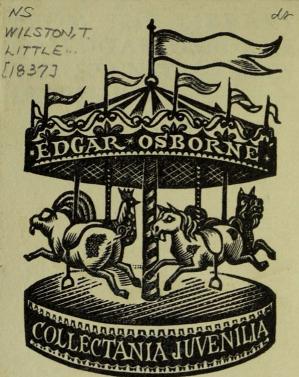
THE LITTLE

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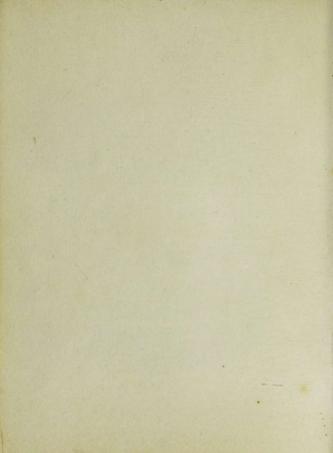


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THE LITTLE

CONCHOLOGIST;

AN INTRODUCTION

To the Classification of Thells.

BY THE REV. T. WILSON.

LONDON:

DARTON AND CLARK,
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PREFACE.

THE study of Conchology has of late years been redeemed from the charge of being a mere list of hard names, by its having become connected with Geology, as well as from the closer investigation which has been bestowed on the nature and habits of Molluscous Animals. The mere arrangment and naming of Shells could never have a just claim

to the name of a Science; but from the associations, which it has thus acquired, it has become a necessary part of some of the most interesting and important branches of Natural History.

The following little book is intended as a manual for constant reference to those who are learning, till they have acquired a ready habit of discriminating the Genera that are found on the British Coasts. It may be well to state, that the *generic* character, that is, the particular traits that are common to all the species included in a Genus, is placed first in each section in a small type;

then follows any remark that may seem necessary, with a notice of the most striking or best known Foreign Species: after which is a list of the British Species, with notices of those that are most easily found, or are most remark-Of course such a tiny volume able. cannot pretend to completeness in regard to particulars; but it is confidently hoped, that it will be found to contain quite as much useful matter as any of the elementary works on the subject, at present before the public, all of which are less portable and much more expensive.

The arrangement adopted is substantially that of Linnæus, as being the

most simple, and on the whole the best for beginners. Such alterations have, however, been made as are necessary to adapt it to our present increased knowledge. The use of technical terms has been avoided as far as was compatible with accurate expression.

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THE LITTLE

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THE INHABITANTS OF SHELLS.

The Animals which live in shells are called Testaceous Mollusca. Their bodies are cold and soft, without a skeleton of bones, and covered with a skin, from which exudes a slimy liquid. They have muscles, nerves, glands, and a heart with a system of vessels in which a cold white fluid circulates.

They are divided into two classes; one called *Acephala* or *without a head*; and the other *Cephala* or *with a head*.

The Acephala have an appearance of great simplicity in their structure, and no distinct organs of sense are perceptible. They inhabit shells, consisting of two or more parts. For the most part they are incapable of locomotion, but some move by a jerk or spring, produced by opening and then violently shutting their shells.

The Oyster is a well known example of the Acephala.

The Cephala have a distinct head, and organs of sense more or less perfectly developed. Most of them move from place to place by determinate contractile movements of muscles in a part of their bodies called the foot. The Snail and the Whelk may be taken as examples.

The Cephala are generally in shells consisting of only one piece.

Shells must generally be looked upon as the armour for the tender bodies of the Mollusca. Some animals of a similar character, such as

the Actinia (Sea Anemone,) and the Sepia (Cuttle fish,) which are not provided with shells, are covered with a tough skin. There are, however, some instances in which the use of the shell is only to enable the animal to float on the surface. The connection between the shell and the animal is in general formed by means of a strong muscle; but in some instances, as the Argonauta, (Paper Nautilus,) it is only by suckers, which cause a vacuum underneath by their close application to the surface of the shell.

The inhabitants of Bivalves and Multivalves are viviparous; those of Univalves, oviparous. The animal is universally furnished with a shell at its birth. The subject of the growth of shell has been closely investigated; but it is one of such extreme difficulty, that no very satisfactory results have been obtained. It appears that the animal has the power of covering the edge of the shell with successive layers of a viscous substance, which gra-

dually hardens and becomes a part of the shell, and this process goes on as long as it lives. The extreme regularity of the markings of some shells is very remarkable, considering this mode of formation. The substance of which they are composed is universally carbonate of lime.

Some of the Mollusca live on vegetable substances and some on animal. Most of the former are furnished with horny jaws, and some of them with teeth; a few of the latter have a simple opening to receive such animalcules as the waves may bring to them; but the greater part have a kind of proboscis by which they seize their prey.

Some use this proboscis for the purpose of boring into other shells, so as to get at the body of the fish inside. It has been supposed that this boring is strictly mechanical, and performed by the aid of the little teeth which are usually found at the end of the proboscis. It seems, however, more probable that the crea-

ture does it by means of a corrosive fluid, which dissolves the shell which comes in contact with it. There are some genera which make use of this perforating faculty to form their habitations, boring their way into chalk or wood. The Pholas and the Teredo are amongst the most remarkable of this kind.

CLASSIFICATION OF SHELLS.

Shells are divided into three classes, which may easily be distinguished, as they depend only on the number of parts of which the shell is composed. They are termed

I. Univalve, or consisting of one part, as the Buccinum (Whelk,) or Turbo (Periwinkle;) they are inhabited by Mollusca Cephala.

Note.—The small coverings or opercula, usually somewhat flexible, (called in the Periwinkle the cap,) which many univalve shells are furnished with, are not considered as part of the shell.

II. BIVALVE, or consisting of two parts, as the Ostrea (Oyster,) Cardium (Cockle,) or Mytilus (Muscle.) They are inhabited by Mollusca Acephala.

III. MULTIVALVE, or consisting of many parts, as the Lepas, (Barnacle,) or the Pholas (Chalk Borer.)

PARTS OF A SHELL.

In order to understand conchological descriptions, it is important to obtain a clear notion of the various parts of a shell. Those of a Univalve are thus distinguished. see Fig.

- 1. Plate I. The example is the Buccinum Undatum, or common Whelk.
 - a The space included in the bracket a, is the spire.
 - b Each turn of the spire is called a whorl, and the largest is called the body whorl.
 - c The aperture.

- d The canal.
- e The base; when this part is lengthened out, it is called a beak.
- f The outer lip.
- g The inner or columellar lip.
- h The suture.
- i The apex.

If the shell is carefully broken, a continuous support will be seen running the whole length of the spire, called the columella, or pillar. See $c \, c$ Fig. 2.

The parts of a bivalve are as follows. See Figs 3 & 4. The shell is the *Venus Chione*, or Smooth brown Venus.

- a The space within the bracket is termed the hinge.
- b The beaks.
- c The umbo.
- d The disk.
- e The base.
- f The tooth.
- g The ligament.

The two parts into which the shell is divided are called right and left valves, and, to distinguish them, when the complete shell is placed with its hinge towards you, and the ligament below the beak, the left valve, Fig. 5, is opposite the left hand, and the right valve opposite the right hand.

EXPLANATION OF TERMS.

Anterior Slope, the side of the beaks of a Bivalve where the Ligament is placed, the opposite side being called the Posterior Slope.

Apex, in Univalve shells, the top of the Spire. The Plural Apices is applied to the points of Bivalves, over the hinge, which are also called Beaks.

Base, the part of a shell, whether Univalve or Bivalve opposite to the Apex.

Columella, the line which runs up the middle of the spire of Univalves; called also the Pillar.

Complicated, folded together.

Convoluted, when the whorls descend from the apex towards the body whorl, so as to form a cone. Involuted means that the whorls are included in the body whorl. Involute is sometimes used to express the absence of a spire, as in the limpet.

Crenated, notched.

Dessepiment, a division between two chambers of a shell.

Effuse, open, having the lips so separated at the base that water would run out before it reached the margin.

Entire, the aperture is said to be entire when the margin all round it is perfectly level without a canal.

Equilateral, applied to Bivalves, when the sides of the shell on each side of the beaks are alike.—Inequilateral, when the sides are unlike.

Equivalve, in Bivalves, having the valves alike.—Inequivalve, having them unlike.

Involute, see Convolute.

Ligament, a cartilage which connects the valves, commonly on one side of the beak.

Striated, marked with fine parallel lines, either by ridges and furrows, or by two different colours.

Teeth in Univalves are small protuberances on the lips; but in Multivalves on the hinge. In the latter they are said to be articulated when that on one shell fits into a cavity in the other.

I. UNIVALVES.

ARGONAUTA.—PAPER SAILOR; OR, PAPER NAUTILUS.

Spiral, one celled.

THE shells of this genus are remarkable for their delicacy and thinness. Their form is extremely elegant, and they are much valued as ornaments. The colour is generally white or of a blueish tinge, running into brown and black towards the outer edge; the size is very various. The A. Argo is sometimes twelve inches in diameter, while there are some species extremely minute.

There are no British species. The most common is the A. Argo, or Oriental Nautilus,

which mostly comes from the Cape of Good Hope. The A. Vitrea is very rare and extremely beautiful.

NAUTILUS .- PEARLY SAILOR.

With a spire divided into several chambers, communicating with each other by small apertures, which, taken altogether, are called the Siphuncle.

In most of the Nautili the spire is on a plane, so that there is no part of the shell extending beyond the body whorl. In some species the whorls touch, and are partially included in each other, as in the beautiful shell N. Pompilius, Chambered Nautilus; in others they are detached, as in the small N. Spirula, Spiral Nautilus. Several of these species, like the first mentioned, are of a dingy white, with brown or yellow marks, but some are semi-transparent, of a delicate

white, as the Spirula. The fish are of the Sepia, or cuttle-fish kind, provided with several long arms. They use the shell as a sort of float, which, when they want to come to the surface of the sea, they empty of water by means of the Siphuncle.

The English Nautili are all very small. N. Lævigulatus, smooth Nautilus...N. Rotatus, wheel Nautilus...N. Depressulus...N. Crispus, keel edged Nautilus...N. Crassulus, strong Nautilus... All exceedingly minute with the whorls touching each other.

The following are considerably elongated: N. Semilituus...N. Carinatulus...N. Costatus...N. Rectus, straight Nautilus...N. Spinulosus.

There is one fresh water species found in Kent, N. Lacustris.. sometimes called Segmentina.. it is about a quarter of an inch in diameter. (See P. I. Fig. 8.)

CONUS .--- CONE.

Convoluted; aperture longitudinal, effuse; without teeth; pillar smooth; form conical.

This is a very beautiful genus, comprising a very large number of species, all distinguished by their form, and nearly all by their beauty of lustre and colour. There are no British species. The *C. Tesselatus*, or Mosaic Cone, and *C. Ebræus*, or Hebrew Cone, are amongst the best known species.

CYPRÆA.-COWRY.

Involuted; form nearly oval; aperture linear and effuse at each end; lips turned inwards with teeth.

Many of the rich variety of foreign cowries are well known from their use as ornaments, distinguished by their beautiful colours and fine polish. CYPRÆA EUROPEA.—Nun Cowry.—Of a pale flesh colour, transversely ribbed; usually about half an inch long,—abounds in the island of Guernsey. (See P. I. Fig. 7.)

BULLA .- DIPPER OR BUBBLE.

With a spire; form nearly oval, inflated; aperture oblong, longitudinal; without teeth; the base entire; columella, oblique and smooth.

In many of the species, the fish is so large as to include, and nearly conceal, the shell. It is provided with a very curious gizzard, which both masticates and digests its food. (See P. I. Fig. 6.) There is no operculum, which indeed could be of no use from the form and size of its body in relation to the shell; and in consequence, it always keeps in deep water, out of the reach of crabs and other enemies. The B. Ovum (poached egg) and B. Volva, weaver's shuttle) are beautiful foreign species of this genus.

B. Aperta, broad shuttle.. B. Hydatis, paper shuttle.. B. Plumula.. B. Catena.. B. Lignaria, wood dipper.. Involuted, of a yellow or brownish colour, with a surface much resembling the grain of wood.. B. Akera, all distinguished by thin shells and broad openings.

These have a prominent spire: B. Fontinalis. .. B. Rivalis. .. B. Hypnorum, fresh water shells found in both streams and pools; known also as the genus Physa; they are remarkable for a sort of convulsive rapidity in their motions.

VOLUTA.-VOLUTE.

Convoluted; no beak; often effuse; columella curiously twisted, so as to produce several plaits or teeth on the columellar lip.

This genus includes the shells commonly known by the names of Mitres, Melons, and Olives. The V. Musica, music shell, is one of

the most beautiful species; but nearly all are remarkable for symmetry and beauty of surface. The British species are among the smallest and plainest.

These are minute shells with a thick outer margin, V. Pallida.. With a depressed spire and effuse, V. Catenata.. V. Lævis.

V. Denticulata and V. Triplicata, toothed Volute, and three toothed Volute, found chiefly in the Island of Guernsey... V. Alba, white Volute, on the coast of Kent.. V. Pellucida.. V. Unidentata.. V. Insculpta.. V. Interstineta, in the West of England.

BUCCINUM .- WHELK OR TRUMPET.

Convoluted; form gibbous; aperture nearly oval, ending in a short canal turning away from the outer lip; columellar lip expanded.

This genus includes the shells called Tuns, Helmets, Harps, Needles, and Scoops.

B. Undatum, a thick coarse shell covered with undulating ribs, striated both longitudinally and transversely. The fish is eaten; and it is, therefore, often seen in our markets.—B. Lapillus, has the apex smaller and more pointed; and the fish produces a liquid which dyes of a rich purple. B. Bilineatum, smooth net helmet.. B. Hepaticum.. B. Reticulatum.. B. Lineatum and B. Acicula, are minute shells.

STROMBUS .- CLAW SHELL.

Convoluted; aperture dilated with the outer lip expanding; a beak turning to the left.

INCLUDES the kinds called Claw shells and many of the Wing shells.

S. Pes Pelicani, the outer lip very like a bird's foot. (See P. II. Fig. 3.) S. Costatus, ribbed Strombus, with no teeth.

MUREX .- ROCK SHELL.

Convoluted; surface rough with spines, or with a sort of fringes called Varices; aperture oval with a nearly straight canal, and in many species with a very long beak.

This genus comprises the Thorny Woodcock, (M. Tribulus) the Spider shells, and several sorts commonly termed Whelks. Some species resemble in some degree the genus Buccinum in their general form. M. Erinaceus, rough ridged whelk. M. Reticulatus. M. Corneus. M. Gracilis. M. Muricatus. M. Purpureus. M. Attenuatus.

TROCHUS .- TOP SHELL.

Convoluted; form decidedly conical; pillar oblique; aperture angular.

THE conical form of this genus is its leading feature. Most of its species have a very bril-

liant pearly lustre when the outside has been taken off by some corrosive acid. The *T. Pharaonis*, strawberry shell, and *T. Perspectivus*, stair case shell, are amongst the foreign species.

T. Magus. T. Obliquatus. T. Patholatus. T. Terrestris, is a land shell, small and very remarkable, sometimes called Helix Spinulosa. T. Striatus. T. Ziczac. T. Crussus.

TURBO .- TURBAN SHELL.

Convoluted; form conical; aperture circular and remarkably perfect.

This genus is distinguished from the *Trochus* by the shape of the aperture. Amongst the foreign species are the *Turbo Scalaris*, or True Wentle trap;* in which there is no colu-

* This is a corruption of the German, Wendle Treppe, a winding stair case.

mella, and the Turbo Clathrus, or false Wentle trap, which, is much more taper, and has a columella uniting the whorls in the usual manner. The former is so rare, that good specimens of it have been sold for £25.

T. Rudis. T. Petræus . T. Jugosus. T. Crassior. T. Littoreus, the common periwinkle; T. Tenebrosus, which is of a chocolate colour.

These have a striated surface, T. Crinex, or bug periwinkle, T. Calathiscus.

T. Auricularis, which is umbilicated, i. e. with a hole at the base of the columella, found in Southampton water. T. Vinctus and T. Thermalis, are also umbilicated.

T. Bidens, T. Laminatus, and T. Labiatus, are reversed shells, and have teeth at the aperture.

Minute shells—T. Costatus. T. Semicostatus. T. Punctura. T. Elegantissimus. T. Arenarius. T. Labiosus. T. Ventrosus. T. Interruptus. some of which are found in great quantities on the shores of bays and

arms of the sea. T. Parvus, found in Guernsey.
T. Fasciatus, a land shell, found in immense quantities in the West of England.

Above seventy species of *Trochus* exist in Britain, most of which are very minute.

HELIX .- SNAIL.

Convoluted; semi-transparent; thin and fragile; aperture nearly circular and very entire.

PERHAPS the most extensively diffused of all genera. Found in all climates in fresh water and on land; amongst plants and on the driest deserts: a few species exist in the sea. Some of the land species lie dormant in winter, and are then covered with an operculum, which falls off in summer.

This genus is divided into several very distinct families, which are treated by those who make a more exclusive study of fresh water shells as separate genera. The first of these is the *Helix*; the character of which is

Orbicular, thin; with a conical spire; rather obtuse; aperture nearly semicircular, the margin being interrupted by the whorl next the last

H. Nemoralis, or coppice snail, a glossy shell, handsomely striated, colours red, brown, and white. H. Hortensis, garden snail, nearly globular, smooth, yellow or brownish, with bands like the above, but less. (P. II. Fig. 7.) H. Arbustorum, H. Cantiana, Kent snail... H. Rufescens, deeply umbilicated ... H. Sericia, of a yellowish horn colour, and hairy... H. Pisana .. H. Crenulata .. H. Spinulosa .. H. Pomatia, eatable snail; abounds in Buckinghamshire, Surrey, Bedfordshire, and some other counties. Eaten in considerable quantities on the Continent during Lent; and once used as an article of food in our own country. Its size is larger then that of most English snails; the shell is nearly globular, with brown bands, and the columellar lip much turned over. (P. II. Fig. 8.) H. Ericetorum, heath snail. H. Aspersa, or Grisea, the commonest of all snails, and the pest of gardens, with a wrinkled coat. H. Fusca. H. Nitens of a greenish horn colour... H. Crystallina.

Another division is called *Planorbis*. (See P. II. Fig. 9.)

Shell circular; flat; dish like; the whorls turning horizontally round each other, something like those of the Nautilus.

H. Planorbis; H. Complanata; H. Rhombea; H. Vortex; H. Cornea.

A third division is called Limneus. (See P. II. Fig. 10.)

Shell oblong, and often with a very acute spire; a single fold in the middle of the pillar; entire at the base.

H. Auricularia. H. Peregra. H. Limosa. H. Glutinosa. a very delicate shell, nearly globular... H. Stagnalis

NERITA .- HOOF SHELL.

Convoluted; aperture semicircular; columellar lip strikingly truncate, in a transverse direction, and flat

The most common of this genus are marked with black spots on a white ground. The best known foreign species have teeth curiously situated on the columellar lip... N. Peloronta, bleeding tooth Nerite.. N. Bidens.. N. Tesselata, &c.

N. Pallidula.. N. Carena, tabby cat shell.. N. Littoralis.

HALIOTIS .- EAR SHELL.

Dilated; ear shaped, mostly with a row of holes on one side; depressed spire on one side. Fish adheres to rocks by a broad foot.

H. Iris and H. Splendens, are very remarkable. These beautiful species of this genus is from New Zealand and Australia.

H. Tuberculata, common Ear shell, or Aumer, abounds in the island of Guernsey. (P. III. Fig. 1.)

PATELLA.-LIMPET.

Dilated; conical; no regular spire. Fish adheres strongly to rocks by a broad fleshy foot.

P. Pellucida. P. Lævis. P. Ungarica P. Vulgata, common limpet. P. Intorta, cone much inclined... P. Fissura, with a small slit in the margin... P. Lacustris, a fresh water shell.

DENTALIUM .- TOOTH SHELL.

In the form of a tube slightly curved and tapering.

MOSTLY found on sandy shores on the South of England and the Channel Islands.

D. Entalis, common tooth shell. D. Dentalis, striated tooth shell. (P. III. Fig. 4.)

SERPIILA .- WORM SHELL.

Tubular; irregularly contorted; mostly adhering to other substances, with frequent partitions.

S. Triquatra, triangular worm shell. S. Intricata. S. Vermicularis, round worm shell. (P. III. Fig. 5.) S. Tubularia. S. Semilunum, never adhering to other substances.

TEREDO .- SHIP WORM.

Tubular; lodged in woody substances; with hemispherical valves at each end.

PIERCES the hardest oak, probably by means of a solvent liquid, and thereby very destructive to shipping. See the remark under the genus Pholas.

TEREDO NAVALIS.—Common ship worm, from three to twelve inches long. (P. III. Fig. 6.)

II. BIVALVES.

MYA .- TROUGH SHELL OR GAPER.

Valves alike; gaping at one end; hinge with one broad tooth, broader at one end than the other, placed beneath the beak; form mostly oval, but some species nearly round, and others angular, with ears.

THEY generally burrow in sand, and are provided with a thick brown coating, or *Epidermis*. When this is removed, the shell often exhibits rich prismatic hues.

M. Truncata, abrupt gaper, looks as if it had been cut off at one end. The fish is furnished with a proboscis, which it can protrude several inches: this species is eaten in some countries. M. Arrenaria. M. Declivis. M.

Prætensus...M. Distorta...M. Bidentata, with two teeth at the hinge...M. Purpurea...M. Prismatica.

The following are distinguished by the teeth fitting into the opposite valve:—M. Margaritifera, a river shell, which produces pearls; covered with a black wrinkled skin, which fringes the margin; thick and ponderous.. M. Prata, also a river shell.. M. Suborbicularis.. M. Inæquivalvus.

SOLEN .- RAZOR SHELL.

Valves alike; gaping at both ends; hinge with one small taper tooth, sometimes double, not often inserted in the opposite valve; mostly brittle, and covered with an epidermis.

In many species the breadth of the shell is more than six times its length. They are found on most sandy shores, where they bury themselves with great rapidity. The following are very wide and entirely open at both ends:—S. Siliqua, pod razor shell; nearly cylindrical; square at one end and rounded at the other.. (P. III. Fig. 11.) S. Vagina, sheath shell, square at both ends, and much flatter.. S Ensis, sword shell, more curved and more slender.. S. Pellucidus.

The following are oblong:—S. Fragilis.. S. Coarctatus.. S. Minutus.. S. Vespertinus.. S. Sauamosus. found in Dorsetshire.

TELLINA.-TELLEN.

Valves alike; form generally broader at one end than the other; hinge with three teeth, which distinguishes it from some of the oblong species of Sclen; in the fore part of one valve a convex fold, and in that of the other a concave one; with the anterior slope more or less compressed.

T. Radiata.. T. Fragilis.. T. Oblonga.. T. Levigata.. T. Punicea.. T. Inæquivalvus.. T.

Depressa. T. Tenuis. T. Striata. T. Planata. The following species have nearly round shells:—T. Remies. T. Reticulata. T. Crassa, Island of Guernsey. T. Lactea. T. Rotundata. T. Zonata.

These are found in fresh water, T. Lacustris.. T. Cornea.

CARDIUM .- COCKLE OR HEART SHELL.

Valves alike; generally very convex; shape generally round, longitudinally ribbed, with a crenated margin, the edges of the shells fitting close together; hinge with four teeth, two near the valve and one on each side, at a little distance, all locked into the opposite valve.

This shell takes its name from the Greek word for a heart, from the form it bears when looked at on the edges of the valves with the hinge upwards. The fish mostly buries in the sand.

C. Edule, common cockle, eaten by poor

people.. C. Farciatum.. C. Elongatum.. C. Echinatum, prickly cockle.. C. Aculeatum.. C. Exiguum.. C. Rubrum.. C. Lævigatum, smooth cockle.

MACTRA.-KNEEDING TROUGH.

Valves alike; principal tooth of the hinge, just under the beak, complicated, and having a small hole on each side, which may be considered characteristic of the shell. One tooth on each side at some distance, and inserted into each other, the teeth always remarkably thin. Form, oblong or approaching a triangle.

THE Colour of these shells is mostly lilac, or a dull white tinged with blue and yellow. They are thin, light, and often semi-transparent.

M. Stultorum. M. Triangularis. M. Radiata. M. Solida. M. Truncata. M. Tenuis. M. Fragilis. M. Hians. M. Glauca. M. Listeri. M. Planata.

DONAX.-WEDGE SHELL.

Valves alike; hinge with two central teeth, and one at some distance, on one side; mostly approaching a triangle and always closely resembling a wedge; often gaping. Margin often CRENULATE, or ending in small teeth, fitting between those of the opposite valve.

D. Trunculus. D. Denticulata, very rarely found on our coasts. D. Castanea, of a chesnut colour. D. Plebeia. D. Complanata. D. Irus.

VENUS .- VENUS.

Valves alike; inequilateral; front margin flattened; forms varying from nearly circular, to nearly oval; hinge almost universally with three teeth very near each other, the middle one longitudinal, the other diverging; beak turned away from the ligament. (See Plate, I. Figs. 3 & 4.)

THE V. Mercenaria, a thick obliquely heart-shaped shell, thick, and of a grey brownish,

or sometimes rich purple colour, with a white inside, is used by the North American Indians for making their wampum belts, which are given by one to another in token of friendship; the shells are cut into strips and strung together. They are also used as money, and by the women as ornaments.

The following are nearly heart-shaped:—
V. Fasciata, thick ribbed Venus, a triangular shell, marked with very distinct concentric ridges. V. Cassina, broad ribbed Venus. V. Cingenda, girdled Venus. V. Excavata. V. Spinifera, thorny Venus, found in the West of England. V. Verrucosa, trusty Venus. V. Minima, red streaked Venus. V. Gallina, hen Venus. V. Ovata. V. Triangularis. V. Chione, the beautiful, well-known, smooth brown Venus. V. Spuria. V. Exoleta. V. Undata. V. Spuria. V. Decussata. V. Perforans, piercing Venus, bores into lime-

stone; found in Devonshire.. V. Virginea.. V. Aurea.

The following is nearly circular:—V. Tig-rina, tiger Venus.

ARCA .- ARK.

Valves alike; inequilateral; forms very different in the various species, often oblong, sometimes circular; hinge with a great number of sharp teeth, fitting between each other in the opposite valves, in some species placed in a straight line, and in others in a curved one.

Most of the species lie buried in the sand, but a few adhere to rocks by means of a *byssus* or beard.

These have the teeth of the hinge in a straight line, and are oblong in form:—A. Noæ, Noah's Ark, a singular looking shell, of a darkish brown colour. (P. IV. Fig. 9.) A. Imbricata. A. Lactea.

The following have the teeth in a curved

line, and are of a circular form:—A. Glycymeris, orbicular ark, found chiefly in the Island of Guernsey.. (P. IV. Fig. 2.) A. Pilosa.

OSTREA.-OYSTER, SCALLOP, OR PECTEN.

Valves generally unlike; with small ears; hinge without teeth, but having an ovate eavity, in which an elastic cartilage is fixed, and in most species with lateral transverse grooves.

This genus is divided into two sub-genera; the Pecten and the Oyster. The Pecten, or Scallof, is of a circular form, with very distinct ears, and having very regular diverging furrows from the beak to the margin; several of these are equivalve. Their colours are often very brilliant. The fish have, in common with several other testacea, the power of leaping, by suddenly opening and closing their shells, and are provided with a

very strong muscle for that purpose, often to be seen in the shells. At times they float on the water, with one shell erected as a sail. All the species of Oyster are of very irregular shapes, covered with scaly laminæ, with the upper valve small and flat, the other convex; inside pearly white. They scarcely ever move from the spot of rock to which they first adhere.

The British species of the division Pecten are O. Maxima, greater scallop, often eaten; found in great quantities on the coast of Sussex and many other parts This shell was formerly worn in the hats of Pilgrims. O. Jacobæa.. O. Fasciata, all with equal ears. With unequal ears, O. Cinnabarica, red Scallop.. O. Sinuosa.. O. Opercularis.. O. Lineata. O. Obsoleta.. O. Lævis.

The following species of OYSTER is well known, and distinguished by its coarse rough valves.—O. Edulis common eatable oyster.

SPONDYLUS.—THORNY OYSTER; OR, ARTICHOKE.

Inequivalve; one valve much flatter than the other; hinge with two recurved teeth.

The distinguishing mark of this genus is that all the species are covered with spines or ramifications. There are no British species. They generally come from the Indian Ocean. The best known is *S. Gædaropus*, or Thorny red Artichoke.

ANOMIA, -ANCIENT LAMP.

Valves unlike, one flattened and the other considerably convex towards the beak, which turns over the hinge. One of the valves in almost all the species has a hole near the hinge; hinge with a linear projection on the flat valve, united to a strong ligament on the other valve. The interior often has a silvery appearance. Generally thin and semi-transparent.

The use of the hole is for the fish to protrude part of its body, by which it adheres to various substances, mostly shells of larger animals. The genus is divided into two families, one of which is commonly known by the name Anomia, and bears a very general resemblance to the oyster, and, like it, seldom moves from the spot to which it first adheres. The other family is termed Terebratula, and is distinguished by a very graceful form; no species of this family exists in Britain.

A. Ephippuim, wrinkled Anomia, often found adhering to oysters.. (P. IV. Fig. 4.) A. Cepa, onion Anomia.. A. Aculeata.. A. Undulata, striated Anomia.

MYTILUS .- MUSCLE.

Surface rough; hinge generally toothless, marked with a long furrow, which in some species is waved; form commonly a long oval; mostly fixed to rocks and stones by a Byssus, or beard of fine filaments, but some species perforate rocks and large massive shells.

M. Edulis, common eatable muscle.. M. Pellucidus.. M. Discors.. M. Hirundo, swallow muscle (P. III. Fig. 7.) so named from a fancied resemblance to a swallow flying; found chiefly in the west of England.

The following burrow in rocks:—M. Ambiguus.. M. Rugosus.. M. Præcisus.. M. Lithophagus, seldom found in Britain.

PINNA .- FIN OR WING SHELL.

Valves alike; very fragile; gaping at one end; furnished with a byssus; shape approaching a triangle; a cut towards the beak; hinge toothless, and the valves united by a long external ligament.

THE byssus of this creature is used as a sort of silk, for the sake of which it is caught by the inhabitants of the islands of the Mediterranean sea, where there are some very large species, often two or three feet long.

P. Pectinata, spiny Pinna.. P. Carnea, flesh-coloured Pinna. (P. IV. Fig. 6.)

III. MULTIVALVES.

PHOLAS. -- STONE BORER.

valuable with the linear state value of a ditte on hide

Two primary valves, with several smaller ones situated about the hinge; hinge united by a cartilage, and having a long slender tooth turned back in each valve; open at one end, generally at both.

Some of the shells of this genus are of a brown colour; but the commonest species are white with the surface beautifully reticulated, looking as if it were covered with fine lace. It is not known by what means the fish makes its habitation, but it is generally found in a hole by itself, bored in limestone, chalk, or wood.

As it grows, it enlarges the cavity inside, but does not alter the opening. It has been conjectured that the process is purely mechanical, effected by the rotary motion of a sort of proboscis; but it seems more likely that it is effected chemically, by a solvent liquid which the animal is provided with. This is, perhaps, more probable from the circumstance that a phosphorescent fluid oozes out of its shell, and the phosphorescent fluid of other animals, as the *Acalepha*, is known to be corrosive. The *Pholas* is oftenest found at the bottom of chalk cliffs.

P. Dactylus, prickly piercer. (P. IV. Fig. 8.) P. Candida, white piercer, which is the commonest of the genus in the south of England ... P. Crispata. P. Parva. P. Papyracea, a very thin shell, with one end truncated.

LEPAS.—BARNACLE.

More or less of a conical form; valves erect and unequal, varying in number, but generally six, affixed to

This genus is divided into two very distinct families, one known as the proper Lepas, the other Balanus.

The Lepas is found united to rocks or to drift wood by a long fleshy peduncle, often of a flesh or orange colour, and very flexible. The form of the shell is compressed. They occur in great numbers on the coast of Sussex. The shell of the Balanus is affixed directly to the substance on which it dwells, and some of the species look almost like limpets. The fish of the Lepas and Balanus are very similar, and both are distinguished by a very curious bunch of tentacula or feelers, resembling a curl of hair.

The species of LEPAS, known on our coasts

are L. Anatifera, duck barnacle.. (P. IV. Fig. 11.) L. Scalpellum.. Anserifera, all closely resembling each other.. L. Sulcata. The species of the Balanus, are L. Balanus, acorn shell, the common barnacle.. L. Balanoides, smooth barnacle.. L. Conoides.. L. Elongata.. L. Rugosa, wrinkled barnacle.. L. Punctatus.. L. Radiatus, rayed barnacle.. L. Striatus.. L. Spongeosa, spongy barnacle, with a curious appendage at the base, like a small saucer.

CHITON .- COAT OF MAIL.

Several valves, mostly eight, arranged on the back of the animal longitudinally, the margin of one valve resting on the back of the next, connected by an elastic membrane.

This genus is so peculiar that it can never be confounded with any other. The animal can roll itself into a ball, like a wood-louse, which, indeed, it considerably resembles. It sometimes remains at the bottom of the sea rolled up, and at other times adheres to rocks.

C. Fascicularis, sometimes found adhering to oysters on the west coast of England. C. Punctatus. C. Albus. C. Lævis. None of these are very common.

INDEX

OF

The Common Names of Shells.

The following Table is intended to assist the early progress of the Student of Conchology, by enabling him to find the scientific place of those shells which are most generally known, so as to have acquired a vulgar name. It should be observed that these names are in almost all instances very loosely applied, by those who deal in shells, and other persons who are ignorant of Conchology, to dissimilar species and even to distinct genera; reference to this Index may, therefore, not always prove

satisfactory. When the names are more properly applied, many of them are used to designate whole genera; we have distinguished such by printing them in capitals.

Abbot Shell... Conus Abhas
Acorn Shell.. See Barnacle
ANTIQUE LAMP.... ANOMIA
ARK.... ARCA
Ark (Noah's).... A. Noæ
ARTICHOKE... SPONDYLUS
— (Orange)... S. Aurantuis
Artichoke (Thorny Red)... S. Gæduropus
Ass's Ear... Haliotis Asinina
Aumer... Haliotis Tuberculata
Awl Shell ... Bulla Terebellum

BARNACLE...LEPAS
Barnacle (common) or Acorn Shell...L.
Balanus

Barnacle (Bell Shaped)....L. Tintinnabulum

Barnacle (Club) L. Elongata

Barnacle (Duck)....L. Anatifera

Barnacle (Wrinkled) L. Rugosa

Bean Shell.... Mytilus Faba

Bishop Shell.... Conus Episcopus

Blackamoor's Tooth.... Cypræa Europea

Bleeding Tooth.... Nerita Peloronta

Boat Nautilus; or, Boat Shell.... Argonauta

Boat Volute ... Voluta Navicula

BORER PHOLAS

BUBBLE BULLA

Bucket Shell.... Argonauta Haustrum

Cat's Foot.... Ostrea pes felis
Chinese Bonnet.... Patella Sinensis
Chinese Obelisk.... Murex Obeliscus
CHITON.... CHITON
CLAM.... CHAMA
Clam (Gigantic).... C. Gigas
— (Heart).... C. Cor

Clam (Spotted, or Bear's Paw).... C. Hippopus

CLAW SHELL ... STROMBUS

COCKLE ... CARDIUM

Cockle (Common).... Cardium Edule

Cockle (Prickly).... C. Echinatum

Cock's Comb.... Ostrea Crista Galli

CONE.... CONUS

COWRY.... CYPRÆA

Cowry (Mole).... C. Talpa

- (Money, or Trussed Fowl).... C. Moneta
- (Mouse).... C. Mus
- (Nutmeg).... C. Arabica
- (Saffron Throated, or Brown Mouthed)

 C. Vanelli
- (Striped).... C. Zonata
- (Tortoise Shell).... C. Testudinaria
 - (Vetch).... C. Cicercula

Crozier.... Nautilus Lituus, or sometimes Nautilus Spirula

Cup and Saucer.... Patella Equestris

Devil's Claw.... Strombus Chiragra

Diana's Ear ... Strombus Auris Dianæ

EAR SHELL...HALIOTIS
Ear, several species of VOLUTA and of
STROMBUS, are thus called

FIN SHELL... PINNA
Fool's Cap.... Patella Ungarica

GAPER....MyA Geometrical Stair Case.... Trochus Perspectivus

Glory of the Sea.... Conus Gloria Maris

Hammer Shell.... Ostrea Malleus
Harps; many species of Buccinum are termed
Harps: the most generally known by
the name is B. Harna

Heart Shell, several species of CARDIUM, are so termed

Hedge-Hog Shell.... Spondylus Histrix

Helmets, many species of BUCCINUM are so called HOOF SHELL....Nerita Horse Tooth....Nerita Plicata

Judas's Ear.... Voluta Auris Judæ

KNEADING TROUGH.... MACTRA KNIFE HANDLE.... SOLEN

LAMPET. . . PATELLA

Magpie Shell.... Turbo Pica

Melon Shell.... Voluta Olla and V. Melo

Midas' Ear.... Haliotis Midæ

Midas' Ear Volute.... Voluta Auris-Midæ

Mitre Shell.... Voluta Episcopalis

Money Shell.... Cypræa Moneta

Mulberry Shell.... Mytilus Morio

MUSCLE.... MYTILUS

Music Shell.... Voluta Musica

NACRE.... PINNA

Needle, several species of Buccinum and Turbo, of a slender form, are so called

NERITE NERITA

Olive....Voluta Oliva. Several other species of Volute of nearly a cylindrical form are called Olives

Onion Shell.... Anomia Cepa

OYSTER....OSTREA

Oyster (Common) Ostrea Edulis

PAPER NAUTILUS, OR SAILOR....ARGO-NAUTA

Parrot's Beak.... Anomia Psittacea

PEARLY SAILOR ... NAUTILUS

Pelican's Foot Shell.... Strombus pes Pelicani

Periwinkle.... Turba Littoreus

Pewett's Egg.... Bulla Ampulla

PIERCER PHOLAS

Piercer (Prickly).... Pholas Dactylus

— (Paper)....P. Papyracea

Poached Egg.... Bulla Ovum

Ram's Horn.... Nautilus Spirula RAZOR SHELL.... Solen ROCK SHELL.... MUREX

Satchel Shell.... Pinna Saccata
Scallop, one of the sub-genera of OSTREA
Scallop (Great).... Ostrea Maxima
Scoop; several species of BUCCINUM, having

the aperture very wide are called SCOOPS

SCREW.... TURBO

SEA WING....PINNA

Sea Nut... Bulla Naucum
SHIP WORM... TEREDO

SNAIL ... HELIX

Snipe; several species of MUREX, are so called

Spider Claw Shell.... Strombus Lambis Spider Shell.... Murex Rota

Stair Case Shell.... Trochus Perspectivus

Strawberry Heart.... Cardium Unedo

Strawberry Shell.... Trochus Pharaonis

Strawberry (White).... Cardium Fragum
Sun Shell (Rising).... Solen Oriens
—— (Setting).... Solen Occidens
Swallow Shell.... Mytilus Hirundo

Telescope Shell.... Trochus Telescopium
TELLEN.... TELLINA
THORNY OYSTER.... SPONDYLUS. See

Thorny Snipe.... Murex Scolopax
Thorny Woodcock.... Murex Tribulus
TOOTH SHELL.... DENTALIUM
TOP SHELL.... TROCHUS

Tower; several species of MUREX are so designated

Tower of Babel.... Murex Babylonius
Triton.... Murex Tritonis

TRUMPET SHELL ... MUREX

Tulip Shell.... Murex Tulipa

Tun; many species of Buccinum are thus called

Tun (Ribbed).... Buccinum Nodosum

TURBAN SHELL ... TURBO

VENUS.... VENUS
Venus' Heart.... Cardium Cardissa
Venus (Hen).... V. Gallina
Venus (Polished).... V. Erycina
Venus (Smooth Brown).... V. Chione
Venus (Tiger).... V. Tigrina
VOLUTE.... VOLUTA

WREATH; VOLUTA AND TURBO
Weavers' Shuttle.... Bulla Volva
WEDGE SHELL.... DONAX
Wentle Trap.... Turbo Scalaris
WHELK; BUCCINUM and some species of
MUREX
WING (SEA)

WING (SEA)....PINNA
WING SHELL....STROMBUS
WORM SHELL....SERPULA





EXPLANATION OF PLATE I.

ENGLISH NAMES.

1 Ruccinum Undatum Common Whelk (see p. 16.)

2. Buccinum Undatum shewing the Columella

3 & 4. Valves of the Venus Smooth Brown Chione (see p. 6.)

5. Venus Chione, showing the hinge and ligament

6 a. Bulla Lignaria

6 b. Gizzard of the Bulla Lignaria

7. Cypræa Europæa

8. Nautilus Lacustris

9. Voluta Olina

10. Voluta Cancellata

Venus

Wood Dipper

Nun Cowry Fresh Water Nau-

tilms

Olive Volute

Latticed Volute

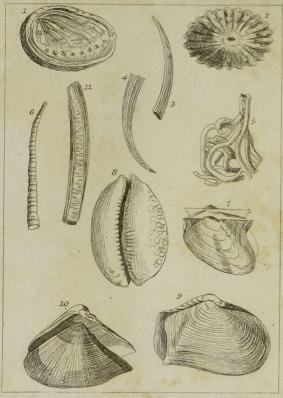
EXPLANATION OF PLATE II.

ENGLISH NAMES. 1. Buccinum Harna The Harp Shell 2. Buccinum flammeum Triangular Helmet 3. Strombus pes pelicani Pelican's Foot 4. Trochus ziziphinus Livid Top Shell 5. Turbo Scalaris Wentle Trap 6. Murex Ramosus Branched Murey 7. Helix Hortensis Garden Snail 8. Helix Pomatia Eatable Snail 9. Helix planorbis, or Flat Snail

Brittle Snail

Complanata
10. Helix fragilis





EXPLANATION OF PLATE III.

ENGLISH NAMES.

Haliotis Tuberculata Aumer, or Common
 Ear Shell
 Patella Nodosa Rough Limpet

3. Dentalium Striatum

4. Dentalium Dentalis Tooth Shell

5. Serpula · Vermicu-. Worm Shell

6. Teredo Navalis Ship Borer
7. Mytilus Hirundo Swallow Muscle
8. Cypræa Arabica Nutmeg Cowry

9. Mya Truncata Truncated Gaper

9. Doman Scortum Reaked Donax

10. Donax Scortum Beaked Donax11. Solen Siliqua Pod like Sheath

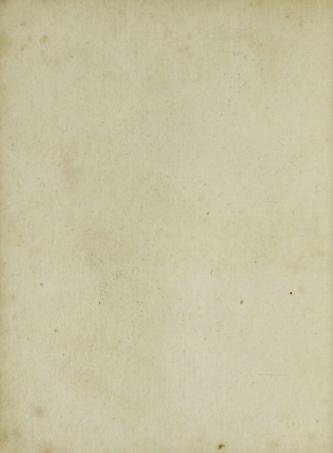
Shell

EXPLANATION OF PLATE IV.

ENGLISH NAMES. 1. Venus Dione Spined Venus 2. Arca Glycymeris Circular Ark Variegated Scallop 3. Ostrea Varia Circular Antique 4. Anomia Ephippium Lamp 5. Ostrea Ziczac Zigzag Scallop 6 Pinna Pectinata Spiny Pinna Scaly Chiton 7. Chiton Squamosus Prickly Piercer 8. Pholas Dactylus Noah's Ark 9. Arca Noæ Common Muscle 10. Mytilus Edulis Duck Barnacle 11. Lepas Anatifera

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