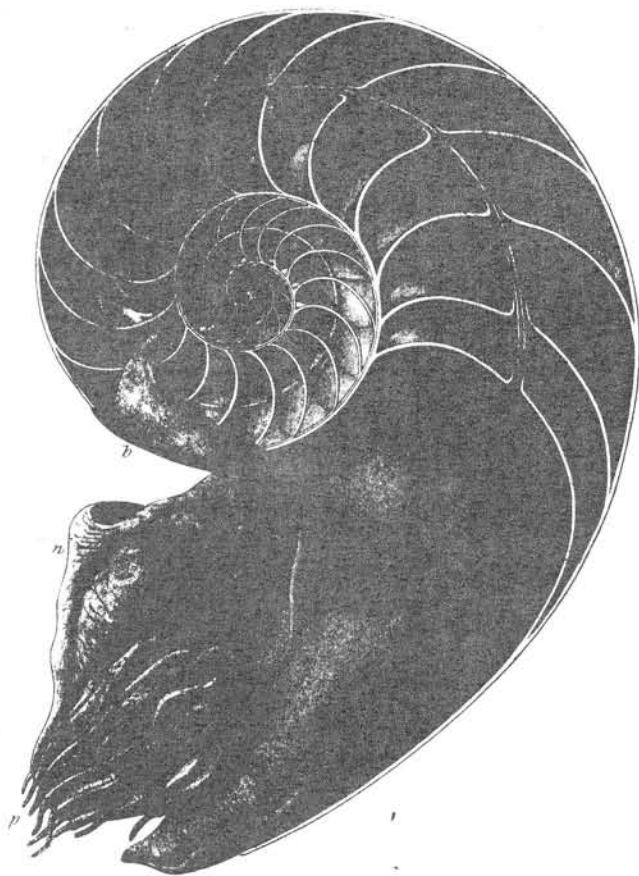


THE PEARLY NAUTILUS

after Owen



- |     |                  |     |                      |
|-----|------------------|-----|----------------------|
| a   | The mantle       | u   | Udd                  |
| b   | Its dorsal fold  | v v | Exterior digitations |
| c   | Nidamental gland | p   | Tentacles            |
| g   | Shell muscle     | s   | Eye                  |
| i i | Siphon           | o o | Septa                |
| k   | Finnet           | z   | Last Chamber         |

J.W. Lowry D.

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1885

MANUAL OF THE MOLLUSCA

BEING A TREATISE ON

RECENT AND FOSSIL SHELLS

By S. P. WOODWARD, A.L.S., F.G.S.

LATE ASSISTANT-PALAEONTOLOGIST IN THE BRITISH MUSEUM

FOURTH EDITION

WITH AN APPENDIX OF RECENT AND FOSSIL CONCHOLOGICAL DISCOVERIES

By RALPH TATE, A.L.S., F.G.S.

Illustrated by

A. N. WATERHOUSE AND JOSEPH WILSON LOWRY



LONDON

CROSBY LOCKWOOD AND CO.

7, STATIONERS' HALL COURT, LUDGATE HILL

1880

*Type*, *P. plumbea*. Pl. V., Fig. 12.

*Shell* globular, thick; with a deep spiral furrow near the front of the body-whorl, forming, as in *monoceros*, a small tooth on the outer lip; spire short, acute; suture channelled; inner lip callous; aperture notched in front; operculum? Animal unknown.

*Distribution*, 6 species. Africa and California.

*Fossil*, 5 species. Eocene. Britain, France, Chili.

? ANOLAX (Roissy), Conrad, Lea.

*Etymology*, *an aulax*, without furrow.

*Synonyms*, *Buccinanops*, D'Orbigny. *Leiodomus*, Sw. *Bullia*, Gray.

*Types*, *A. gigantea*, Lea. *Buc. laevigatum*. *B. semiplicata*, Pl. V., Fig. 14.

*Shell* variable; like *buccinum*, *pseudoliva*, or *terebra*; sutures enamelled; inner lip callous.

*Animal* without eyes; foot very broad; tentacles long and slender; operculum pointed, nucleus apical.

*Distribution* 26 species. Brazil, West Africa, Ceylon, Pacific Western America.

*Fossil*, 3 species. Eocene—. North America, France.

? HALIA, Risso.

*Etymology*, *halios*, marine.

*Synonym*, *Priamus*, Beck.

*Types*? *bullia helicoides* (Brocchi). Miocene, Italy. *Helix priamus* (Meuschen). Coast of Guinea?

*Shell* like *achatina*; ventricose, smooth; apex regular, obtuse, operculum? The fossil species occurs with marine shells, and sometimes coated by a polyzoon (*lepralia*).

TEREBRA, Lamarck. Auger-shell.

*Synonyms*, *Aeus*, Humph. *Subula*, Bl. *Dorsanum*, Gray.

*Type*, *T. maculata*. Pl. V., Fig. 13.

*Shell* long, pointed, many-whorled; aperture small; canal short; operculum pointed, nucleus apical.

*Animal* blind, or with eyes near the summit of minute tentacles.

*Distribution*, 109 species, mostly tropical. Mediterranean (1 species). India, China, Western America.

*Fossil*, 24 species. Eocene—. Britain, France, Chili.

EBURNA, Lamarck. Ivory-shell.

*Etymology*, *ebur*, ivory.

*Synonym*, *Latrunculus*, Gray.

*Type*, *E. spirata*. Pl. V., Fig. 11.

*Shell* umbilicated when young; inner lip callous, spreading and covering the umbilicus of the adult; operculum pointed, nucleus apical.

*Distribution*, 9 species. Red Sea, India, Cape, Japan, China, Australia. Solid, smooth shells, which have usually lost their epidermis, and are pure white, spotted with dark red; the animal is spotted like the shell. 14 fathoms. (Adams.)

NASSA, Lam. Dog-whelk.

*Etymology*, *nassa*, a basket used for catching fish.

*Synonyms*, *Desmoulinia* and *Northia*, Gray.

*Type*, *N. arcularia*. Pl. V., Fig. 15.

*Shell* like *buccinum*; columellar lip callous, expanded, forming a tooth-like projection near the anterior canal. Operculum ovate, nucleus apical. Lingual teeth arched, pectinated; uncini, with a basal tooth.

The animal has a broad foot, with diverging horns in front, and two little tails behind. *N. obsoleta* (Say) lives within the influence of fresh water and becomes eroded. *N. reticulata*, L., is common on the English shores at low water, and is called the dog-whelk by fishermen.

*Distribution*, 210 species. Low water—50 fathoms. World-wide. Arctic, Tropical, and Antarctic Seas.

*Fossil*, 19 species. Eocene—. Britain, &c. North America.

*Sub-genus*, *Cyllene*, Gray. *C. Oweni*, Pl. V., Fig. 17. Outer lip with a slight sinus near the canal; sutures channelled. West Africa, Sooloo Islands, Borneo. *Fossil*, Miocene, Touraine.

*Cyclonassa*, Swainson. *C. neritea*, Pl. V., Fig. 16.

PHOS, Montfort.

*Etymology*, *phos*, light.

*Synonym*, *Rhinodomus*, Sw.

*Type*, *P. senticosus*, Pl. V., Fig. 18.

*Shell* like *nassa*; cancellated; outer lip striated internally, with a slight sinus near the canal; columella obliquely grooved.

The animal has slender tentacles, with the eyes near their tips.

*Distribution*, 30 species. (Cuming.) Red Sea, Ceylon, Philippines, Australia, West America.

APPENDIX TO THE  
MANUAL OF MOLLUSCA

OF S. P. WOODWARD, A.L.S.

CONTAINING SUCH RECENT AND FOSSIL SHELLS AS ARE NOT  
MENTIONED IN THE SECOND EDITION OF THAT WORK

By RALPH TATE, A.L.S., F.G.S.



LONDON  
CROSBY LOCKWOOD AND CO.  
7, STATIONERS' HALL COURT, LUDGATE HILL  
1880.

Shell fusiform, spirally striated; aperture with a rather long canal; columella plicated as in *Fusciolaria*; operculum like that of *Chrysodomus*. Lingual dentition, resembles that of the *Purpuridae*, 1·1·1. Rhachidian tooth, deeply arched, with three denticles; lateral teeth versatile, elongated, simple, hook-shaped, base swollen.

BUCCINOPSIS, Jeffreys, 1859.

*Etymology*, having the aspect of *Buccinum*.

*Synonym*, *Liomesus*, Stimpson, 1865.

*Type*, *Buccinum Dalei*, J. Sowerby, Britain.

Shell oval, spirally striated; epidermis filmy; spire short, obtuse; outer lip smooth within; canal short and open; operculum triangular; nucleus placed on the inner base of the aperture.

The lingual dentition makes an approach to *Mangelia*, and consists of a single plain and slightly curved tooth on each side of a thin non-denticulated plate.

The egg cases of *Buccinopsis* are separate.

*Distribution*, 3 species. German Ocean, North Atlantic, Spitzbergen, Behring's Straits.

*Fossil*. *B. Dalei* occurs in the Red, Antwerp, and Coralline Crags. England, Belgium.

*Cheletropis* is the fry of species belonging to the *Muricidae*.

*Adamsia*, Dunker, resembles a sculptured *Cominella* without the sutural construction of the whorls. 2 species. Australia.

#### FAMILY III.—BUCCINIDÆ.\*

The enumerated genera are:—

BUCCINUM, PSEUDOLIVA, BULLIA, EBURNA, PHOS, NASSA (*Cyllene*, *Northia*, *Cyclonassa*), COLUMBELLA, TRUNCARIA, and TEREBRA (*Myurella*), SUBULA (*Euryta*).

TRUNCARIA, A. Adams and Reeve, 1848.

*Synonym*, *Buccinopsis*, Deshayes.

*Type*, *T. filosa* (*Buccinum*). Adams and Reeve. China.

Shell oval, oblong; spire elongated; apex acute, often channelled at the suture; aperture oblong, dilated in front, angulated, sometimes with a small canal behind; outer lip simple or bordered; columella concave, abruptly truncated, and shorter than the right lip.

\* See p. 218, &c.

Species of this genus are *Buccinums* with a truncated columella.

*Distribution*, 5 species. China, Central America, Vigo Bay.

*Fossil*, 3 species. Eocene. Paris basin.

#### [FAMILY PURPURIDÆ]

Is composed of the following genera:—

PURPURA, including *Monoceros* (of sectional value)\* and the sub-genera:—

*Concholepas*, *Cuma*, *Rapana* (see p. 217, under *Pyrula*), *Pinaxia*, Adams.

*Iopas*, H. and A. Adams, 1853. Shell bucciniform, with a small canal in the posterior angle of the aperture. *Fossil*, 3 species. Eocene. Paris.

*Vitularia*, Swainson, 1840. *V. salebrosa*. South and Central America. Shell with irregular varices; operculum as in *Purpura*.

*Nitidella*, Swainson. Shell as *Cylindra*; spire sometimes decollated; lip continuous or crenated; operculum elongate; nucleus lateral.

RICINULA, HARPA, RHIZOCHCHILUS (*Coralliophila*, Adams), and MAGILUS, with the

*Sub-genus* *Leptoconchus*, Rüppell.

Shell similar to that of *Magilus*; young shell only with an operculum.

#### [FAMILY CASSIDÆ.]

The genera referred to this family are:—

RANELLA (p. 214), TRITON (p. 214), PYRULA (p. 217), CASSIS (p. 224), ONISCIA (p. 225), CASSIDARIA (p. 225), DOLIUM (*Malca*) (p. 226), and

NASSARIA, Pfeiffer.

*Animal* analogous with that of *Ranella*, as regards the length of the tentacles, position of the eyes, smallness of the head, and by the form of the operculum, but is provided with a long branchial siphon.

Shell sub-canaculated in front, and deeply notched.

#### [FAMILY OLIVIDÆ]

Includes OLIVA (*Olivella*, *Scaphula*, *Agaronia*), ANCILLARIA (*Monoptygma*, Lea).†

\* See p. 223.

† See p. 227.