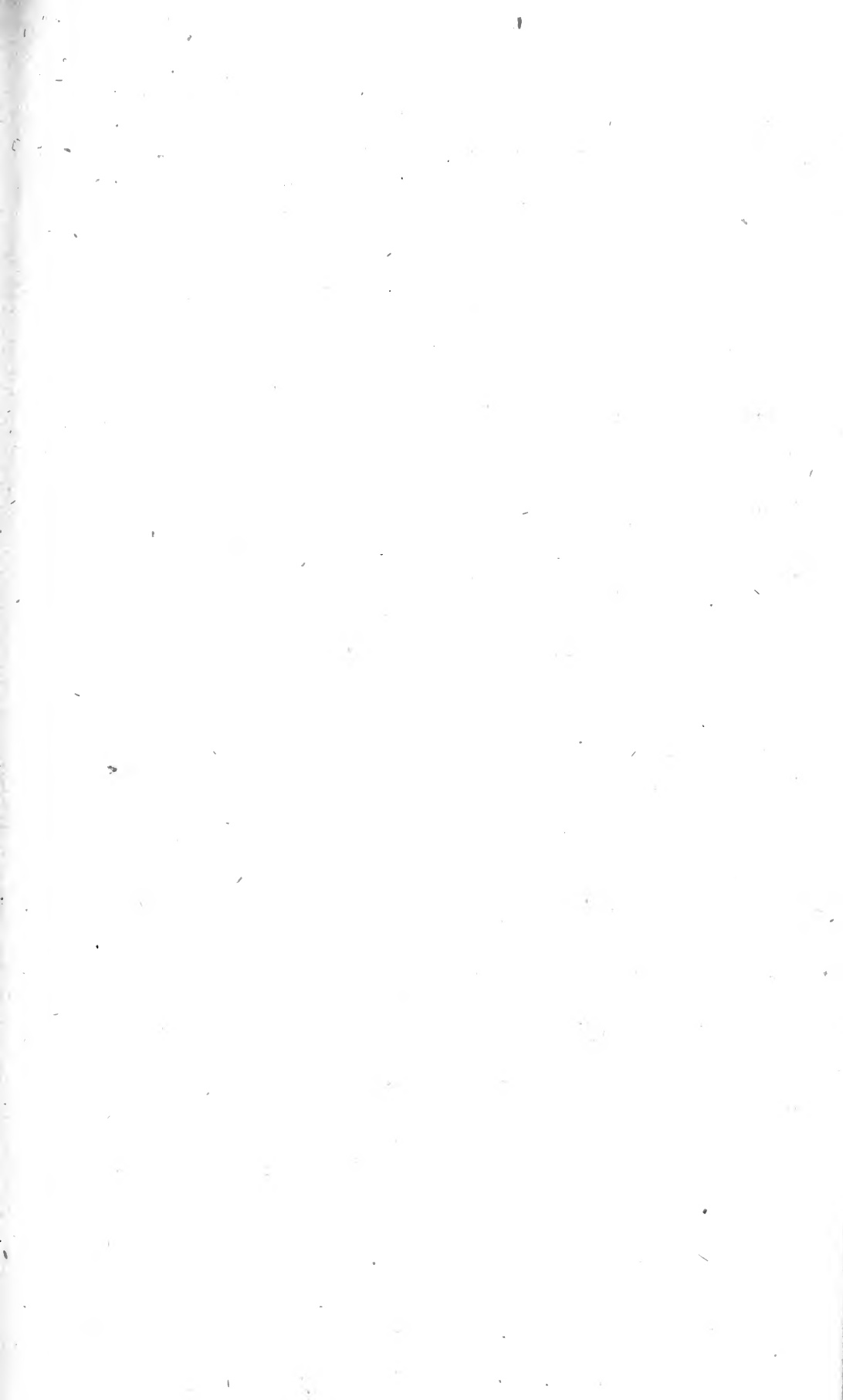
NAIS PELLUCIDA, intestino spirali rubro,
collari triplici nigro.

NAIS SERPENTINA.

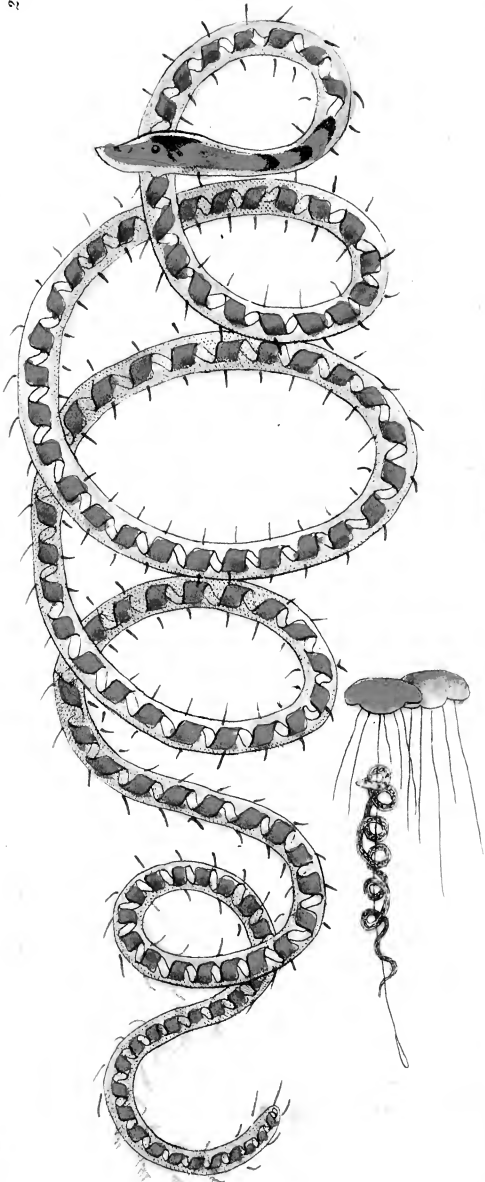
Lin. Syst. Nat. Gmel. p. 3121.

Roef. inf. 3. p. 567. t. 92.

Spargit se genus *Nais* in parva animalia, aquas plerumque dulces amantia. Horum nonnullæ species, qualis est ea quam depinximus, examinari fatis accurate nequeunt sine microscopio. Depingitur hæc species, quam frequentem alunt aquæ stagnantes, tum sua magnitudine, tum microscopice aucta.







THE
SERPENTIFORM NAIS.



GENERIC CHARACTER.

Body repent, long, linear, pellucid, depressed.

Bristles on each side, instead of feet.

Tentacula none.

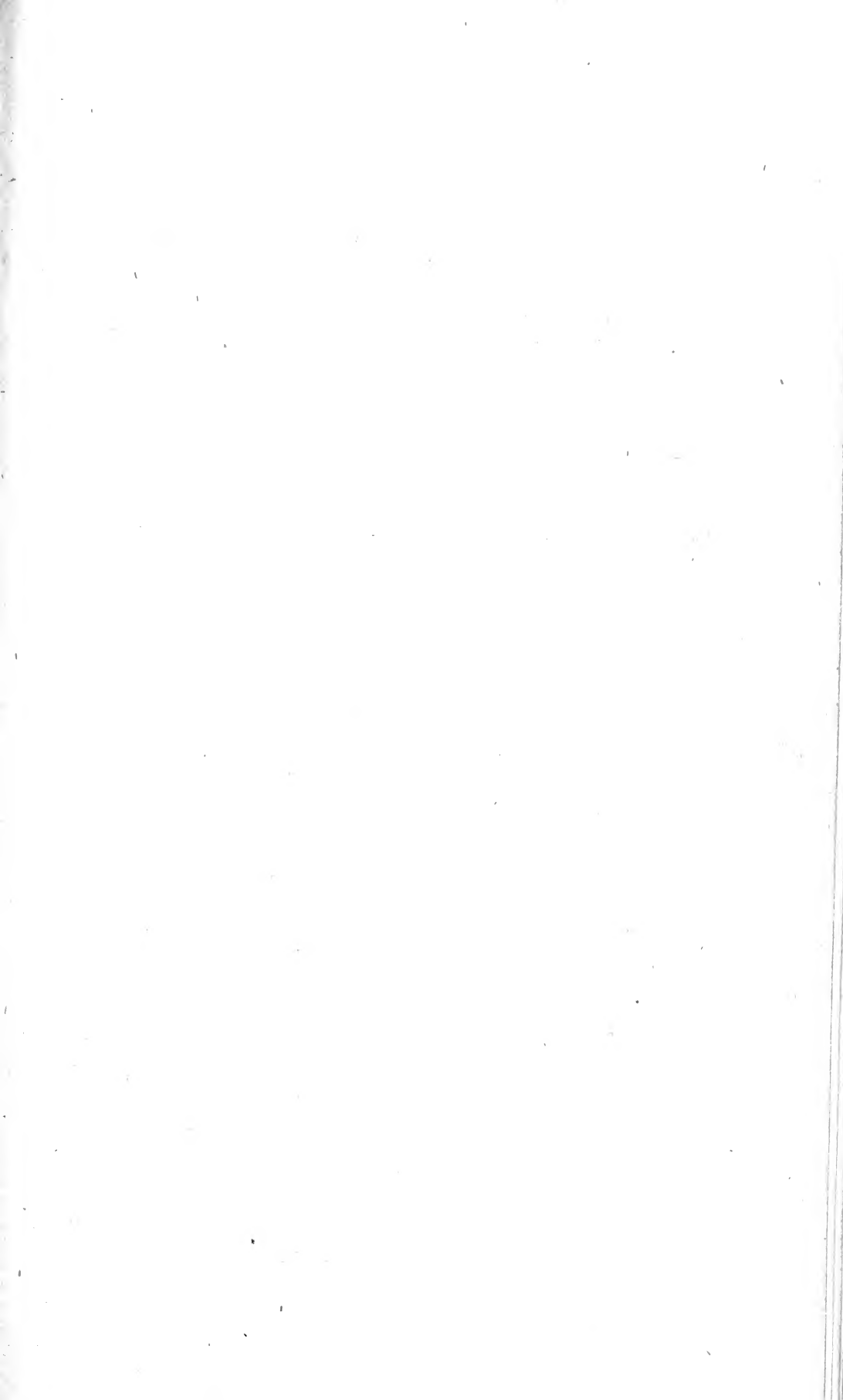
SPECIFIC CHARACTER, &c.

PELLUCID SNAKE-LIKE NAIS, with red
spiral intestine and triple black collar.

The COLLARED WATER-WORM.

The SNAKE NAIS.

The genus *Nais* consists of small animals, which in general are natives of fresh waters: some species are not to be distinctly examined without the assistance of glasses: amongst these is the animal here represented, both in its natural size, and as it appears when magnified: it is not uncommon in stagnant waters.



PAPILIO HECTOR.



CHARACTER GENERICUS.

Antennæ apicem versus crassiores, sæpius clavato-capitatae.

Alæ (sedendis) erectæ sursumque conniventes.
(Volatu diurno.)

Lin. Syst. Nat. p. 744.

CHARACTER SPECIFICUS, &c.

PAPILIO alis caudatis concoloribus nigris; primoribus fascia interrupta alba; posticis maculis lunatis coccineis.

PAPILIO alis caudatis concoloribus nigris: primoribus fascia alba; posticis maculis rubris.

Lin. Syst. Nat. p. 745.

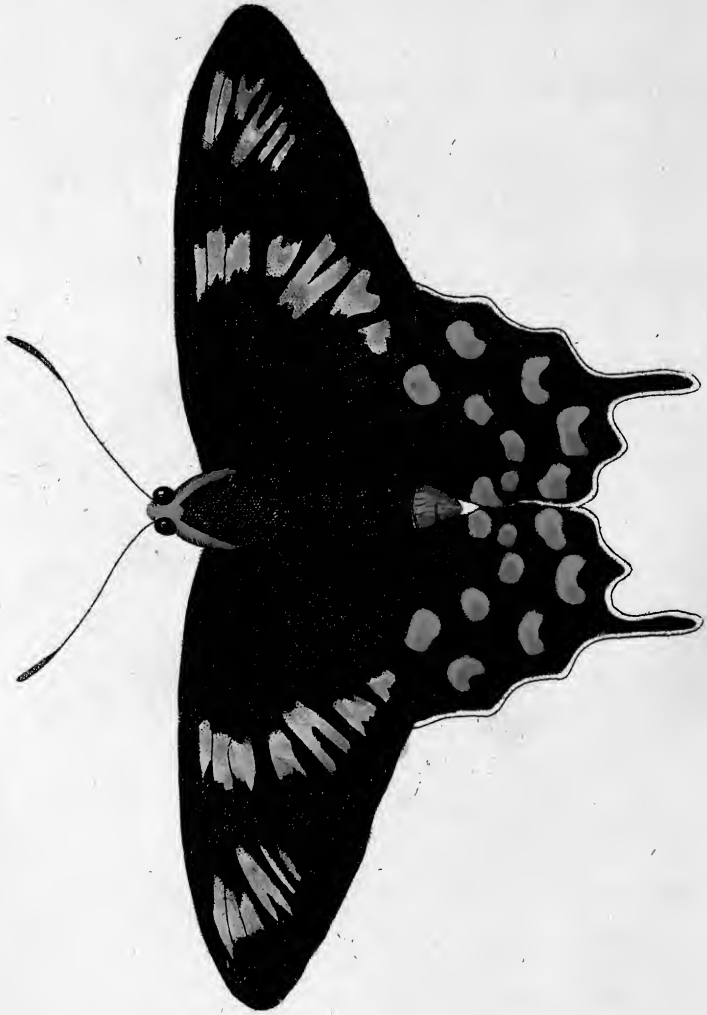
PAPILIO HECTOR.

Lin. Fabr. Cram. Gmel. &c. &c. &c.

Inter lautissimos papiliones exoticos habetur papilio Hector quem alit India. Tabula eum exhibet magnitudine naturali.







HECTOR.



GENERIC CHARACTER.

Antennæ thickening towards the upper part, and generally terminating in a knob.

Wings (when fitting) erect. (Flight diurnal.)

SPECIFIC CHARACTER, &c.

BLACK BUTTERFLY with tailed wings: the upper pair marked by a broken white band; the lower by numerous crescent-shaped crimfon spots.

The crimfon-spotted **INDIAN BUTTERFLY**.

This insect is one of the finest of the exotic butterflies, and is a native of India: the plate presents it in its natural size.

ALCYONIUM ARENOSUM.



CHARACTER GENERICUS.

Animal (plerumque) plantæ forma crescens.

Stirps fixa, carnosæ, gelatinosæ, spongiosæ, vel coriacea, *osculis polypiferis* obsita.

CHARACTER SPECIFICUS, &c.

ALCYONIUM simplex semicirculare arenosolutosum.

ESCHARA LUTOSA.

Pall. el Zooph. p. 37. n. 5.

Eschara MILLEPORA arenosa Anglica.

Raii syn. p. 31.

FLUSTRA ARENOSA.

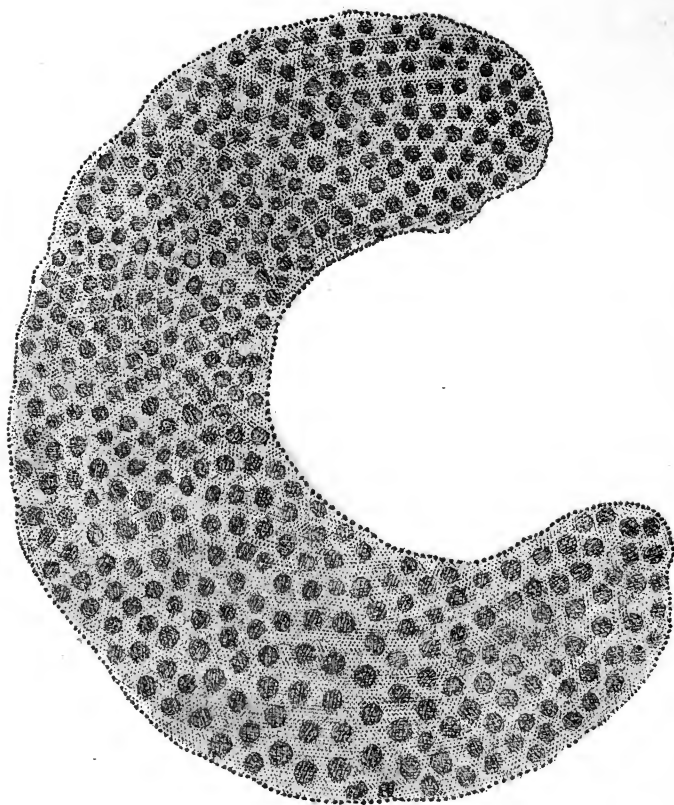
Lin. Syst. Nat. Gmel. p. 3829.

FLUSTRA ARENOSA.

Soland. et Ell. Zooph. p. 17

Miram hanc substantiam, quam in *Escharis* numeravit Pallas, in *Milleporis* Ellisius? in *Flustris* Gmelinus, qui systema naturæ Linnæanum auctius edidit, nullus

nullus dubito in *Alcyonii* genere reponere. Adhæret plerumque radicibus fucorum majorum; circa littora Britanniae septentrionalis minime rara; semper retinens figuram semicircularem. Substantia est multo leviori et magis friabili quam cætera pleraque Alcyonia, et constare videtur ex arena glutine animali connexa. Cellulae polypos recipientes qui putantur massam aedificasse, majusculae sunt, nec profundae, sed potius superficialiæ. Color totius leviter fuscoflavet. Ostendit tabula veram magnitudinem.



SANDY ALCYONIUM.



GENERIC CHARACTER.

Animal (commonly) growing in the form of a plant.

Substance more or less fleshy, gelatinous, spongy, or coriaceous: beset with polype-cells.

SPECIFIC CHARACTER.

Flat sandy ALCYONIUM of a semi-circular form.

Horse-shoe MILLEPORE.

English sandy MILLEPORA.

Ellis corallin. p. 74.

I have not the slightest hesitation in ranking this curious substance under the genus *Alcyonium*, rather than that of *Eschara*, in which it is placed by Pallas, of *Millepora*, in which it is stationed by Ellis? or lastly, in that of *Flustra*, in which it is arranged by Gmelin in his enlarged edition of the *Systema Naturæ* of Linnæus. It is represented in its natural size, and is generally found attached to the roots of the

the larger fuci: it is not uncommon about the northern parts of the British coasts, and always preserves its semicircular shape. Its texture is much lighter than that of most others of this genus, seeming to consist of sandy particles connected by an animal gluten: the cells or cavities, in which are supposed to reside the polypes, or fabricators of the mass, are rather large than small, and are not very deeply impressed, but rather superficial. Its colour is a pale yellowish brown.

CORACIAS INDICA.



CHARACTER GENERICUS.

Rostrum cultratum apice incurvato, basi pennis
denudatum.

Lingua cartilaginea, bifida.

Pedes ambulatorii.

Lin. Syst. Nat. p. 159.

CHARACTER SPECIFICUS, &c.

CORACIAS ex cyaneo et cæruleo-thalaffino varia,
dorso testaceo, pileo virescente.

CORACIAS CÆRULEA, antice testacea, pileo
viridi.

Lin. Syst. Nat. p. 159.

CORACIAS INDICA.

Lath. ind. orn. p. 170.

Licet superbiat totum genus splendidissimis coloribus, ægre tamen speciem pulchriorem reperies quam quæ in tabula depingitur. In Museo Britanico asservatur specimen unde delineata est hæc nostra figura, magnitudine quasi Coraciæ communis sive Europææ.

THE
INDIAN ROLLER.



GENERIC CHARACTER.

Bill straight, bending a little towards the end ; cul-
trated at the edges.

Nostrils narrow ; naked.

Legs generally short : toes divided to their origin ;
three forwards and one backwards.

SPECIFIC CHARACTER, &c.

ROLLER varied with deep-blue and pale
greenish-blue ; the back pale-brown ; the
top of the head greenish.

The CEYLONESE ROLLER.

The INDIAN ROLLER.

Lath. syn. p. 412.

BLUE JAY from the East Indies.

Edw. pl. 326.

The genus *Coracias* is eminently distinguished by beauty of color, and the species here represented may be considered as one of the most brilliant. The specimen from which the figure was taken is in the British Museum, and is about the size of the common or European Roller.



STYLEPHORUS CHORDATUS.



CHARACTER GENERICUS.

Oculi pedunculati (seu cylindro crasso brevi impositi.)

Rostrum productum, sursum spectans, versus caput membrana interjecta retractile.

Os terminale, edentulum?

Branchiæ trium parium sub jugulō sitæ.

Pinnæ pectorales parvæ; *dorsalis* longitudine dorsæ, caudalis brevis, radiato-spinosa.

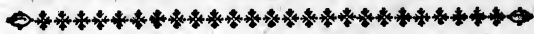
Corpus longissimum, compressum.

Cum rarissimum hunc piscem in primo volumine Actorum Societatis Linnæanæ jam descripserim, fatis erit lectores admonere fideliter in tabula depingi naturalem animalis magnitudinem, coloremque (exceptis capite pinnisque fuscis) esse splendide argenteum.

Captus fuit *Stylephorus chordatus* juxta parvulas aliquot insulas non longe a Cuba distantes. Specimen, quod unicum in Europa extare creditur, undequæ exaravi descriptionem quæ actis inferitur Societatis Linnæanæ, conspici possit in Museo Leveriano.

Novum genus constituit piscis, cujus alia nulla hætenus cognita est species.

THE
CHORDATED STYLEPHORUS.



GENERIC CHARACTER.

Eyes pedunculated ; standing on a short, thick cylinder.

Snout lengthened ; directed upwards ; retractile towards the head by means of a membrane.

Mouth without teeth ?

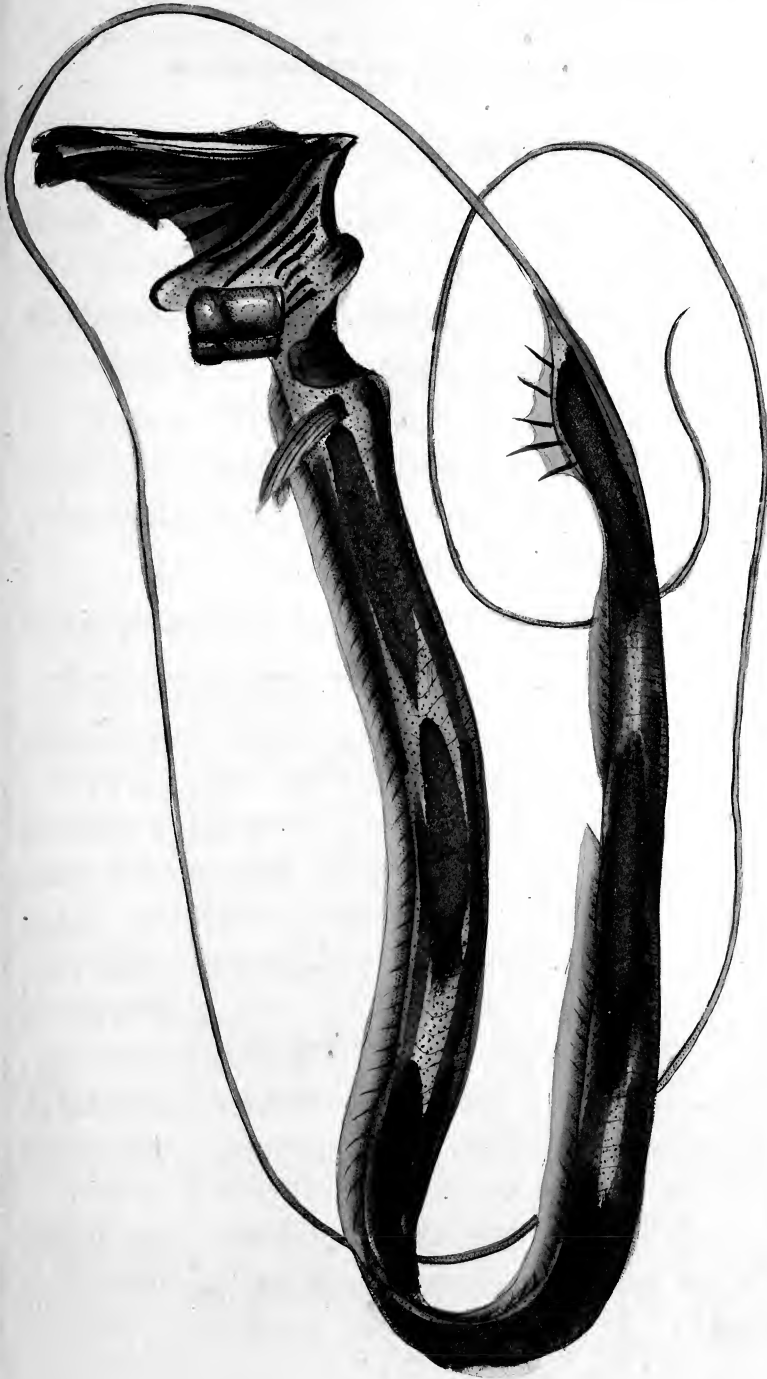
Branchiæ three pair, beneath the throat.

Fins pectoral small ; *dorsal* the length of the back ; *caudal* short, with spiny rays.

Body very long ; compressed.

Having already described this highly curious animal in the first Volume of the Transactions of the Linnæan Society, I shall at present only observe that it is here represented in its natural size ; that the color (except on the head and fins, which are brown) is a bright silver ; and that it was taken near a cluster of small islands not far from the coast of Cuba. The only specimen yet known in Europe, and from which the description above referred to in the Linnæan Transactions was drawn up, is preserved in the Leverian Museum.

I need not add that this fish constitutes a new genus, of which no other species has yet been discovered.





CHÆTODON SQUAMULOSUS.



CHARACTER GENERICUS.

Dentes (plerisque) setacei, flexiles, confertissimi, numerosissimi.

Membrana branchiostega radiis sex.

Corpus plerumque fasciatum. Pinna dorsi anique carnosæ squamosæ.

CHARACTER SPECIFICUS, &c.

CHÆTODON viridi-aureus, squamis squamulosis.

ACARAUNA MAJOR, &c.

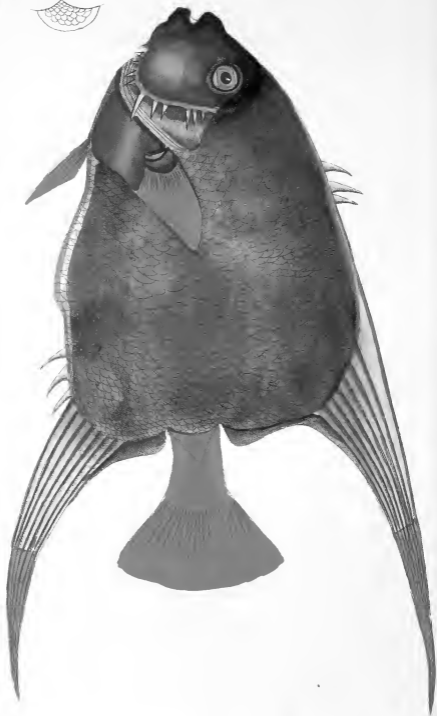
Catesb. 2. p. 31. t. 31.

Pisces depinximus non modica pulchritudine, juxta Americæ et insularum adjacentium litora copiose satis generatum, squamis insigniter contextum quæ ipsæ minutius squamata: quod vel solum speciem satis denotet. Non raro errant auctores, qui nihil distare opinantur hunc pisces a *Chætodonte triostego* Linnæi; ducitque eos in errorem quod falso citatur in systematis Linnæani editione duodecima, indeque in alia multa opera irrepsit.

Accidere

Accidere solet huic quod et aliis plerisque piscibus, ut diversis anni temporibus variet color; magis scilicet minusve aureus, pinnis itidem magis minusve rubro-cæruleis.





THE
DOUBLE-SCALED CHÆTODON.



GENERIC CHARACTER.

Teeth (in most species) setaceous, small, very numerous.

Body commonly fasciated transversely. Dorsal and anal fins fleshy and scaly towards the base.

SPECIFIC CHARACTER, &c.

Gold-green CHÆTODON, with the scales coated with smaller ones.

The ANGEL-FISH.

This beautiful fish is not uncommon about the coasts of America and the West Indian islands. It is remarkable for the very singular appearance of its scales; which are each coated over with much smaller ones; a particularity alone sufficient to distinguish this species from almost all others. It is often confounded with the *Chætodon triostegus* of Linnæus; owing to a mistaken quotation in the
twelfth

twelfth edition of the *Systema Naturæ* of that author, and which has been carelessly repeated by several others. In color, like most fishes, it varies at different seasons; being sometimes of a far richer and more golden tinge than at others; as well as with the blue and scarlet of the fins either deeper or lighter according to circumstances.

TRICHECHUS ROSMARUS.



CHARACTER GENERICUS.

Dentes Primores nulli utrinque.

Laniarii superiores solitarii.

Molares ex osse rugoso utrinque ; inferius duo.

Labia geminata.

Pedes posteriores compedes coadunati in pinnam.

Lin. Syst. Nat. p. 49.

CHARACTER SPECIFICUS, &c.

TRICHECHUS dentibus laniariis superioribus exfertis.

Lin. Syst. Nat. p. 49.

TRICHECHUS dentibus laniariis superioribus exfertis remotis.

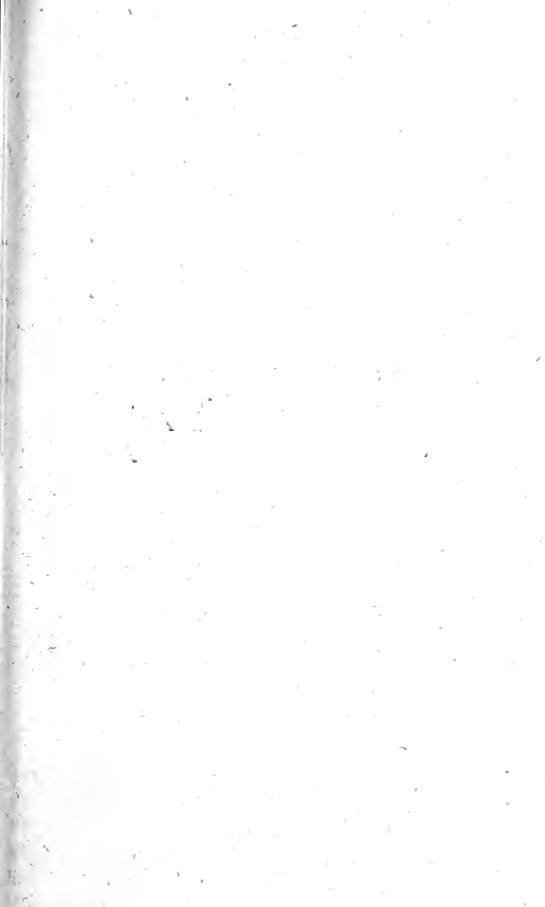
Lin. Syst. Nat. Gmel. p. 59.

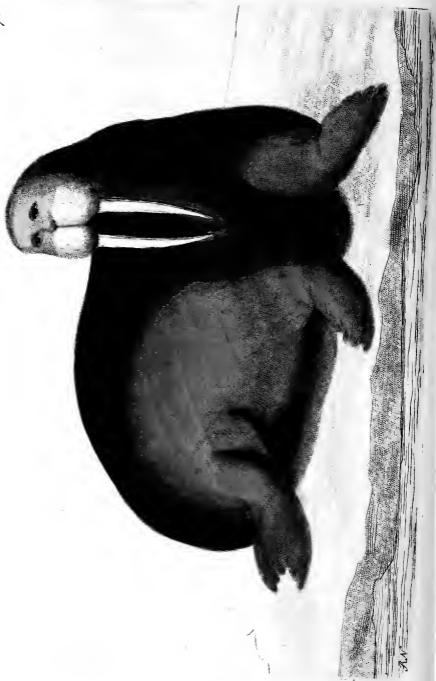
ROSMARUS.

Fonst. pisc. t. 44.

EQUUS MARINUS f. Hippopotamus falso dictus.

Raj. quadr. 191.





THE
ARCTIC WALRUS.



GENERIC CHARACTER.

Tusks in the upper jaw, large, and pointing downwards.

Grinders four on both sides, above and below.

Cutting teeth none.

Feet palmated.

SPECIFIC CHARACTER, &c.

WALRUS with long tusks remote from each other.

The ARCTIC WALRUS.

Penn. Quadr. 2. p. 266.

Arctic Zoology. n. 71. p. 144.

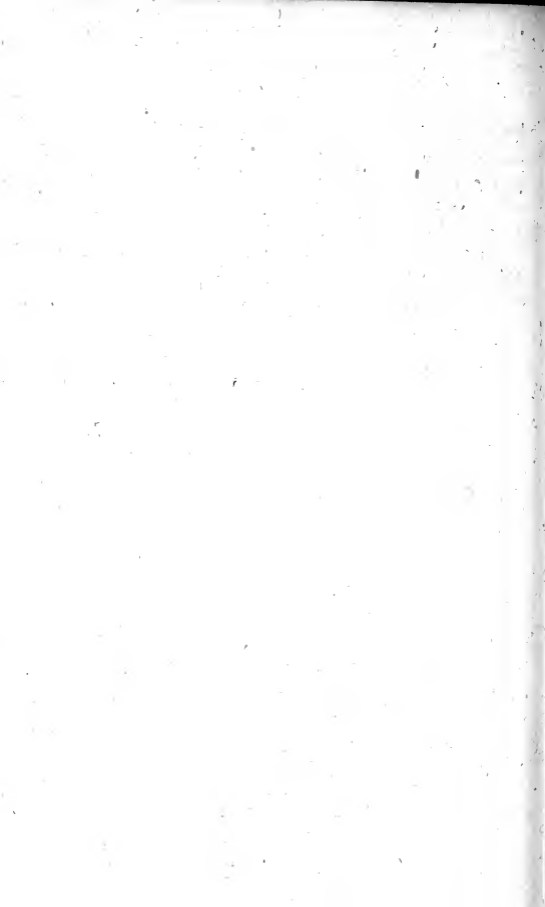
The Morfe, Sea-Horse, or WALRUS.

The Walrus is one of those animals which in general shape and appearance make a near approach to the Seal or sea-calf, and in a natural arrangement of quadrupeds must of necessity be disposed in the same tribe. The color of this animal is a darkish brown:

brown : the body is thinly scattered with hair, and the skin is thick and wrinkled. The shape of the Walrus is extremely uncouth ; it is very thick in the middle, and gradually lessens towards the tail, which is very short : the head is remarkably short and round ; the lips very thick, and the vibrissæ or whiskers consist of transparent bristles as thick as straws. In the upper jaw are two very long, large, acuminate tusks, pointing downwards. The Walrus grows to the length of several feet, and has sometimes been found not far short of twenty feet in length.

Of animals whose habitations and retreats are so far removed from the general haunts of mankind, we must not expect to obtain that exact knowledge with respect to their ways of life which creatures of a more accessible nature permit us to discover. Innumerable stratagems, says an elegant writer, are acted in the gloomy wilderness and in the great deep, which must for ever elude human investigation. All that is known of the general habits of the Walrus is derived from the accounts of navigators and others who have observed them during their temporary abodes either on the floating islands of ice in the northern ocean, or on the frozen coasts of the arctic regions. They are gregarious animals, and sometimes assemble in multitudes on the coasts to sleep. They are of a very pugnacious disposition, and with their enormous teeth inflict the most grievous wounds on each other during their contests. Their voice is a loud roar. They are possessed

essed of great courage, and resist with dreadful violence the attacks of mankind. They are killed in the northern regions for the sake of their oil, which is extremely plentiful: their teeth are also considered as a valuable article of commerce, being in strength at least equal, if not superior to ivory; their color however is not so lasting.



CUCULUS SINENSIS.



CHARACTER GENERICUS.

Rostrum teretiufculum.

Nares margine prominulæ.

Lingua sagittata, plana, integra.

Pedes scanforii,

Lin. Syst. Nat. p. 168.

CHARACTER SPECIFICUS, &c.

CUCULUS macrourus cæruleus, subtus niveus,
caudæ tectricibus rectricibusque macula ni-
vea notatis.

CUCULUS caudâ cuneiformi macrourea, corpore
cæruleo subtus albo, rectricum apicibus ma-
cula alba.

Lin. Syst. Nat. p. 171.

CUCULUS finensis cæruleus.

Briff. av. 4. p. 157. t. 14.

Ab erudito Briffono mutuatus sum hanc descrip-
tionem, qua nulla possit esse plenior et accuratior.

“ Speciem istam nondum mihi videre contigit.
Ipfius descriptionem desumpfi ab icone in Sina ad

G

vivum

vivum depicta a D. Poivre; et sic eam æri insculptam esse curavi.

Merulam crassitie circiter æquat. Ipfius longitudo ab apice rostri ad caudam extremam tredecim circiter pollices explet, et ad extremos ungues septem pollices et novem lineas. Rostrum ab ipfius apice ad oris angulos ufque undecim lineas longum est; cauda feptem pollices et fex lineas; pes decem cum femi lineas; digitorum anticorum extimus cum ungue undecim lineas, intimus novem lineas; poflicorum exterior decem lineas, interior quinque cum femi lineas. Alæ complicatæ ultra caudæ exortum non multum protenduntur. Summum caput albore nitet, minutisque variegatur maculis cæruleis. Totum reliquum caput et guttur nigricant: color autem nigricans fuper inferiorem colli partem in acumen protenditur. In utroque capitis latere macula exftat rotunda candida, pone oculum pofita. Pars colli fuperior, dorfum, pennæ fcapulares et fuperiores alarum tectrices fplendidiffimi cærulei funt coloris, exceptis tamen fuperioribus alarum tectricibus majoribus a corpore remotioribus albis. Uropygium dilutiffimo tingitur cæruleo. Superiores caudæ tectrices eodem imbuuntur cæruleo ac dorfum ipfum tingitur, et ex iftis quælibet majufcula macula ovata nivea verfus apicem infignitur. Collum inferius et ad latera, pectus, venter, latera, crura, inferioresque caudæ tectrices niveo candore nitent. Alarum remigès majores funt ab ipfarum exortu mediam verfus longitudinem ufque dilutiffime cæruleæ, a medietate ad apicem eodem ac dorfum cæruleo imbutæ: minores quoque dorfo concolores. Caudam

dam componunt decem rectrices splendidissime cæruleæ, majuscula macula ovata nivea versus ipsarum apicem notatæ. Binæ intermediae utrinque proxime sequentem trium pollicum et totidem linearum longitudine excedunt : laterales vero gradatim longitudine minuuntur ad utrinque extremam usque unum pollicem et novem tantum lineas longam. Oculorum irides rubræ. Mandibulæ superioris basis quibusdam obfita est plumulis rigidis, piliformibus, anteriorum versis. Rostrum, pedes, unguesque rubent. Habitat in Sina.”

THE
CHINESE CUCKOW,



GENERIC CHARACTER.

Bill somewhat bending.
Nostrils bounded by a small rim.
Tongue short, pointed.
Feet scanforial.

SPECIFIC CHARACTER, &c.

Long-tailed blue CUCKOW, white beneath; the tail-feathers and their coverts each marked with a white spot.

Le COCOU bleu de la Chine.

Briff. 4. p. 157.

SAN-HIA de la Chine.

- *Buf. ois.* 6. p. 389.

The Chinese Cuckow is thus described with elaborate exactness by the celebrated ornithologist Briffon.

“ Not having seen the bird myself, I have given its description from a drawing taken from the life in China by Monf. Poivre. It is about the size of a black-





a blackbird: its length, from the tip of the bill to the end of the tail, is about thirteen inches; and to the end of the claws about seven inches and nine lines. The bill, from the tip to the corners of the mouth, eleven lines: the tail seven inches and six lines: the foot ten lines and a half: the exterior fore-toe, with the claw, eleven lines; the interior nine lines; the exterior hind-toe ten lines; the interior five lines and a half. The wings, when closed, do not reach much beyond the beginning of the tail. The top of the head is of a clear white, variegated with minute specks of blue: all the rest of the head, with the throat, is blackish: the blackness being produced on the lower part of the neck into a sharpened form. On each side the head is a round white spot, placed behind the eye. The upper part of the neck, the back, the scapular feathers, and the upper wing-coverts are of a most brilliant blue, except the larger upper wing-coverts farthest from the body, which are white: the rump is of a very pale blue: the upper tail-coverts are of the same blue color with the back, and are each marked with a rather large, snow-white spot towards the end: the lower part and sides of the neck, the breast, belly, sides of the body, thighs, and lower tail-coverts are of a beautiful snow-white. The larger wing-feathers are of a very pale blue from their origins to their middles; and from their middles to their tips of the same blue with the back: the smaller wing-feathers are also of the same color with the back. The tail is composed of ten feathers of a very bright blue, each marked towards the tip with a largish snow-white spot: the two middle
feather

feathers exceed in length the two next them on each side by three inches and as many lines; but the side-feathers shorten gradually to the exterior one on each side, which is only one inch and nine lines in length. The irides of the eyes are red: the base of the upper mandible is beset with some small, stiff, hair-like feathers, turned forwards. The beak, feet, and claws are red. It is a native of China."

VORTICELLA POLYPINA.



CHARACTER GENERICUS.

Corpus contractile nudum, ciliis rotatoriis.

Lin. Syst. Nat. Gmel. p. 3874.

CHARACTER SPECIFICUS, &c.

VORTICELLA composita ovato-truncata, pedunculo reflexili ramosissimo.

Müll. an. inf. p. 328. t. 46. f. 7—9.

VORTICELLA composita, floribus concatenatis, stirpe paniculata subdigitata.

Lin. Syst. Nat. p. 1317.

BRACHIONUS vegetans, stirpe retortili umbellata, radiis racemosis, corpusculis campanulatis.

Pall. Zooph. 56.

VORTICELLA polypina:

Müll. hist. verm. 1. p. 123. n. 137.

Mirari jure possint in operibus naturæ minutioribus parum versati, non inter vegetabilia referri quod in tabula proponitur, sed inter animalia. In fere innumeris aquarum incolis quos ope microscopii detexerunt hodierni physici, pulchriores pauci sunt, aut digniores qui penitius examinentur, quam quos

quos continet *Vorticellarum* genus: quod modo vendi, et prolem propagandi, polyphis seu hydris admodum est affine: adeo ut a multis microscopicis scriptoribus nomine vocatum sit *polyphi racemati*. Sunt enim variæ species quæ fere unitæ et connexæ videntur, plurimis confertis et parvo spatio coarctatis; sunt etiam quæ crescunt et panduntur veluti in racemi similitudinem.

Reperiuntur, ut plurimum, Vorticellæ mensibus æstivis, in aquis purioribus stagnantibus, adhærentes caulibus foliisque plantarum minorum; præcipue autem lemnæ vulgaris. Quam vero jam describimus marina est species, quæ simili modo crescit super fucis minoribus. Tota congeries nudo oculo inspecta videtur quasi macula quædam albicans, viscido-mucosa: nec patet ejus forma mira et peculiaris, donec in aquæ guttula immerfa vitroque imposita examen microscopii subierit. Ab unico caule prodeunt incertis intervallis ramuli minores, singulo quasi in florem pulcherrimum desinente convolvulo non ab similem, lateraque habentem adversa filamentis duobus instructa, more staminum. Habet omnis coacervatio pelluciditatem vitri purissimi; floresque animati nunc se contrahentes, nunc dilatantes, motu quaquaversum variato, adeo delectant oculos, ut vix aliud magis quod ope microscopii spectatur. Singulum animalculum, licet stipes omnibus in commune sit, integrum tamen est et sui juris; cumque plene adoleverit, possit se a patrio solo dissociare, et novam coloniam alio deducere.

Prædantur Vorticellæ animalcula se minora, quæ prope natantia arripiunt ingurgitantque, simul atque in vorticem contorserint aquas gyratis tentaculis.





THE
ARBORESCENT VORTICELLA.



GENERIC CHARACTER.

Body contractile, naked; furnished with rotatory organs.

SPECIFIC CHARACTER, &c.

Compound bell-shaped VORTICELLA, with retortile branched stem.

Paniculated sea VORTICELLA.

Tree or Arborefcnt VORTICELLA.

To those who are not particularly conversant in the history of the minuter productions of Nature it must doubtless be matter of surprize to be informed that the figures on the annexed plate are not the representations of a vegetable but of an animal.

Amongst the innumerable inhabitants of the waters, which the microscope has enabled modern naturalists to discover, few are more strikingly curious than those which constitute the genus *Vorticella*. These animals, in their general mode of life, their manner of production, and other circumstances, bear a great affinity to the Hydræ or Polypes; and indeed by many microscopical writers have been called by the

the title of Cluster-Polypes; many of the species being found in groupes; sometimes formed by the mere approximation of several individuals; and at other times by the ramified or aggregate manner in which they grow.

The Vorticellæ are generally found in clear stagnant waters, during the summer months; attached to the stalks of the smaller water-plants; and particularly to those of the common Lemna or duckweed. The species however here represented is a marine one, and is attached in a similar manner to the stalks of the smaller Fuci. To the naked eye the whole groupe bears the appearance of a very small whitish spot or slime, resembling mouldiness; but when placed in a drop of water on a glass, and examined by the microscope, its extraordinary structure is immediately displayed. From a single stem proceed, at various heights, smaller ramifications, each terminated by a seeming flower, like that of *Convolvulus*, and furnished on the opposite edges with a pair of filaments resembling stamina. The whole is in the highest degree transparent, and perfectly resembles the finest glass; while the varying motions of the seeming flowers, expanding and contracting occasionally, and turning themselves in different directions, afford a scene so singularly curious that it may be numbered amongst the most pleasing spectacles which the microscope is capable of exhibiting. Each animal, though seated on the common stem, is to be considered as complete in itself, and possesses the power, when fully grown, of detaching itself from the parent stem, affixing
itself

itself in some other spot, and forming a new colony. The Vorticellæ feed on animalcules still smaller than themselves; and their various motions are commonly exerted in order to obtain their prey, the rotatory motion of their tentacula causing an eddy in the neighbourhood of each individual sufficient to attract into its vortex the animalcules which happen to swim near, and which the Vorticellæ seize, by suddenly contracting, and inclosing them.



LACERTA PALUSTRIS.



CHARACTER GENERICUS.

Corpus tetrapodum, caudatum, nudum.

Lin. Syst. Nat. p. 359.

CHARACTER SPECIFICUS, &c.

LACERTA nigricans, lateribus albido-punctatis,
abdomine croceo, maculis inæqualibus nigris.

SALAMANDRA alepidota verrucosa.

Gronov. Mus. 2. p. 77. n. 51.

SALAMANDRA aquatica.

Houttuyn. Aët. Ulyff. 9. p. 328.

Triton PALUSTRIS.

Laur. amphib. p. 39. n. 43. t. 4. f. 2.

Superat interdum magnitudine Lacerta palustris
specimina quæ in tabula ostenduntur ; rarior et am-
plior lacerta aquatica, quam alunt fere omnes aquæ
stagnantes. Color corporis superioris fusco-nigricat
faturator ; infra aurantius, maculis magnis, inæqua-
libus, nigris, variatus. Latera verruculis plurimis
feu atomis convexis, albis, asperguntur ; caudaque
utrinque fasciam plerumque habet latam, subargen-
team,

team, cum mixtura quadam subcærulei. Affurgit magis minusve per dorsum maris quasi crista continuata et compressa inæqualiter ferrata.

Amat ut plurimum, hæc species aquas puriores et frigidiores quam quas incolit lacerta aquatica; et ineunte vere, conspici possit vespertino tempore in locis udis juxta margines aquarum, nec non sub sepibus, aliisque latibulis, quæ umbram præbent et humorem.



THE
WARTED NEWT.



GENERIC CHARACTER.

Body four-footed, tailed; naked; or unfurnished with any distinct integument.

SPECIFIC CHARACTER, &c.

Blackish NEWT with the sides speckled with white; the abdomen orange with irregular black spots.

The Warty LIZARD.

Pennt. Brit. Zool. 3. p. 22. t. 3. fig. 1.

The black-and-orange WATER-NEWT.

The greater WATER-NEWT.

The *Lacerta palustris* is a species somewhat less common than the *lacerta aquatica*, which occurs in almost every stagnant water: it is also of a superior size; being sometimes found considerably larger than the specimens here represented. Its color is an extremely deep blackish brown above, and a bright orange beneath, variegated with large irregular black spots. The sides of the body are sprinkled over

over with numerous white convex specks or tubercles, and on each side of the tail there is commonly a broad streak of a silvery hue, with a cast of blueish. The back of the male is more or less distinguished by a kind of flattened process, divided into irregular serratures. This species is commonly met with in waters of a clearer and colder nature than those in which the *lacerta aquatica* is found; and in the beginning of spring may occasionally be observed, towards the evening, in damp situations near the margins of ponds, as well as under hedges, and other shady situations.

CERAMBYX GIGANTEUS.



CHARACTER GENERICUS.

Antennæ setaceæ.

Palpi quatuor.

Thorax spinosus aut gibbus.

Elytra linearia.

Lin. Syst. Nat. Gmel. p. 1814.

CHARACTER SPECIFICUS, &c.

CERAMBYX thorace utrinque tridentato, corpore nigro, elytris ferrugineis, antennis brevibus.

Lin. Syst. Nat. Gmel. p. 1816.

PRIONUS giganteus.

Fab. spec. inf. 1. p. 206.

Depingitur *Cerambyx giganteus* magnitudine naturali. Americam australem inhabitat, physicisque Europæis paucis abhinc annis innotuit. A Domino Drury in elegantissimo opere de insectis exoticis eximie exprimitur, nec non a Domino Daubenton in opere cui titulus *Planches Enluminées*. Color est obscure castaneus, seu terreo-fuscus, thorace paulum nigriore. *Elytra*, seu alarum thecæ exteriores, quodammodo scabra sunt: antennæ brevissimæ.

THE
GREAT CERAMBYX.



GENERIC CHARACTER.

Antennæ setaceous.

Thorax either spinose or gibbose.

Palpi four.

Wing-Cases long or linear.

SPECIFIC CHARACTER, &c.

Black CERAMBYX, with ferruginous wing-cases, short antennæ, and thorax tridentated on each side.

Le THUSTE de Cayenne.

Pl. Enl. 64. f. 2.

The great short-horned CERAMBYX.

The *Cerambyx giganteus*, represented in its natural size on the annexed plate, is a native of South America; and was introduced to the notice of European naturalists some few years backwards. It has been extremely well figured by Mr. Drury, in his elegant work on exotic insects; as also by Monf. Daubenton in his *Planches Enluménées*. Its color is a uniform dull chestnut, or earthy brown: the thorax is somewhat darker or blacker than the other parts: the elytra or wing-cases are of a roughish surface, and the antennæ are remarkably short.



CERTHIA CYANEA.



CHARACTER GENERICUS.

Rostrum arcuatum, tenue, subtrigonum, acutum.

Lingua acuta.

Pedes ambulatorii.

Lin. Syst. Nat. p. 184.

CHARACTER SPECIFICUS, &c.

CERTHIA CYANEA, vertice beryllino, alis caudaque nigris, tectricibus inferioribus flavis.

CERTHIA cærulea, fascia oculari humeris alis caudaque nigris, pedibus rubris.

Lin. Syst. Nat. p. 188.

CERTHIA cærulea, fascia oculari, humeris, alis caudaque nigris, pedibus fuscis.

Lin. Syst. Nat. Gmel. p. 483.

Certhiæ familiari æqualis prope est magnitudine avis quam repræsentat tabula. Generatur in America Australi, in Cayana autem præcipue.







THE
CYANEAN CREEPER.



GENERIC CHARACTER.

Bill slender, incurvated, sharp-pointed.

Tongue differing in shape in the different species.

Legs moderately stout.

Toes three before; one behind: back-toe large;
claws hooked and long.

SPECIFIC CHARACTER, &c.

Blue CREEPER, with the wings and tail black;
the crown beryl-coloured; the under wing-
coverts yellow.

GUIT-GUIT noir et bleu.

Buff. ois. 5. p. 529.

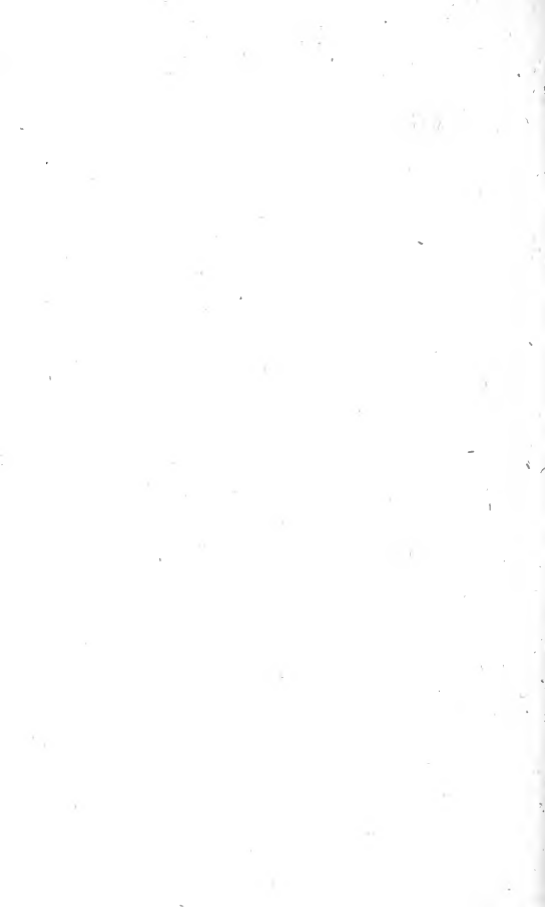
GRIMPEREAU du Bresil.

Pl. Enl. 83. f. 2.

Black-and-blue CREEPER.

Edw. pl. 264. f. 1.

The bird represented on the plate is an inhabitant of South America, and is principally found in the province of Cayenne. Its size is nearly that of the common English Creeper.



CANCER BRACHIATUS.



CHARACTER GENERICUS.

Pedes octo (rarius sex aut decem); infuper manus
duæ chelatae.

Palpi sex inæquales.

Oculi duo distantes, plurimis pedunculati; elongati, mobiles.

Mandibula cornea, crassa.

Labium triplex.

Cauda articulata, inermis.

Lin. Syst. Nat. Gmel. p. 2963.

CHARACTER SPECIFICUS, &c.

CANCER elongatus, thorace striato, brachiis longissimis.

CANCER thorace rugoso, antice ciliato spinoso, rostro tridente, manibus filiformibus.

Fab. sp. inf. 1. p. 508.

CANCER rugosus.

Lin. Syst. Nat. Gmel. p. 2985.

In variis Europæ Arcticæ oris conspici possit hæc cancri species, ob enormem crurum anticorum longitudinem

gitudinem notabilis, nec non ob summam thoracis superioris elegantiam; qui laminis decoratur plurimis transversis, quasi imbricatim dispositis, et subtiliter ferratis, ipsis quoque marginibus belle ciliatis.





THE
BAMFFIAN LOBSTER.



GENERIC CHARACTER.

Legs generally eight (in some species six or ten).

Feelers six, unequal.

Eyes two, generally distant, footstalked, moveable.

Tail articulated, unarmed.

SPECIFIC CHARACTER, &c.

Long-bodied CRAB, with striated thorax and very long arms.

The BAMFFIAN CRAB.

Long-clawed LOBSTER.

Penn. Brit. Zool. 4. p. 14.

pl. 13. *n.* 25.

This curious species is distinguished by the enormous length of its arms, as well as by the singular elegance of the upper part of the thorax, which is ornamented with a great many transverse, finely-ferrated laminæ, disposed over each other in an imbricated manner, and beautifully ciliated on the margins. It is found on several of the Northern coasts of Europe.



SERPULA VERMICULARIS.



CHARACTER GENERICUS.

Animal Terebella.

Testa univalvis, tubulosa, adhærens, (sæpe isthmis integris passim intercepta.)

Lin. Syst. Nat. p. 1264.

CHARACTER SPECIFICUS, &c.

SERPULA testa tereti, subulata, curvata, rugosa.

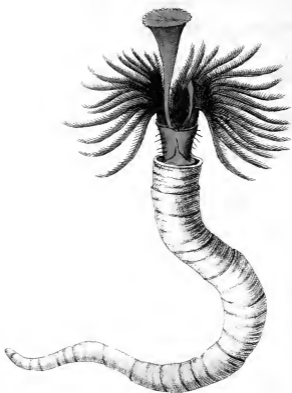
Lin. Syst. Nat. p. 1267.

TUBUS VERMICULARIS.

Ellis Corall. t. 38. *f.* 2.

Specierum quas plurimas continet genus *Serpula* varium omnino et inæquale, diversa admodum est forma et magnitudo. Species quam magnitudine naturali depinximus, in litoribus Britannicis aliisque Europæis sæpe conspicitur, quasi in longitudinem agglutinata conchis majoribus, rupibus, lapidibus, reliquisque ejusmodi. Pulcherrima sunt tentacula quasi plumata, eodem colore quo corpus, scilicet vivide rubra; quæque, cum animal escam quæritat, infecta nempe parvula marina aliaque id generis, exeruntur;

feruntur ; et affurgit inter tentacula tuba, margine ampliore, tubæ bellicæ non longe abfimilis, quam juxta est et alia simplicior. Corpus reliquum intra testam contrahitur, et ad similitudinem hirudinis quodammodo accedit.



A.P.

THE
VERMICULAR SERPULA.



GENERIC CHARACTER.

Animal resembling a Terebella.

Shell univalve, tubular, adhering commonly to other substances, (in some species intercepted internally by dissepiments at uncertain distances.)

SPECIFIC CHARACTER, &c.

SERPULA with round, tapering, curved, wrinkled shell.

VERMICULAR SERPULA.

Common SERPULA or Worm-shell.

The genus *Serpula*, consisting of a great number of species of very different sizes and forms, is among the least regular of the testaceous tribe; and the inhabiting animals appear of a very different cast from those of any other shells. The species here figured in its natural size, is not uncommon on the British and other European coasts. It is found attached, or agglutinated as it were, longitudinally, to the larger shells,

shells, rocks, stones, or other substances. The animal is remarkable for the elegance of its plummy tentacula, which, as well as the body, are of a bright scarlet color, and are protruded when the creature is in quest of prey; viz. the smaller sea insects, &c. Between the tentacula arises a curious tube with a dilated opening not ill resembling the form of a trumpet; and near this appears another tube of a more simple structure. The remainder or body of the animal is imbedded in the shell, and bears a distant resemblance to a leech.

CERAMBYX CERVICORNIS.



CHARACTER GENERICUS.

Antennæ fetaceæ.

Palpi quatuor.

Thorax spinosus aut gibbus.

Elytra linearia.

Lin. Syst. Nat. Gmel. p. 1814.

CHARACTER SPECIFICUS, &c.

CERAMBYX thorace utrinque tridentato, mandibulis porrectis corniformibus spinosis, elytris fusco et flavescente variis.

CERAMBYX thorace marginato dentato, maxillis porrectis corniformibus utrinque spinosis, antennis brevibus.

Lin. Syst. Nat. p. 622.

CERAMBYX thorace utrinque tridentato, mandibulis porrectis, extus unispinosis, antennis brevibus.

Lin. Syst. Nat. Gmel. p. 1814.

Magnitudine naturali depingitur *Cerambyx cervicornis*, inter maximos sui generis numerandus. In America meridionali præcipue conspicitur.







THE
STAG-HORNED CERAMBYX.



GENERIC CHARACTER.

Antennæ setaceous.

Thorax either spinose or gibbose.

Palpi four.

Wing-Cases long or linear.

SPECIFIC CHARACTER, &c.

Great CERAMBYX, with the thorax tridentated on each side; the jaws resembling horns; the wing-sheaths variegated with brown and yellowish.

The Stag-horned variegated CERAMBYX.

Le BUFLARD de Cayenne.

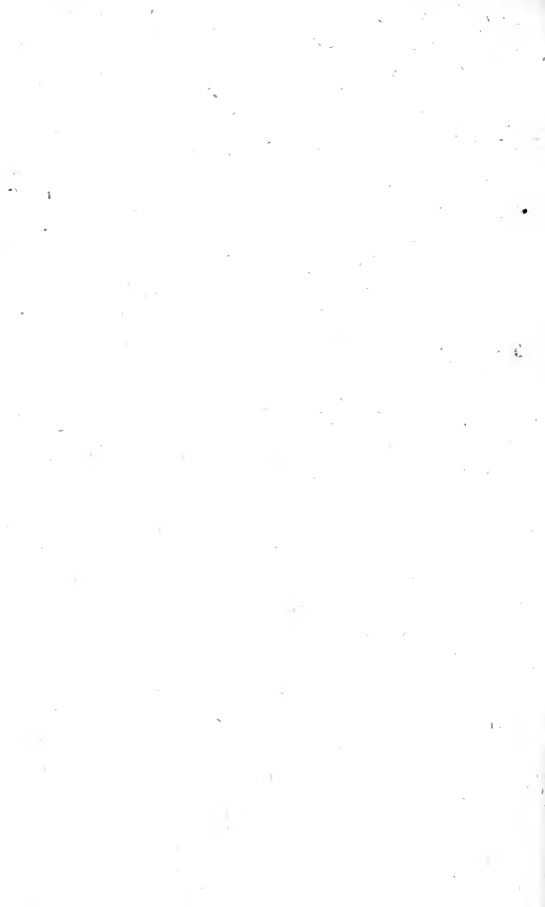
Daubent. Pl. Enl. 90. fig. 3.

Mer. Sur. pl. 48.

Roes. 2, p. 12. t. 1. f. B.

Sloan. Jam. 2, t. 237. f. 6.

The Stag-horned Cerambyx, which is one of the largest insects of the genus, is a native of South America, and is represented on the plate in its natural size.



ORIOLOUS GALBULA.



CHARACTER GENERICUS.

Rostrum conicum, convexum, acutissimum, rectum: mandibula superiore paulo longiore, obsolete emarginata.

Lingua bifida, acuta.

Pedes ambulatorii.

Lin. Syst. Nat. p. 160.

CHARACTER SPECIFICUS, &c.

ORIOLOUS luteus, loris alis caudaque nigris, rectricibus exterioribus postice flavis.

ORIOLOUS luteus, loris artubusque nigris, rectricibus exterioribus postice flavis.

Lin. Syst. Nat. p. 160.

TURDUS luteus.

Frisch. t. 31.

TURDUS aureus.

Klein. av. p. 66.

GALBULA.

Raii Syn. p. 68.

Oriolus Galbula, aves plerasque Europæas pulchritudine superans, quemque satis abundanter alit reliqua Europa, in insulas Britannicas fortuitus hospes rarissime defertur. Magnitudo est quasi turdi communis. Color feminæ olivaceus.



THE
GOLDEN ORIOLE.



GENERIC CHARACTER.

Bill conic, convex, very sharp-pointed, straight: the upper mandible rather longer than the lower, and slightly emarginated.

Tongue bifid, sharp-pointed.

Feet formed for walking.

SPECIFIC CHARACTER, &c.

Gold-yellow ORIOLE with black lores wings and tail: the exterior tail-feathers yellow on their lower part.

The Golden THRUSH.

Edw. t. 185.

Golden ORIOLE.

Lath. Syn. 1. p. 449.

WITWALL.

Will. orn. p. 198.

Le LORIOT.

Buf. 3. p. 254. *t.* 17.

The Oriolus Galbula, surpassing most of the European birds in beauty of plumage, is not uncommon

in Germany, France, and many other parts of the continent, but is seen only as an occasional straggler, (and even that but very rarely,) in the British dominions. Its size is that of a common thrush. The female is olive-coloured.

SCARUS VIRIDIS.



CHARACTER GENERICUS.

Caput: *Dentium* loco maxillæ ipsæ eminentes ;
margine dentato-crenatæ ossæ.

Membrana branchiosæga radiis quinque ; Oper-
culum integerrimum.

Corpus: Linea lateralis plurimis, ramosa,
Lin. Syst. Nat. Gmel. p. 1280.

CHARACTER SPECIFICUS, &c.

SCARUS viridis, linea laterali interrupta.

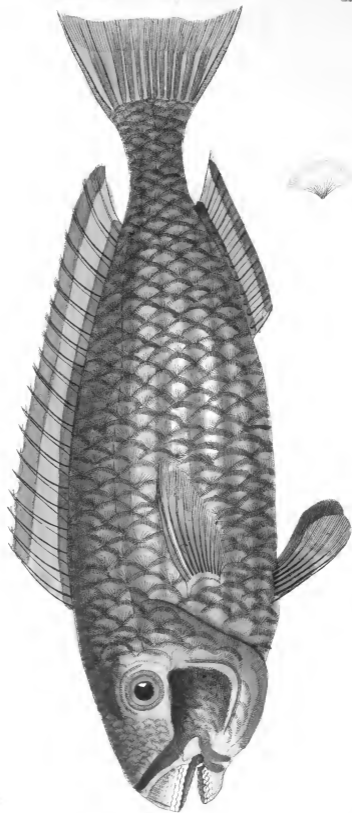
SCARUS linea laterali interrupta.

Bloch avfl. Fisch. 7. t. 222.

Ad generis *Scari* distinctionem insignis est forma dentium, qui constant e duabus quasi maxillis seu laminis ossæ in utraque mandibula fitis, quales sunt in genere *Tetrodontis* ; margine vero serie denticulorum separatorum crenata. Hæ quoque ipsæ laminæ ossæ, si accuratius inspiciantur, constare videntur in nonnullis speciebus e congerie quasi dentium minorum, super se invicem serie continuata surgentium, adeo ut belle cælatas putes. Squamæ pluribus scaris magnæ sunt, et colores vividi. Scarus quem ostendit tabula, æquat magnitudine *Cyprium Carpionem*, et alitur in aquis Japonicis.







THE
GREEN SCARUS.



GENERIC CHARACTER.

Strong *bony processes*, crenated at the edges, instead of teeth.

SPECIFIC CHARACTER.

Green SCARUS, with interrupted lateral line.

The genus Scarus is eminently distinguished by the form of its teeth, which consist of a pair of strong, bony processes in each jaw, as in the genus Tetrodon; but marked or crenated round the edges by a number of separate denticulations: the whole body also of the bony processes themselves, if narrowly examined, will be found to consist, in some species, of a kind of aggregate mass of smaller teeth, placed as it were in succession over each other, and giving a beautiful kind of carved appearance to the whole. The scales in most of the Scari are large, and the colors beautiful. The present species is about the size of a Carp, and is a native of Japan.



TESTUDO IMBRICATA?



CHARACTER GENERICUS.

Corpus tetrapodum, caudatum, testa obtectum.

Os mandibulis nudis, edentulis.

Lin. Syst. Nat. p. 350.

CHARACTER SPECIFICUS, &c.

TESTUDO palmarum plantarumque unguibus
binis, scutis laxè atque imbricatim incum-
bentibus?

Lin. Syst. Nat. Gmel. p. 1036.

TESTUDO *Caretta*.

Raj. quadr. p. 258?

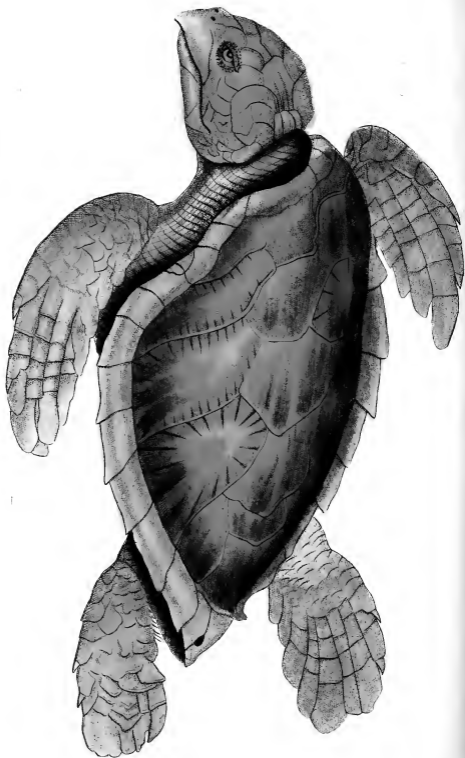
TESTUDO Marina Americana?

Seb. Mus. 1. p. 130. t. 80. fig. 9.

Dividitur genus in testudines terrestres, fluviatiles, et marinas. Marinis quæ vulgo dicuntur *Turtles*, pedes sunt quasi pinniformes, lati, et squamati. Harum præcipua est species *Mydas* dicta, hodie habita in exquisitissimis dapibus. Dividi solet tegmen testudinis jam depictæ, nec non testudinis *Mydæ* et *Carette* Linnæi, in tenues lamellas artificiose

ficiose paratas et expolitas; unde multa et fatis quæstuosa fit mercatura. Cruftis testudinis lectos, domuum postes, et reliqua ejusmodi decorare mos erat veteribus.

Fœcundæ admodum sunt testudines pleræque marinæ, ovaque numerosa in arena deponunt, ovis galinaceis non abfimilia, sed cute quasi membranacea obtecta, et rotundata; unde post paucos dies exclusi pulli mari se illico credunt. Amplissima interdum est moles testudinis imbricatæ & *Mydæ*. Fuisse dicuntur nonnullæ pondo sexcenis, longitudine plus quinquipedali. Communiter autem captantur bipedales, seu tripedales. Alitur præcipue testudo imbricata in maribus Americanis, frequentior apud insulas Jamaicæ, Cubæ, Hispaniolæ, &c. Victitat, ut solent aliæ testudines marinæ, testaceis, sepiis, fucis, reliquisque ejusmodi.



THE
IMBRICATED TORTOISE.



GENERIC CHARACTER.

Body four-footed, tailed ; covered with a shell.
Mouth with uncovered, toothless, bony mandibles.

SPECIFIC CHARACTER, &c.

SEA-TORTOISE with two claws on each foot ;
the shell consisting of laxly-imbricated, acu-
minated scales.

Hawk's-Bill TURTLE ?

Brown. Jam. p. 465.

Scaly TORTOISE ?

Grew. Mus. p. 38. t. 3.

The animals of this genus are divided into land, river, and sea tortoises ; which latter are commonly distinguished by the name of Turtles ; and are furnished with broad, flat feet, resembling a kind of thick, scaly fins. Of these the most important species is the *Testudo Mydas*, which has long been celebrated for the peculiar delicacy of its flesh, and which forms a principal article in the repasts of modern

modern epicures. It is from the species here represented, as well as from the *Caretta* and *Mydas* of Linnæus, that a great part of what is commonly called tortoise-shell is procured; and which, when properly prepared and polished, affords so many beautiful and valuable articles of commerce. The ancients were well acquainted with the ornamental use of tortoise-shell, and applied it to the decoration of their houses, &c.

Most of the animals of this tribe are extremely prolific, and deposit their eggs, which are about the size of hen's eggs, but round, and covered with a membranaceous skin, under the sand; which, after a certain number of days, are hatched; and the young immediately betake themselves to the sea. The *Testudo imbricata* and *Mydas* grow sometimes to a vast size; and have been seen of the length of five or six feet, and of the weight of many hundred pounds: the general length however is about two or three feet. This species is a native of the American seas, and is common about the coasts of Jamaica, Cuba, Hispaniola, &c. Like the rest of its tribe, it feeds on shell-fish, cuttles, fuci, &c. &c.

PHALÆNA CAJA.



CHARACTER GENERICUS.

Antennæ fetacæ, a basi ad apicem sensim attenuatæ.

Alæ (sedentis) sæpius deflexæ. (Volatu nocturno.)
Lin. Syst. Nat. p. 808.

CHARACTER SPECIFICUS, &c.

PHALÆNA *Bombyx* alis albis fusco maculatis ; inferioribus rubris nigro maculatis.

PHALÆNA *Bombyx* elinguis, alis deflexis fuscis, rivulis albis ; inferioribus purpureis nigro punctatis.

Lin. Syst. Nat. p. 819.

Goed. inf. t. 17.

Roes. inf. 1. phal. 2. t. 1.

Mouff. inf. 93. f. 15.

Aldr. inf. 246. f. 11. 12.

Polyphaga vocatur larva pulcherrimi hujus insecti; depascitur nempe varia gramina, plantaginem, et alia vegetabilia. In chrysalidem plerumque convertitur mense Junio, tela quadam tenui cooperta. Erumpere solet phalæna mensibus Julio et Augusto.





R. 1.

THE
TIGER MOTH.



GENERIC CHARACTER.

Antennæ or *Horns* setaceous, decreasing in size from the base to the point.

Wings, when at rest, genenerally deflected.

Flight mostly nocturnal.

SPECIFIC CHARACTER, &c.

PHALÆNA with the upper wings cream-coloured, spotted with brown; the lower wings red, spotted with black.

The Great Tiger Moth.

Merian. inf. Eur. t. 5.

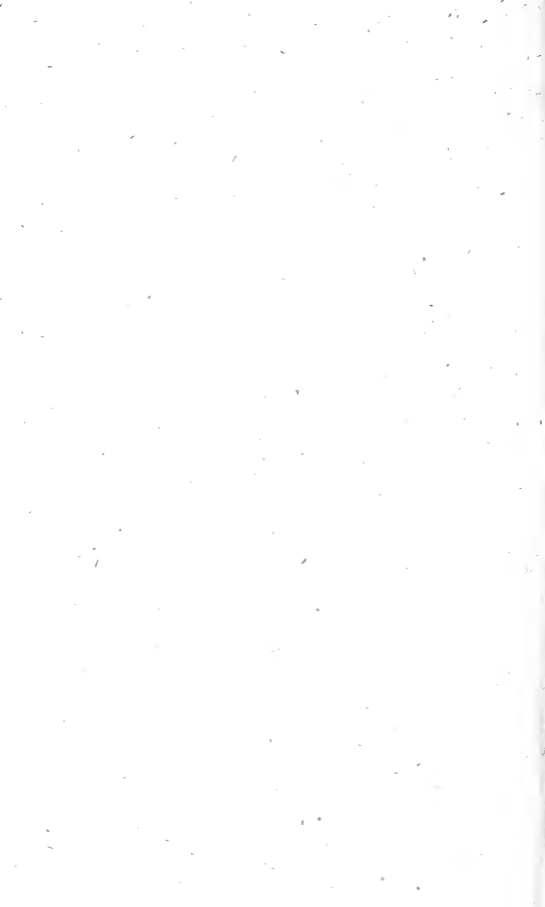
Albin. inf. t. 20.

Degeer. inf. 1. t. 12. f. 8. 9.

Seba. 4. p. 63. t. 52. fig. F. 1—4.

Sepp. inf. 4. t. 9. f. 2.

The Larva or Caterpillar of this beautiful Moth is of a polyphagous nature; feeding indiscriminately on grass, plantain, and a variety of other vegetables. It commonly changes to a chrysalis in June, enveloping itself in a web of a slight texture. The Moth appears in July and August.



CERTHIA MURARIA.



CHARACTER GENERICUS.

Rostrum arcuatum, tenue, subtrigonum, acutum.

Lingua acuta.

Pedes ambulatorii.

Lin. Syst. Nat. p. 184.

CHARACTER SPECIFICUS, &c.

CERTHIA cinerea, alis caudaque nigris; tectricibus roseis, remigibus roseo marginatis.

CERTHIA cinerea, macula alarum fulva.

Lin. Syst. Nat. p. 184.

PICUS muralis.

Gesn. av. p. 712.

PICUS murarius.

Aldr. av. 1. p. 851.

Will. orn. p. 99. t. 23.

Italiam sibi sedem præcipuam selegit Certhia muraria; rara tamen et ibi; in reliqua Europa longe rarior. In muris turrium aliorumque ædificiorum, ut plurimum, solet reptare, necem parans insectis. Solivaga est avis, nec unquam volat gregatim. Maris guttur stria seu fascia nigra distinguitur. Ostenditur in tabula naturalis magnitudo.

THE
WALL CREEPER.



GENERIC CHARACTER.

Bill slender, incurvated, sharp-pointed.

Tongue differing in the different species.

Toes three before; one behind: claws hooked and long.

SPECIFIC CHARACTER, &c.

Grey CREEPER, with black wings and tail; the coverts rose-coloured; the quills edged with rose-colour.

The WALL-CREEPER, or Spider-catcher.

Will. orn. p. 143. t. 23.

Le GRIMPEREAU de muraille.

Buf. ois. 5. p. 487. t. 22.

The *Certhia Muraria* or Wall Creeper may be considered as one of the rarer European birds, being very little known in any other country except Italy; and even there it is by no means common. It principally frequents towers and other edifices, creeping about the walls in quest of insects. It is a bird of a solitary nature, and is never seen in flocks. The male is distinguished by a black stripe or longitudinal patch on the throat. The plate represents it in its natural size.



TEREBELLA MADREPORARUM.



CHARACTER GENERICUS.

Corpus oblongum repens nudum, branchiis ad latera instructum, sæpius in tubulo.

Os anterius labiatum edentulum, proboscidem clavatum exferens.

Tentacula circum os capillaria, plura, ciliata.

Lin. Syst. Nat. Gmel. p. 3112.

CHARACTER SPECIFICUS, &c.

TEREBELLA tentaculis spiraliter fasciculatis, proboscidis disco bicorni.

TEREBELLA proboscidis disco simplici terminali bicorni ??

Lin. Syst. Nat. Gmel. p. 3114.

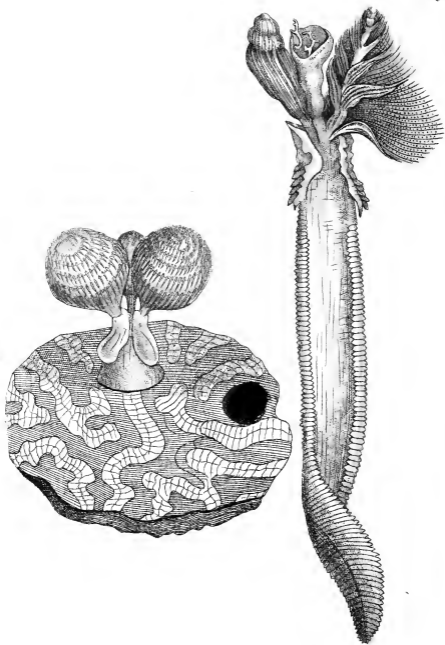
Aët. Angl. tom. 75. p. 333. t. 11.

In opere hoc nostro jam antea notatum est, foramina quæ in Madreporis magnis et globosis sæpius cernuntur, non a natura originem ducere, sed ab animali aliquo sedem sibi in madrepora quærente, esse terebrata. Qui de hoc plus doceri cupit, adeat lector Actorum Anglicorum volumen septuagesimum

quintum, in quo insigne profertur exemplum ab ingenioso Domino Home, qui commentario suo ad-
jecit quicquid præterea observavit celeberrimus Jo-
annes Hunterus. Et quantum colligere possumus a
figura, quam inde in tabellam nostram transtulimus,
ut melius illustraretur res de qua quæritur; censemus
animal in madrepora latitans, speciem esse Tere-
bellæ; quæ cum semel madreporam terebraverit,
manet in cavo, exinde se, ut verisimile est, ad libi-
tum protrudens, prædæ studio.

Figura prima ostendit animal e foramine exemp-
tum. Secunda frustum madreporæ cum cellula in
qua latet Terebella.





THE
MADREPORE TERESELLA.



GENERIC CHARACTER.

Body oblong, repent, naked: often inhabiting a tube.

Mouth without teeth, in some species exerting a clavated proboscis.

Tentacula several, capillary and ciliated; in some species fasciculated.

SPECIFIC CHARACTER.

TEREBELLA with spirally fasciculated tentacula; the head of the proboscis furnished with two horns.

It has been already observed in the course of the present work, that the foramina which frequently appear in some of the larger globose Madrepores, are not always owing to the natural structure of the coral, but rather to the operation of some other animal, which thus forms itself a habitation in the madrepoire. Of this a curious instance has been observed by the ingenious Mr. Home, whose memoir on this subject may be seen in the seventy-fifth volume

volume of the Philosophical Transactions, accompanied by some farther observations by Mr. John Hunter. From the figure there given, and which we have here copied, as an illustration of this particular, it appears that the animal should be considered as a species of Terebella, which, when it has formed itself a hole in the madrepore, continues to reside there, and may be supposed to protrude itself occasionally from its cell in quest of prey.

Fig. 1. The animal taken out of its cell.

Fig. 2. A piece of the madrepore, with the cell in which the terebella resides.

COLUBER RUSSELLII.



CHARACTER GENERICUS.

Scuta abdominalia.

Squamæ subcaudales.

Lin. Syst. Nat. p. 275.

CHARACTER SPECIFICUS.

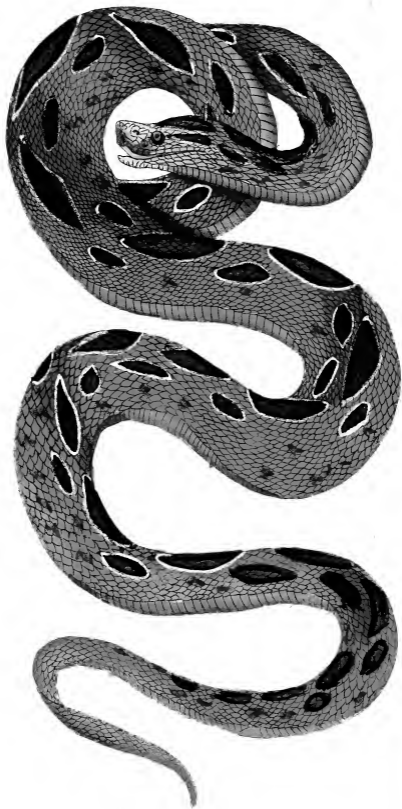
COLUBER fusco-flavescens, maculis dorsalibus ovato-acuminatis nigricantibus albo marginatis, lateralibus minoribus ovatis.

Scuta abdominalia 168. *Squamæ subcaudales* 59.

Longus est quasi quatuor pedes serpens quem describere in animo est. Capitis largiusculi pars superior squamis parvulis contegitur. Nasus obtusus. Rictus oris amplus. Tela magna, et (quod variis serpentibus venenatis contingit), duplicia; minus nempe in utraque maxilla adjacet majori. Color eleganter fusco-flavescit, ducta per totam dorsi longitudinem macularum fuscarum, rhombiformium, seu potius ovatarum serie continua, quarum medium pallet, margines albescent; quæque aliquibus in locis confluent, ut cernere est in tabula. Utrinque in lateribus sitæ sunt maculæ ovatæ, fuscæ, minores iis
quæ

quæ in tergo sunt; et præterea transversim sparguntur aliæ vel his minores. Corpus inferius albet, scutorum seu lamellarum multarum marginibus notas aliquot fuscas habentibus.

Speciem hanc primus descripsit Dominus Ruffellius, libri auctor de Serpentibus Indicis, quique specimine quod depinximus Museum Britannicum ditavit. Narrat Ruffellius in India non rarius reperiri hunc serpentem quam ipse *Coluber Naja*; eique vix et ne vix cedere telo venenato: suis enim experimentis probavit vir doctus, horæ momento post morsum tricies et sex elapso, interiisse pullos gallinaceos; ipsum autem canem, exacto fere semihoræ spatio.



THE
RUSSELIAN SNAKE.



GENERIC CHARACTER.

Transverse *Lamellæ* under the abdomen.
Broad alternate *Scales* under the tail.

SPECIFIC CHARACTER, &c.

Brownish-yellow SNAKE, with acutely-ovate blackish dorsal spots edged with white, and smaller ovate lateral ones:

Abdominal lamellæ 168. *Subcaudal scales* 59.

Katuka Rekula Poda.

Ruffel's Indian Serpents. p. 10. pl. 7.

The length of this remarkable snake is about four feet: the head is rather large, and covered on its upper part with small scales: the snout obtuse: the mouth wide: the fangs large, and, (as in several other poisonous serpents), double; a smaller fang being situated close to the larger one on each side. The color of the animal is an elegant pale yellowish brown, marked throughout the whole length of the back with a continued chain or series of large rhomboid, or rather oval spots of deep brown, with paler

ler middles, and narrow white edges: in some parts these spots are nearly confluent, as shewn in the figure: on each side of the body is a row of brown oval spots, smaller than those on the back; and besides these a few still smaller transverse marks are scattered here and there on the sides: the under part of the body is white, with a few dusky spots.

This species appears to have been first described by Dr. Patrick Ruffel, who presented the elegant specimen here figured to the British Museum. Dr. Ruffel, in his work on Indian Serpents, informs us that it is scarce less common in India than the Coluber Naja or Cobra de Capello; and that its poison is nearly as deleterious. Its bite, according to Dr. Ruffel's experiments, proved fatal to chickens in thirty-six seconds, and to a dog in twenty-six minutes.

DYTISCUS PICEUS.



CHARACTER GENERICUS.

Antennæ fetaceæ, aut clavato-perfoliatæ.

Pedes postici villosi, natatorii, submutici:

Lin. Syst. Nat. p. 664.

CHARACTER SPECIFICUS, &c.

DYTISCUS niger nitidus, antennis perfoliatis,
sterno postice mucronato.

DYTISCUS antennis perfoliatis, corpore lævi,
sterno carinato, postice mucronato.

Lin. Syst. Nat. p. 664.

HYDROPHILUS ruficornis.

Degeer. 4. p. 371. t. 14. f. 1. 2.

DYTISCUS hastatus.

Herbst. Besch. der naturf. Berl. Fr.

4. t. 7. f. 2.

HYDROPHILUS niger, &c.

Geoffr. inf. Par. 1. p. 182. t. 3. f. 1.

SCARABEE, &c.

Lyonet Less. t. 2. p. 54. n. 110. t. 1.

f. 15—17.

Omniū qui in Britannia generantur maximus est
Dytiscus piceus. A cæteris facillime dignoscitur,
quippe

quippe qui totus nigerrimus thoracem inferiorem solus gerat mucronatum; quod non nisi paucis exoticis contingit, nulli præter hunc Britannico. Aliæ licet species magis abundant, hujus tamen nulla est penuria. Piscinas amat aquasque stagnantes, larvaque ejus ut et aliorum Dytiscorum atrocissime prædatur teneriora insecta, nec non vermes et pisciculos, quos oris forcipibus correptos fugendo enecat. Hujus aliorumque majorum Dytiscorum juniores ab antiquioribus physicis nomine *Squillarum aquaticarum* describi soliti sunt; esse enim eos revera larvas tunc temporis ignorabant. Licet inter larvas diversarum specierum maxima sit similitudo, hujus tamen cæteris major sibi peculiare quiddam habet et anomalum, cui vix simile in aliis animalibus invenias: crura nempe, ni penitus examinentur, non ut aliorum insectorum, sub thorace sita videntur, sed supra, indeque ad latera deflecti. Crura autem non revera dorso inferuntur, sed oritur deceptio a peculiari quadam conformatione situque capitis; augetque deceptionem larvæ tum natantis tum quiescentis inversa plerumque positio; adeo ut difficile sit vel exercitatissimo physico errorem semel conceptum ex animo excutere. Frischi in historia insectorum ne minimum dubitasse videtur crura reapse esse dorso inserta: et celeberrimus Reaumurius cum huic simile aliquod in alio insecto aquatico observasset, attonitus rei novitate phænomenon unicum nec alibi uspiam conspectum commemoravit. Auctor quoque quarti voluminis Sebæ Thesauri lectores sedulo admonet, sculptorem corrigere volentem quod falso et incite delineatum putavit, pedes hujus larvæ non supra thoracem

thoracem sed subtus depinxisse. Lyonettus autem, multo vir acumine, in notas quas adjecit libro *Lefseri*, cui titulus "Theologie des Insectes," errorem vulgarem primus videtur detexisse, et veram larvæ conformationem luculenter descripsisse.

Dytiscorum larvæ non nisi post duos? circiter annos in pupas seu chrysalidas transformantur: cum enim ad plenam magnitudinem pervenerint, in cavo aliquo ripæ latibulo torpidæ aliquandiu dormiunt; deinde cutim exuunt et chrysalides fiunt. Elapso certo tempore, iterum exuviæ abjiciuntur, ipseque Dytiscus jam plene formatus erumpit; qui chrysalidis cute primum deposita, tenerrimus est et coloris pallidi; paucis vero horis elytra seu alarum tegumenta fatis indurantur, colore gradatim magis magisque fusco donec penitus nigraverit; et tum demum insectum novâ gaudens forma, nec alias ullas vices subiturum, aquis se audacter concredit.

Mares Dytiscos distinguit a feminis crurum anteriorum diversitas, quæ juxta pedum infitionem concava quadam cornea et rotundata parte velut clypeolo instruuntur, quo prorsus carent crura feminea. Toti generi peculiaris est et miranda crurum posteriorum formatio, quorum latera interiora serie pilorum longorum et densorum obsita sunt, pinnas quodammodo referentium; quibus magnopere in natando adjuvantur. Notandum porro est Dytiscum feminam speciei jam depictæ exemplum præbere artis, aliis (ut videtur) insectis coleoptratis penitus incognitæ; telam nempe nendi complanatam, circularem, fericam, quam super aquas libere fluitantem relinquit, ibique ova sua deponit; cujusque
super-

superficies superior cornu in formam quasi conicrescente terminatur, longo, fusco, et densiori ipsa theca, quæ albet. Larvæ ut primum a thecæ carcere liberantur, aquis se illico credunt. Quod mirum in historia Dytisci primus notavit Dominus Lyonettus.

Cavendum est putemus Dytiscos non posse sub dio vivere; frequenter enim per prata vagantur, in hanc vel illam aquam ad libitum se recipientes: quod cum noctu præcipue fiat, non mirum est si ignoretur. Si incaute ex aquis nuda manu excipiat Dytiscus piceus, eo est robore ut cutim mucrone thoracico interdum luctando vulneret.



THE
GREAT DYTISCUS.



GENERIC CHARACTER.

Antennæ either fetaceous or clavato-perfoliate.

Hind Feet formed for swimming, villose on the interior side, and scarce perceptibly clawed.

SPECIFIC CHARACTER, &c.

Glossy-black DYTISCUS, with perfoliate antennæ and long thoracic spine pointing backwards.

The large Black WATER-BEETLE.

The Spiked WATER-CLOCK.

Grew. Mus. p. 170.

The insect here figured is the largest of all the British Dytisci, and is at once distinguished by its uniform blackness, and by the remarkable spine or process proceeding from the lower part of the thorax; and which, though occurring in some exotic Dytisci, is found in no other British species. It is not a very uncommon animal, though far more so than some others of the genus. It is found in ponds and stagnant waters; where its larva, like those of
other

other species, commits great havoc amongst the more tender aquatic insects, as well as amongst worms and young fish, which it seizes with its forcipated jaws, and destroys by sucking out their juices. The larvæ of the larger Dytisci were described by the older writers on natural history under the title of *Squillæ aquaticæ*; and were not at that time known to be Dytisci in their first or caterpillar state. There is a great similarity between the larvæ of the different Dytisci; but that of the present species is distinguished by a particularity so very remarkable as scarce to be equalled by any other creature. This consists in the apparently anomalous situation of the legs; which seem, unless very accurately examined, to be placed, not beneath the thorax, as in other insects, but on the upper part, and from thence to be deflected towards the sides. This uncommon appearance however is not owing to a real dorsal instead of ventral insertion of the legs, but principally to the peculiar shape and position of the head; and the deception is so much heightened by the inverted posture in which the insect generally swims and rests, that it is by no means easy even for the most scientific observer to divest himself of the erroneous idea before mentioned. Frisch, in his History of Insects, appears to have been completely convinced of the real dorsal insertion of the legs; and the celebrated Reaumur, having discovered something similar in another aquatic insect, was so struck with the unusual appearance, that he has commemorated it as a circumstance unparalleled in the animal world. The author of
the

the fourth volume of Seba's Thesaurus was of the same opinion, and expressly warns his readers that his engraver, thinking to rectify what he supposed an erroneous drawing, has represented the legs in this larva as situated beneath the thorax, and not on the upper part. The sagacious Lyonett, in his observations on Lesser's "Theologie des Insectes," seems to have been the first who detected the common error, and ascertained the real structure of the animal, which he has clearly and satisfactorily explained.

The larvæ of the Dytisci remain about two? years before they change into pupæ or chrysalides. When the larva is arrived at its full growth, it secretes itself in the bank of the water it inhabits, and having formed a convenient cavity or cell, lies dormant for some time; after which it divests itself of its skin, and appears in the form of a chrysalis; in which state having continued for some time longer, it again delivers itself from its exuvix, and appears in its complete or Beetle form. When first disengaged from the skin of the chrysalis, it is of a pale color, and very tender: in the space however of a few hours, the elytra or wing-cases acquire a degree of strength and a dark color, which gradually grows more and more intense, till the animal, finding itself sufficiently strong, comes forth from its retreat, and commits itself in its new form to the waters.

The male Dytisci are distinguished from the females by the structure of the fore legs, which are furnished, near the setting on of the feet, with a sort of horny, concave flap or shield: the legs of the

females are destitute of this part. The structure of the hind legs, in the whole genus *Dytiscus* is singularly curious, and finely calculated for their aquatic mode of life; being furnished on the interior side with a series of long and close-set filaments, so as to give a sort of finny appearance to the legs, and to enable the animal to swim with the greatest ease and celerity. It may be added that the female of the *Dytiscus piceus* affords an example of a faculty which seems to be exercised by no other coleopterous insects; viz. that of spinning a kind of web or flattish, circular case of silk, which it leaves floating on the surface of the water, and in which it deposits its eggs: this case is terminated on its upper surface by a lengthened, conical process resembling a horn; of a brown color, and of a much stronger or denser nature than the case itself, which is white. The young larvæ, as soon as hatched, make their escape from the envelopement of the case, and commit themselves to the water. This curious particular in the history of the *Dytiscus piceus* was first discovered by Lyonett.

It is not to be imagined that because the *Dytisci* are so generally seen in the water, they are therefore incapable of living in air: on the contrary, they sometimes emerge, and fly about the fields, and thus migrate from water to water: but as this happens chiefly by night, it is not generally observed.

The *Dytiscus piceus* is an insect of great strength, and if incautiously handled when taken out of the water, will struggle in the hand with so much force as sometimes to wound the skin with its thoracic spine.

TANTALUS GANGETICUS.



CHARACTER GENERICUS.

Rostrum longum, subulatum, teretiusculum, sub-
arcuatum.

Facies ultra oculos nuda.

Lingua brevis, lata.

Saccus jugularis nudus.

Nares ovatae.

Pedes tetradactyli, basi palmati.

Lin. Syst. Nat. p. 240.

CHARACTER SPECIFICUS, &c.

TANTALUS albus, tectricibus alarum remi-
gibusque nigricantibus, uropygio roseo.

TANTALUS leucocephalus.

Lath. ind. orn. 2. p. 706.

Lin. Syst. Nat. Gmel. p. 649.

In India innascitur Tantalus Gangeticus; mag-
nitudine Ciconiam æquans vel superans. In Cey-
lonia quoque, aliisque insulis indicis conspicitur.
Rostrum flavum. Pedes carnei.

THE
GANGETIC IBIS.



GENERIC CHARACTER.

Bill long, thick at the base, incurvated.

Face, and sometimes the whole head, naked.

Nostrils linear.

Tongue short.

Toes connected at the base by a membrane.

SPECIFIC CHARACTER, &c.

White IBIS, with the wing-coverts and remiges blackish; the tail-coverts rose-coloured.

White-headed IBIS.

Penn. Ind. Zool. p. 47. t. 11.

Lath. Syn. 3. p. 116.

The Gangetic Ibis is a native of India, and is also found in Ceylon and other Indian islands. In size it is equal, or rather superior to the common Stork. The bill is yellow: the legs pale rose-color.



LERNÆÆ.



CHARACTER GENERICUS.

Corpus se affigens tentaculis, oblongum, teretiuf-
culum.

Ovaria bina, tanquam totidem caudæ.

Tentacula brachiformia duo seu tria.

Lin. Syst. Nat. p. 1092.

CHARACTERES SPECIFICI, &c.

LERNÆA radiata.

L. corpore quadrato depresso, brachiis utrinque
tribus, cornubus quatuor rectis.

Müll. zool. dan. 1. p. 122. n. 57. t. 33.

fig. 4.

Lin. Syst. Nat. Gmel. p. 3146.

Habitat in Coryphænæ rupestris oris angulis.

LERNÆA gobina.

L. corpore rhomboidali, brachiis duobus antero-
ribus totidemque posterioribus nodosis, cor-
nubus duobus arietinis.

Müll. zool. dan. 1. p. 121. t. 33. *fig.* 3.

Lin. Syst. Nat. Gmel. p. 3145.

Habitat in Cotti Gobionis branchiis.

LERNÆA nodosa.

L. corpore quadrato tuberculato, brachiis fubtus breviffimis utrinque duobus.

Müll. zool. dan. 1. p. 123. n. 58. t. 33.
fig. 5.

Lin. Syst. Nat. Gmel. p. 3146.

Habitat in Percæ Norwegicæ rictu.

LERNÆA cornuta.

L. corpore oblongo, brachiis quatuor rectis emarginatis, capite fubovato.

Müll. zool. dan. 1. p. 124. n. 59. t. 33.
fig. 6.

Lin. Syst. Nat. Gmel. p. 3146.

Habitat in Pleuronectis Plateffa et Linguatula.

LERNÆA pectoralis.

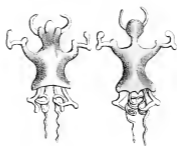
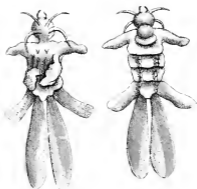
L. capite orbiculato hemisphærico, abdominis obcordati papilla terminali truncata.

Müll. zool. dan. 1. p. 125. n. 60. t. 33.
fig. 7.

Lin. Syst. Nat. Gmel. p. 3146.

Habitat in Pleuronectarum et Æglefini pinnis.

Piscium corporibus affigunt se Lernææ, brachiis præcipue et pinnis adhærentes. Depinguntur species in tabula vera magnitudine juxta ipsam naturam.



LERNÆÆ.



GENERIC CHARACTER.

Body oblong somewhat cylindric, affixing itself by tentacula.

Ovaries two, resembling tails.

Tentacula resembling arms, two or three in number on each side.

SPECIFIC CHARACTERS, &c.

Radiated LERNÆA.

LERNÆA with square depressed body, three pair of arms and four straight horns.

It is found about the mouth of the *Coryphæna rupestris*.

Gobian LERNÆA.

LERNÆA with rhomboid body, two nodose anterior and posterior arms, and two curved horns.

It is found on the gills of the *Cottus Gobio*.

Knotty LERNÆA.

LERNÆA with square tuberculated body, with two very short arms beneath on each side.

Found in the mouth of the *Perca norvegica*.

Horned

Horned LERNÆA.

LERNÆA with oblong body, four strait emarginated arms, and subovate head.

Found on the Plaife, &c.

Pectoral LERNÆA.

LERNÆA with orbiculated hemispheric head and obcordate abdomen with a terminal truncated papilla.

Found on the gills and pectoral fins of
Flounders, &c. &c.

The Lernææ affix themselves to the bodies of fish; adhering principally to the branchiæ and fins. The species figured on the annexed plate are all represented in their natural size.

BULLA? OCCIDUA.



CHARACTER GENERICUS.

Animal Limax.

Testa univalvis, convoluta, inermis.

Aperturā coarctata, oblonga, longitudinalis.

Columella obliqua, lævis.

Lin. Syst. Nat. p. 1181.

CHARACTER SPECIFICUS, &c.

BULLA? (Helix?) ovato-oblonga, crassa, al-bida, spira obtusa, labio purpureo.

HELIX oblonga. H. testa perforata ovato-ob-longa, striata, labro columellaque roseis.

Müll. Hist. Verm. p. 86. n. 284.

PSEUDO-AURIS MIDÆ, testa ovali oblonga, subumbilicata, tumida, crassa, anfractibus sex ventricosus, apice obtuso, labro et labio roseis, apertura ovata integerrima.

Martini. Vol. 9. p. 30. t. 119.

fig. 1022. 1023.

BUCCINUM admodum crassum, &c. &c.

List. conch. t. 23. *fig.* 21. &c.

t. 1055. *fig.* 1.

COCHLEA

COCHLEA terrestris Americana Plumieri.

List. it. Par. p. 74. t. 3.

HELIX oblonga.

Born. Mus. Cæs. Vind. test. t. 15.

fig. 21. 22.

HELIX oblonga.

Lin. Syst. Nat. Gmel. p. 3637.

COCHLEÆ lævæ.

Seb. Mus. 3. t. 71. fig. 17—20.

Facie formaque generali affinis admodum est Bulla Occidua perpulchræ Bullæ achatinæ, quam in hoc opere jam depinximus. Ab illa tamen facile dignosci possit, quod crassior multo fit, labio non tenui, quale est Bullæ achatinæ, sed circa testæ hiatum solidam in marginem ducto. Differt quoque colore; nam alba paulatim subflavet, labio pulchre roseo, (quo etiam leviter inficitur interna testæ superficies,) caretque omnino eleganti illa variatione qua decoratur Bulla achatina. Terrestris est species, et in variis Americæ meridionalis partibus non raro reperitur, nec non in insulis Americanis seu occiduis. Animal testam incolens helici communi simillimum est. Color est cinereus, umbris striisque huc illuc obscurioribus et lucidioribus variatus, et in aliquibus partibus sub-cæruleo et roseo commistus. Viro celeberrimo Carolo Plumiero, quem circiter finem sæculi jam elapsi merito insigniverunt
scripta

scripta quæ congeffit de naturali novi orbis historia, de botanice præcipue, figuram archetypam debemus, quam in tabula imitati sumus, quamque cum Listero in Lutetia Parisiorum agente, communicavit Plumierus. Ova quæ deponit Bulla occidua putamine calcario conteguntur, et tum forma tum magnitudine ad ovorum passeris vulgaris similitudinem tam prope dicuntur accedere, ut ab iis vix ac ne vix possint distingui.

THE
OCCIDENTAL BULLA.



GENERIC CHARACTER.

Animal resembling a Limax or Slug.

Shell univalve, convoluted.

Aperture somewhat fraitened, oblong, longitudinal, entire at the base.

Column oblique and smooth.

SPECIFIC CHARACTER, &c.

Ovate-oblong thick BULLA? (Helix?) with obtuse spire, and purple lip.

The Rose-lipped SNAIL.

Rose-mouthed BULLA.

Surinam SNAIL.

Oviparous SNAIL.

Der Rosenmund. } *Martini. Vol. 9. p. 30. t. 119.*
Roodlip. } *fig. 1022. 1023.*

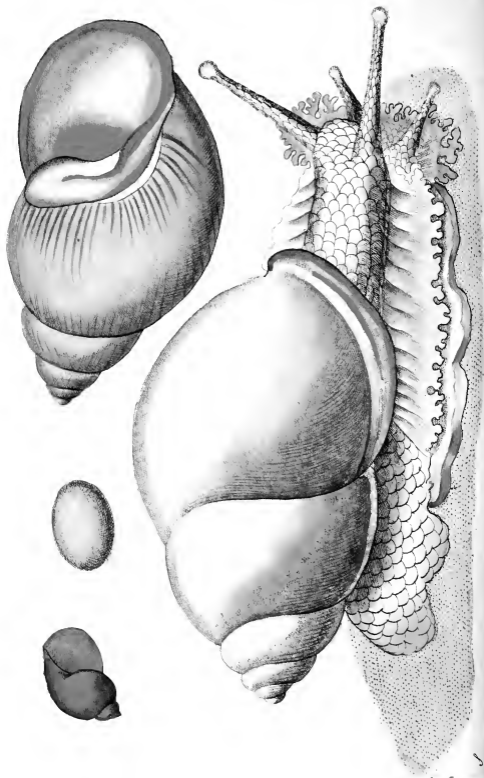
FAUSSE Oreille de Midas.

Davil. Cat. 1. p. 134. n. 166.

Der rosenmundige SCHNIRKEL.

Born. Mus. Cæs. p. 381. t. 15.

fig. 21. 22.



La FAUSSE Oreille de Midas.

Favanne conch. t. 65. fig. 1.

Surinam HELIX.

Cat. Mus. Port. p. 55. n. 1299.
p. 39. n. 933.
p. 82. n. 1835.
p. 174. n. 3745.

In its general appearance this shell is very nearly allied to the beautiful species called *Bulla achatina*, already figured in the present work: it is however readily distinguished by its far thicker or more solid substance, by the lip or edge, which instead of being thin, as in that shell, forms a strong ridge or border round the opening, and by its total want of the beautiful variegations so conspicuous on the surface of the *Bulla achatina*; being merely of a dull white, with the border or lip before-mentioned of an elegant purple or rose-color: the inside of the shell has also a slight tinge of the same color. It is a terrestrial species, and is not very uncommon in several parts of South America, as well as the West Indian Islands. The inhabiting animal, which bears the most striking resemblance to the common snail, is of a cinereous color, varied with lighter and darker shades and streaks; with a tinge of blueish and rose-color on some parts. It is to the celebrated Father Plumier, so distinguished towards the latter part of the last century for his researches into
the

the natural history of the new world, and more particularly in the botanical department, that we owe the original of the elegant representation on the present plate; the drawing having been communicated by Plumier to Dr. Lister during the time of his residence in Paris.

The eggs which this animal deposits are covered with a hard calcareous coating, and are said to resemble those of the common sparrow to such a degree as to be scarce distinguished from them.



PAPILIO DIOMEDES?



CHARACTER GENERICUS.

Antennæ apicem versus crassiores, sæpius clavato-capitatae.

Alæ sedentis erectæ fursumque conniventes, (volatu diurno).

Lin. Syst. Nat. p. 744.

CHARACTER SPECIFICUS, &c.

PAPILIO caudatus niger, alarum disco inæqualiter cæruleo-radiato, macula nigra rotundata; posterioribus lunulis marginalibus cæruleis.

An Var. P. Ulyssis?

Papilio DIOMEDES.

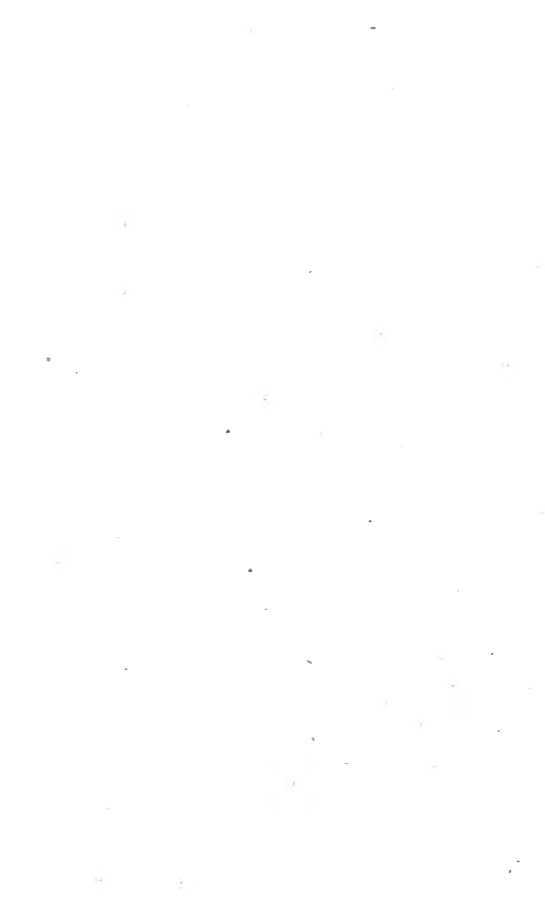
Cram. inf. t. 122. A.

Pap. DIOMEDES ???

Lin. Syst. Nat. p. 749.

Lin. Syst. Nat. Gmel. p. 2236.

Indiam incolit pulcherrimus hic Papilio, magnitudine naturali in tabula depictus.



DIOMEDES?



GENERIC CHARACTER.

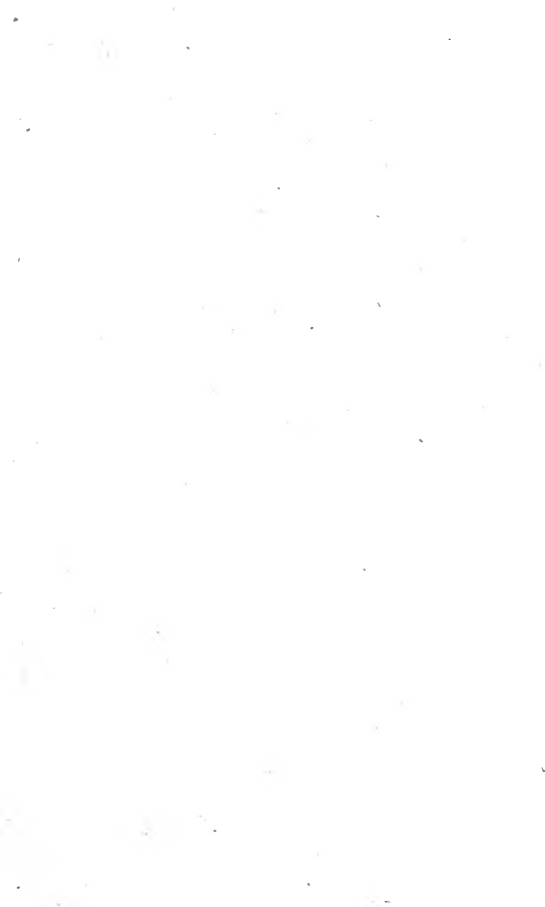
Antennæ thickening towards the upper part and generally terminating in a knob.

Wings (when fitting) erect and meeting upwards.
(Flight diurnal.)

SPECIFIC CHARACTER.

Caudated black BUTTERFLY, with the disc of the wings unequally radiated with blue, with a round spot of black: the lower wings marked by a row of blue crescents round the margin.

This most beautiful Insect is a native of India, and is represented on the plate in its natural size.



CASUARIUS GALEATUS.



CHARACTER GENERICUS.

Rostrum depresso, rectum, subconicum.

Nares ovatae.

Alae brevissimae, volatui inutiles.

Femora in parte inferiore denudata.

Pedes tridactyli, digitis omnibus anticis.

Cauda nulla.

Lath. ind. orn. p. 664.

CHARACTER SPECIFICUS, &c.

CASUARIUS niger, vertice galeato, collo purpureo-cæruleo, palcaribus rubris.

-EMEUS.

Will. orn. 105. t. 25.

Struthio CASUARIUS.

Lin. Syst. Nat. p. 265.

CASUARIUS Emeus.

Lath. ind. orn. p. 664.

In insulis Indiae orientalis praecipue conspicitur *Casuarium galeatum*, vel ipsi Struthio-camelum magnitudine parum cedens. Cum alarum loco scapos

aliquot nudos, breves, acuminatos utrinque gerat, volandi omnino inscius est. Pennæ totius avis sunt valde graciles, laxè plumatæ, et veluti duplicès; duæ nempe ab eadem basi oriuntur. Si cum hac avi comparetur Casuarius australis, quem in hoc opere jam depinximus, facile patebit species inter se omnino esse diversas.



THE
GALEATED CASSOWARY.



GENERIC CHARACTER.

Bill depressed, strait, nearly conical.

Wings extremely small, and unfit for flight.

Feet tridactylous, with all the toes standing forwards.

SPECIFIC CHARACTER, &c.

Black CASSOWARY, with galeated head, and purple carunculated neck, with red wattles.

The CASSOWARY or EMEU.

Will. orn. p. 151. *pl.* 25.

Galeated CASSOWARY.

Lath. syn. 3. p. 10. *pl.* 72.

EMEU.

Robert icon. t. 4.

Le CASOAR.

Brisf. av. 1. p. 10. *pl.* 1. *f.* 2.

Buf. ois. 1. p. 464. *Pl. enl.* 313.

The Cassowary is principally found in the East-Indian islands: in size it is but little inferior to the

ostrich: it is totally destitute of the power of flight, being furnished only with a few strong, short, sharp-pointed shafts or naked quills in the place of wings: the feathers throughout the whole bird are of a very slender form, loosely webbed, and double; i. e. two proceeding from the same base or root. The Australasian or New Holland Cassowary has been already described in the present work, and from a collation of the figure of that bird with the present, it will readily appear that the two species are perfectly distinct from each other.

DIDELPHIS OBESULA.



CHARACTER GENERICUS.

Dentes numerosi, parvi.

Folliculus abdominalis. (feminæ.)

CHARACTER SPECIFICUS.

DIDELPHIS subferruginea, subtus albescens, cauda longiuscula, pedibus anticis pentadactylis, ungue exteriori utrinque brevissimo; posticis tetradactylis, digitis interioribus unitis.

Macropi potius quam Didelphidis species.

Australasiam incolit hæc species, crassior et pinguior reliquis congeneribus. Crura posteriora anterioribus longiora, pedesque eodem fere more formati quo pedes *Macropi gigantei*, vulgo *Kangaroo* nominati; licet minor longe sit digitus intermedius pro rata proportione pedis. Digiiti duo interiores utrinque conjuncti, seu cute communi vestiti. Magnitudo animalis eadem prope est ac *muris Ratti* Linnæani, femiadulti. Color pallido-fusco-flavescit. Pilus crassior et asperior quam aliarum plerarumque minorum Didelphidum. Aures rotundatæ. Cauda lon-

longiuscula. Si obiter et in transitu aspiciatur hæc Didelphis, non absimilis videtur porcello minutulo. Hanc speciem primo observavi in Museo celeberrimi Joannis Hunteri, unde figura hæc nostra vera magnitudine depingitur. Iconas quoque nonnullas vidi quas depingi curaverat Dominus White, coloniæ Britannicæ, vulgo dictæ *Botany Bay*, chirurgus primarius; quique specimen supra dictum Domino Huntero donavit.



A.S.P.

THE
PORCULINE OPOSSUM.



GENERIC CHARACTER.

Teeth numerous, small.

Abdominal Pouch in the female.

SPECIFIC CHARACTER.

Subferruginous OPOSSUM, whitish beneath, with longish tail; the fore-feet pentadactylous with very small exterior claws; the hind-feet tetradactylous with the two interior toes united.

In reality it is more properly a species of Macropus than Didelphis.

This species, hitherto undescribed, is a native of New Holland, and is remarkable for a thicker or more corpulent habit than others of the genus. The hind legs are considerably longer than the fore-legs, and have, in miniature, the form of those of the Kangaroo and some other Australasian quadrupeds; though the middle claws are far less in proportion: the interior ones are double, or both covered by a common skin. The size of this species is nearly that

that of a small or half-grown domestic rat. Its color is a pale yellow-brown, and its hair is of a coarser or more harsh appearance than in the rest of the smaller Opossums: the ears are rounded: the tail rather long. When viewed in a cursory manner the animal bears a distant resemblance to a pig in miniature. I first observed this species in the Museum of the late Mr. John Hunter, and from the specimen there preserved the present figure is taken. It is represented in its natural size. I have also seen drawings of the same species in the collection of Mr. White, Chief Surgeon to the Settlement at Botany Bay, who presented the above-mentioned specimen to Mr. Hunter.

MEDUSA PULMO.



CHARACTER GENERICUS.

Corpus gelatinosum, orbiculatum, depressum.
Os subtus, centrale.

Lin. Syst. Nat. p. 1096.

CHARACTER SPECIFICUS, &c.

MEDUSA hemisphærico-concava, margine fimbriato, subtus striata, caudice quadrifenestrato, brachiis octo.

Macri observ. del pulm. mar. p. 34. t. 1.

Lin. Syst. Nat. Gmel, p. 3155.

PULMO marinus Matthioli.

Aldr. zooph. p. 575.

Fonst. anim. exang. t. 19.

Seb. mus. 3. t. 1. fig. 2.?

PULMO marinus.

Matthiol. in Dioscor. Venetiis. 1583.

p. 310.

Speciem hanc Dominus Macri quam diligenter descripsit in hunc modum,

“ Corpus

“ Corpus totum gelatinosum, pellucidum, crystallinum, durum, tenax, uniforme, nitidum, cærulescens : Pileo maximo, hemisphærico-concavo, quasi usque ad caudicis extremitatem extenso, supra lævi, subtus cavo, striato, striis numerosis, concentricis, proximis, a sexdecim, ut plurimum ligamentis, distantibus, ramum unum brevissimum utrinque emittentibus, longitudinaliter dissectis : Margine tenui, subtili, membranaceo, fimbriato, fimbriis subrotundis, fature cæruleis, multis, vicinis, lævibus, nitidis, sensim ut ad centrum accedit crassiori, et ad centrum crassissimo.

Pilei centro adnatus descendit caudex maximus, crassissimus, tetragonus, lævis, versus finem attenuatus, in origine 4-fenestratus, fenestris lateralibus, magnis, subpatentibus, semiovalibus, inferne lobo lævi majore, superne minori et opposito donatis.

Rami octo ab ima caudicis parte prodeuntes, magni, æquales, subcylindracei, pendentes, antè et lateribus læves, postèrè semper crispi.

Appendices sexdecim, subtrigonæ, mediocres, liberæ, æquales, veluti coronam circa caudicis finem constituentes, antèrè bifidæ, latere superiori plano densarum rugarum terminatæ, origine uniuscujusque rami adnatæ, una utrinque.

Rami desinunt in totidem pendentes, magnas, æquales, branchias, subpyramidales, lateribus duobus anterioribus multum extantibus, proximis, plano densarum rugarum terminatis, superficiebus lævissimis, latere posteriori sive interno, remoto, minus existente, rugoso, plicis ramorum continuato.

Branchiæ abeunt in octo oblonga, subtrigona,
pen-

pendentia, æqualia corpora, magna, crassa, lævia, in plana tria membranacea acuta, parum distantia, desinentia, singulum unicuique lateri, in extremitate in acumen coalita.

Intra singulam fenestram adest fascia striata, serpentina, flavo-cærulescens: an genitalia?

Mirabile visu, hoc animal ore, arteriis, venis, nervis, (nisi strias, et ligamenta nervorum munus obire censeas) musculis, cerebro, medulla spinali, cordeque destitutum, vivere, nutrir, moveri, cresci, multiplicari!"

Habitat in mari Tyrrheno.

THE
PULMONIC MEDUSA.



GENERIC CHARACTER.

Body gelatinous, orbicular, commonly depressed.
Mouth central, beneath.

SPECIFIC CHARACTER.

Hemispherically-concave MEDUSA with fimbriated border; striated beneath; the body or stem furnished with four openings and eight arms.

This curious species of Medusa is very accurately described by Dr. Macri, nearly as follows, viz.

The whole is gelatinous, pellucid, crystalline, hard, tenacious, uniform, glossy, and blueish: the pileus or head is very large, hemispherically concave, and extended as it were to the extremity of the stem; it is smooth above, hollow beneath, and marked with numerous, concentric, approximated striae, which are cut or traversed by sixteen distant ligaments, each emitting a very short branch on each side: the border is thin, fine, membranaceous, and fim-



fimbriated with numerous roundish, smooth, approximated, blue scallops: the head gradually thickens as it approaches toward the centre, where it is very thick: the body or stem, which descends from the head or pileus, is very large and thick, and is of a tetragonal form, smooth, attenuated towards the extremity, and furnished at its origin or upper part with four large, semi-oval, lateral windows or openings, each of which has a smooth and large lobe above, and a smaller opposite one below. From the lower part of the stem or body proceed eight large, equal, subcylindric, pendent branches or arms, which are smooth in front and on the sides, but are always crisped or wrinkled behind: there are also sixteen appendices, of a moderate size, and of a subtrigonal form, hanging loose, and constituting as it were a kind of crown round the extremity of the body: these parts are bifid in front, and terminated on the upper side by a flat, thickly-wrinkled surface; they arise from the beginning of each branch, one on each side.

The branches end in as many large, pendent, equal, subpyramidal branchiæ, with their two exterior sides very prominent, and terminating in a flat thickly-wrinkled surface: on their hinder or inner side less prominent, rugose, and continued into the plicæ of the branches: these branchiæ end in eight oblong, subtrigonal, pendent, large, thick, smooth bodies, terminating in three flat, acute, membranaceous pieces, and hanging at small distances from each other. Within each of the windows or open-

openings is a kind of flexuous or serpentine, striated fascia, of a mixed blue and yellow tinge.

Dr. Macri concludes his description by observing that it is wonderful that an animal apparently destitute of mouth, arteries, veins, nerves, muscles, brain, spinal marrow, and heart, should live, move, increase, and multiply!

It inhabits the Tuscan sea.

PHALÆNA AUGUSTA.



CHARACTER GENERICUS.

Antennæ fetaceæ, a basi ad apicem sensim attenuatæ.

Alæ (sedentis) sæpius deflexæ. (Volatu nocturno.)

Lin. Syst. Nat. p. 808.

CHARACTER SPECIFICUS, &c.

PHALÆNA alis primoribus falcatis fuscis, striga sigmoidali pallida, posterioribus nigris macula magna rubra medio alba.

PHALÆNA Conspicillator.

Cram. 2. p. 1. t. 97. A. B.

In rarissimis phalænis exoticis numeratur ea quam in insula Amboyna generatam magnitudine naturali ostendit tabula. Alarum anticarum superficies inferior striis aliquot seu nubeculis albidis, in longitudinem ductis notatur; habentque nonnulla specimina superficiem superiorem stria obliqua distinctam, quæ ipsis alis pallidior prope apices eas utrinque fascia decorat.

AUGUSTA.



GENERIC CHARACTER.

Antennæ fetaceous, decreasing in size from the base to the point.

Wings, when at rest, generally deflected.

Flight mostly nocturnal.

SPECIFIC CHARACTER.

PHALÆNA with falcated brown upper wings, with a pale figmoid streak, and black lower wings with a large red spot, white in the middle.

The elegant insect here represented in its natural size is considered as one of the rarest of the exotic Phalænæ. It is principally found in the island of Amboyna. The under surface of the superior wings is marked by a few whitish, longitudinal streaks; and in some specimens an oblique streak of a paler color than the rest of the wing is seen on the upper surface; forming a band towards the tip of each wing.





I N D E X.

- PL. **A**NAS lobata.
 255. Alcedo cærulea.
 269. Alcyonium arenosum.
 272. Bulla virginea.
 268. Bulla? Occidua.
 294. Bulla? Occidua.
 256. Buprestis gigantea.
 297. Casuarius galeatus.
 282. Cancer brachiatus.
 265. Caprimulgus longipennis.
 280. Cerambyx giganteus.
 284. Cerambyx cervicornis.
 281. Certhia cyanea.
 289. Certhia muraria.
 257. Chiton squamosus.
 275. Chætodon squamulosus.
 266. Coluber fasciatus.
 291. Coluber Ruffelii.
 273. Coracias Indica.
 277. Cuculus Sinensis.
 262. Cyprinus bupthalmus.
 298. Didelphis obefula.
 292. Dytiscus piccus.
 263. Gorgonia sanguinolenta.
 260. Holothuria inhærens.
 279. Lacerta palustris.
 295. Lernææ.
 259. Medusa Andromeda.
 299. Medusa Pulmo.
 261. Motacilla Sialis.
 270. Nais serpentina.
 285. Oriolus Galbula.
 271. Papilio Hector.
 296. Papilio Diomedes.
 264. Phalæna Luna.
 288. Phalæna Caja.
 300. Phalæna Augusta.

I N D E X.

- PL. **A**LCYONIUM
 272. fandý.
 268. Bulla ribband.
 294. Bulla Occidental.
 271. Butterfly Hector.
 296. Butterfly Diomedes.
 256. Buprestis great.
 280. Ccrambyx great.
 284. Cerambyx stag-horned.
 262. Carp telescope.
 281. Creeper cyanean.
 289. Creeper wall.
 275. Chætodon double-scaled.
 257. Chiton scaly.
 297. Cassowary galeated.
 277. Cuckow Chinese.
 292. Dytiscus great.
 255. Duck lobated.
 263. Gorgonia purple-sided.
 265. Goatfucker long-shafted.
 260. Holothuria brown.
 269. Kingfisher white-collared.
 293. Ibis Gangetic.
 282. Lobster Bamffian.
 295. Lernææ.
 259. Medusa Egyptian.
 299. Medusa pulmonic.
 264. Moth Luna.
 288. Moth Tiger.
 300. Moth Augusta.
 270. Nais serpentiniform.
 279. Newt warted.
 285. Oriole golden.
 298. Opossum porculine.
 258. Parrakeet pale.
 261. Redbreast blue.

- | | | |
|-------------------------------------|---|------------------------------------|
| 258. <i>Pfittacus pallidus.</i> | ✦ | 273. Roller Indian. |
| 286. <i>Scarus viridis.</i> | ✦ | 286. <i>Scarus green.</i> |
| 283. <i>Serpula vermicularis.</i> | ✦ | 266. Snake fasciated. |
| 267. <i>Squalus Zygaena.</i> | ✦ | 291. Snake Ruffelian. |
| 274. <i>Stylephorus chordatus.</i> | ✦ | 267. Shark hammer-headed. |
| 293. <i>Tantalus Gangeticus.</i> | ✦ | 274. <i>Stylephorus chordated.</i> |
| 290. <i>Terebella Madreporarum.</i> | ✦ | 283. <i>Serpula vermicular.</i> |
| 287. <i>Testudo imbricata.</i> | ✦ | 290. <i>Terebella Madrepore.</i> |
| 276. <i>Trichechus Rosmarus.</i> | ✦ | 287. Tortoise imbricated. |
| 278. <i>Vorticella polypina.</i> | ✦ | 278. <i>Vorticella arborefcnt.</i> |
| | ✦ | 276. Walrus Arctic. |



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