REGIAE SOCIETATI LONDINENSI,

QUOD SCIENTIAE SIT ET LITERARUM

NIHIL PATROCINIO SUO INDIGNUM PUTANTI,

DECIMUM HUNC

NATURAE VIVARII

FASCICULUM,

D.D.D.

GEORGIIUS SHAW,

FREDERICUS P. NODDER.
TO THE

ROYAL SOCIETY OF LONDON,

DISTINGUISHED BY ATTENTION

TO EVERY BRANCH OF SCIENCE,

THIS TENTH VOLUME

OF THE

NATURALIST'S MISCELLANY

IS

WITH THE HIGHEST RESPECT INSCRIBED,

BY

GEORGE SHAW,

FREDERICK P. NODDER.
STURNUS LUDOVICIANUS.

Character Genericus.
Rostrum fubulatum, angulato-depressum, obtusiusculum: Mandibula superiore integerrima, marginibus patentiusculis.
Nares supra marginatae.
Lingua emarginata, acuta.

Character Specificus, &c.
STURNUS griseo fuscoque maculatus, subitus flavus, linea capitis superciliisque albis, gula nigra.
Lath. ind. orn. p. 323.

STURNUS Ludovicianus.

ALAUDA magna.

In variis Americae Septentrionalis partibus generatur avis quam depinximus, sturno vulgari paulo major. Variat coloribus. Interdum enim evenit ut cingatur
cingatur utrinque guttur linea nigra, quae senfim se
dilatans quasi lunulam nigram ducit trans pectus;
quae lunula in aliis speciminebus vix ac ne vix visi-
bilis est. Nonnullorum quoque speciminum albent
remiges externi. In editione duodecima Sytematis
Linnæani dantur huic avi duo diversa genera, Sturni
nempe et Alaudæ, ab experientia autem fatis jam
compertum est varietates ejusdem speciei causam
fuisse erroris.
THE CRESCENT STARLING.

GENERIC CHARACTER.

Bill strait, depressed.
Nostrils guarded above by a prominent rim.
Tongue hard and cloven.
Middle Toe united to the outmost as far as the first joint.


SPECIFIC CHARACTER, &c.

Pale-brown STARLING spotted with dusky; beneath yellow with black throat.

Large LARK.

Louisiane STARE.

Crescent STARE.

ETOURRENAU de la Louisiane.
Buf. ois. 3. p. 192. Pl. enl. 256.

The bird here represented is found in several parts of North America, and in size somewhat exceeds
the common Starling. It is subject to some variety in point of colour; the throat in some specimens being black, which descends in a dilated band beneath, so as to form a black crescent across the breast; while in others this appearance is scarce perceptible. The external tail-feathers are also white in some individuals. This bird in the twelfth edition of the Systema Naturæ was arranged under two different genera; viz. those of Sturnus and Alauda; but later observations have proved the varieties, which caused this impropriety, to belong to the self same species.
RANA PARADOXA.

Character Genericus.

Corpus tetrapodum, ecaudatum, nudum.


Character Specificus, &c.

RANA femoribus postice oblique striatis.


Mus. ad. Frid. 2. p. 40.

LARVA.

Lacerta cauda ancipiti, palmis tetradactyliis fissis, plantis pentadactyliis palmatis, abdomen ventricoso.


RANA piscis.


Seb. 1. p. 123. t. 78. f. 15--21.

Mer. Sur. t. 78. f. 1--5.

Plerisque fatis cognitum est ranam nostram vulgarem, sumul atque ex ovo eruperit, gyrinum esse, cauda instructum longa, complanata, pinnata, pinnulisque branchialibus utrinque a capite fitis; quae pe-nitus delentur cum animal plene formatum adoleve-rit,
rit, cauda tamen paulo diutius remanente. Præ-
grandem autem gyrinum ranæ, quam Linnæus para-
doxam nominavit, e misfa quadam et ambiguæ natura
confiare existimarunt nonnulli; quodque cauda car-
nosa piscis corpus quodammodo referat, ranam-pis-
cem eum vocaverunt, credideruntque satis inepte in
piscem transformari, et a pisce iterum gradatim ra-
nam fieri. Ranam tamen veram in larva delitescere
dubitabit nemo qui conformationem ejus probe ex-
aminaverit, præcipue fi cum gyrinis ranarum etiam
nonnullarum Europæarum comparaverit; cum illo
nempe qui in Roefelii historia ranarum tabula octo-
decima depingitur, quique non longe cedit magni-
tudine minoribus ranæ paradoxæ seu Surinamenfis
specimenibus.

Accidere solet huic, quod et gyrinis Europæis, ut
pro diversa ætate vel pedes tantum posteriores, vel
quattuor omnes cernantur; immo ut majorum non-
nullorum specimenum, eorum nempe quæ sex aut
octo uncias longitudine superant, pedes tantum pos-
teriores apparent, cum aliorum minorum quatuor
omnes pedes æque sint conspicui. Mirabiliun ho-
rum animalium in Museo Britannico et Leveriano
extant specimena. In Museo quoque Britannico ex-
imium afflervatur specimen ranæ ipsius integræ et
perfectæ, cujus ostendit figura nostra veram magni-
tudinem; nec non gyrini, qui alteri tabulæ adjici-
tur. Patet omnino majorem esse gyrinum hujus
speciei, fi cum perfecto animali comparetur, gyrinis
aliarum omnium ranarum quas adhuc novimus.
Americam incolit australum, Surinamiam præcipue.

Existi-
Existentia videtur Gmelinius in auctiore sua editi
tione Systematis Linnaæani, caudam carnosam hujus
gyrini animali etiam adulto permanere. Sed errat
vir doctus; cum desit ranæ perfectæ vel minimum
caudæ vestigium. Verisimile porro est non omnia
magnorum gyrinorum quæ in museis continentur
specimina, ad ranam paradoxam revera et singulatim
pertinere; sed ad alias quasdam grandiores species,
Americanas, Africanas, seu Asiaticas; ranam nempe
ocellatam, marinam, aliasque.
THE
PARADOXICAL FROG.

Generic Character.

Body four-footed, naked, without tail.

Specific Character, &c.

Frog with the thighs streaked in an oblique direction behind.

The Tadpole.

Frog Fish of Surinam.

Edw. Phil. Trans. v. 51. p. 653. pl. 15.

Few perhaps are unacquainted with the first form under which the common Frog appears, after its exclusion from the ovum or spawn; viz. that of a Tadpole, furnished with a long, flat, finny tail, and with ramified branchial fins on each side the head, which are obliterated when the animal has acquired its complete or perfect form; the tail still remaining some time longer. The tadpole of the frog called by Linnaeus rana paradoxa, is of so large a size that it has been considered as a being of an ambiguous or mixed nature, and has been named the frog-fish; the
the fleshy appearance of the tail bearing some resemblance to the body of a fish; and from this circumstance it was presumed, by those who were ignorant of its real nature, that it gradually arrived at the state of a fish, and from thence reverted to that of a frog. That it is really no other than a frog in a larval state will be evident to every one who considers its structure; and more particularly if it be collated with the tadpole of some even of the frogs of Europe; for instance that figured on the 18th plate of Roefels' Historia Ranarum, where the larva does not fall very far short of the size of some of the smaller specimens of the frog-fish of Surinam. Like our European tadpoles, this animal, according to the more or less advanced state in which it is found, is furnished either with all the four legs, or with only the two hinder ones: it also sometimes happens that in the largest sized of these tadpoles, exceeding perhaps the length of six or eight inches, only the hind-legs appear, while in those of far smaller size both the fore and hind legs are equally conspicuous. Specimens of these curious animals occur both in the British and Leverian Museums: in the British Museum is also preserved a fine specimen of the complete or perfect frog, which is here represented in its natural size, as is likewise the larva or tadpole on the other annexed plate.

It will readily appear that the tadpole of this frog is larger in proportion to the complete animal than in any other species hitherto discovered. It is a native of South America, and has been principally observed in Surinam. Dr. Gmelin, in his enlarged edition
edition of the Sytæma Naturæ, seems to suppose that the fleshy part of the tail of the tadpole still remains after the animal has acquired its complete form; but this is by no means the case: not the least vestige of that part being visible in the perfect frog.

Lastly, it may not be improper to observe that perhaps all the specimens of these very large tadpoles which occur in Museums, may not be those of the rana paradoxa in particular, but of some other species of American, African, or Asiatic frogs, as the rana ocellata, marina, &c. &c.
ANTIPATHES MYRIOPHYLLA.

Character Genericus.
Animal crescens plantae facie.
Stirps intus cornea, spinis exiguis obsoleta, basi explanata, extus carne gelatinosa, verrucis polymiferis obducta.
Soland. et Ellis Zooph. p. 97.

Character Specificus, &c.
ANTIPATHES incurva ramosissima pinnata, pinnulis hinc ramosis setaceis.
Soland. et Ellis Zooph. p. 102.

ANTIPATHES incurva ramosissima pinnataque, ramis sparxis divaricatis, pinnulis rariusculis setaceis, hinc ramosis.

MYRIOPHYLLUM Indicum ramosissimum.
Petiv. gaz. t. 35. f. 12.

ERICA marina tenuis.

In mari Indico præcipue crescit Antipathes myriophylla, magnitudine circiter pedali vel sesquipedali. Coloris est fuscì vel ex flavo fusci, in diversis speciminibus plus minus saturati.
MILFOIL ANTIPATHES.

Generic Character.

Animal growing in the form of a plant.

Stem expanded at the base, internally horny, beset with small spines: externally covered with a gelatinous flesh beset with numerous polype-bearing tubercles.

Specific Character, &c.

ANTIPATHES with numerous, incurved, pinnated branches, with the pinnules spined on their upper side.

Yarrow-like ANTIPATHES.

Ellis and Soland. Zooph. p. 102.

The Antipathes myriophylla or Milfoil Antipathes grows principally in the Indian ocean: its height is about a foot or a foot and half. Its color is either brown or yellowish-brown, more or less deep in different individuals.
PHASIANUS VARIUS.

Character Genericus.

Rostrum breve, robustum.
Genæ cute nuda lævigata.
Pedes (plerisque) calcarati.

Character Specificus.

PHASIANUS niger, fronte rubra, collo dorsiisque viridi-nitentibus, cauda compressa adscendente, tecriticibus utrinque dependentibus.

Nunc primum in publicum prodit pictura formosæ hujus speciei, quæ avibus non antea descriptis videtur annumeranda. Magnitudine paulo cedit gallo communi feu gallinaceo, corpus tamen habens pro mole gracilius. Pars nuda rubra et carunculata in fronte oculos quoque amplectitur, et excurrit supérieus quasi in cristam planam, inferius in paleam quasi obscure bifidam. Disponuntur adeo pennæ colli dorsiisque anterioris, ut totidem squamas seu conchas quodammodo referant. Alarum tecrices minores lanceolatae sunt (ut loquantur physici) nigræ, flavoaurantio marginatae. Lanceolatae quoque sunt B caudæ
caudæ tegtrices utrinque dependentes, nigræ, marginibus ochraceis. Rostrum pedesque subflavent.

Quanam in patria generatur venusta hæc avis, non pro certo cognitum est; conjicimus tamen esse Indicam.
THE
VARIEGATED PHEASANT.

GENERIC CHARACTER.
Bill short and stout.
Cheeks covered by a smooth naked skin.
Legs in most species furnished with spurs.

SPECIFIC CHARACTER.
Black PHEASANT, with red front, glossy-green neck and back, and compressed-ascending tail with the coverts hanging down on each side.

This beautiful bird seems to be a non-descript, of which the present figure is the first that has been presented to the public. Its natural size is somewhat inferior to that of a common Cock, and the habit or shape of the body is more slender in proportion. The carunculated or red part in front takes in the eyes, and is continued upwards into a kind of plain comb or crest, and downwards into an obscurely-divided wattle or flap. The feathers of the neck and upper part of the back are so shaped and disposed as to resemble a kind of scales or shells: the
the smaller wing-coverts are black, lanceolate, and deeply edged with bright orange-yellow: the tail-coverts hang down on each side, and are also of a long, narrow, and sharpened form, and are black with ochre-coloured edges: the bill and legs are yellowish. The native country of this species is perhaps not clearly ascertained, but is is probably an Indian bird.
TUBULARIA CAMPAHNLULATA.

 CHARACTER GENERICUS.

 CHARACTER SPECIFICUS, &c.
 TUBULARIA crystallina tentaculis lunatis, receptaculo simplici vel multifido-palmato.

 TUBULARIA crystallina.  
 Pall. elench. zooph. p. 85.

 TUBULARIA campanulata.  

 TUBULARIA reptans.  

 POLYPI crista.  
 Trembl. polyp. 3. p. 209. t. 10. f. 8. 9.

 Animalium minorum aquaticorum in pulcherrimis est quod in tabula depingitur tum aucta, tum naturali magnitudine. Aquas incolit puriores stagnantes, decem nempe, duodecim, seu quindecim in communi
muni receptaculo gregatim degentibus, singulo tamen motus fuos ad libitum, et fine impedimento exercente. Totam congeriem, qualis nudo oculo cernitur fine ope instrumentorum opticorum, representat minor tabulæ figura. Affigitur, ut plurimum, hæc congeries fibris radicularum in aquis immersum, aut caulibus plantarum aquaticarum, Lemnæ scilicet, Veronicæ Beccabungæ, aliarumque plurium. Singulo animalculo corpus est sub-cylindraceum, tubulatum, hyalinum, in tubo majore inclusum; e quo pars superior ad libitum protruditur; qui tubi maiores connectuntur cum ipso receptaculo communi, gelato, nec longe absimili quasi campanulata vesicae marginem habenti in segmenta aliquot truncato-tubulata incisum. Caput unicumque seu pars superior constat e membris duobus amplis, semicirculatis, tenuilibus, quorum numerosissima tentacula disponuntur quasi in formam literæ /; expansa que similia quodammodo sunt calceamento equino. Tota conglomeratio vitreo-hyalina est; fibrarumque quaqua verum velociissime commotorum elegantem et veram proportionem nequit fideliter fatis attingere ars sculptoria; non nisi ipsius animalculi intuitu plene percipiendam; cum singulis tentaculis sua et peculiariis insit pulchritudo. Tentaculorum ope gyratis quasi in vorticem aquis, varia fortasse animalcula in os facilius attrahuntur. Si subito turbantur Tubulariæ, dicto citius intra tubos maiores et exteriorese sese recipiunt; et horæ momento iterum extenduntur; sunt enim impatientes carceris, gaudentque, ut plurimum, membris liberis et
et expansis; quo tempore de forma et motu generali vel nudo oculo posset judicari. Sunt præterea ea magnitudine ut non opus sit pollentibus instrumentis, sed lente tantum cujus (ut optici loquentur) uncialis sit focalis distantia. Ut tamen singulae partes plene et penitius examinantur, necesse omnino est microscopio uti.

Mensibus aestivis conspici possint pulcherrima haec animalcula in variis aquis Londino adjacentibus. Inveniebantur Tubulariae quas repræsentat tabula, Augusto mense, juxta ambulacrum Chelseanum, a fælicibus Willow-Walk dictum; qua etiam in aqua nec non in aliis pluribus suburbanis habitat Hydra communis feu viridis.
CAMPANULATED TUBULARIA.

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Generic Character.

Stem tubular, simple or branched, fixed by the base.
Animal terminal; the head crested with tentacula.

Specific Character, &c.

Crystalline TUBULARIA with tentacula disposed in the form of a crescent; the receptacle either simple, or more or less palmated.

Vesicular fresh-water TUBULARIA.
FEATHER-POLYPE, or Bell-Polype.
POLYPEGES à panache.

Trembl.

The BELL-FLOWER ANIMAL, or Plumed Polype.

pl. 12. f. 15—20.

Among the most beautiful of the smaller aquatic animals may most justly be ranked that represented on the present plate both in its natural size as well as
as magnified. It is a native of clear stagnant waters, living in a kind of congregated manner; several individuals to the number of ten, twelve, or fifteen, inhabiting a common or general receptacle: each exerting its own voluntary motions independent of the rest. To the naked eye the whole groupe appears of the size represented by the smaller figure. It is generally attached either to the small fibres of roots projecting into the water, or to the stems of aquatic plants as Lemna, Brooklime, and others. The body of each animal is transparent, of a sub-cylindric, tubular form, and is included in a larger or exterior tube, from which the head or upper part is at pleasure protruded. The larger or exterior tubes are connected to the vesicular and somewhat bell-shaped general receptacle, which is of a gelatinous substance, and is divided at the top or border into several tubular, truncated segments. The head of the animal consists of two large, semicircular, expansile parts or organs, the tentacula of which are extremely numerous, in shape resembling an italic $s$, and, when expanded, representing in some measure the figure of an horse-shoe. The whole is of a glassy transparency, and the various flexures of the tentacula, moving with rapidity in different directions, afford a spectacle which it is not possible by any engraving to express with sufficient exactness, since nothing but an actual view of the animal can convey a genuine idea of this particular; every varying position of the tentacula displaying an elegance peculiar to itself. When disturbed they sud-


denly withdraw into the larger or exterior tubes, and in a moment or two afterwards again extend themselves: they even seem impatient of confinement, and are commonly seen with the heads expanded, in which state their general shape and motions may be observed with the naked eye; and indeed the size of this animal is such as not to require the assistance of powerful magnifiers, but may be viewed to considerable advantage by a lens of an inch focus; though in order to examine with accuracy its several parts it is necessary to make use of a microscope.

These beautiful Zoophytes may be found during the Summer months in various waters in the neighbourhood of the Metropolis: the specimens represented on the present plate were discovered in the water by the side of the Willow-Walk at Chelsea, in which, as well as in several of the neighbouring waters, may also be found the Hydra viridis or common green Polype.
ANTHIAS ARGUS.

Character Genericus.

Caput totum squamosum; operculo anteriore ferrato.

Bloch. ichth. 9. p. 86.

Character Specificus, &c.

ANTHIAS argenteo-caeruleascens, maculis numerosis ocellaribus fuscis.

ANTHIAS maculis rotundis.

Bloch. ichth. 9. p. 95. t. 317.

The genus Anthias, instituted by Dr. Bloch, contains several species of extreme beauty; of which the animal here represented is certainly one of the most elegant. Its color is a silvery white, tinged with fine blue on the upper parts, and marked all over with annular or ocellated spots of a brown color with white centres. On the head, pectoral and ventral fins, the spots are smaller and without the white centres. The native country of this fish seems unknown. It grows to about the length of a foot. In the Linnaean arrangement it would doubtless have been placed in the genus Perca.
PHALÆNA POLYPHEMUS.

CHARACTER GENERICUS.

Antennæ setaceæ, a basi ad apicem sensim attenuatæ.

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


CHARACTER SPECIFICUS, &c.

PHALÆNA alis subfuscatis griseo-flavecentibus, fascia nigrigante ocelloque fenestrato, posteriorum majori, subcyaneo.

PHALÆNA alis patentibus falcatis griseo carneis, fascia atra ocelloque fenestrato, posteriorum majori.

Fabr. sp. inf. 2. p. 168.


Cram. inf. 1. t. 5. f. A. B.

POLYPHEMUS.

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**Generic Character.**

Antenneæ fetaceous, decreasing in size from the base to the tip.

Wings, when at rest, generally deflected.

Flight nocturnal.

**Specific Character.**

Phalæna with subfalcated yellowish-grey wings marked by an ocellated central spot and dusky marginal band: the spot on the lower wings very large and blueish.

The Phalæna Polyphemus is a native of North America, and is represented on the plate in its natural size. The caterpillar, which is large and green, feeds principally on the different kinds of oaks, and changes into a yellowish-brown chrysalis.
MEROPS ERYTHROCEPHALUS.

 Emblem

CHARACTER GENERICUS.

Rostrum curvatum, compressum, carinatum. 
Lingua apice laciniata. 
Pedes grefforii.


CHARACTER SPECIFICUS, &c.

MEROPS viridis, subtus flavicans, capite rubro, 
fascia oculari nigra, gula lutea.

APIASTER Indicus erythrocephalos.
   Briff. av. 4. p. 563. t. 44. 3. a.

MEROPS erythrocephalus.

Adeo accurate descriptis hanc speciem celeberri-
mus Briflion ut ipsius auctoris verba non dubitem
proferre.

“Hanc Apiastrī speciem nondum mihi videre
contigit: ipsius descriptionem desumpsi ab icone
ad avem ipsam depicta a Domino Poivre, et sic eam
xeīrī insculptam esse curavi.

C

Apiastrī
THE
RED-HEADED BEE-EATER.

Generic Character.
Bill curved, compressed, carinated, and sharp-pointed.
Tongue (generally) laciniated at the tip.
Feet gressorial.

Specific Character, &c.
Green BEE-EATER, yellowish beneath, with red head, black eye-streak, and yellow throat.

Le GUESPIER a testé rouge des Indes.
Briss. ois. 4. p. 563. pl. 44. f. 3. A.

GUEPIER a tête rouge.
Buf. ois. 6. p. 508.

This bird is most accurately described in the following manner by the celebrated Brisson.
This species of Bee-Eater I have never seen: but have taken its description from a figure drawn from nature by Mons. Poivre, and have caused it to be engraved. In size it rather exceeds the Bee-Eater of Angola. Its length from the tip of the beak to...
the end of the tail is about six inches, and to the ends of the claws five inches and six lines. The beak from the tip to the angles of the mouth is sixteen lines long; the tail one inch and nine lines; the foot five lines; the middle of the three front toes together with the claw eight lines, the exterior seven lines, the interior five lines and a half; the hind toe only four lines. The wings when closed extend a little beyond the middle of the tail. The head and upper part of the neck are of a bright scarlet. On each side of the head is a black stripe, rising from the beginning of the bill, and passing through the eyes. The back, rump, scapular feathers, and upper tail-coverts are of an elegant green. The throat is yellow. The lower part of the neck, the breast, belly, sides and thighs are yellowish and shaded with a little red. The under tail-coverts also are yellowish, but edged with pale-green. The upper wing-coverts are deep-green. The quill-feathers are of the same full-green above, and within edged with ash-color, but beneath are entirely ash-coloured. The tail consists of twelve feathers of equal length, all of which are ash-coloured beneath, but the two middle ones are green above; the rest of the same color, but edged internally with ash-color. The irides of the eyes are red. The feet ash-color: the claws blackish. It is a native of the East Indies.
SEPIA OCTOPODIA.

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CHARACTER GENERICUS.

Corpus carnosum: vagina excipiente pectus, ad cujus basin tubus.
Brachia (præter bina tentacula pedunculata in ple-risque) octo interius adsperfa cirris verrucosis. Os inter brachia, terminale, corneum.

CHARACTER SPECIFICUS, &c.

SEPIA corpore ecaudato, tentaculis pedunculatis nullis.

POLYPUS octopus.
Rondel. pisc. 513.

OCTOPODIA.

Haffelg. aët. ups. 1750. p. 33.

POLYPUS pelagius.
Seb. musf. 3. p. 4. t. 2. f. 1—7.

Magna interdum huic animali moles est; major nullibi quam in oceano Indico et Septentrionali.
Narrat
Narrat Dominus Pennantus se ab hominibus fide dignis accepisse, in certis maris Indici partibus visa interdum fuissæ specimina, quorum singula brachia longa essent novem orgyias; Indosque navigium suescipere non audere, nisi prius latis securibus instrucitos, ut brachia sepiae cymbam prensantis possint abscindere: quod ni faciant periclitari ipsam cymbam ne sub aquis mergatur.

Lepidam historiam ex Trebio Nigro excerptit Plinius de monstro hujusmodi *, quod immodiacis in receptacula commissis furtis, non levem piscatorum iram in se convertit.

"Cætera, quæ idem retulit, monstro propiora possunt videri.

Carteïæ in cetariis affuetus exire e mari in lacus eorum apertos, atque ibi falsamenta populari, (mire omnibus marinis expetentibus odorem quoque eorum: qua de causa et nassis illinuntur:) convertit in se custodem indignationem affiduitate furti. Immodiacæ his sepes erant objectæ: sed has transcenderat per arborem: nec deprehendi potuit, nisi canum fagacitate. Hi redeuntem circumvase re noctu, concitique custodes expavere novitatem. Primum omnium magnitudo inaudita erat: deinde color muria obliti, odore diiri. Quis ibi polypum expectasset, aut ita cognosceret? cum monstro dimicare sibi videbantur. Namque et afflatu terribili canes agebat, nunc extremis crinibus flagellatos, nunc robustioribus brachiis clavaram modo incussos, ægregque multis

* S. Loligine?

Huc forsan referenda sunt quae vaga et incerta scribuntur de monstro Arctico, *Kraken* seu *Korven* dicit; quod verisimile est originem duxisse ab incipientibus aliquibus hujus speciei speciminiibus, in mari septentrionali visis, et in majus, ut fit, celebres.
THE
EIGHT-ARMED CUTTLE-FISH.

Generic Character.

Body fleshy, sheathing the breast, which is furnished at its base with a tubular opening.

Arms eight, (and in most species two pedunculated tentacula,) beset with numerous suckers or acetabula.

Head short; Eyes large; Mouth resembling a Parrot’s beak.

Specific Character, &c.

Short-bodied CUTTLE-FISH, without any tail or appendage; with eight arms and no tentacula or longer arms.

The SEA POLYPUS.

The eight-armed CUTTLE-FISH.


The size to which this animal sometimes grows is very great; but it is in the Indian and Northern seas that it seems to arrive at its fullest magnitude. Mr. Pennant tells us he has been well assured that in some
some parts of the Indian seas, specimens have been seen with each arm of the length of nine fathoms; and that in those seas the Indians never venture to navigate their canoes or boats without being provided with broad hatchets in order to cut off the arms of the cuttlefish, should it happen to attack the vessel, which it sometimes does in such a manner as greatly to endanger its being drawn under water.

A most entertaining account is given by Pliny, from Trebius Niger, of an enormous monster of this kind (perhaps a Loligo), near the coast of Carteïa, which used to rob the neighbouring reservoirs of salted fish, and which continued its depredations in so alarming a manner as to provoke the vengeance of the enraged proprietors.

This tale, in the translation of honest Philemon Holland, runs thus.

"The rest which mine author hath related as touching this fishe, may seem rather monstrous lies and incredible, than otherwise: for he affirmed, that at Carteia there was one of these Polypi, which used commonly to go forth of the sea, and enter into some of their open cesterns and vaults among their ponds and stews, wherein they kept great sea-fishes, and otherwhiles would rob them of their salt-fish, and so go his waies againe: which he practised so long, that in the end he gat himselfe the anger and displeasure of the masters and keepers of the said ponds and cesterns, with his continuall and immeasurable filching: wherupon they stalked up the place and em-
palled it round about, to stop all passage thither. But this thiefe gave not over his accustomed haunt for all that, but made meanes by a certaine tree to clamber over and get to the foregoing salt-fish; and never could he be taken in the manner nor discovered, but that the dogges by their quicke sent found him out and bayed at him: for as he returned one night toward the sea, they assailed and set upon him on all sides, and therewith raised the foregoing keepers, who were affrighted at this so sodaine an alarme, but more at the strange flight which they saw. For first and foremost this Polype fish was of an unmeasurable and incredible bignesse: and besides, he was besmeared and beraied all over with the brine and pickle of the foregoing salt-fish, which made him both hideous to see to, and also to stinke withall most strongly. Who would ever have look'd for a Polype there, or taken knowledge of him by such markes as these? Surely they thought no other, but that they had to deale and encounter with some monster: for with his terrible blowing and breathing that he kept, he drove away the dogges, and otherwhiles with the ends of his long stringed winding feet, he would lash and whip them; sometimes with his stronger clawes like armes he rapped and knocked them well and surely, as it were with clubs. In summe, he made such good shift for himselfe, that hardly and with much adoe they could kill him, albeit he received many a wound by trout-speares which they launced at him. Well, in the end his head was brought and shewed to Lucullus for a wonder,
der, and as bigge it was as a good round hogfhead or barrel that would take and containe 15 Ampho-
res: and his beards (for fo Trebius tearmed his clawes and long-ftringed feet) carried such a thick-
ness and bulke with them, that hardly a man could fathom one of them about with both his armes, such knockers they were, knobbed and knotted like clubs, and withall 30 foot long. The concavities within them, and hollow vessels like great basons, would hold four or five gallons apeece: and his teeth were answerable in proportion to the bignes of his bodie. The rest was faved for a wonder to be seen, and waighed 700 pound weight."

It may be added that the vague and uncertain descriptions of the northern animal called the Kra-
ken or Korven, may perhaps owe their origin to ex-
aggerated accounts of some uncommonly large spe-
cimens of this animal seen in the northern seas.
PAPILIO LEILUS.

Character Genericus.

Antennae apicem versus crassiores, sæpius clavato-capitatae.
Alæ (fidentis) erectæ sursumque conniventes (volatu diurno.)


Character Specificus, &c.

PAPILIO alis caudatis concoloribus nigris, fascia lineisque viridibus nitentibus numerofois.


Eq. Archiv.

Merian. Sur. t. 29.
Seb. mus. 4. t. 36. f. 1. 2. 3. 4.
Cram. 8. t. 85. f. e. f. &c. d.

Multas Americae meridionalis partes nec non infularum Americae adjacentium incolit pulcherrimum hoc insectum. Coloribus aliquatenu variaet. Specimina nempe ab infulis delata plus habent coloris aureo-cuprei, minus autem leviter caerulei, in alarum oris. Futuris forsan physicorum disquisitionibus
bus poterit probari, infecta insularia et Americana revera specie differre, quamvis eadem fere sit utrisque facies, et affinia admodum sibi invicem videantur. Larvam seu erucam prima omnium descripsit Domina Merian, quae asserit setas longas crassasque quibus obtigitur vix ac ne vix duritie cessisse totidem filis ferreis. Larva gramineo-viret; chrysalis fusca est, nigro maculata.
LEILUS.

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**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, &c.**

Caudated black BUTTERFLY, with shining-green band and numerous narrow stripes: both surfaces of the wings nearly similar in color.

Merian's Surinam Insects. pl. 29.  
Kleeman ins. 1. pl. 2. f. 1.  
Aubent Pl. Enl. 71. f. 1.

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This beautiful Insect is a native of many parts of South America, as well as of some of the West Indian islands. It admits of some variety in point of colors: the West Indian specimens having more of the coppery or gilded tinge, and less of the pale-blue on the edges. Future observations may also prove that the two kinds may in reality differ from each
each other, though so extremely nearly allied in their general appearance. The caterpillar or larva was first described and figured by Madam Merian, who assures us that the long and thick bristles with which it is beset are nearly as strong as iron wires: it is of a green color; and the chrysalis is brown, spotted with black.
TURBO PETHOLATUS.

疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬疬俐

CHARACTER GENERICUS.

Animal Limax.
Testa univalvis, spiralis, solida.
Apertura coarctata, orbiculata, integra.

CHARACTER SPECIFICUS, &c.

TURBO testa imperforata ovata laevi nitida, an-
fractibus surfum subangulatis.

COCHLEA petholata.
Rumpf. t. 19. f. d. & 5. 6. 7.

COCHLEA variegata.
Argenv. Conch. t. 6. f. k.

List. Conch. t. 584. f. 39.
Gualt. test. t. 64. f. f.
Klein. sflr. t. 2. f. 51.

Maria Indica et Americana incolit Turbo petho-
latus, magnitudine vera in tabula depictus.
THE

VARIEGATED TURBO.

GENERIC CHARACTER.

Animal snail-shaped.
Shell univalve, spiral, solid.
Aperture orbicular.

SPECIFIC CHARACTER, &c.

TURBO with ovate glossy variegated shell; the whirls inclining to an angular form on the upper part.

The variegated TURBO.
The ribband TURBO.
The parti-coloured American SNAIL.

This elegant shell is a native of the Indian and American seas, and is represented on the plate in its natural size.
FRINGILLA TRISTIS.

Character Genericus.

Rostrum conicum, rectum, acuminatum.

Character Specificus, &c.

FRINGILLA flava, fronte nigra, alis fuscis.

CARDUELIS Americana.

Briff. av. 3. p. 64.
Edw. av. t. 274.

Fringilla tristis quam magnitudine vera representat tabula in variis Americæ Septentrionalis partibus conspicitur. Femina supra olivacea, caret fronte nigra.
THE AMERICAN GOLDFINCH.

Generic Character.

Bill perfectly conic, slender towards the end, and very sharp-pointed.

Specific Character, &c.

Yellow FINCH, with black front and wings.

American GOLDFINCH.

Edw. pl. 274.

Le CHARDONNERET jaune.

Buff. ois. 4. p. 212.

Pl. enl. 202. f. 2.

Golden FINCH.


The American Goldfinch, which the plate represents in its natural size, is found in various parts of North America. The female is olive-coloured above, and wants the black spot on the front.
GASTROBRANCHUS CAECUS.

Character Genericus.

Spiracula duo ventralia.


Character Specificus, &c.

GASTROBRANCHUS oculis carens.


MYXINE glutinosa.


Mus. Ad. Frid. 1. p. 91. t. 8. f. 4.

Myxines glutinosae nomine vermis adjunxit Linnaeus animal in tabula depictum, a Blochio rectius piscibus annumeratum, instituto ei novo genere, quod dicitur Gastrobranchus. Mirum est Linnaeum aliosque physicos ab hoc non discriminasse Lampetram caecam Willughbeii; quam quoque representari ab effigie quae existat in Pennanti Zoologia Britannica existimat Blochius, negquaquam vero Gastrobranchum nostrum, seu veram Myxinem glutinofam Linnei. Longum esse Gastrobranchum seu Myxinem paucas uncias tradunt Linnaeus aliique.

Figura secunda monstrat partem anticam disiectam et apertam, ut de formatione duplicis ferei dentium, nec non de simplici dente curvato in medio palati superioris melius et commodius possit inquiri.
THE
GLUTINOUS GASTROBRANCHUS.

Generic Character.

Mouth terminal, furnished with cirri or beards.
Teeth in a double pectinated row on each side:
Upper tooth single, sharp, in the roof of the mouth.
Body anguilliform, carinated beneath by a soft fin.
Two Ventral Spiracula.

Specific Character, &c.
Eel-shaped GASTROBRANCHUS without eyes.

The Glutinous HAG.

The HAG-FISH, or Slime-Worm.

Der BLINDFISCH.

Bloch. ichth. t. 413.

The animal which forms the subject of the present plate was by Linnæus ranked amongst the Vermes, under the title of Myxine glutinosa. Dr. Bloch however has with great propriety given it its true rank
rank amongst Fishes, and has instituted for it the
genus *Gastrobranchus*. It is remarkable that a very
different animal has by Linnaeus and others been
confounded with it: viz. a small species of Petromyzon or Lamprey; (Lampetra cæca. Will. ichth.)
The figure also in the British Zoology is, according
to Dr. Bloch, by no means the Gastrobranchus,
(Myxine glutinosa, Lin.) but the above-mentioned
small species of Petromyzon. Linnaeus and others
have also described the Gastrobranchus (Myxine)
as seldom exceeding the length of a few inches;
yet in the British Museum is a specimen not less than
a middle-sized eel: and in a collection of drawings
of South-Sea animals in the possession of Sir Joseph
Banks, a figure occurs of the same animal at least as
large as a common eel. We may therefore conclude
that it varies very greatly in size, and that the European specimens fall far short of the Antarctic ones.
When placed in a vessel of sea water this fish soon
renders it gelatinous, being of an uncommonly gluta-
tinous nature. It is found in the Mediterranean and
the northern seas, as well as in those of the southern
hemisphere. It is entirely destitute of eyes, which
seems to have been the reason of Linnaeus and others
having confounded it with the Lampetra cæca of
Willughby above mentioned, in which fish however
there are eyes, though very small ones.

It must be unnecessary to add that the genus
*Myxine* amongst the Vermes must be now exploded;
the animal belonging, as we have seen, to the division
of Cartilaginous Fishes, or *Nautes* of Linnaeus.

The
The second figure represents the fore-part of the animal opened, in order to shew the structure and situation of the double rows of teeth; as well as the single curved tooth in the middle of the roof of the mouth.
SEPIA LOLIGO.

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CHARACTER GENERICUS.

Corpus carnosum: vagina excipiente pectus, ad cujus basin tubus.

Brachia (præter bina tentacula pedunculata in pleurisque) octo interius adspersa cirris verrucosis.

Os inter brachia, terminale, corneum.


CHARACTER SPECIFICUS, &c.

SEPIA corpore subcylindrico subulato, cauda ancipiti-rhombea.


LOLIGO.

Rond. pisc. 506.

LOLIGINIS species maxima.

Seb. Mus. 3. p. 7. t. 4.

In magnum Interdum crescit molem Sepia Loligo; minor tamen est Sepia octopodia; a qua etiam facile fecernitur corpore magis elongato. Suppeditavit huic Natura nec non aliis nonnullis congreribus receptaculum magnum internum, foramine extrinsecus
fecus aperto: continetur in hoc facculo fluidum quoddam nigrum et spissum, quo, si turbata sit, statim emisso, aquam infuscare, et e conspectu fugere dicitur. Utebantur antiqui hoc succo, atramenti vice: putatque celeberrimus Swammerdamus atra-mentum Sinense seu quod Indicum vulgo dicitur, ex hoc ipso liquore spissato concoqui, additis certis suffimentis, aliisque ejusmodi. Affirmant contra nonnulli succum, quem emittit Loligo, in atramentum scriptorium apte et utiliter non posse converti; et ut aliquid ejus ope plane et probe literis mandetur, summa peritia opus esse. Quibus fortasse assen-tiendum sit, si liquor recens fuerit extraactus: sed si prius fatis exsiccatus, contritus fuerit et in aqua solutus, de calamo facilius dilabetur; et probabile omnino videtur quod opinatur Swammerdamus; praecipue cum certum sit atramenti Indici modicam quantitatem, si post solutionem in vasa aliquo servetur, intra paucos dies foetorem non levem emittere; quod fatis indicare videtur animalem originem.

Prædatoria est indole Sepia Loligo, ut et aliae con-generes; vesciturque praecipue testaceis et molluscis variis. Color generalis fusco-rubet, oculis læte cæruleis. Non prorsus supervacaneum sit notare Sepias ab antiquis Polypos fuisse dictas; polypoque parvulos aquaticos, quos Hydras hodie nuncupant physici, facie seu habitu generali sepili quodammodo similes esse; consparguntur enim hydrarum tentacula verrucis pluribus quae visibles sunt ope microscopii, quasque verifimile est eodem fungi munere quo sepilarum acetabula. Addendum porro est, vice ossis quod sepia officinalis seu communis in corpore habet,
bet, instrui hanc speciem cartilagine quadam endiformi, hyalina, longa; quae a quibusdam physicis quasi species Pennatulae descripta et depicta est; a Seba nempe in tertio volumine thesauri rerum naturalium p. 40. tab. 16. In editionibus quoque non-nullis prioribus systematis naturae Linnæani, falso reponebatur in genere Pennatulae.
THE CALAMARY.

GENERIC CHARACTER.

*Body* fleshy, sheathing the breast, which is furnished at its base with a tubular opening.

*Arms* eight, (and in most species two pedunculated tentacula,) beset with numerous suckers or acetabula.

*Head* short; *Eyes* large; *Mouth* resembling a Parrot’s beak.

SPECIFIC CHARACTER, &c.

SEPIA with subcylindric subulate body and flattish sharp-edged rhomboid tail.

The CALAMARY or Ink-Fish.

The INK-SEPIA or Loligo.

The Ink CUTTLE-FISH.

This species is readily distinguished from the S. octopodia or eight-armed Cuttle-Fish by its more elongated form: in size it is inferior to that animal, though sometimes seen of a very considerable magnitude.
nitude. It is provided, like some others of this genus, with a large receptacle or internal pouch containing a peculiar secretion or fluid of a black color and of a thickish consistence, and opening outwardly by a tubular foramen. When pursued it ejects a quantity of this fluid, which mixing with the surrounding water, is supposed to facilitate the escape of the animal by concealing it from view. This liquor appears to have been used by the ancients for the purpose of ink. The sagacious Swammerdam also declares himself of opinion that the celebrated compound formed by the Chinese, and commonly termed Indian ink, is no other than the black fluid before mentioned in an inspissated state, with the addition of certain perfumes, &c. By others however it is affirmed that the liquor of the Loligo is not very convenient for the purpose of an ink, and requires a considerable degree of dexterity in its use. This perhaps may be the case with the recent liquor, but when dried and again ground or dissolved in water, it may become much more easily manageable, and it should seem that Swammerdam's theory may be highly probable; more especially as Indian ink dissolved in water and kept in any considerable quantity, in the space of a few days acquires a very high degree of fætor, which clearly seems to indicate an animal substance. Like the rest of the Sepiæ, the Loligo is of a very predacious nature; and feeds on Shell-fish and various Mollusca. Its general color is a reddish brown: the eyes of a beautiful blue. It may not be improper to observe that the different species of this genus were the Polypi of
of the ancients, and it is also highly probable that the small fresh-water animals called Hydrae or Polypes in modern natural history, are considerably allied in general habit to the Sepiae, and their arms or tentacula when microscopically examined, seem beset with numerous verrucæ which probably act in the same manner as the acetabula or suckers on those of the Sepiae. It may also be observed that the Loligo, instead of the friable calcareous bone with which the common or officinal Cuttle-Fish is furnished, has on the contrary a long, lance-shaped, transparent cartilage in place of the bone; and this cartilage has sometimes been described and figured as a species of pennatula, under which name it may be found in the third volume of Seba's Thesaurus, p. 40. pl. 16. and even in some of the earlier editions of the Systema Naturæ of Linnaeus it was erroneously placed under that genus.
MONOCULUS PULEX.

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CHARACTER GENERICUS.

Pedes natatorii.
Corpus crusta tectum.
Oculi (plerisque) approximati, testae innati.


CHARACTER SPECIFICUS, &c.

MONOCULUS antennis dichotomis, cauda inflexa.


PULEX aquaticus.

Schaeff. monogr. t. 1. f. 1—8.

Daphnia PULEX.

Mull. zool. dan. prod. 2400.

In stagnis fere omnibus generatur Monoculus Pulex. Interdum fit ut ipsae aquae ab animalculorum numero rubescant. Movetur quasi subfultim; quam ab causam magnitudini adjectam, antiquioribus nonnullis physicis placuit pulicem aquaticum nominare. Si microscopio examinetur, vix ullis cedit monoculis vel pulchritudine vel singulari partium conformatione; cumque pellucida sit testa, evidenter apparent

ERRATUM.

Page 14 of this Sheet, first line, for probable read remarkable.
THE
FLEA MONOCULUS.

Generic Character.

Feet formed for swimming.
Body covered by a crustaceous shell.
Eyes (in most species) approximated.

Specific Character, &c.

MONOCULUS with dichotomous antennæ and inflected tail.

The Flea MONOCULUS or Water-Flea.
The WATER-FLEA with branched horns.


The Monoculos Pulex, one of the most elegant species of this genus, is an inhabitant of almost every stagnant water, in which it is sometimes so very numerous as to diffuse a reddish tinge through the whole body of the water. The size of this animal, with its startling kind of motion, has induced many of the more ancient writers on natural history to call it by the title of the water-flea. Few of the Monoculi can exceed it in the beauty and singularity of its
its appearance when microscopically examined; the transparency of the shelly covering admitting a most admirable view of the several internal parts. This animal is viviparous, and it frequently happens that the included eggs may be plainly perceived while contained within the parent animal. In the plate it is represented moderately magnified, as well as in its natural size. In color it varies, being sometimes merely whitish or very pale yellowish-brown; at other times brown, or even strongly tinctured with red, and sometimes it is found of a greenish hue.
ORIOLUS HÆMORRHIOUS.

Character Genericus.

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

Lingua bifida, acuta.

Pedes ambulatorii.


Character Specificus, &c.

ORIOLUS niger, rostro flavo, uropygio phœniceo.

ICTERUS niger, uropygio coccineo.

Briss. av. 2. p. 98. t. 8. f. 2.

ORIOLUS hæmorrh hous.


Merulæ vulgari magnitudine æqualis Oriolus hæmorrh hous in America meridionali generatur; illumque a congeneribus discriminat plaga læte phœnicea, qua decoratur pars dorsi inferior, cum reliqua avis nigret, rostro flavo-pallente excepto.
THE

RED-RUMPED 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.

Black ORIOLE, with yellow bill and crimson rump.

Red-rumped ORIOLE.

Lath. syn. 1. p. 420.

Le CASSIQUE rouge.

Briss. orn. 2. p. 98. pl. 8. f. 2.

Le CASSIQUE rouge du Bresil.

Bus. ois. 3. p. 238. Pl. enl. 482.

This species, which is about the size of a blackbird, is a native of South America: it is readily distinguished from the rest of its congeners by the rich
rich and vivid crimson which adorns the lower part of the back, while all the rest of the bird is of a deep glossy black, except the bill, which is of a pale yellow.
SCIÆNA CIRROSA.

Character Genericus.

Squamae arcte adhaerentes.
Caput squamosum.
Dorsum dipterygium.

Bloch. ichth. 9. p. 27.
Thoracici.

Character Specificus, &c.

SCIÆNA flavescens, subtus subargentea, lineis longitudinalibus obliquis nigrificantibus, mento barbato.

SCIÆNA cirrosa. S. maxilla superiore longiore, inferiore cirro unico.


SCIÆNA cirro mentali.

Bloch. ichth. 9. p. 41. t. 300.

Præcipuam distinctionis notam in Sciæna genere docuit Linnaeus esse fossulam quandam dorsualem in longitudinem ductam, in qua quiescere ad libitum posset pinna dorsi, et quasi abscondi. Blochio autem,
tem, qui compertum habuit non modo evidentiorum esse hanc notam in aliis multis piscibus, sed et majori parti etiam Sciaenarum Linnæanarum omnino deesse, visum est alium characterem genericum feli-
gere. In pulcherrimis merito habetur species quæ in tabula depingitur. Maria incolit Europæa et Americana, quasi pedali ut plurimum longitudine.
THE BEARDED SCIÆNA.

GENERIC CHARACTER.

Scales strongly fixed.
Head scaled.
Back with two fins.

Thoracici.

SPECIFIC CHARACTER, &c.

Yellowish SCIÆNA, subargenteous beneath, with longitudinal blackish stripes, and a cirrus or beard on the under jaw.

L'UMBRE.

Rond. Hist. de Poiss. p. 120.

The genus Sciæna was characterized by Linnaeus principally from the circumstance of a sort of longitudinal cavity or fossula dorsalis into which the back fin might occasionally be so far depressed as to be in a manner concealed from view. Dr. Bloch however has observed that this character, exclusive of its being found in a more striking degree in several
several other fishes, does by no means pervade the major part even of the Linnaean Scianae themselves; many of which are destitute of it. Dr. Bloch therefore has taken the generic character from a different circumstance. Among the most elegant species may be numbered that represented on the plate. It is a native of the European and American seas, and is commonly found of about a foot in length.
RANA BICOLOR.

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CHARACTER GENERICUS.

Corpus tetrapodum, ecaudatum, nudum.

CHARACTER SPECIFICUS, &c.

RANA supra cærulea, fubtus ochracea, pedibus fissis, digitis orbiculato-dilatatis.

RANA pedibus fissis, palmis tetradaætylis, plantis pentadaætylis, omnibus orbiculato-dilatatis, superne cyanea, inferne fulva.
Schloff. & Boddart. de ran. bicol. p. 19.

RANA bicolor.

In Africa? generatur animal cujus veram magnitudinem ostendit tabula, non tam formæ elegantia insigne quam colorum. Pedes similes fere pedibus ranæ arboreæ; singulis nempe digitis orbiculato-dilatatis et complanatis. A Domino Schloffer pri-
mum descripta est hæc species, qui adjecit quoque descriptioni præstantem iconem. Jaætat Museum Britannicum eximum specimen unde depiesta est hæc nostra figura.
THE
BLUE-AND-YELLOW FROG.

Generic Character.
Body four-footed, naked, without tail.

Specific Character, &c.
Blue FROG, ochre-coloured beneath; with unwebbed feet, and flattened orbicular toes.

Blue-and-yellow FROG.

This animal, more remarkable for the elegance of its colors than its form, is a native of Africa; and is represented in its natural size on the annexed plate. The feet are formed nearly in the same manner as those of the rana arborea or tree frog; the toes being of a flattened orbicular shape. This species was first described by Dr. Schloffer, who has accompanied his description by an excellent figure. The representation here given is from a fine specimen in the British Museum.
MONOCULUS APUS.

Character Genericus.

Pedes natatorii.
Corpus crufta tectum.
Oculi (plerisque) approximati, testae innati.


Character Specificus, &c.

MONOCULUS testa convexa, antice rotundata, postice truncata, cauda bifeta.

APUS cancriformis. Schæff. monogr. t. 1—6.

MONOCULUS Apus.


BINOCULUS palufriris.

Müll. zool. dan. prodr. 2047.

LIMULUS palufriris.

Müll. entomost. p. 127.

Inter Monoculos Europæos quasi gigas eminet
Monoculus apus: manifesta omnino sunt tum bran-
chiae tum alia membra, quæ adeo exigua habent
minores
minores congeneres, ut non nisi microscopii ope possint discerni. Genus Linnaeanum Monoculus dicitum disperserunt Fabricius, Geoffrius, Mullerus, et alii nonnulli in varia genera, ab oculis diverse sitis; qui in aliis adeo appropinquant, ut unicus oculus videatur.

Fatendum fane est Monoculi titulo species aliquas minus feliciter designari. Cum tamen eadem fere aut saltem simili sit generalis partium conformatio, melius visum est Linnaequo nomine jam olim recepto genus distinguere, quam novis generibus, quae paulo licentius instituitis videntur hodierni entomologi, lectorum animis dubitationem inocere.

Subvirens, ut plurimum, Monoculus apus, interdum subrubet, aut fusco-pallet. Rara hæc species, si cum aliis comparetur, quærenda est in stagnis majoribus, et aliis eujusmodi locis. Tabula eam ostendit vera magnitudine. In Actis Anglicis proba exsdat hujus infecti effigies a Kleinio descripti, qui speciem Germanicum examinaverat; cui descriptioni adjicitur quoque historia ejusdem animalculi copiosissime reperti in magna aqua apud Bexly common in agro Cantuariensi; quam aquam penitus exsiccatam cum subito restituisset pluvia tonitrallis, duorum dierum spatium dicitur ingentes iterum occupasse eorundem insectorum catervas.
THE CANCROID MONOCULUS.

Generic Character.

Feet formed for swimming.
Body covered by a crustaceous shell.
Eyes (in most species) approximated.

Specific Character, &c.

MONOCULUS with convex shell rounded in front, truncated behind: the tail furnished with two bristle-shaped processes.

Le BINOCLE à queue en filets.


INSECTUM aquaticum, &c.

Phil. Trans. vol. 40. p. 150, &c.

pl. 1. f. 2.

This curious insect is by far the largest of all the European Monoculi; exhibiting with great distinctness the numerous branchiae and other parts which in the smaller species are only to be viewed by the assistance of the microscope. The Linnaean genus Monoculus has by Fabricius, Müller, and others been
been subdivided into different genera on account of the disposition of the eyes, which in some species are approximated, so as to appear as if single, while in others they are remote from each other. It must be confessed that the title Monoculus is, with respect to many of the species, rather an unfortunate one; yet since the insects which Linnæus has arranged under the genus agree sufficiently in the general structure of their several parts, it seems better to continue it as it first stood, than to create confusion by the unnecessary institution of new genera; a fault which seems to be prevailing among modern entomologists. The Monoculus apus is generally of a greenish cast, and sometimes of a reddish or pale brown. It is rare in comparison with many other species, and is found in large ponds and other stagnant waters. The plate represents it in its natural size. In the Philosophical Transactions may be found a good figure of this insect, with a description by Klein, from a specimen found in Germany; to which is added an account of the same animal discovered in great plenty in a pond on Bexly common in Kent. It is also added that the above-mentioned pond having been perfectly dried, and being suddenly filled during a heavy thunder-storm, swarms of the same animal were again observed in it within the space of two days.
CERTHIA VENUSTA.

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CHARACTER GENERICUS.

Rostrum arcuratum, tenue, subtrigonom, acutum. 
Lingua acuta. 
Pedes ambulatorii. 


CHARACTER SPECIFICUS.

CERTHIA viridi-aurea, fronte mento fasciaque 
pectorali violaceis, alis fuscis, abdomen 
flavo. 

Fascia pectoralis violacea subtus nigro cineta: rostrum pedesque nigra.

Africæ regionem quæ Sierra Leona nominatur in- 
colit hæc avicula, non antea, ut opinor, descripta, 
cujus magnitudinem naturalem ostendit, tabula. 
Specimen unde delineata est, nobis cum perhumani- 
riter communicavit Thomas Wilton armiger, cui 
transmissum erat a Domino Joanne Lowes, Sierræ 
Leonæ chirurgo primario.
THE
LEONA 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.

Gold-green CREEPER, with the forehead, chin, and pectoral band violet: the wings brown: the abdomen yellow.

The violet-coloured pectoral band is bounded by black below: the bill and legs are black.

This bird, which seems to be a species hitherto undescribed, is a native of Sierra Leona, and is represented on the plate in its natural size. The specimen was communicated by Thomas Wilson, Esq. to whom it was sent by Mr. John Lowes, chief surgeon to the English settlement at Sierra Leona.
NEPA GRANDIS.

.Character Genericus.

Rostrum inflexum.
Antennae breves.
Alae quattuor cruciato-complicatae: anterius coriacae.
Pedes antiores cheliformes; reliqui quattuor ambulatorii.


.Character Specificus, &c.

NEPA teftacea, scutello laevi, alis albis maculis venisque flavis.


NEPA ecaudata teftacea flavo maculata.


NEPA Surinamensis.

Degeer. inf. 3. p. 379.

Congenerum qui haecenus physicis innotuerunt species procudubio maxima est cujus naturalem magni-
THE
GREAT NEPA.

GENERIC CHARACTER.

Beak inflected.
Antennae short.
Wings four; closing in a crossed direction; corneous on their upper part.
Feet anterior cheliform; the remaining four formed for walking.

SPECIFIC CHARACTER, &c.

NEPA with brown wings variegated with yellow.

The great brown NEPA or Water-Scorpion.
The great Surinam NEPA.

This insect, which the plate represents in its natural size, is by far the largest species yet discovered. It is a native of South America, and seems to have been first figured by the celebrated Madam Merian, who has introduced it into her History of Surinam insects. It is an inhabitant of fresh waters; and lives by preying on the smaller water insects, &c. In size it sometimes exceeds the figures here represented.
ANTHIAS SACER.

 CHARACTER GENERICUS.
Caput totum squamosum; operculo anteriore ferrarato.

Bloch ichth. 9. p. 86.

 CHARACTER SPECIFICUS, &c.
ANTHIAS radio secundo pinnae dorsalis longissimo.

Bloch. ichth. 9. p. 86. t. 315.

Labrus ANTHIAS.

ANTHIAS Rondeletii.
Jonsf. de piscib. p. 53. t. 16. f. 1.
Will. ichth. p. 325. t. x. 5. f. 3.

In mari Mediterraneo præcipue conspicitur formosus hic piscis, pedali, ut plurimum, longitudine. Coloris est læte rosei.
THE RED ANTHIAS.

Generic Character.

Head completely scaled: anterior gill-cover serrated.

Specific Character, &c.

Rose-coloured ANTHIAS, with the second ray of the dorsal fin extremely long.

The rose-coloured ANTHIAS.
The crimson ANTHIAS.

Le BARBIER.


This beautiful fish is principally found in the Mediterranean sea. It grows to the length of about a foot, and is of an elegant bright rose-color.
Sphinx Nerii.

Character Genericus.
Antennae subprismaticae, utroque fine attenuatae. Lingua exsirta (plerisque.) Palpi duo reflexi. Alae deflexae.


Character Specificus.
Sphinx alis subangulatis viridibus; fasciis variis pallidioribus saturatoribus flavescentiibusque.


Frisch. inf. 7. t. 3
Schaeff. ic. t. 100. f. 3. 4.
Esp. pap. 2. t. 4.
Cram. pap. 19. t. 244. f. d.

In pulcherrimis infectis quae generat Europa locum digni procul dubio vindicat animalculum in tabula depictum; in variis Germaniae et Italiœ partibus repertum; præcipue vero in Italia. Larva ejus folia plantae depascitur quam Linnaeus Nerium Oleandrum nominavit.

Qui
Qui iconas historiam naturalem explicantes probe callent, sentient mutuatos esse nos hanc nostram tabulam a figuris tantum non vivis et spirantibus Domini Roeselii; quas si exuperent, admodum defundaturos putemus hodiernos pictores.
THE

OLEANDER SPHINX.

Generic Character.

Antennæ subprismatic, attenuated at each extremity.

Tongue (generally) exserted.

Feelers two, reflex.

Wings deflected.

Specific Character, &c.

Sphinx with subangular green wings, varied with paler and deeper bands, and with a cast of yellowish rose-color.

The Oleander Hawk-Moth.

This is unquestionably one of the most beautiful of the European insects. It is found in several parts of Italy and Germany, but more particularly in the former. The caterpillar feeds on the leaves of the Nerium Oleander of Linnaeus or rose-flowered Oleander.

Those who are conversant in the iconical part of natural history will easily perceive that the annexed plate
plate is copied from the spirited and beautiful figures of the admirable Roesel, whose representations, I believe, will not easily be surpassed by the attempts of any succeeding artists.
PLOTUS MELANOGASTER.

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CHARACTER GENERICUS.

Rostrum rectum, acuminatum, denticulatum.
Facies mentumque nuda.
Pedes breves, palmati, omnibus digitis connexis.


CHARACTER SPECIFICUS, &c.

PLOTUS supra albo lineatus, abdomen nigro.

PLOTUS melanogaster. Pl. capite lævi, abdomen nigro.

Latb. ind. orn. p. 895.

ANHINGA melanogaster.


Varias Indiæ partes incolit hæc avis, fluviorum præcipue amatrix, ramis insidens super aquas prominentibus, unde longum collum in pisicicullos, aliaque quæ prædari solet, ejaculatur. Rectricum tota longitudo quasi crenata videtur ftriis plurimis transverse impressis. Magnitudo avis eadem fere est atque Pelecani Graculi Linnaei.
THE
BLACK-BELLIED DARTER.

GENERIC CHARACTER.
Bill long, strait, sharp-pointed.
Nostrils long and narrow, near the base of the bill.
Legs short: toes four: all united by a web.

SPECIFIC CHARACTER, &c.
DARTER with the body streaked with white above; the abdomen entirely black.

Black-bellied DARTER.
_Lath. syn. 6. p. 624._

ANHINGA de Cayenne.
_Pl. ent. 959._

This bird is a native of various parts of India, where it chiefly frequents rivers; generally fitting on branches which closely overhang the water; from time to time darting down its long neck in order to seize the smaller fishes and other animals on which it preys. The tail feathers are marked throughout their whole length by a great number of transverse undulations or furrows. The size of this species is nearly equal to that of a shag.
HELIX.

Character Genericus.

Animal Limax.
Testa univalvis, spiralis, subdiaphana, fragilis.
Apertura coarctata, intus lunata, f. subrotunda: segmento circulo dempto.


HELIX RINGENS.

Character Specificus, &c.

HELIX testa subcarinata imperforata convexa: apertura resupinata; labio posterius quadruplicato.


Lift. conch. t. 99. f. 100.

HELIX CAROCOLLA.

Character Specificus, &c.

HELIX fusca, testa imperforata utrinque convexa, labro transversali albo.

HELIX
HELIX Carocolla. H. testa carinata imperforata utrinque convexa.


LUCERNA antiqua.

Knorr vergn. 4. t. 5. f. 2. 3.

Cum incolat, ut plurimum, genus numerosum Helicus aquas dulces aut loca terrestria, eo fit, ut careat crassa illa et polita substantia qua testae marinae præcellunt. At quamvis non jactent pulchritudinem, multae tamen sunt species, quarum forma mira et inusitata abunde doceat, habere Naturam fere incredibilem et veluti lusoriam varietatem. Inter species maxime notabiles numerari possunt Helix ringens, et Helix carocolla, quarum priorem denotant in tabula figuræ minores, posteriorem figuræ majores. Ambæ in India inasfcuntur.
SNAIL.

GENERIC CHARACTER.

Animal resembling a slug.
Shell spiral, sub-pellucid.
Aperture semilunar.

RINGENT SNAIL.

SPECIFIC CHARACTER, &c.
Whitish HELIX, with yellowish-brown spots, and inverted ringent mouth.

INDIAN SNAIL with inverted ringent mouth.
Toothed INDIAN SNAIL.

LAMP SNAIL.

SPECIFIC CHARACTER, &c.
Brown imperforated HELIX, slightly convex on both sides, with white transverse lip.

The Indian LAMP-SNAIL.
La LAMPE antique.

Argenv. ed. 2. p. 216. pl. 8. d.
The genus Helix is more distinguished by the number than the beauty of its species; which being mostly either land or fresh-water inhabitants, have not that thick and glossy appearance which, in general, distinguishes those shells which are natives of the sea. It is however marked in many species by a high degree of singularity in point of form; and exhibits striking examples of that strange variety of shape into which Nature has arranged her productions. Amongst the more remarkable species may be numbered the Helix ringens, represented by the smaller figures, and the Helix Carocolla, represented by the larger figures on the present plate. Both these shells are natives of India.
LONCHIURUS BARBATUS.

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CHARACTER GENERICUS.

Pinnæ Ventrāles discreetae: Caudalis lanceolata.
Bloch. ichth. 10. p. 119.

CHARACTER SPECIFICUS.

LONCHIURUS cirris duobus mentalibus.
Bloch. ichth. 10. p. 120. t. 360.
Pisces Thoracici.

Surinamiam incolit Lonchiurus barbatus, in fluviiis præcipue degens. Longior raro est decem unciis, colore plerumque fusco, quem plus minus saturatum habent diversa specimena.
THE
BEARDED LONCHIURUS.

GENERIC CHARACTER.
Ventral Fins separaten Caudal Fin lanceolate.

SPECIFIC CHARACTER, &c.
Brown LONCHIURUS with two cirri or beards under the chin.

The Lancet-Tail, or Bearded LONCHIURUS.

The bearded Lonchiurus is a native of Surinam, where it is generally found in rivers. It seldom exceeds the length of about ten inches, and is of a brown color, deeper or lighter in different individuals.
ALCYONIUM? BOTRYOIDES.

Character Specificus.

ALCYONIUM? (Spongia?) flavo-purpurascens, caule crasso atuposo, superne ramoso, ramulis densissime congestis.


Pulchri et mirabilis Alcyonii quod neminem opinnamur descriptisse, veram magnitudinem depinximus. Litora incolit Australasiae, insulae praecipue quae Norfolcia dicitur, et profunde sub aquis mersum adhaeret rupibus. Caulis ramique majores flavo-pallent, ramulis minoribus vivide rubentibus seu purpureis. Totum Alcyonium molliculum, sed tenax; tacitu durum, si exaruerit; et videtur componi omnino e fibris parvulis, vermiculatis, quarum extremitates acuminatae. Racemi qui terminales vocantur constant e tubulis divisis et sub-divisis, singulis quasi in calycem leviter expansum definitibus; bracteamque, seu foliolum florale (ut physice loquar) non male simulantibus, qui forsan munimento sint illi
III zoophyti partii quae animalis esse videtur; organo nempe flori-formi, flavo-pallenti, ex iisdem fibris vermiculatis confecto quibus reliquae partes, sed minoribus et confertioribus. Constat hae quasi corolla seu pars hydraeformis e quinque vel sex segmentis oblique acuminatis et convergentibus, foramen tubulatum habentibus, per quod ipsi Alcyonio nutrimentum posset administrari. Licet tamen conjicere, nec inepte, polypos seu hydros (si quae revera sint) intra tubulos quos supra memoravimus, seque subduxisse, calycibus tantum five foraminibus externis in conspectu reliquit. A transverso caulis segmento manifestum erit Alcyonium esse veluti cancellatum et leviter compactum, cavitate omnibus in longitudinem ab imo ad summum continuatibus.

Elegans Alcyonii botryoidis specimen Societati Linnæanae Londiniensi donavit Dominus Paterson, coloniae Britannicae apud Australiam Subpraebestus.

Figura inferior monstrat specimen in spiritu vini diu affervatum: tertia partem racemi externi magnitude aucti ut corolliformes terminaciones manifestius pateat: quarta unam e fibris vermiculatis e quibus totum componitur, magnitude auctam.
CAULIFLOWER ALCYONIUM.

SPECIFIC CHARACTER.

Yellow-purple ALCYONIUM? (Sponge?) with thick, stipose stem, ramifying on the upper part; with very thickly-crowded branchets.

This elegant and singular Alcyonium seems a species hitherto undescribed, and is a native of the coasts of New Holland, and more particularly of Norfolk Island; adhering to rocks at a considerable depth. The plate represents it in its natural size. The color of the stem and principal branches is pale yellow: of the smaller ramifications bright crimson or purple. The substance of the whole is softish, but tough; harsh to the touch in its dried state; and seemingly composed entirely of small, thickish, vermicular fibres with attenuated or sharpened extremities. The terminal clusters consist of divided and subdivided tubular processes, each ending in a calycular, slightly-expanded part, not ill resembling a bractea, and forming a kind of guard for what appears to be the animal part of the zoo-phyte; viz. a kind of flower-shaped organ of a pale-yellow color, and composed of the same kind of thickish vermicular fibres with the rest, but on a smaller scale, and somewhat more closely disposed.

This
This flower, or polype-like part consists of five or six obtusely-acuminated, converging segments, leaving a tubular opening, through which the proper nutriment may be conveyed to the whole. It is however no improbable supposition that the real polypes, (if such exist) may have withdrawn themselves into the lower parts of their respective tubular branches, leaving only the external calyces in view. A transverse section of this Alcyonium shews it to be of a cancellated or loosely-compacted fabric, the hollows all running in a longitudinal direction from the bottom upwards.

An elegant specimen of this Alcyonium was some-time since presented to the Linnæan Society by Colonel Paterson, Vice-Governor of the English settlement in New Holland.

The lower figure represents a specimen preserved for a considerable time in spirit of wine.

Fig. 3. A magnified view of one of the exterior ramifications, in order to shew the flower-like terminations.

Fig. 4. Magnified view of one of the vermicular fibres of which the whole is composed.
LANIUS COLLURIO.

Character Genericus.

Rostrum rectiusculum, dente utrinque versus apicem, basi nudum.
Lingua lacera.


Character Specificus, &c.

LANIUS ferrugineus, capite cano, cauda fasciaque tranfoculâri nigris.

LANIUS minor rufus, seu tertius Aldrovandi.

Raii syl. p. 18.

LANIUS Collurio. L. cauda subcuneiformis, dorso griseo, rectricibus quatuor intermediis unicoloribus, rostro plumbeo.


Notior longe in Anglia Lanius Collurio Lanio majore, seu Excubitore Linnaei, verno tempore ramis arborum altioribus juxta sepes insidet, nec propriorem populi præterentis adventum valde formidat. Femina mare paulo major, subtus ochraceo-pallido-albet, lineis plurimis tranfversis fuscis notata.

K
THE
RED-BACKED SHRIKE.

GENERIC CHARACTER.
Bill straightish, with a tooth or small process on each side near the tip.
Tongue jagged.

SPECIFIC CHARACTER, &c.
Ferruginous SHRIKE, with grey head, black tail, and a black band across the eyes.

L'ECORCHEUR.

Briss. 2. p. 151.

The Smaller SHRIKE, or Red-backed Butcher-Bird.

Lesser BUTCHER-BIRD or Flusher.
Will. orn. p. 88.

The Lanius Collurio is a much more common species in England than the great shrike or Lanius Excubitor of Linnaeus. It is a bird of an audacious disposition, and may often be seen in the spring.
season fitting on the taller branches of trees, and about hedges, and is not easily disturbed by a near approach. The female differs in having the under parts of a very pale ochre-color, with numerous transverse lines or streaks of a dusky cast. It is also rather larger than the male.
TRACHICHTHYS AUSTRALIS.

Character Genericus.

Caput antice rotundatum: Oculi magni: Os amplum, edentulum, descendens.
Membrana branchioflega radiis octo, quorum quatuor inferiores margine scabri.
Squamae scabrae: Abdomen carinato-cataphraetum,

Cernere est in tabula veram pisces miri magnitudinem. Corpus modice crafsum, præcipue a parte antica. Caput permagnum. Os deorsum se recludit fere perpendiculariter, linea tamen curvata; eoque claufo, frontis ambitus perfecte ovatus. Oculi prægrandes: videturque iris vivo fuisse argentea, qualis solet plerisque piscibus. Os caret dentibus. Lingua modica, maxillæ inferiori quasi adnata, cujus ad extremitatem fere pertingit. Branchiarum opercula partem habent superiorem spina magna, scabra, infructam, ad basin crafissima. Partem quoque inferiori occupat spina, sed minor et brevior. Operculi utriusque circumferentia paululum sinuata est, prope medium prominentiis brevissimis, subacutis: reliquum conflat e quinque vel sex lamellis. in longitudinem ductis, quarum margines scabrae more corporis. Ex radiis qui quasi octo sunt in membrana branchioflega, quatuor inferiores reliquis sunt crafiores,
THE
SOUTHERN TRACHICHTHYS.

Generic Character.

Head rounded in front: Eyes large: Mouth wide, toothless, descending.

Branchiopterygous Membrane furnished with eight rays, of which the four lowermost are rough on the edges.

Scales rough: Abdomen cataphracted with large carinated scales.

This remarkable fish is represented on the plate in its natural size. The body is moderately thick, more especially on the fore part: the head is very large; the mouth opening downwards in an almost perpendicular direction, but in a curved line; and, when closed, the outline of the head or front is completely oval. The eyes are extremely large, and the iris appears to have been of a silvery hue, or as in generality of fishes. The mouth is destitute of teeth, and the tongue, which is moderately large, is adnate, or fixed to the lower jaw, to the extremity of which it almost reaches. The Opercula or gill-covers are furnished on the upper part with a large, strong, and rough spine, which is very thick at its base: a smaller and shorter spine also occurs at the lower part:
part: the outline of each operculum is somewhat
finuated by two very short and subacute processes
towards the middle; and the remainder is composed
of five or six longitudinal rough-edged lamellæ re-
sembling the surface of the body. The *membrana
branchiosepta* has about eight rays, of which the four
lowermost are rough-edged, and thicker than the
rest. Perhaps no fish yet known, if we except what
are called mailed or cataphracted fish, is so strongly
coated as the present; the scales forming a kind of
processes, which are so strongly and closely inserted,
that it is not possible by means of a forceps to detach
one from the rest, without bringing away with it a
small portion of the corium or general integument
itself; the skin in this respect resembling in some
degree that of the genus *Balistes*. These scales or
processes, as to their general structure, are analogous
to those of the *Chætodons*; terminating outwardly
in a fringe of small, strong spines, besides several
scattered ones on the surface. They differ somewhat
in shape on different parts of the animal, and, as
they approach the abdomen, become more dilated.
The abdomen itself is carinated and cataphracted by
a row of eight strong, rough incisures or scales, each
of which projects into a shortish spine, pointing
backwards, and forming a sharp keel beneath, while
the sides are continued upwards near a quarter of an
inch on each side the abdomen. The scales of the
abdomen, as before observed, are also somewhat
broader in this part, and gradually lessen towards
the middle of the body. On each side the tail is a
slightly-prominent line, or an approach to a carinated
appearance,
appearance, owing to the middle of each scale on that part rising up a little above the level of the rest: the scales also along this part are rather larger than elsewhere: otherwise the appearance of a lateral line is scarce distinct. The dorsal fin has fourteen rays, of which the seven hindermost subdivide towards their tips into softer ramifications. The pectoral fins have thirteen rays: the ventral fins seven: and the anal fin twelve rays, most of which subdivide into softer ramifications at the tip. The tail is strongly furcated, and consists of about twenty-four rays, of which the external or shorter ones are strong or spiny; the rest of a similar appearance to those of the anal fin. The three first rays of all the fins, except the pectoral ones, are very strong, rough, and finely serrated outwards, but more particularly those of the ventral fins.

This fish, which constitutes a new genus, belongs to the Linnaean division of Thoracici, or such as have the ventral fins situated beneath the pectoral ones. From its uncommonly rough surface I have given it the generic name of Trachichthys, and as a trivial name, at least till we are better acquainted with its natural history, it may be sufficient to distinguish it by the title of Australis. Of all the old Linnaean genera, or those contained in the twelfth edition of the Systema Naturæ, it seems to approach the nearest to that of Perca. The Trachichthys Australis is a native of the coasts of New Holland, and the specimen from which the present engraving was taken occurred amongst several other fishes preserved in spirits in the collection of Mr. White, chief Surgeon to the English
English settlement in those regions. Among some drawings in Mr. White's possession I have also observed a representation of this fish, which though not executed with minute precision as to some particulars, serves at least to identify the animal, as well as to shew the natural color, which is a bright pink-ferruginous or fair reddish-brown; whereas in the preserved specimen the color is faded into a dull brown. The middle part of all the fins is of a deeper color than the rest of the animal, and the edges are lighter, or of a yellowish tinge.
NAIS PROBOSCIDEA.

Character Genericus.
Corpus repens, longum, lineare, pellucidum, depressum.
Pedunculi fetis simplicibus.
Tentacula nulla.
Oculi duo aut nulli.


Character Specificus, &c.
NAIS fetis lateralibus folitariis, proboscide longa.

Zool. dan. prodr. 2649.

NEREIS. (lacustris) linearis, lingua exserta.


Ternas unciae partes raro superat longitudine hæc species, aquarum puriorum stagnantium incola, in quibus aestivo tempore sæpius posset conspici. Cum motus generalis languide fit tranquillus, non raro tamen eventit ut corpus subito et violenter contorqueatur. Species ipfa facillime a reliquis dignoscitur,
tur, rostro seu proboscide prælonga pro corporis magnitudine, et naturaliter exerta. Varia specimina plus minus habent pelluciditatis. Alia omnino vitrea ab ipfa aqua vix possunt distinguiri; alia subfuscæ de longinquo evidentem discerni. In eorum animalium numero est quæ mira pollent facultate se regenerandi, quæque in partes duas vel plures divisa, paucorum dierum spatio totidem perfecta monstrabunt specimina.
ROSTRATED NAIS.

**Generic Character.**

*Body* repent, long, linear, pellucid, depressed.

*Feet* consisting of simple bristles.

*Tentacula* none.

*Eyes* two, or none.

**Specific Character, &c.**

NAIS with single lateral bristles, and long proboscis.

Long-snouted NAIS.

The Proboscis WATER-WORM.

*Trembley. hist. polyp. t. 6.*

*Scaeff. arm. polyp. 1754. t. 3.*

*Roef. inf. 3. p. 483. t. 78, &c.*

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This species, which rarely exceeds the length of about three quarters of an inch, is a native of clear stagnant waters, in which it is not uncommon during the summer months, and is remarkable for the sudden and violent contortions into which it frequently throws itself, while its more general motion is smooth and somewhat languid. As a species it is clearly distinguished from others of this genus by the
the length of its proboscis or tongue, which is naturally exerted, and of a great length in proportion to the body. In the degree of transparency this animal differs greatly in different individuals; being sometimes seen of a glasly clearness, so as scarce to be distinguishable from the water in which it swims, and at other times of a dusky cast; so as to be readily perceptible at a distance. It is one of those animals which are possessed, in a very high degree, of the power of reproduction, and if cut into two or more parts, will in a few days constitute so many complete specimens.
SPONGIA FLABELLIFORMIS.

Character Genericus.

Animal fixum, flexile, polymorphum, torpidissimum, contextum vel e fibris reticulatis, vel e spinulis gelatina viva vestitis; Osculis seu foraminibus superficie aquam respirantibus.

Soland. et Ellis zooph. p. 182.

Character Specificus, &c.

SPONGIA flabelliformis conformis orbiculata, fibris cartilagineis dense reticulatis.


RETE philippense nigrum, telis quadrangulis.

Pet. gaz. t. 32. f. 1.

FLABELLUM marinum aruense.

Rumph. amb. 6. t. 80. f. 1.


L
FAN SPONGE.

Generic Character.

Animal? fixed, flexible, torpid, of various forms; composed either of reticulated fibres, or masses of small spines interwoven together; cloathed with a gelatinous flesh full of small mouths or foramina on its surface, by which it sucks in and throws out the water.

Specific Character, &c.

Fan-shaped orbicular cartilaginous SPONGE, with quadrangularly-reticulated fibres.

Blackish fan-shaped Indian SPONGE.

Cartilaginous Fan-Sponge.

This curious Sponge differs greatly in habit or general form from most of its congers, bearing a strong resemblance to some of the reticulated Gorgonæ: this is also the case with another species of sponge, viz. the Spongia Ventilabrum of Linnaeus. The present species is a native of the Indian seas, and is sometimes found considerably larger than the specimen here represented.
CERTHIA CHALYBEA.

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**CHARACTER GENERICUS.**

Rostrum arcuatum, tenue, subtrigonom, acutum.
Lingua acuta.
Pedes ambulatorii.


**CHARACTER SPECIFICUS, &c.**

CERTHIA viridi-aurea, alis caudaque fuscis,
fascia pectorali coccinea lunula caerulea, ab-
domine albido.

CERTHIA viridis nitens, pectore rubro, fascia
antica chalybea.


CERTHIA torquata capitis bonæ spei.

*Briff. av.* 3. p. 643. t. 32. f. 1.

In Africa, et præcipue in promontorio bonæ spei
conspicitur Certhia chalybea, coloribus interdum
varians; collari nempe five lunula chalybea plus
minus lata in diversis speciminiibus. Tabula illam
ostendit magnitudine naturali.
THE
CHALYBEAN 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.
Gold-green CREEPER, with the wings and tail dusky; the breast marked by a scarlet band and steel-blue crescent; the abdomen whitish.

Le SOUI-MANGA à collier.

*Buf. ois. 5. p. 502.*

GRIMPEREAU du Cap de Bonne Esperance.

*Pl. ent. f. 3.*

Collared CREEPER.

*Lath. syn. p. 709.*

The Chalybean Creeper is a native of Africa, and is principally seen about the Cape of Good Hope. It sometimes varies a little in colors; the blue band or crescent being more or less wide in different specimens. The plate represents it in its natural size.
EPINEPHELUS MERRA.

Character Genericus.

Caput totum squamatum, operculo anteriore ferrato, posteriore aculeis armato.

Bloch ichth. x. p. 9.

Character Specificus, &c.

EPINEPHELUS albus, maculis numerosis sub-hexagonis fuscis.

EPINEPHELUS corpore toto maculato.

Bloch ichth. 10. p. 15.

PERCA tota maculis fuscis et punctis albis varia; pinna dorfi aculeorum undecim.

Seb. musf. 3. p. 76. tab. 27. fig. 7.

Mare Japonicum incolit Epinephelus Merra, longitudine quasi pedali. In genere Percæ locum illi proculdubio assignasset systema Linnæanum.
THE
SPOTTED EPINEPHELUS.

Generic Character.

Head entirely covered with scales: anterior Gill-Cover serrated, posterior spiny.

Specific Character, &c.

White EPINEPHELUS, with numerous sub-hexagonal brown spots.

Le MERRA.

Bloch t. 329.

The spotted Epinephelus is a native of the Japanese sea, and is about a foot in length. Linnaeus would doubtless have placed it the genus Perca.
MADREPORA ROSEA.

Character Genericus.

Animal Medusa.
Corallium cavitatibus lamelloso-stellatis.

Character Specificus.

MADREPORA ramosa rosea, stellis prominentibus marginatis.

MADREPORA hirtella ??
Pall. el. zooph. p. 313.

MADREPORA rosea ?
Pall. el. zooph. p. 312.

In pulcherrimis Madreporarum ramosarum habenda est haec species, cui recens e mari extractae color late roseus, postea fit pallidior et evanidus. In oceano Indico inascticur, eadem magnitudine quam cernere est in tabula.
ROSE MADREPORE.

**Generic Character.**

*Animal* allied to a Medusa.  
*Coral* marked with lamellar star-shaped impressions or cavities.

**Specific Character.**

Branching rose-coloured MADREPORE, with prominent marginated stars.

This is one of the most elegant of the ramified Madrepores, being, when recent, of a beautiful rose-color, which fades to a paler tinge afterwards. It is a native of the Indian ocean, and is represented on the plate in its natural size.
SCARABÆUS MACROPUS.

CHARACTER GENERICUS.

Antennæ clavatae capitulo fissili.
Tibiae anticae faepius dentatae.


CHARACTER SPECIFICUS.

SCARABÆUS scutellatus viridis nitens, subtus cupreo-auratus, pectore recto, femoribus posticis crassissimis.

Francill. descr. scarab. rar.

In formandis scarabæis variam et quasi ludibundam esse naturam dudum observavimus; in scarabæis præcipue majoribus, qui, ut plurimum, nigri aut fusci, privantur splendidis coloribus, quibus superbiunt multa ex infectis coleopteris minoribus. A congreribus tamen insigniter differt species de qua jam loquimur; cum formæ inconcinnæ, quæque carere videtur apto partium consensus, adjecti sunt colores vividi et pulcherrimi. Totus scarabæus superior splendide gramineo-viret quasi vernice oblatus; inferior nitet more cupri politissimi; crura postica præcipue, adeo enormiter magna, si cum corpore comparantur, ut primo visu impedimento ei et incommodo esse videantur. Dictus inde est scarabæus
scarabæus macropus. Ad sultum tamen, si forte fa-
liendo graditur, apta omnino et accommodata est
hæc infolia crurum longitudo.

Mírum hoc insectum a Potosí delatum in pinaco-
theca extat Domini Francillon, qui iconem ad hoc
opus ornandum humanissime nobiscum communica-
vit, eodem corporis situ insectum monstrantem quo
illa quæ ab ipso Domino Francillon non ita pridem
publicata est.
THE

KANGUROO BEETLE.

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**Generic Character.**

*Antennae* divided at the tip or head into several lamellae.

*Tibiae* or second joints of the fore-legs generally toothed.

**Specific Character.**

Scutellated bright-green BEETLE, gold-coppery beneath; with projecting breast; the thighs of the hind-legs very thick.

*Francill. descr. of a rare Scarabæus.*

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It has been already observed in the present work that in the genus Scarabæus Nature seems to have exerted an almost capricious diversity of form; the most extravagant shapes that can easily be conceived presenting themselves to our view amongst the larger animals of this tribe. It is also to be observed that, in general, the color of the larger beetles is either black or brown, and seldom exhibits that rich assortment of brilliant hues so conspicuous in many of the smaller coleopterous insects. A striking exception however to this rule occurs in the insect represented in
in its natural size on the present plate, and which to a form the most seemingly disproportioned unites the most beautiful colors; the whole animal, on the upper surface, being of the richest varnishy grass-green, while the under surface is ornamented by a metallic lustre resembling that of burnished copper: this is particularly conspicuous on the hind legs, which are of so enormous a size in proportion to the rest of the animal as to appear, at first view, rather an inconvenience to it. The animal may however be formed for leaping; for which purpose this extravagant size of leg may be well calculated. It is from this circumstance that it has received the title of the Kangaroo Beetle.

This singular Beetle was received from Potosí, and is preserved in the elegant collection of Mr. Francillon, who politely permitted a figure to be engraved for the present publication, and which shews the insect in the same posture with the beautiful representation some time ago published by that gentleman.
PLATYPUS ANATINUS.

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CHARACTER GENERICUS.

Os anatinum.
Pedes palmati.

Novum omnino et inauditum constituit genus quod in tabula depingitur animal, juxta Linnaeana divisionem in Brutorum ordine reponendum, et Myrmecophagis proxime annumerandum. Diversum omnino ab omnibus Mammalibus quae haecenus physicis innotuerint, perfectam rostri anatini similitudinem capiti quadrupedis adjunctam fortitum est. Rei novitate percussi non nisi inspexitone femel atque iterum attentiissime habita persuadere nobis meti faciam potuimus verum et genuinum esse quadrupedes rostrum; primo suspicantes artem lufioram cum ipsa Natura feliciissime certasse: eandem enim habet epidermidem, ferraturas, aperturam, totam denique rostri conformationem anas quae elyptata dicitur Linnaei, seu alia aliqua anas latirostra.

Corpus depressum, lutræ corpori quodammodo simile nisi quod multo minus sit, pilo dense stimulus molli et quasi castoreo, satureatim infuscatur, infra sub-ferrugineo-albet. Caput modice parvum, fere complanatum, rostro (ut supra diximus) anatis cujusdam latirostræ simillimo; ducta orbiculatim circa basin membrana, cujus pars superior æquat N lati-
latitudine circiter octavam unciam partem, inferior
circa quintam. Cauda depresso, nec minus corpore
pirofa, breviuscula et obtusa, latior ad basi, indeque
senis decrescens in apicem fere subbifidum, tres
quasi uncias longa, corpori concolor. Longum est
totum animal a rostri apice ad extremum caudae tri-
decim uncias: rostrum unciam cum dimidio. Crura
brevissima in pedes late pinnatos definunt, pinnas ant-
icorum longe ultra unguis excurrentibus; postii-
corum tantum ad bases unguium pertingentibus.
Ungues digitis anticis sunt quinque, recti, validi,
acuti, duobus exterioribus paulo brevioribus. Post-
ticus sex, longiores, magisque curvati; digito et
ungue exteriore quatuor mediis multo breviore;
ungue intemore feu sexto altius cruris adjuncto, ad
inflar validi et acuti calcaris. Crura omnia superne
pirofa sunt. Pedes antiores supra infraque nudi:
posteriores supra pilosi, subtus nudi. Mandibulæ
inferiores, quæ angustior est suiperiore, margines in-
teriöres striis feu ferraturis plurimis notantur, eó-
dem modo quo rostrum anatis. Nares parvulæ, ro-
tundæ, distant quasi quadrantem uncia ad extremo
rostro, et octavam unciam partem a se invicem. Den-
tium nulla sunt vestigia. Caret fræcem palato,
quod ex ore disceptum est; sed quatenus a fitu
conjecere liceat, probable est similis uisse palato
anatis. Defuit quoque lingua fræcimini. Aurium
spatio fere semiunciali ab oculis remotarum foramen
ovatum, octavam unciam partem latum, pilo occul-
tatur; nulla extrinsecus visibili aure. Oculi sub
duabus albis maculis siti sunt non longe a bafi rostri.
Vivo animali verisimile est eos perexiguos uisse,
fortasse
fortasse etiam subcuticulares; cavitates enim profunde latent sub vellere haud majoris diametri decima unciae parte; unde conjicimus non indulisse iis Naturam visum clarum et distantia spectantem, sed illum tantummodo qui talpis et aliis nonnullis ejusmodi quadrupedibus conceditur.

A rostro et pedibus pinnatis non dubitamus Platyypum locorum fluivialium esse incomam, in ripis cubicile fibi posse effodere, vesicique plantis et animalibus aquaticis.

De animali a cæteris adeo insigniter discrepante ut clarissimi Buffoni dictum comprobet, "quicquid possibiles sit generari Naturam revera generasse," nihil in praefens habemus quod ulterius proferamus. Plenius innotescet physicus (uti sperare fas est) accurate examinatum in locis natalibus.

Non modo excusatos habemus verum etiam laudatos lectores nostros, si de re insolita et pene incredibili paululum addubitaverint: et fatemur nosmetipso oculis nostris vix ac ne vix credidisse. Audenter tamen possumus asserere nos nulla fallaciarium signa detegisse, mandibularumque margines, rictum, omniaque ad rostrum pertinentia, postquam ipsius macerationis pericum in aqua subierant, ut faciius moveri possent, fuisset omnino naturalia, nec peritissimorum anatomicorum acumini vel minimum fraudis vestigium patefacere.

In Australasia generatur Platypus anatinus.

Ipsissimum animal penes est Dominum Dobsonum, qui arte anatomica quam in specimina vegetabilia pereleganter exercet merito inclaruit.
THE

DUCK-BILLED PLATYPUS.

GENERIC CHARACTER.

Mouth shaped like the bill of a Duck.
Feet webbed.

The animal exhibited on the present plate constitutes a new and singular genus, which, in the Linnaean arrangement of Quadrupeds, should be placed in the order Bruta, and should stand next to the genus Myrmecophaga.

Of all the Mammalia yet known it seems the most extraordinary in its conformation; exhibiting the perfect resemblance of the beak of a Duck engrafted on the head of a quadruped. So accurate is the similitude that, at first view, it naturally excites the idea of some deceptive preparation by artificial means: the very epidermis, proportion, ferratures, manner of opening, and other particulars of the beak of a shoveler, or other broad-billed species of duck, presenting themselves to the view: nor is it without the most minute and rigid examination that we can persuade ourselves of its being the real beak or snout of a quadruped.

The body is depressed, and has some resemblance to that of an Otter in miniature: it is covered with a very
a very thick, soft, and beaver-like fur, and is of a moderately dark brown above, and of a subferruginous white beneath. The head is flattish, and rather small than large: the mouth or snout, as before observed, so exactly resembles that of some broad-billed species of duck that it might be mistaken for such: round the base is a flat, circular membrane, somewhat deeper or wider below than above; viz. below near the fifth of an inch, and above about an eighth. The tail is flat, furry like the body, rather short, and obtuse, with an almost bifid termination: it is broader at the base, and gradually lessens to the tip, and is about three inches in length: its color is similar to that of the body. The length of the whole animal from the tip of the beak to that of the tail is thirteen inches: of the beak an inch and half. The legs are very short, terminating in a broad web, which on the fore-feet extends to a considerable distance beyond the claws; but on the hind-feet reaches no farther than the roots of the claws. On the fore-feet are five claws, strait, strong, and sharp-pointed: the two exterior ones somewhat shorter than the three middle ones. On the hind feet are six claws, longer and more inclining to a curved form than those of the fore-feet: the exterior toe and claw are considerably shorter than the four middle ones: the interior or sixth is feated much higher up than the rest, and resembles a strong, sharp spur. All the legs are hairy above: the fore-feet are naked both above and below; but the hind-feet are hairy above, and naked below. The internal edges of the under mandible, (which is narrower than the upper) are
ferrated or channelled with numerous striae, as in a duck's bill. The nostrils are small and round, and are situated about a quarter of an inch from the tip of the bill, and are about the eighth of an inch distant from each other. There is no appearance of teeth: the palate is removed, but seems to have resembled that of a duck: the tongue also is wanting in the specimen. The ears or auditory foramina are placed about half an inch beyond the eyes: they appear like a pair of oval holes of the eighth of an inch in diameter; there being no external ear. On the upper part of the head, on each side, a little beyond the beak, are situated two smallish, oval, white spots; in the lower part of each of which are imbedded the eyes, or at least the parts allotted to the animal for some kind of vision; for from the thickness of the fur and the smallness of the organs they seem to have been but obscurely calculated for distinct vision, and are probably like those of Moles, and some other animals of that tribe; or perhaps even subcutaneous; the whole apparent diameter of the cavity in which they were placed not exceeding the tenth of an inch.

When we consider the general form of this animal, and particularly its bill and webbed feet, we shall readily perceive that it must be a resident in watery situations; that it has the habits of digging or burrowing in the banks of rivers, or under ground; and that its food consists of aquatic plants and animals. This is all that can at present be reasonably guessed at: future observations, made in its native regions, will, it is hoped, afford us more ample
HIPPOBOSCA HIRUNDINIS.

**Character Genericus.**

*Os* haustello brevi, cylindrico, recto, bivalvi; valvulis æqualibus.  
*Antennæ* filiformes.  
*Pedes* unguibus pluribus.  


**Character Specificus, &c.**

*Hipposcoba* alis fubulatis, pedibus hexadactylis.  


*Reaum. ins. 4. t. 11. fig. 1—5.*  
*Schaeff. ic. ins. t. 53. f. 1. 2.*  
*Geoff. ins. par. 2. p. 547. n. 2.*  
*Scop. ent. carn. 1023.*

Genus Hippoboæca a cæteris omnibus insectis *qua diptera* vocantur, insigniter differt, et vinculo quodam connectere videtur insecta *dipeta* et *aptera*; est enim species, Hippoboæca scilicet ovina, quæ alis omnino caret. Generantur præterea Hippoboæcae eodem fere modo quo pleraque aptera. Ex ovo enim permagno, (quod non tam merum ovum quam pu-
ample information, and will make us fully acquainted with the natural history of an animal which differs so widely from all other quadrupeds, and which verifies in a most striking manner the observation of Buffon; viz. that whatever was possible for Nature to produce has actually been produced.

On a subject so extraordinary as the present, a degree of scepticism is not only pardonable, but laudable; and I ought perhaps to acknowledge that I almost doubt the testimony of my own eyes with respect to the structure of this animal's beak; yet must confess that I can perceive no appearance of any deceptive preparation; and the edges of the rictus, the insertion, &c. when tried by the test of maceration in water, so as to render every part completely moveable seem perfectly natural; nor can the most accurate examination of expert anatomists discover any deception in this particular.

The Platypus is a native of Australasia or New Holland, and is at present in the possession of Mr. Dobson, so much distinguished by his exquisite manner of preparing specimens of vegetable anatomy.
pam esse seu chrysalidem notavit Linnaeus) erumpere solet insectum plene formatum. In nidis hirundinis urbicae et rusticae Linnaei non modica plerumque est copia hippoboscae hirundinis; nec raro in ipsis avibus, praesertim in iis quae non plene adoleverint; quibus non parvam necesse est creant molestiam, non solum magnitudine, sed pedibus ad libitum tenaciter infixis, non duplici tantumungue, (ut fit in aliis plerisque insectis) sed sex aequali fere longitudine instructis. Motus ei celer est et inaequalis; saepe etiam retrogradus. Ostenditur in tabula tum vera tum aucta magnitudine.
THE
SWALLOW HIPOBOSCA.

GENERIC CHARACTER.

Mouth consisting of a short, strait, cylindric, bivalve sucker or tube, with equal valves. Antennæ filiform.
Feet furnished with several claws.

SPECIFIC CHARACTER, &c.

HIPPOBOSCA with sharp wings and six-clawed feet.
The sharp-winged HIPPOBOSCA.
The SWALLOW-FLY.

The genus Hippobosca differs remarkably from all other insects of the dipterous tribe, and seems to form as it were a shade or connecting link between the orders Diptera and Aptera; one species, the H. ovina, (commonly termed the sheep-tick) being entirely destitute of wings. The Hippoboscae also resemble most of the apterous insects in their mode of production; the ovum, (which is of uncommon size) enclosing the insect completely formed; so that, as Linnæus observes, it seems rather a purpa or
or ready-formed chrysalis than an ovum. The Hippobosca hirundinis may be generally found in considerable plenty in the nests of Martins and Swallows, and not unfrequently on the birds themselves, especially those which have lately left the nest, or have not attained their full growth. The size of the insect must of necessity render it extremely troublesome to the birds thus infested, to which it is enabled at pleasure to adhere by means of the peculiar conformation of the feet, each of which, in this genus, instead of being furnished with two claws only, as in the generality of insects, is provided with six of nearly equal size. The motions of this insect are quick and irregular, and it frequently moves laterally, and even backwards with great facility. The plate represents it both in its natural size, and as it appears when magnified.
PAPILIO I O.

Character Genericus.

Antenneae apicem versus crassiores, sæpius clavato-
capitae.

Alæ (sedentis) erectæ surfumque conniventes,
(volatu diurno.)


Character Specificus, &c.

PAPILIO alis angulato-dentatis fulvis nigro-
maculatis; singulis ocello caeruleo.


Nymph. gemmat.

OCULUS pavonis.

Goed. ins. t. 1.


Roef. ins. 1. t. 3.

-Urticas depaescitur larva pulcherrimi hujus papi-
lionis; indeque extrema cauda dependens, ut cer-
nere est in tabula, in chrysalidem convertitur mense
Julio; e qua erumpit papilio incipiente Augusto.
THE

PEACOCK BUTTERFLY.

GENERIC CHARACTER.

Antennæ commonly thickening towards the end into a clavated tip.
Wings (when at rest) meeting upwards. (Flight diurnal.)

SPECIFIC CHARACTER, &c.

Orange-brown BUTTERFLY, with angular, dentated wings, spotted with black; with a large blue-shaded eye on each wing.

Alb. inf. pl. 3.
Reaum. inf. 1. t. 25. fig. 1. 2.
Wilk. pap. 55. pl. 3. A. 2.
Harr. aurel. pl. 8. f. k. i.

The caterpillar or larva of this most beautiful butterfly feeds on nettles, and commonly changes into a chrysalis in July; hanging by the tail, as expressed in the plate. The Fly appears in the beginning of August.
FALCO PONTICERIANUS.

***************

CHARACTER GENERICUS.

Rostrum aduncum, basi cera instructum.  
Caput pennis arcte tectum.  
Lingua bifida.  


CHARACTER SPECIFICUS, &c.

FALCO caffaneus, capite collo peckoreque albis,  
cera cærulea, pedibus flavis.  
FALCO PONTICERIANUS.  

Lath. ind. orn. p. 23.  

AQUILA PONTICERIANA.  

Briss. orn. 2. p. 129.

Milvo vulgari fere æqualis est magnitudine species hæc pulcherrima, quam in variis Indiæ Orientalis partibus generatam quasi facram veneratur incolarum superstitio. Variare paululum videtur plumarum color; cum in opere cui titulus Planches Enluminees, depingantur pectus et abdomen stris parvulis fuscis in longitudinem ductis notata, quorum in specimine quod continet Museum Britannicum, unde delineata est nostra figura, ne minima sunt vestigia.

O
THE
PONDICHERRY EAGLE.

Generic Character.
Bill hooked; with a cere or naked skin at the base.
Head thickly beset with feathers.
Tongue generally bifid.

Specific Character, &c.
Chesnut-coloured Eagle, with white head neck
and breast, blue cere, and yellow feet.
PONDICHERRY EAGLE.
Lath. syn. 1. p. 41.
AIGLE DE PONDICHERRY.
Pl. enl. 416.

This elegant species is nearly equal in size to a
kite. It is a native of many parts of the East In-
dies, and is considered as a sacred bird. It appears
to vary a little in point of plumage; the figure gi-
ven in the Planches Enluminees representing it as
dashed down the breast and abdomen with small
longitudinal streaks of brown; of which, in the
specimen preserved in the British Museum, from
which the present figure was drawn, there is not
the slightest appearance.

O 2
MONOCULUS CONCHACEUS.

Character Genericus.

Pedes natatorii.
Corpus cruenta tectum.
Oculi (plerisque) approximati, testae innati.

Character Specificus, &c.

MONOCULUS testa ovali tomentosa.
M. antennis capillaribus multiplicibus, testa bivalvi.
M. ovato-conchaceus.
   Degeer. ins. 7. p. 476. t. 29. f. 5—7.
Cypris pubera.
   Müll. entomol. p. 56. n. 15. t. 5. f. 1—5.

In omnibus fere aquis stagnantibus conspici possit aëstivo tempore Monoculus conchaceus, mytulo deminuto simillimus. Variat moles pro aëtate; interdum grano arenæ vix major, interdum decimaæ fere uncæ parti æqualis. Color, ut plurimum, leviter fuscus, interdum subflavo tinctus.
THE
MUSCLE MONOCULUS.

Generic Character.

Feet formed for swimming.
Body covered by a crustaceous shell.
Eyes (in most species) approximated, fixed in the shell.

Specific Character, &c.

Brown oval MONOCULUS, with downy shell.
Oval-shelled MONOCULUS.
Muscle MONOCULUS.

The Monoculus Conchaceus, so remarkable for its resemblance to a muscle in miniature, may be discovered in almost every stagnant water during the summer months. In size it varies according to age; being sometimes scarce larger than a grain of sand, and sometimes nearly the tenth of an inch in length. Its color is a pale brown, with a slight cast of yellow.
FLUSTRA FOLIACEA.

Character Genericus.

Animal Hydra.
Stirps membranacea, foliacea, cellulosa.

Character Specificus, &c.

FLUSTRA FOLIACEA ramosa, laciniis cuneiformibus rotundatis.

Alga marina πλατυκέφας porosa.
J. Baub. hist. plant. 3. p. 809.

Fucus marinus, &c. telam sereccam textura sva æmulans.
Moris. hist. pl. 3. p. 646. sect. 15. t. 8. f. 16.

FOLIACEOUS FLUSTRA.

GENERIC CHARACTER.

Animal Polype-shaped.
Stem foliaceous, membranaceous, cellular.

SPECIFIC CHARACTER, &c.

FOLIACEOUS branchy Flustra, with rounded subdivisions.
Broad-leaved Horn-wrack.

Ell. corall. p. 70.

FOLIACEOUS FLUSTRA, or Leafy Horn-wrack.

The species of Flustra here represented is of an appearance so perfectly resembling that of a vegetable, that it is impossible, at first view, not to suppose it a real plant. It is not uncommon on the British coasts, and is found attached to shells, rocks, and various submarine substances. Its size is as represented in the plate. It is of a soft substance, and its color is an extremely pale yellowish brown.
TUBULARIA INDIVISA.

Character Genericus.

Stirps tubulosa, simplex vel ramosa, basi affixa. Animal capite tentaculis criptato.

Character Specificus, &c.


Corallina TUBULARIA calamos avenaceos referens. Ell. corall. p. 31. t. 16. f. c.


UNDIVIDED TUBULARIA.

Generic Character.

*Stem* tubular, simple or branched, fixed by the base.
*Animal* crested with tentacula.

Specific Character, &c.

TUBULARIA with simple or undivided stems and twisted joints.
TUBULAR Coralline like oaten pipes.

_Ell. corall._ p. 31.
Oat-straw TUBULARIA, or Tubular Coralline.

This is the largest of the British Tubulariae, and is represented on the plate in its natural size. It is a marine species, and is found on several of our coasts, adhering to rocks, shells, &c. The bodies of the animals are of a pale red, the heads of a bright crimson, the larger or exterior tentacula white, and the tubes or receptacles of a straw color.
PLATYPUS.

Quum de Platypo non ita pridem in hoc operè depicto tractaremus, "non modo excusatost habuimus verum etiam laudatos lectores nostros, sì de re infolia et pene incredibili paululum addubitaverint; et falsi fumus nos met-ipsos oculis nostris vix ac ne vix credidisse." Qui igitur litem dirimendi pari nobiscum flagrantstudio, perlegantque annotaverint Pallas, Guldenstedtius, et Lepechinius de Sorice moschato Linnaei, qui aliqua ex parte ad Platypi similitudinem evidenter videtur accedere, quique, licet in nonnullis Europae regionibus non admodum rarus sit, jejunem tamem depictus est, nec (nisi ab auctorisibus quos jam memoravimus) fatis luculente descriptus. Fatendum quidem est Soricis moschatum pedes posteriores multo latius esse pinnatos quam antiores, quod Platypo contrarium obtigit. Cauda quoque insigniter differt. Certum tamen est Soricem moschatum lepido fallaciaarum experimento egregie posse infervire. Decernet in posterum de miro animali diligens et accurata investigatio, quod in praescens dubium sit et controversium necesse est.
PLATYPUS.

In the description of the animal called Platypus, in a preceding number of this publication, I observed that "a degree of scepticism on a subject so extraordinary was not only pardonable but laudable, and that I almost doubted the testimony of my own eyes with respect to the structure of that animal's beak." I therefore recommend to the attention of those who may be equally zealous in the investigation of a point so interesting, the descriptions given by Pallas, Guldenstedt, and Lepechin of an animal, not indeed very rare in some parts of Europe, but which seems to have been hitherto but indifferently figured, and, till lately, but very imperfectly described, viz. the Sorex moschatus Lin. In this animal, in some particulars, an evident approach seems to be made to the Platypus; and though the structure of the feet differs as to exact similitude, there is yet a general resemblance; except that the authors above mentioned represent the hind feet as much more widely webbed than the fore; the contrary of which is the case in the Platypus: the tail is also of a widely different appearance. It is undeniable however that no animal would so well answer for an experiment of ingenious deception as the Sorex moschatus. Upon the whole this paradoxical quadruped must be left to future investigation, and we must be content at present to remain ignorant of its real nature.
BUCCO BIDENTATUS.

 CHARACTER GENERICUS.
 Rostrum cultratum, laterliter compressum, apice utrinque emarginato, incurvato; rictu infra oculos protenfo.
 Nares pennis recumbentibus obtectae.
 Pedes scanforii.


 CHARACTER SPECIFICUS, &c.
 BUCCO mandibula superiore bidentata.
 BUCCO dubius.

 Lath. ind. orn. p. 206.

 Magnitudine naturali tertia fere parte minor de- pingitur in tabula rarisima avis, Barbariae incola; quae licet habitu et forma generali Ramphastis admodum sit affinis, linguam tamen habet non in pennae similitudinem formatam (qualem habent Ramphastr) sed crassam seu carnosam. In Museo Britannico continetur pulchrum specimen, unde delineata est hae nostra figura.

 P 2
THE TOOTH-BILLED BARBET.

GENERIC CHARACTER.

_Bill_ wedge-shaped, laterally compressed, incurvated at the tip and emarginated on each side; the _riëtus_ or gape extending beyond the eyes. _Nostrils_ covered with recumbent feathers. _Feet_ scanorial.

SPECIFIC CHARACTER, &c.


Barbican.

_Buf. ois._ 7. p. 132.
_Pl. enl._ 602.

This very rare species is a native of Barbary, and is represented about a third part less than its natural size. In general appearance it is extremely allied to the Toucans. The tongue however is not feather-shaped as in those birds, but thick or flethy. The beautiful specimen here figured is in the British Museum.
PHALANGIUM RENIFORME.

CHARACTER GENERICUS.

Pedes octo.
Oculi verticis duo contigui, duo laterales.
Frons antennis pediformibus.
Abdomen rotundatum.


CHARACTER SPECIFICUS, &c.

PHALANGIUM brachiiis dentatis, pedibus primis longissimis filiformibus, thorace reniformi.


Tarantula fusca major:

Brown. Jam. 409. t. 11. f. 3.

Cancellus araneoides.

Petiv. pteriog. t. 20. f. 12.

Generis Phalangii, araneis admodum affinis, si non pulchritudinem, formam tamen singularem et infolitam datur mirari. Species, cujus vera magnitudo in tabula ostenditur, Americæ partes calidiores incolit, morfu dicta non modo summum dolorem, sed interdum etiam gravia absorpti veneni symptomata excitare.
THE
RENIIFORM PHALANGIUM.

Generic Character.

Eight Legs.
Two vertical and two lateral Eyes.
Antennae resembling legs.
Abdomen rounded.

Specific Character, &c.

Phalangium with the arms dentated; the first pair of legs extremely long and filiform; the thorax kidney-shaped.
Great Brown Phalangium.

The genus Phalangium, nearly allied to that of Aranea, is much more remarkable for the singularity than the beauty of its appearance. The present species, which the plate represents in its natural size, is a native of the hotter regions of America, and is said to be of a dangerous nature; the bite exciting not only severe pain, but, in some instances, producing the most alarming symptoms of poison.
BRACHIONUS URCEOLARIS.

Character Genericus.

Corpus contractile, testa tectum, ciliis rotatoriis.

Character Specificus, &c.

BRACHIONUS testa apice multidentata, basi mutica, cauda simplici.

BRACHIONUS capsularis, testa ovata, apice sexdentata, basi incisa, cauda longa bicuspis.

Vorticella urceolaris.


In flagnis Britannicis æstivo tempore non raro conspectus Brachionus urceolaris, affinis admodum est Brachiono Bakeriano Mülleri, qui in præcellenti opere de animalculis infusoriis ambas species depingi curavit. Ob abundantiam Brachionorum interdum quasi pellicula induuntur aquæ obscuræ rubente seu ferruginea. Superat magnitudine hæc species pleuroque congeneres; in guttula puræ aquæ imposita nudo oculo visibilis. Manifesti sunt ovorum racemi sub
sub tempus generationis. Animalculum primus di-
lucide descriptisse videtur ingeniosus Henricus Ba-
kerus, qui in opere cui titulus "Employment for
the Microscope," iconem exculpi curavit, fيدam
fatis, parum tamen elegantem. Color generalis
fusco-rufescit.
THE

BELL-SHAPED BRACHIONUS.

Generic Character.

Body contractile, enclosed in a shell, and furnished at the head with rotatory organs.

Specific Character, &c.

Bell-shaped Brachionus, with the shell divided into several teeth at the top; rounded at bottom; the tail long and bifid at the tip.

The Bell BRACHIONUS.

Tooth-shelled BRACHIONUS.

This species, which is by no means uncommon in the stagnant waters of England during the summer months, is extremely nearly allied to the Brachionus Bakeri of Müller, who in his admirable work on the animalcula infusoria has given figures of both. The Brachioni are sometimes so numerous as to form on the surface of the water a scum of a deep dusky red or ferruginous color. The size of the B. urceolaris exceeds that of many others of this genus; being such as to render it visible to the naked eye, when placed in a drop of clear water. The ovaries or
or clusters of spawn in the breeding season are extremely conspicuous. This animalcule seems to have been first distinctly described by the ingenious Mr. Henry Baker, who in his work entitled *Employment for the Microscope* has given a figure sufficiently exact to determine the species, though not remarkable for its elegance. Its general color is a reddish brown.
CONUS AULICUS.

Character Genericus.

Animal Limax.
Testa univalvis, convoluta, turbinata.
Apertura effusa, longitudinalis, linearis, edentula, basi integra.
Columella lævis.

Character Specificus, &c.

CONUS testa venis reticulatis fasciisque longitudinalibus fuscis interruptis.
Seb. Mus. t. 47. fig. 10—12.
Knorr. vergn. 2. t. 1. p. 1—3. et. 3. t. 19. f. 1.
Regenf. conch. 1. t. 8. f. 25.

In mari Indico præcipue reperta fedem sibi jure vindicat hæc cochlea inter pulcherrimas fui generis. Colore interdum variat; notas tamen semper retinet certas adeo et constantes, ut de specie vix possit dubitari.
THE
PORPHYRY CONE.

GENERIC CHARACTER.

Animal resembling a Limax or Slug.
Shell more or less conic or pyramidal.
Aperture longitudinal, linear, without teeth, entire at the base.
Pillar smooth.

SPECIFIC CHARACTER, &c.

White CONE, with brown reticular veins and longitudinal bands.
Heart-spotted CONE.
Porphyry CONE.

This shell, which is principally found in the Indian ocean, may justly be considered as one of the most beautiful of its genus: in color it sometimes varies, but commonly retains characters so well marked as hardly to admit of a doubt as to the species.
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<td>———— Peacock.</td>
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<tr>
<td>357.</td>
<td>Bee-Eater red-headed.</td>
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<tr>
<td>384.</td>
<td>Beetle Kangaroo.</td>
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<td>363.</td>
<td>Calamary.</td>
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<td>369.</td>
<td>Creeper Leona.</td>
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<td>381.</td>
<td>———— chalybea.</td>
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<td>359.</td>
<td>Cuttle-Fish eight-armed.</td>
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<td>395.</td>
<td>Cone Porphyry.</td>
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<td>373.</td>
<td>Darter black-bellied.</td>
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<td>382.</td>
<td>Epinephelus spotted.</td>
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<td>389.</td>
<td>Eagle Pondicherry.</td>
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<td>350. 351.</td>
<td>Frog paradoxical.</td>
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<td>367.</td>
<td>Frog blue and yellow.</td>
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<td>391.</td>
<td>Flustra foliaceous.</td>
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<td>362.</td>
<td>Gastrobranchus glutinous.</td>
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<td>361.</td>
<td>Goldfinch American.</td>
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<td>387.</td>
<td>Hippobosca Swallow.</td>
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<td>375.</td>
<td>Lonchiusus bearded.</td>
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<td>383.</td>
<td>Madreporre Rofe.</td>
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<td>304.</td>
<td>Monoculus Flea.</td>
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<td>368.</td>
<td>———— Cancroid.</td>
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<td>390.</td>
<td>———— Muscule.</td>
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<td>356.</td>
<td>Moth Polyphemus.</td>
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<td>370.</td>
<td>Nepa great.</td>
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<td>379.</td>
<td>Nais rofrated.</td>
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<td>365.</td>
<td>Oriole red-rumped.</td>
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<td>353.</td>
<td>Pheasant variegated.</td>
</tr>
<tr>
<td>393.</td>
<td>Phalangium reniforme.</td>
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<tr>
<td>385. 386.</td>
<td>Platypus Duck-billed.</td>
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384. Scarabaeus Macropus.
366. Sciæna Cirrofa.
359. Sepia Octopodia.
363. —— Loligo.
349. Sturnus Ludovicianus.
380. Spongia flabelliformis.
372. Sphinx Nerii.
354. Tubularia campanulata.
392. —— indivisa.
359. Turbo petholatus.
378. Trachichthys Australis.

366. Sciæna bearded.
377. Shrike red-backed.
374. { Snail ringent.
374. —— Lamp.
372. Sphinx Oleander.
380. Sponge Fan.
349. Starling Crescent.
378. Trachichthys Southern.
354. Tubularia campanulated.
392. —— undivided.
359. Turbo variegated.