

EX LIBRIS



129

JOHN BROOKS HENDERSON



CONCHOLOGIA ICONICA:

OR,

ILLUSTRATIONS

OF THE

SHELLS OF MOLLUSCOUS ANIMALS.

VOL. XX.

CONTENTS. MONOGENETES OF THE GENERA

SOLEMYA.	TEREDO	FISTULANA.	PTEROPODA.
MYA.	PEDICULARIA.	RISSOA.	ANCYLUS.
CLAUSILA.	MYTILIMERIA.	SILICUARIA.	ALYCEUS.
CYLINDRELLA.	SAXICAVA.	CYRENA.	MARGARITA.
PUPA.	PI PINIDE.	SPHERIUM.	ROTELLA.
VANIKORA AND	GASTROILENA.	PLANORBIS.	STYLIFER.
NERITOPSIS.	ZYLOPHAGA AND	PLANAXIS.	AURICULA.
KUPHUS.	NAVEA.	VELORITA.	

183

LOVELL AUGUSTUS REEVE, F.L.S., F.G.S.,

CORRESPONDING MEMBER OF THE SCIENTIFIC SOCIETY OF WASHINGTON, OF THE LYCEUM OF NATURAL HISTORY OF NEW YORK, OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, AND OF THE ZOOLOGICAL AND BOTANICAL SOCIETY OF VIENNA.

DESIGNED BY

G. B. SOWERBY, F.L.S.

Printed and Published by
 J. MONTAGUE, at the Office of the
 Publisher, No. 1, Henrietta Street, Covent Garden,
 London: 1878.

J. Montague.

LONDON:

L. REEVE & CO., 5 HENRIETTA STREET, COVENT GARDEN.

1878.

LONDON: PRINTED BY
SPOTTISWOOD, AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET



PREFACE

11

THE TWENTIETH VOLUME.

ON the completion of this great work, a few words appear due to the Subscribers.

In the British Museum, England possesses a collection of shells—including that of the late Mr. Hugh Cuming, acquired by purchase in 1865—which for richness and completeness rivals all other collections in the world put together.

The 'Conchologia Iconica' was commenced by my late husband, Mr. Lovell Reeve, in 1843, as the exponent of these and other collections. At the time of his decease, in 1865, fifteen volumes of the work had been completed. Although these, containing as they do most of the more important Genera, would have been no inconsiderable contribution to Conchological science, still as many Genera remained unrepresented, it was thought desirable to continue the work to a point at which, for all practical purposes, it might be pronounced complete.

The literary conduct of the work was therefore entrusted to Mr. G. B. Sowerby, F.L.S., who had hitherto supplied the artistic portion.

His Royal Highness the late Prince Consort was amongst the earliest subscribers, and his subscription (for two copies) has been graciously continued by Her Majesty the Queen.

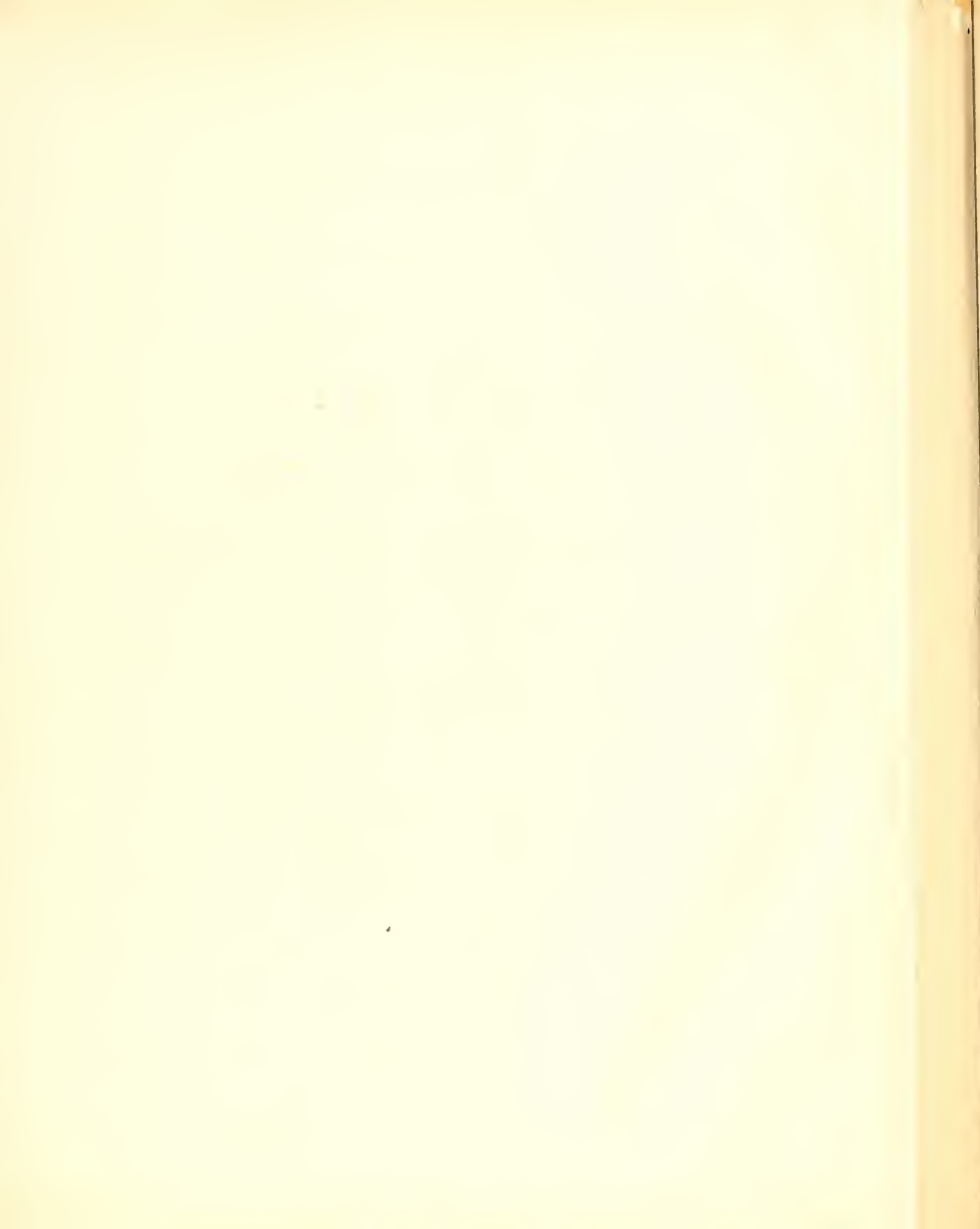
Many of the earlier subscribers have not lived to see the completion of the work, in the commencement of which they took a lively interest, but their subscriptions have been continued by members of the family, or have been replaced by other individuals.

To Her Most Gracious Majesty the Queen, and to the rest of the Subscribers, I beg to tender my most grateful acknowledgments, for the continued support which has enabled me to bring the work to what I trust will be deemed a satisfactory conclusion.

MARTHA REEVE

THE COFFAGE, GILDON, NEAR HARLOW.

March 29, 1878.



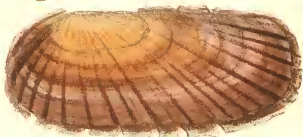
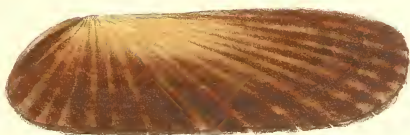
MONOGRAPH

OF THE GENUS

S O L E M Y A.

— Out of the depth Almighty King,
Did youd' the frame — *Watts.*





SOLEMYA.

GENUS SOLEMYA, Linnæus.

Testæ equivalvæ, elongatæ, latæ, tenuis — obtusæ, utriusque obtusa, epidermide crassa, calli, utriusque fuscæ, altera margines exteriori crassa, tubulæ, Cardæ obtusulæ. Ligamentum, partim intercomp. post callum trigonum, rest. partim. Impressiones duæ crassæ, subtriangulæ.

Shell equivalve, im-pulvoral, transversely oblong, obtuse at each end, covered with a smooth shiny brown horny epidermis extending beyond the edges of the valves. Hinge without teeth, ligament partly internal, inserted behind a three-cornered callus; muscular impressions two, distant, subtriangular.

To the four or five species previously known one has recently been described and well characterized by Mr. Edgar Smith, of the British Museum—namely, the *Sol. Parkisoni* from New Zealand, which appears to be very distinct from the comparatively well-known Australian species. The northern parts of the United States present one or two species, which, with the familiar *Solemya Mediterranea*, complete the little list. The *Solemya*, like the *Solenes* and *Mya*, are mud burrowers, and from the construction of the foot and thickness of the shell leap with surprising activity. The shell is described as having a cardinal tooth in each valve, but the term seems quite inapplicable to the internal callus, behind which the ligament is inserted in a groove.

Species 1. (Mus. Brit.)

SOLEMYA OCCIDENTALIS. *Sol. testâ parvâ, angustâ, elongatâ; latere postico brevissimo, margine laterali obliquè truncato; latere postico attenuato, ad terminum acuminato.*

THE WESTERN SOLEMYA. Shell small, narrow, elongated; posterior side very short, lateral margin obliquely truncated; posterior side attenuated, acuminated at the end.

DESHAYES, MS. Brit. Mus.

Hab. — ?

The specimens in the British Museum appear young, and the shape of the callus and ligamental insertion not sufficiently developed to determine the distinctness of the species. It is, however, a larger shell than *Solemya Mediterranea*.

Species 2. (Figs. a, b, c, Mus. Brit.)

SOLEMYA MEDITERRANEA. *Sol. testâ soleniformi, elongatâ, radiatâ; latere postico angustiusculo, brevissimo, obliquè truncato; latere antico elongato, versâs terminum ampliûculo; callo cardinali angusto, arcuato, obliquè trigono; areâ ligamentiferâ post callum trigonâ, infra lineam productâ; ligamento partim etiam in sulcum obliquum linearem ante callum instructo.*

THE MEDITERRANEAN SOLEMYA. Shell soleniform, elongated, rayed; posterior side rather narrowed, very short, obliquely truncated; anterior side elongated, rather more ample towards the end; cardinal callus narrow, curved, obliquely trigonal; ligamental area behind the callus trigonal, linearly produced below; also a part of the ligament inserted in an oblique linear sulcus in front of the callus.

LAMBECK, Anim. s. Vert., ed. Deshayes, vol. vi. p. 125.

Solemya Solen, Salis Marchlius.

Hab. Mediterranean.

Species 3. (Mus. Brit.)

SOLEMYA BOREALIS. *Sol. testâ breviusculâ, anticâ latâ, subtruncatâ, posticâ latissimâ, ad terminum truncato; callo cardinali trigono crasso, lato; infra bifurcato; impressione musculari anticâ elongatâ, subtrigoni; epidermide crassa.*

THE BOREAL SOLEMYA. Shell rather short, anteriorly broad, rather truncated, posteriorly very broad, truncated at the end; cardinal callus trigonal, thick, broad; bifurcate below; anterior muscular impression elongated, subtriangular; epidermis thick.

SOLEMYA.

TOTTEL, Siliman's Journal, vol. vi, p. 124.

Solemya celum, Say.

Hab. North America.

Species 4. (Mus. Brit.)

SOLEMYA PARKINSONI. *Sol. testâ latâ, brevissimâ, radiatim subsulcata, attingi latè truncatâ; calli cardinali valdè obliquo, arcuato, versus terminum internam attenuato; ligamento partim etiam in sulcum elongatum verticalem autè callum instructo; impressione musculari latâ.*

PARKINSON'S SOLEMYA. Shell broad, rather short, radiately slightly grooved, broadly truncated at each end; cardinal callus very oblique, curved, attenuated towards the inner termination; ligament also partly inserted in an elongated vertical sulcus in front of the callus; anterior muscular impression broad.

GRAY, MS. in Brit. Mus. Deser. E. Smith, Zool. Erebus and Terror, p. 6.

Hab. New Zealand.

Species 5. (Mus. Brit.)

SOLEMYA AUSTRALIS. *Sol. testâ brevissimâ, ob terminis obtusâ, æqualiter latissimâ; calli cardinali latâ, trigono, infra attenuato; ligamento etiam partim in foramen subquadratum ante callum instructo.*

THE AUSTRALIAN SOLEMYA. Shell rather short, obtuse at the ends, equally rather broad; cardinal callus broad, trigonal, attenuated below; ligament also partly inserted in a rather square pit in front of the callus.

LAMARCK, Anim. s. Vert., De-laeyes ed., vol. vi, p. 124.
Hab. Australia.

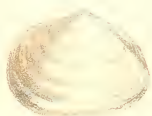
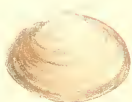
MONOGRAPH

OF THE GENUS

M Y A.

"To dive like buckets in concealed wells." *Shakspeare.*





M Y A.

PLATE I.

Genus MYA. *Linnaeus*.

Testa æquivalvis, biconvexula, pleurotypo ad ætrowitatis hians, oblonga, epidermide rugata isolata. Cardo edentato, lamina ligamentifera trigona, cœca ata, projecta, in valva sinistra minuto. Impressio pallii plusminusve sinuata.

Shell equivalve, bimuscular, generally gaping at each end, covered with a wrinkled epidermis. Hinge toothless, furnished in the left valve with a ligament-bearing, trigonal, hollow projecting plate. Pallial impression more or less sinuated.

Genus CRYPTOMYA. *Conrad* (included).

In the more restricted genus *Mya*, typified by *M. arenaria* and *M. truncata*, the siphons are long and produced, and covered with a coriaceous epidermis in continuation of that which covers the shell; but in the *Cryptomya* there is not the same epidermis-covered projection. But the construction of the hinge and general characters of the shell, and the mud-boring habits of the animal are alike in both groups; and no useful purpose is served in keeping them apart. The *Myæ* are few in number, and are principally inhabitants of Northern shores.

Species 1. (Mus. Sowerby.)

MYA ARENARIA. *Mya testis ovata, solidâ, foveâ concentricâ leviter rugatâ, utriusque validè hianti; latere antico ventricoso, lato, latere postico concavo, subdepresso, leviter angulato, ad terminum subbiliqui truncato; lamina ligamentiferâ in valvâ dextrâ magnâ, productâ; impressione pallii late et quadratum sinuata.*

THE SAND MYA. Shell ovate, solid, brown, concentrically lightly wrinkled, gaping strongly on each side; anterior side ventricose, broad, posterior side concave, subdepressed, slightly angular,

rather obliquely truncated at the end; ligament-bearing plate in the left valve large, produced, pallial impression broadly and squarely sinuated.

LINNEÆUS. *Systema Naturæ*.

Hab. British Coasts.

Species 2. (Mus. Brit.)

MYA ELLIPTICA. *Mya testis tenui, ovata, compressâ, angustè hianti; latere antico breviusculo; latere postico propè marginem dorsalem obliquè depressâ, angulatâ, ad terminum obliquè truncatâ; margine ventrali rectiusculo.*

THE ELLIPTICAL MYA. Shell thin, ovate, compressed, narrowly gaping; anterior side rather short; posterior side obliquely depressed near the dorsal margin, angular, obliquely truncated at the end; ventral margin rather straight.

A. ADAMS (*Cryptomya*), MS. Mus. Brit.

Hab. — ?

More nearly equal-sided than *Mya Californica*, the anterior and not the posterior side being the shorter.

Species 3. (Fig. a, b, Mus. Brit.)

MYA CALIFORNICA. *Mya testis compressâ, angustè hianti, ovata, pallidè rubescenti; latere antico inflato, rotundo, umbonibus subretrotratis; latere postico subangustato, breviusculo, ad terminum subtruncato, lamina ligamentiferâ parviusculo, sinu pallii impressionis parvâ.*

THE CALIFORNIAN MYA. Shell compressed, narrowly gaping, ovate, pale reddish; anterior side inflated, rounded, umboes leaning a little backwards; posterior side a little narrow, rather short, slightly truncated at the end; ligamentiferous plate rather small, sinus of the pallial impression small.

CONRAD — ? *Cryptomya*.

Hab. California.

MYA.—PLATE I.

Species 4. (Mus. Sowerby.)

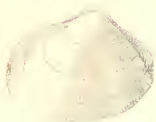
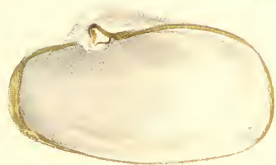
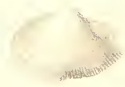
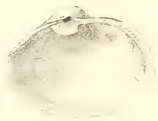
MYA TRUNCATA. *Mya testâ oblongâ, ventricosâ, irregulariter rugatâ, posticè latè hiantî; latere antico valdè inflato, obliquè tumido, margine dorsali elevato, umbonibus angulatis, prominentibus, retrorsis, latere postico angustato; margine dorsali depresso, margine terminali truncato.*

THE TRUNCATED MYA. Shell oblong, ventricose,

irregularly wrinkled, posteriorly broadly gaping; anterior side much inflated, obliquely tumid, dorsal margin elevated, umboes angular, prominent, leaning backwards, posterior side narrow; dorsal margin depressed, terminal margin truncated.

LINNEUS. Systema Naturæ.

Hub. Coasts of Great Britain.



M Y A.

PLATE II.

Species 5. (Fig. a, b, Mus. Brit.)

MYA PHILIPPINARUM. *Mya testâ tenui, albâ, inflatâ, inequilatrali, viz equilateri; latere antico lavi, ventricosissimo, margine dorsali declivi, margine ventrali inflato; latere postico brevi, striato, sub-compresso, posticè cuneato, subangulato, viz truncato, margine dorsali declivi, margine ventrali sensum acclivi, subanilloâ rotundâ, retroscis.*

THE PHILIPPINE MYA. Shell thin, white, inflated, inequilateral, scarcely equiangular; anterior side smooth, very ventricose, dorsal margin sloped, ventral margin much inflated; posterior side short, striated, a little compressed, posteriorly cuneate, slightly angular, hardly truncated; dorsal margin sloped downwards, ventral margin sloped upwards; umbos rounded, leaning backwards.

A. ADAMS. MS. Brit. Mus.

Hab. Bay of Manila.

Belonging to the group known as *Cryptomya*, and like several other species, having one half of its surface striated; the other smooth.

Species 6. (Fig. a, b, Mus. Brit.)

MYA SEMISTRIATA. *Mya elongato-oratâ, tenui, albâ, latere antico inflato, levigato; latere postico, usque ad medium tenuiter, posticè valdè striato, ad terminum angustato angulato, post angulum, truncato, lavi.*

THE HALF-STRIATED MYA. Shell elongated, oval, thin, white, anterior side inflated, smooth; posterior side finely striated as far as the middle, strongly behind, narrow at the end, angular, truncated behind the angle, smooth.

HANLEY. Proc. Zool. Soc. 1850, p. 80.

Hab. — ?

One of the *Cryptomya* group described by Mr. Hanley from a single valve in the collection of the late Mr. Cuming.

Species 7. (Mus. Brit.)

MYA PELECISA. *Mya testâ oblongo-subquadratâ, brevi altâ, concentricè irregulariter rugatâ, anticè inflatâ, latâ; posticè subangulatâ; latere postico brevi, lat. truncato, hiantî, margine elevato.*

THE SHORTENED MYA. Shell oblong-subquadrate, short, elevated, concentrically irregularly wrinkled, inflated in front, broad; posteriorly rather angular; posterior side short, broadly truncated, gaping, margin raised.

GOULD. United States Exploring Expedition.

Hab. Sitcha.

Although this shell is broader and shorter than the British *Mya truncata* is generally found, its distinctness from that species is matter of some doubt.

Species 8. (Fig. a, b, Mus. Sowerby.)

MYA CANCELLATA. *Mya testâ elongatâ, crassiusculâ, albidâ rugis concentricis numerosis, minutè undulatis, et striis radiantibus decussatâ; latere postico brevi, cuneato, ad terminum, truncato, circulariter hiant, latere postico inflato, obliquè producto, ad terminum rotundato.*

THE CANCELLED MYA. Shell elongated, rather thick, whitish; decussated with numerous minutely undulated concentric wrinkles and radiating striae, posterior side short, cuneate, truncated and roundly gaping at the end; posterior side inflated, obliquely produced, rounded at the end.

CONRAD. Annals of Natural Science of the Academy of Philadelphia.

Hab. California.

April, 1875.





24



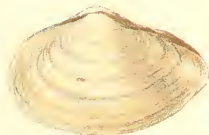
25



26



27



28



29

M Y A.

PLATE III.

Species 9. (Fig. in 5.)

MYA MINDORONENSIS. *Mya testâ compressâ, albâ, brevî, levigatâ, ovatâ; latere anticeo undulato, rotundato, umbonibus parvis, subaequalibus; latere postico angustiusculo, prope marginem dorsalem angulato, post angulum compresso, ad terminum laterali truncato, margine dorsali brevi, depresso.*

THE MINDORO MYA. Shell compressed, white, broad, smooth, ovate; anterior side rather inflated, rounded, umbos small, nearly central; posterior side rather narrow, angular near the dorsal margin, compressed behind the angle, broadly truncated at the end, dorsal margin short, depressed.

ADAMS AND REEVE — ? MS. Mus. Cum. in Brit. Mus. *Isl. Mindoro.*

A small shell of the *Cryptomya* group, differing from *Mya Californica* chiefly in the broad posterior truncation.

Species 10. (Mus. Brit.)

MYA DIVERGATA. *Mya testâ brevi, postice latissima biaxi, subquadratâ, albâ, tenuissimo striatâ; latere anticeo semirotundo; umbonibus elevatis, subaequalibus; latere postico acuti angulato, perpendiculariter truncato, ante angulum undulatum rugatâ, divagatione striato.*

THE DIVERGENT MYA. Shell short, with a wide posterior hiatus, rather square, white, very finely striated; anterior side half-round; umbos elevated, rather acuminate; posterior side acutely angular, perpendicularly truncated, with wavy wrinkles and divergent striae in front of the angle.

A. ADAMS (*Cryptomya*). MS. Cum. Coll. in Brit. Mus. *Isl. Ceylon.*

Species 11. (Mus. Brit.)

MYA DECURTATA. *Mya testâ ovatâ, albâ, levigatâ, antice subrotundâ; margine ventrali convexo; latere*

postico acuti arcuatim angulato, angustato, perpendiculariter truncato; margine dorsali depresso, rectiusculo, complanato.

THE SHORTNECKED MYA. Shell ovate, white, smooth, anteriorly rounded; ventral margin convex; posterior side with an acute curved angle, narrow, perpendicularly truncated; dorsal margin depressed, rather straight, flattened.

A. ADAMS — ? MS. (*Cryptomya*). Cum. Coll. in Brit. Mus.

Isl. Luzon, Philippines.

Species 12. (Fig. a, b, Mus. Sowerby.)

MYA ACUTA. *Mya testâ ovatâ, tenuiusculâ, pallidâ fulvâ, concentricè leviter rugatâ, utrinquè latè hiante; latere anticeo ventricosò, lato; latere postico cuneato, compresso subrostrato, subaeuminato; impressione palli acutè sinuato.*

THE ACUTE MYA. Shell ovate, rather thin, pale fulvous, concentrically lightly wrinkled, widely gaping at each end; anterior side ventricose, broad; posterior side cuneate, compressed, rather rostrated, rather acuminate; impression of the mantle roundly sinuated.

SAY, Wood's General Conchology.

Mya Japonica, Say (var.) MS. Mus. Sowerby.

Isl. North America; Chupoo, Japan.

The two specimens figured, the smaller Japanese, the larger North American, resemble each other and differ in the same degree from our common *Mya arenaria*. They are much more pointed at the end, and have a more rounded sinus in the pallial impression. These differences, however, may be rather varietal than specific.

MYA.—PLATE III.

Species 13. (Mus. Brit.)

MYA PRINCEPS. *Mya testā albā, tenui, ovali, ventricosā; antè medianū, medio et posticè radiatim striatā; latere antico inflato, oblongo anticè levigato, semi-ovato; umbonibus inflatis, retrorsis; latere postico brevi, angusto, obliquè angulato, antè angulum coarctato, ad terminum truncato; margine dorsali depresso, declivi.*

THE PRINCE MYA. Shell white, thin, ovate, ventricose;

radiately striated from before the middle, and posteriorly; anterior side inflated, oblong, smooth anteriorly, semiovate; umboes inflated, recurved; posterior side short, narrow, obliquely angular; narrowed in front of the angle, truncated at the end; dorsal margin depressed, sloped.

A. ADAMS. Ind. (*Cryptomya*) MS. Cum. Coll.

Hab. Philippine Islands.

The largest and finest of the *Cryptomya* group.

MONOGRAPH
OF THE GENUS
CLAUSILIA.

Nature, great parent!

How brightly, how majestic are thy works! *Thou comest*





CLAUSILIA.

PLATE I.

Genus CLAUSILIA. *Proparaceras*.

Testa terrestris, plerumque siccitatis, terebra, fusiformis, apertura plus minusve auriformi, latis laminis liberi subspirali testæ et clausi, columellæ plerumque biplicatæ.

Shell terrestrial, generally sinistral, turreted, fusiform, aperture more or less auriform, closed within by a free subspiral shelly plate, columella generally with two plaits.

The *Clausium*, shown at fig. 7, can only be seen *in situ*, by breaking the last whorl of the shell. It is of a subspiral form and turns on the edge of the inner part of the columella by means of a cartilaginous ligge. The animal can thereby retreat further within his shell and shut himself up more securely than by means of the ordinary external operculum of other shells. The species of this interesting genus of land shells are found everywhere in Europe, in China, and Chinese and Indian Islands, and generally in temperate districts. We have not been able to identify, among our 165 species taken principally from the British Museum and our own collections, half of the species enumerated by Pfeiffer, whose long and laborious studies, almost entirely confined to the air-breathing molluscs, have enabled him to present so complete a list. Our enumerations, however, include the great bulk of the species likely to be met with, and most of the more interesting and striking forms.

Species 1. (Mus. Sowerby.)

CLAUSILIA TRIDENS. *Clæ. testâ papiræformi, medio subin-plate, fusco, profundè perpendiculariter sulcata; anfractibus senis permanentibus, altis, ultimo elongato, angustato, infra prolongato, profundè rimato, subortuo; apertura oblongâ, labi subquadratâ, superne elevato, acuminato; margine albo, crasso, expanso; plââ parietali crassâ, plââ columellari parvâ, elevatâ, plââ subcolumellari inconspicuâ.*

THE THREE-TOOTHED CLAUSILIA. Shell pupa-shaped, a little inflated below, brown, deeply perpendicularly grooved; whorls six permanent, high, last elongated, narrow, prolonged below, deeply

notched, a little tortuous; aperture large, broad, rather square, raised above, acuminated; margin white, thick, expanded; parietal plait thick, columellar plait small, raised, under-columellar plait inconspicuous.

CHUMNITZ (Turko). Pflr. Mon. Hel. II. 396.

Turba costulatus. Wood.

Clausilia labiata. Sowerby.

Hab. Porto Rico.

Species 2. (Mus. Brit.)

CLAUSILIA BARTLETTI. *Clæ. testâ subrosâ, brevissimâ, ventricosissimâ, solidâ, lavi; anfractibus quinis, tribus maximis, inflatis, ultimo angustato, prolongato; apertura subauriformi, labio externo supra medium sinuato; plââ parietali magnâ, plââ columellari subtriangulâ.*

BARTLETT'S CLAUSILIA. Shell somewhat pink, very short, very ventricose, solid, smooth; whorls five, three very large, inflated, last narrowed, prolonged; aperture subauriform, outer lip sinuous above the middle; parietal plait large, columellar plait subtriangular.

A. ADAMS. Proc. Zool. Soc. 1866.

Hab. Eastern Peru.

Species 3. (Mus. Brit.)

CLAUSILIA BIPLICATA. *Clæ. testâ fusiformi, ventricosâ, pruinosâ, tenuissimè striatâ; anfractibus novenis, inflatis; apertura oblongâ; margine albo, labi interno biplicato.*

THE TWO-PLAIED CLAUSILIA. Shell fusiform, ventricose, plum-coloured, very finely striated; whorls nine, inflated; aperture oblong; margin white, inner lip two-plaited.

MONTAGU. Brit. Bev.

Helix peregrina. Mull.

Clausilia Montagni. Gray.

Hab. Germany, Spain, Great Britain.

Species 4. (Fig. a, b, Mus. Sowerby.)

CLAUSILIA FORMOSENSIS. *Clæ. testâ fusiformi, ventricosâ, solidâ, fulvâ, cel pruinosâ; anfractibus un-*

deccis, usque ad medium et infra gradatim crescentibus, ultimo rimato; aperturâ subauriformi, margine crasso, albo, labio interno triplicato.

- THE FORMOSA CLAUSILIA. Shell fusiform, ventricose, solid, fulvous or plum-coloured; whorls eleven, gradually increasing to the middle and below, last notched; aperture somewhat ear-shaped; margin thick, white; inner lip with three plaits.
- H. ADAMS. Proc. Zool. Soc. 1866, p. 317, t. 33, f. 7.
- Hab.* Island of Formosa.

Species 5. (Mus. Brit.)

CLAUSILIA PLEBUSE. *Cl. testâ altâ, subcylindricâ, flavâ, levigatâ, ad suturam rubro-lineatâ; anfractibus novenis, gradatim crescentibus, altis, obliquis, convexis, ultimo altissimo, longè rimato; aperturâ elongato-auriformi, intûs nigro marginatâ, plicâ parietali magnâ.*

- THE PLEBUSA CLAUSILIA. Shell high, subcylindrical, yellow, smooth, with a red line at the suture; whorls nine, gradually increased, high, oblique, convex, last very high, with a long notch; aperture elongated, ear-shaped, black-edged within, parietal plait large.

A. ADAMS. Proc. Zool. 1872.

Hab. China.

Species 6. (Mus. Brit.)

CLAUSILIA TAYLORI. *Cl. testâ dextrâ, albâ, pyramidalâ, medio paulò inflatâ, rugosè liratâ; anfractibus mudeccis, medio et suprâ gradatim attenuatis, ultimo altissimo, infra medium carinato, descendenti, subattenuato, profunde rimato, sublatato; aperturâ deltoidè, magnâ, vix plicatâ, margine utrinque latè expanso.*

- TAYLOR'S CLAUSILIA. Shell dextral, whitish, pyramidal, a little swelled in the middle, roughly ridged; whorls eleven, gradually attenuated from the middle upwards, last very high, keeled below the middle, descending, slightly attenuated, deeply notched, slightly uncoiled; aperture deltoid, large, scarcely plaited, margin widely expanded on each side.

PEIFFER. Proc. Zool. Soc. 1861, p. 27, Pl. II.

Hab. —?

A shell of remarkable beauty and singularity of form.

Fig. 7. Species 142. (Mus. Brit.)

- CLAUSILIA MACASCARIENSIS. I had figured the species on Plate XV. as *Clausilia Macarona*, not knowing that the latter name was only synonymous with the former. The later figures and description were taken from a specimen in which the back of the last whorl is more strongly and roughly plaited than usual. In the figure on this Plate we have shown a last whorl with the clausium *in situ*.

Species 8. (Mus. —?)

CLAUSILIA EXILIS. *Cl. testâ brevi, solidâ, fusiformi, pruinôsâ, medio et infra ventricosâ, latâ; anfractibus novenis, brevibus, inflatis, brevî falcâ ad suturam marginatis, ultimo leviter rimato, infra angustato; aperturâ perpendiculariter oblongâ, magnâ; margine albo, crasso, labio externo supra medium sinuato, tumido, plicâ parietali prominenti, plicâ columellari crassâ, magnâ.*

- THE NARROW CLAUSILIA. Shell short, solid, fusiform, plum-coloured, ventricose in the middle and below, broad; whorls nine, smooth, inflated, bordered with a narrow band at the suture; last slightly notched, narrowed below; aperture perpendicularly oblong, large; margin white, thick, outer lip sinuous above the margin, tumid, parietal plait prominent, columellar plate thick, large.

ADAMS. Proc. Zool. Soc. 1866.

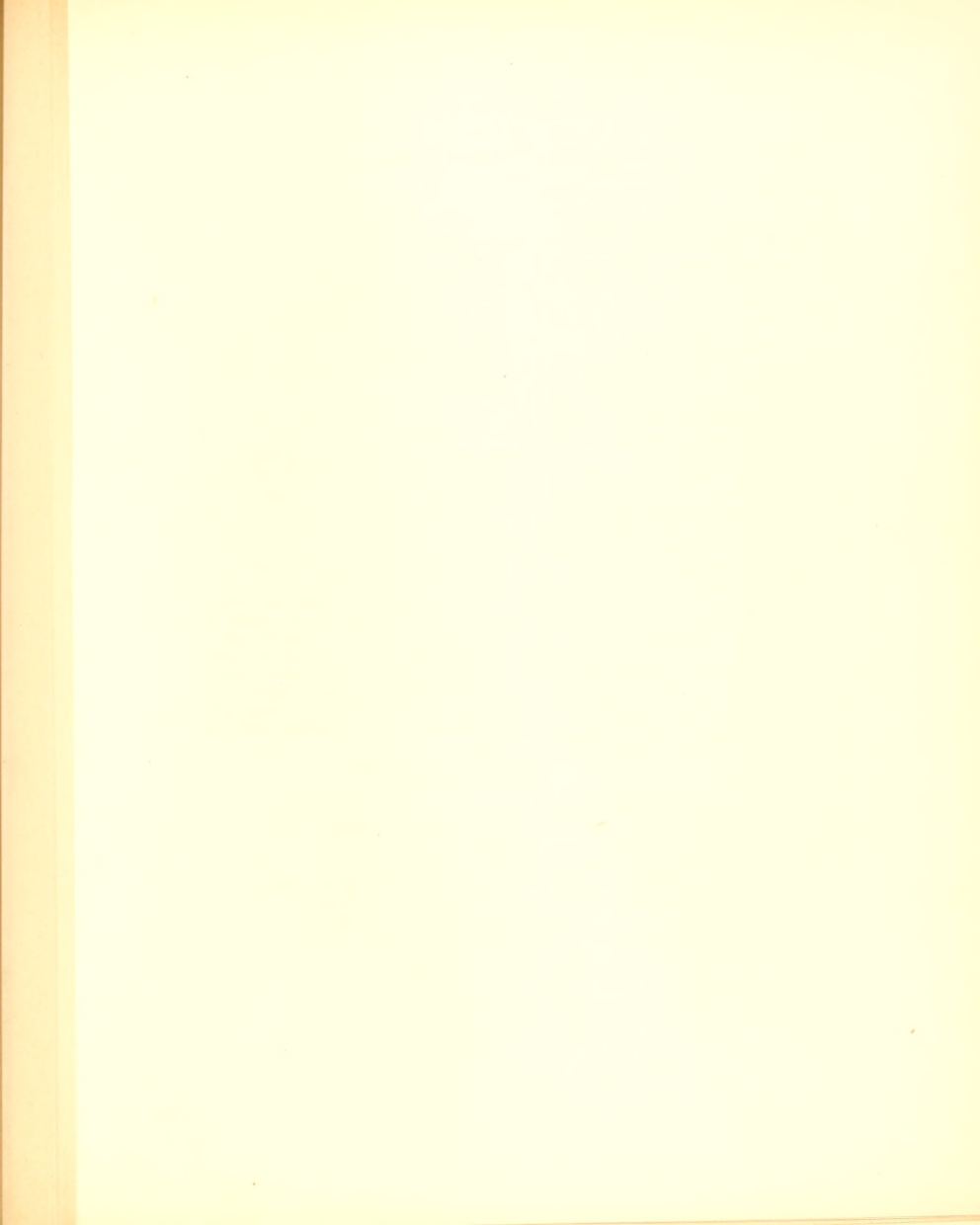
Hab. Isle Formosa.

Species 9. (Mus. —?)

CLAUSILIA OBLITA. *Sowerby.*

THE FORGOTTEN CLAUSILIA.

An error has arisen from the first plate remaining undescribed long after its publication. The writer having mislaid his memoranda cannot now identify this shell, but names it provisionally as above.





ultimo elongato, contracto, propè aperturam obliquè birugato, concavo; aperturâ parvâ, subauriformi, fultâ, infri intus plicatâ, margine expanso, plicâ superiori parvâ, plicâ columellari elevatâ, arcuatâ.

THE PLOUGHED CLAUSILIA. Shell slenderly fusiform, greyish, sculptured with thin, close laminae; last whorl elongated, contracted, with two oblique wrinkles near the aperture, concave; aperture small, rather auriform, brown, with an inner plait below, margin expanded; upper plait small; columellar plait raised, arched.

ZEIGLER. Pfeiffer Monog. ii. 419.

Clausilia callosa, Montford.

Clausilia denegabalis, Zeigler.

Hab. Dalmatia.

Species 15. (Mus. Sowerby.)

CLAUSILIA LEVISSIMA. *Cl. fusiformi, cornâ, levigatâ, sinistrali; anfractibus rix convexis, elevatis, ultimo compresso propè aperturam arcuatâ rimato; aperturâ magnâ, bicipitatâ, margine albo, reflexo, tenui.*

THE VERY SMOOTH CLAUSILIA. Shell fusiform, horny, smooth, sinistral; whorls scarcely convex, elevated, last compressed, with a curved notch close to the aperture; aperture large, with two folds, margin white, reflected, thin.

ZEIGLER. Pfeiffer Monog. ii. p. 439.

Clausilia glabrata, Mühlfeldt.

Clausilia levigata, Mühlfeldt.

Clausilia decorata, Zeigler.

Clausilia superstructo, Parreyss.

Clausilia fulginea, Parreyss.

Hab. Croatia and Dalmatia.

Species 16. (Mus. —? Copied.)

CLAUSILIA MOURIOTI. *Cl. testâ fusiformi, ventricosâ, tenui, tenuiter striatâ griseo-fuscâ, maculis albis fuscisque propè suturam notatâ, maculis albis medio anfractuâ asperâ; anfractibus apicalibus rotundis, medianis inflatis, penultimo elongato, medio contracto, ultimo infra rimato; aperturâ magnâ, auriformi, plicâ superiori parvâ, altâ, columellâ bicipitatâ, aperturâ margine reflexo, subexpanso.*

MOURIOT'S CLAUSILIA. Shell fusiform, ventricose, thin, finely striated, grey-brown, marked with white

and brown spots near the suture, sprinkled with white spots in the middle of the whorls; apical whorls rounded, middle ones inflated, the last but one elongated; the last notched; aperture large, auriform, upper plait small, white, columella with two plaits, margin of the aperture reflected, slightly expanded.

PFEIFFER. Proc. Zool. Soc., 1875, p. 275, Pl. 36.

Hab. Loa Mountains, Camboja.

Species 17. (Figs. a, b, Mus. Sowerby and Brit.)

CLAUSILIA LUCOSTIGMA. *Cl. testâ fusiformi, angustâ, fuscâ, vel pallidâ; cornâ, medio subinflato; anfractibus 9, elevatis, liris, ad suturam lineâ rubrâ maculis albis interruptè ornatis; ultimo rimato, contracto; aperturâ albâ, subauriformi, intus contracto, plicâ columellari latâ, margine superiori perpendiculariter multiplicato.*

THE WHITE-MARKED CLAUSILIA. Shell fusiform, narrow, brown, or pale horn, a little inflated in the middle; whorls nine, raised, ridged, with a red line at the suture, interrupted by white spots; the last notched, contracted; aperture white, somewhat auriform, contracted within, columella plait broad, upper margin with a single perpendicular plait.

ZEIGLER. Pfeiffer Monog. ii. p. 446.

Clausilia caudidilobris, Porro.

Clausilia opalino, Zeigler.

Clausilia latilobris, Mühlfeldt.

Hab. Italy.

Species 18. (Mus. Sowerby.)

CLAUSILIA CYLINDRICA. *Cl. brevicaudâ, subcylindricâ, cornâ, tenuiter lirisatâ; anfractibus altis, rectilinculis, aperturâ perpendiculariter oblongâ, margine angustâ, rotundâ, albo, superne multiplicato, plicâ columellari obliquâ, angustâ, elevatâ.*

THE CYLINDRICAL CLAUSILIA. Shell rather short, rather cylindrical, horny, finely ridged; whorls elevated, rather straight, aperture perpendicularly oblong, margin narrow, rounded, white, plaited above, columellar plait oblique, narrow, raised.

GRAY. MS. Pfeiffer Monog. iii. p. 591.

Hab. Himalaya Mountains.



CLAUSILIA.

PLATE III.

Species 19. (Mus. Sowerby.)

CLAUSILIA FALLAX. *Cl. testâ subcylindrica, fusiformi, lîcis lamelliformibus rugatâ, pallidâ fulvâ; apertura subquadratâ, superâ uniplicatâ, margine externo superâ contracto, labio columellari bicalloso, plîcâ columellari ciliatâ, infra truncatâ.*

THE FALLAXIOUS CLAUSILIA. Shell rather ventricose, fusiform, wrinkled with lamelliform ridges, pale fulvous; aperture rather square, single-plaited above, outer margin contracted above, columellar lip with two callosities, columellar plait rather straight, truncated below.

ROSSMÄLER — ? Pfeiffer, Monog. ii. p. 127.

Clausilia obscura, Parreys.

Clausilia discipiens, Zeigl.

Hab. Transylvania.

Species 20. (Mus. Sowerby.)

CLAUSILIA BISCOLOR. *Cl. testâ brevicauli, obsâ, lævigatâ, medio ventricosâ, versâ apicem angustatâ, cornâ, flammis fuscoviridibus curvâ, anfractibus 10, concentricis, tribus apicalibus angustissimis; apertura latâ, plîcâ superiori parvâ, inferiori super columellam obliquâ elongatâ.*

THE TWO-COLOURED CLAUSILIA. Shell rather short, stout, smooth, ventricose in the middle, narrow towards the apex, horny, varied with brownish flames, whorls 10, rather convex, three apical very narrow; upper plait small, lower obliquely elongated upon the columella.

PFEIFFER, Monographia, ii. p. 416.

Hab. Isl. Cerigo.

Species 21. (Mus. Sowerby.)

CLAUSILIA FÆVULA. *Cl. parvâ, tenui, fusiformi, lævi, purpureo-fuscâ; anfractibus altis, ultimo arcuatum rimato; apertura subauriformi, intus infra biplicatâ, margine tenui, rotundo albo, margine superiori uniplicatâ, plîcâ columellari elevato, perobliquâ, infra truncatâ.*

THE LITTLE CLAUSILIA. Shell small, thin, fusiform, smooth, purple-brown; whorls elevated, the last with a curved notch; aperture rather auriform, with two folds within at the lower part, margin thin, round, white, upper margin with one fold, columellar fold raised, very oblique, truncated below.

STUDER — ? Pfeiffer, Mon. ii. p. 462.

Clausilia minima, Parreys.

Hab. Germany and other parts of Europe.

Species 22. (Mus. Brit.)

CLAUSILIA CYLINDRIFORMIS. *Cl. testâ fusiformi, pallidissimâ lilacâ, longè rimatâ, leviter limatâ, anfractibus apicalibus fuscis, medianis subinflatis; ultimo contracto, elongato, longè soluto, ad dorsum rugis duabus obliquis, elevatis, elongatis quas bicavitâ; apertura renuatâ, subovatâ, plîcâ superiori tenui, plîcâ columellari elevatâ, tenui, margine, expanso, laevi.*

THE CYLINDRIFORM CLAUSILIA. Shell fusiform, very pale lilac, with a long notch, slightly ridged; apical whorls brown, middle whorls a little inflated, the last contracted, elongated, with a long portion uncoiled, as if were double-keeled at the back with two oblique elevated wrinkles; aperture distant, rather oval, upper plait thin, columellar plait raised, thin, margin expanded, thin.

BOURBIGONAT — ? Pfeiffer, Mon. Hel. iv. p. 720.

Hab. Mount Lebanon, Syria.

Species 23. (Mus. Sowerby.)

CLAUSILIA BIELZI. *Cl. testâ dextrorsâ, ventricoso-fusiformi, tenui, cornâ, irregulariter et plerumque distanter limatâ; anfractibus concentricis, medianis inflatis, elevatis, ultimo elongato, propè aperturam rimato; apertura perpendiculariter oblongâ, margine externo rotundo, lævi; plîcis internis duabus, tenuibus, plîcâ marginali superiori parvâ; plîcâ columellari tenui, angulatâ.*

BIELZI'S CLAUSILIA. Shell dextral, ventricose-fusiform, thin, horny, irregularly and for the most part distantly ridged; whorls convex, the middle ones inflated, raised, the last elongated, noticed near the aperture; aperture perpendicularly oblong, outer margin rounded, smooth; internal plaits two, thin, upper marginal plait small, columellar plait thin, angular.

PARREYS, Pfeiffer Monog. iii. p. 588.

Clausilia tenuis, Parreys.

Clausilia clathrata, Rossmäler.

Hab. Transylvania.

Species 24. (Mus. Brit.)

CLAUSILIA ROLPHII. *Cl. testā obtusē fusiformi, corneo fusca liris crebris sculptā; anfractibus medianis ventricosis, ultimo elevato, infra contracto, rimato in varicem spiralem ad dorsum desinentē; aperturā subauriformi, margine exteriori superne contracto, labio columellari plicato, plicis, unā superiori, parvā, duabus parvis submarginalibus, unā magnā laminatā, obliquā subintenui.*

ROLPH'S CLAUSILIA. Shell obtusely fusiform, horn-brown, sculptured with close ridges; middle whorls ventricose, the last raised, contracted below, notched, ending in a spiral varix at the back; aperture rather auriform, outer margin contracted above; columellar lip plaited, plait, one above small, two small near the margin, one large, laminated, oblique, partly internal.

LEACH — ? Pfeiffer Monog. iv. p. 762.

Clausilia Mortilleti, Dumont.

Clausilia biplicata, Parreys.

Clausilia satelles, A. Schuandl.

Hab. Britain, France, &c.

Species 25. (Mus. Brit.?)

CLAUSILIA SWINHOE. *Cl. testā arcuato-rimati, fusiformi, solidā, subventricosā, castaneā, striatā; anfractibus 10–12, convexiusculis, ultimo infra turgide; aperturā verticali, oblongā ovali, angulo superiori rotundato; lamellis validis, unā superiori, duabus columellaribus obliquis, hand elevatis.*

SWINHOE'S CLAUSILIA. Shell with a curved notch, fusiform, solid, rather ventricose, chestnut striated; whorls ten to twelve convex, the last turgid at the lower part; aperture vertical, oblong, oval, rounded at the upper angle, lamellæ strong, one upper, two oblique columellar, not raised.

PFEIFFER. Proceedings of the Zoological Society, 1865, p. 830, plate 46, f. 11.

Hab. Isl. of Formosa.

Species 26. (Mus. Sowerby.)

CLAUSILIA CRISPA. *Cl. testā brevi, ventricosā fumoso-fusca, anfractibus 8, maculis magnis albis castaneisque superne prope suturam variegatis, convexis, tenuiter et densē linitis, ultimo prope aperturam rimato, infra ad dorsum subspiraliter birugato; aperturā albā, disjunctā, intus contractā, margine lato, laminatum expanso, plicā superiori perpendiculari, plicā columellari elevatā.*

THE CRISP CLAUSILIA. Shell short, ventricose, smoky-brown, whorls eight, variegated above near the suture with large white and chestnut spots, convex, finely and closely ridged, the last notched near the aperture, with two subspiral wrinkles below on the back; aperture white, disjoined, contracted within, margin broad, spread in a layer, upper plait perpendicular, columellar plait elevated.

LOWE. Dr. Paiva, Monog. Moll. Madeira.

Hab. Madeira.

Species 27. (Mus. Sowerby.)

CLAUSILIA GASTIDOLEPTA. *Cl. testā breviusculā, castaneā ad suturam albida variegatā, tenuissimē linitā, anfractibus 9, medianis ventricosis, ultimo attenuato, rimato, compresso, infra birugato; aperturā albā, margine lato, latero exteriori supra medianā sinuatim incrassato, plicā superiori elongatiussculō, plicā columellari lato, horizontali.*

THE SMALL-CHESTED CLAUSILIA. Shell rather short, chestnut, varied with white at the suture, very finely ridged, whorls nine, the middle ones ventricose, the last attenuated, notched, compressed, with two wrinkles beneath; aperture white, margin broad, outer side sinuously thickened above the middle, upper fold rather lengthened, columellar fold broad, horizontal.

ZEHLER — ? Pfeiffer Monog. ii. p. 418.

Clausilia Freyerii, Kuster.

Clausilia tabula, Kuster.

Clausilia elongata, Cautraime.

Clausilia imbecilis, Parreys.

Hab. Dalmatia.

Species 28. (Mus. Sowerby.)

CLAUSILIA DELTOSTOMA. *Cl. testā parvā, angustā, fusca, densē albilinatā; anfractibus 10, convexiusculis; ultimo rimato, obliquē attenuato, infra birugato; aperturā sublellatōicā, biplicato, parviusculo, sublijuncto.*

THE DELTA-MOUTHED CLAUSILIA. Shell small, narrow, brown, with close, white ridges; whorls ten, rather convex; the last notched, obliquely attenuated, with two wrinkles below; aperture somewhat deltoid, with two plaits, rather small, a little disunited.

LOWE — ? Pfeiffer Mon. ii. p. 411.

Hab. Porto Santo, Madeira.



CLAUSILIA.

PLATE IV.

Species 29. (Mus. Sowerby.)

CLAUSILIA CONSPERSA. *Clu. testâ brevitate, convexâ, levissimè costatâ, medio ventricosâ, ad suturam tuberculis minutis albis creantâ; anfractibus 10, obliquè striatis, ad dorsum albo notatis, infra subcrenatis. Aperturâ magnâ, platis columellaribus latâ, subcrenatis. marginis tenui, albo, levigatâ.*

THE SPINKELED CLAUSILIA. Shell smooth, lustrous, rather short, ventricose in the middle, crested with minute white tubercles at the suture; whorls ten, the last notched, marked with white at the beak, slightly varicose below; aperture large, columellar plait broad, nearly horizontal; margin thin, white, smooth.

PARREYSS. ROSSMÄSLER, Icon. iii.

Hab. Bosnia. Corfu. Dalmatia.

Species 30. (Mus. Brit.)

CLAUSILIA Plicata. *Clu. testâ elongatâ, fusiformi, castaneâ, fuscâ, tenuiter lineatâ, ad suturam plicis striatis alternantibus; aperturâ oblongâ, biplicatâ, cœliæ minimè dilatâ, marginis tenuiter ciliatâ. Columnæ cœliæ elongatâ, infra elongatâ, tumidâ.*

THE PLICATED CLAUSILIA. Shell elongated, fusiform, reddish-brown, finely ridged, ornamented at the sutures with strong white plaits; aperture oblong, with two plaits, somewhat acuminate below, margin thinly ciliated; last whorl notched, elongated, tumid below.

DEPARNAUD (Pupa). Conch. fluv. Pfeiffer Monog. ii. p. 479.

Clausilia maxima, *C. grossa*, *C. longata*, *C. pubescens*, Parreys.

Clausilia rustica, Zeigler.

Helix muralis, Studer.

H. plicosa, Ferrussac.

Clausilia plebeja, litigiosa, olonosa, mucosa, caucasilis, parudoidea, Zeigler.

Hab. Central Europe.

Species 31. (Mus. Sowerby.)

CLAUSILIA NIGRICANS. *Clu. testâ parvâ, levigatâ, griseo-nigrescenti, brevissimè costatâ, anfractibus 9, convexissimè*

costis, aperturâ parvâ, biplicatâ, platis marginibus albis.

THE BLACKISH CLAUSILIA. Shell small, smooth, blackish-grey, rather short, whorls nine, rather convex; aperture small, with two plaits; plaits and margin white.

PELETSEY. British Isles.

Clausilia Marcedia, Risso.

Clausilia obtusa, Pfeiffer.

Clausilia diligata, Parreys.

Clausilia bibulata, Morch.

Clausilia elegantula, Parreys.

Hab. Britain. Germany. France. Scandinavia.

Figure 32.

CLAUSILIA TRIDENS. Species I. Plate I.

Although this is a different variety and worth figuring for the difference, I am now convinced that *Cl. tridens* of Chemnitz, and *Cl. labiata*, Sowerby, *labiatus*, Montfort, are one.

Species 32 is postponed.

Species 33. (Mus. Sowerby.)

CLAUSILIA JAVANA. *Clu. testâ gracili fusiformi, fusca, tenuissimè obliquè striatâ; anfractibus convexissimè costis, elevatis, obliquis, ultimo infra attenuatâ, rotundâ; aperturâ magnâ, auriformi, marginis reflexo, expanso, albido, levigatâ, platis superioribus, columellaribus parvis, albis, approximatis.*

THE JAVA CLAUSILIA. Shell slenderly fusiform, lustrous, very finely obliquely striated; whorls rather convex, raised, oblique, the last attenuated below, notched; aperture large, auriform, margin reflected, expanded, whitish, smooth, upper and columellar plaits small, white, approximate.

PEIFFER. Monog. Helic. ii. p. 405.

Hab. Java.

This is an elegantly fusiform species with expanded aperture.

Species 34. (Mus. Sowerby.)

CLAUSILIA VENTRICOSA. *Clu. testâ fusiformi-subpyramidalâ, tenuissimè filostriatâ, fuscâ; anfractibus 13.*

April, 1875.

obliquis, altis, mediis et infra ventricosis; suturâ profundâ, incisâ; ultimo anfractu rivato, anticâ tumido; aperturâ subquadratâ, margine albo; plicâ superiori parvâ, plicâ columellari elevato, fere horizontali.

THE VENTRICOSE CLAUSILIA. Shell fusiform, somewhat pyramidal, very finely thread-striated, brown; whorls thirteen, oblique, elevated, ventricose in the middle and under; suture deep, incised; last whorl notched, tumid anteriorly; aperture rather square, margin white; upper plait small, columellar plait raised, nearly horizontal.

DEAFARNAUD. *Cob. flav.* Pflf. *Mon.* ii. p. 465.

Helix perversa, Sturm.

Clausilia latestriata, Parreyss.

Hab. Germany. France, &c.

Species 35. (Mus. Sowerby.)

CLAUSILIA PHILIPPANA. *Clu. testâ brevi, fusco-rubescenti, solidâ, ventricosissimâ, anfractibus 5-6, latis, altis, lævigatis, ultimo angustato, juxta aperturam lineatim rivato; aperturâ subauriformi, margine expanso; plicis superiori et columellari validis, approximatis.*

PHILIPP'S CLAUSILIA. Shell short, reddish-brown, solid, very ventricose, whorls five or six, broad, high, smooth; the last narrow, linearly notched close to the mouth; aperture rather auriform, margin expanded; upper and columellar plaits strong, approximate.

PFEIFFER. *Monog.* ii.

Hab. Birma.

A peculiarly obese shell of few whorls.

Species 36. (Mus. Sowerby.)

CLAUSILIA LINEOLATA. *Clu. testâ fusiformi, elongatâ, angustâ, corneo-fuscâ, liris albis tenuibus, crebris sculptâ; anfractibus 13, convexis, ultimo angustato, ad dorsum medio compresso, infra tumido; aperturâ oblongâ, margine æterno tenui, supra medium sinuatim subcontracto, plicâ superiori brevissima, plicâ columellari, elevato, subinterno.*

THE LINEAR CLAUSILIA. Shell fusiform, elongated, narrow, horn-brown, sculptured with white, thin,

close ridges; whorls thirteen; convex, the last narrow, compressed in the middle at the back, tumid below; aperture oblong, outer margin thin, sinuously contracted above the middle; upper plait very short, columellar plait elevated rather internal.

HELD —? Pfeiffer *Monog.* iv. p. 778.

Hab. Germany. France, &c.

Species 37. (Mus. Sowerby.)

CLAUSILIA OLIVIERI. *Clu. testâ cærulescenti, strigis undique cornis ruscigatâ, validè inæqualiter litatâ, elongato-fusiformi; anfractibus 11, supernè declivibus; suturâ profundâ; ultimo anfractu angustato, rivato, ad dorsum medio compresso, infra tumido, validè rugoso; aperturâ fultâ, angustè ovatâ, plicâ superiori parvâ, plicâ columellari elevato, intus angulatâ.*

OLIVIER'S CLAUSILIA. Shell bluish, variegated with horny stripes and waves, strongly unequally ridged, elongated, fusiform; whorls eleven, sloped above; suture deep, last whorl narrow, notched, compressed in the middle at the back, tumid below, strongly wrinkled; aperture fulvous, narrowly ovate, upper plait small, columellar plait raised, angular within.

ROTH. —? Kuster, p. 233. Pfeiffer *Mon.* ii.

Hab. Rhode Island.

Species 38. (Mus. Sowerby.)

CLAUSILIA LUNULARIS. *Clu. testâ griseo-fuscâ, tenuissimè striatâ, subventricosâ; anfractibus 8, medianis inflatis, ultimo ad dorsum medio contracto; aperturâ subauriformi, margine tenui, expanso, reflecto; plicis superiori et columellari parvis, approximatis.*

THE LUNULAR CLAUSILIA. Shell grey-brown, very finely striated, rather ventricose; whorls eight, the middle ones inflated, the last contracted in the middle at the back, aperture rather auriform, margin thin, expanded, reflected; upper plait and columellar plait small, approximate.

PFEIFFER. *Monograph Heliceorum*, iii. p. 608.

Hab. Eubœa.



CLAUSILIA.

PLATE V.

Species 39. (Mus. Sowerby.)

CLAUSILIA OBLIQUA. *Cl. testâ brevî, constrictâ, sub-
porphyrea, laevigatâ; anfractibus 10, subaequalibus,
ad suturam excavatis; ultimo subrepleto, rimato,
aperturâ rectâ, obliquis, subrepleto, subcylindrico,
marginibus subaequalibus, tenuibus, aperturâ
superiori et columellari tenuibus, approximatis.*

THE OBLIQUE-MOUTHED CLAUSILIA. Shell short, red-
dish, purple-brown, smooth, whorls ten, rather
convex, circulate at the suture; last whorl
notched; aperture straight, oblique, notched below,
a little reflected, outer margin rather callous near the
suture, upper and columellar plain thin, approxi-
mate.

MENKE. Synops. Pfeiffer Mon. ii. p. 102.

Clausilia piliformis, Parreyss.

Clausilia tarantula, Zeigler.

Hab. Germany. Hungary, &c.

Species 40. (Mus. Sowerby.)

CLAUSILIA FLUMINA. *Cl. testâ brevî, constrictâ, pur-
pureo-fusca, laevigatâ; anfractibus 10, subaequalibus,
superiâ ad suturam alba laevigata, inferioribus con-
vexis, ultimo proximali rimato, ad dorsum attenuato,
infra subcarinato, aperturâ alba, lat. biplicatâ,
marginibus, margini recto, expansis.*

THE FLEM-COLOURED CLAUSILIA. Shell short, very
ventricose, purple-brown, smooth; whorls ten,
convex, banded with white above at the suture,
middle ones ventricose, last deeply notched,
depressed at the back, subcarinated below;
aperture white, with two broad plaits, rather
large, margin reflected, expanded.

ROMASSLER — ? Pfeiffer Mon. ii. p. 101.

Hab. Transylvania.

Species 41. (Mus. Sowerby.)

CLAUSILIA SEMIRUGATA. *Cl. testâ griseo-albidâ, lamel-
lis tenuibus liratâ; anfractibus paucis, convexis,*

*medio laevigatâ, ad suturam tantum fusca tuberculâ
albis interruptâ convexis; ultimo rimato, obliquè an-
gustato, ad dorsum compresso, infra tumido, sub-
carinato; aperturâ subauriformi, margine tenui,
plicâ columellari latâ, albâ.*

THE HALF-WINKLED CLAUSILIA. Shell whitish-grey,
ridged with thin lamellæ; whorls few, raised,
smooth in the middle, belted at the suture with a
narrow band interrupted by white tubercles, the
last notched, obliquely narrowed, flattened at the
back, tumid below, partly keeled; aperture rather
auriform, margin thin, columellar plait broad,
white.

ZIEGLER. Vert. Claus. p. 29.

Clausilia pennula, Parreyss.

Clausilia pygmaea, Zeigler.

Clausilia nitida, Mullfeldt.

Clausilia Chersonesus, Ferr.

Clausilia rugata, Parreyss.

Clausilia fasciolaris, Parreyss.

Hab. Dalmatia.

Species 42. (Mus. Sowerby.)

CLAUSILIA STRANGULATA. *Cl. testâ brevissimâ, lami-
nâ liratâ, griseo-fusâ; anfractibus 8, con-
vexis, ultimo attenuato, rimato, brevissimè
soluto, ad dorsum coarctato, tumido liratâ;
aperturâ oblongâ, margini tenui, subexpansâ.*

THE STRANGLED CLAUSILIA. Shell rather short, ridged
with laminae, fulvous-grey; whorls eight, rather
convex, the last attenuated, notched, very shortly
uncoiled, pressed in at the back with two tumid
wrinkles; aperture oblong, margin thin, rather
expanded.

FERRISSAC — ? Pfeiffer Mon. ii. p. 467.

Clausilia rectusa, Parreyss.

Hab. Syria.

This curious little shell is pressed and knotted behind
the aperture so as to give the appearance of strangula-
tion.

Species 43. (Mus. Sowerby.)

CLAUSILIA VALLATA. *Cla. testâ brevi, subcentricâ, convexâ; anfractibus 8, convexisculis; ultimo rimato, ad dorsum compresso, propè aperturam varice albo, plicis foveâi nullâ; aperturâ albâ, marginè crasso, plicâ columellari crassâ, plicâ superiorî tenui.*

THE WALLED CLAUSILIA. Shell short, subventricose, horny; whorls eight, rather convex; the last notched, compressed at the back, walled near the aperture with a white, plait-like varix; aperture white, margin thick, columellar plait thick, upper plait thin.

MOUSSON. Ms. Pfeiffer Monog. 1868, p. 453.

Clausilia cellata, Adams.

Hab. Epirus.

Species 44. (Figs. a, b. Mus. Sowerby.)

CLAUSILIA RUGOSA. *Cla. testâ parvâ, subcentricâ, tenuiter levatâ, fuscâ, anfractibus 10, convexis, ultimo angustato, aperturâ auriformi, marginè plicisque albis, plicis unâ brevi superiorî, unâ inferiorî, propè marginem instructâ, unâ laterali propè marginem æternam conspicuâ, unâ latâ, columellari, cum unâ parvâ infâ.*

THE RUGOSE CLAUSILIA. Shell small, rather ventricose, finely ridged, brown, whorls ten, convex, the last narrow, aperture auriform, margin and plaits white; plaits, one short upper, one placed near the lower margin, one lateral conspicuous near the outer margin, one broad, columellar with one small underneath.

Clausilia R. haubii, Charpentier.

Clausilia pygmaea, Charpentier.

Clausilia circinata, Ferrussac.

Clausilia perversa, Moquin.

Hab. France. Northern Italy.

Species 45. (Mus. Sowerby.)

CLAUSILIA TRISTAMI. *Cla. testâ elongato-fusiformi, purpureo-fuscâ, tenuiter levatâ, anfractibus 14, altis, ultimo rimato; aperturâ latâ, bicipitatâ, marginè albo, levigato, angusto.*

TRISTAM'S CLAUSILIA. Shell elongated fusiform, purple-brown, finely ridged; whorls fourteen, high, the last notched; aperture broad, two plaited, margin white, smooth, narrow.

PFEIFFER. Proc. Zool. Soc. 1860.

Hab. Mount Atlas, Timctan.

Species 46. (Mus. Sowerby.)

CLAUSILIA SHANGHAIENSIS. *Cla. testâ elongato-fusiformi, levigatâ, polibi, convexâ; anfractibus 12, convexisculis, ultimo vix rimato, obliquè attenuato; aperturâ oblongâ, bicipitatâ, marginè crasso, levî, albo, cæteso.*

THE SHANGHAI CLAUSILIA. Shell elongated fusiform, smooth, polished, horny; whorls twelve, rather convex; the last hardly notched, obliquely attenuated; aperture oblong, with two plaits; margin thick, smooth, white, reflected.

PFEIFFER. Monograph iii. p. 410.

Hab. Shanghai, near China.

Species 47. (Mus. Sowerby.)

CLAUSILIA STIMPSONI. *Cla. testâ parvâ, albidd, tenui, gracili, tenuiter levatâ; anfractibus 10, ultimo elongato; aperturâ parvâ, bicipitatâ, levâ, marginè crassiusculo, plicâ columellari obliquè elevatâ, vix prominente.*

STIMPSON'S CLAUSILIA. Shell small, whitish, thin, slender, finely ridged; whorls ten, the last elongated; aperture small, with two folds, fulvous, margin rather thick, columellar plait obliquely raised, scarcely prominent.

A. ADAMS. *Mart. Ocas. Zool.* ii. p. 83.

Hab. Japan.





49



48



50



52



51



53



53.1



51



56



56

CLAUSILIA.

PLATE VI.

Species 48. (Mus. Hanley.)

CLAUSILIA BACILLUM. *Cl. testâ fusiformi, pallidè aurantâ, lœvi; anfractibus 9, convexis, medianis ventricosis, ultimis contractis; aperturâ oblongâ, albi, supernè cuneatâ, plicâ superiori validâ; plicâ columellari elongatâ, obliquâ.*

THE WALKING-STICK CLAUSILIA. Shell fusiform, pale orange, smooth; whorls nine, convex, the middle ones ventricose, the last contracted; aperture oblong, white, covered above. upper plait strong; columellar plait elongated, oblique.

BENSON. MS. Hanley, Conchologia Indica, p. 12.

Hab. Nanchai, Khasi Hills.

There appear to be only two specimens of the species known.

Species 49. (Mus. Brit.)

CLAUSILIA PAREYSSII. *Cl. testâ subpyramidatâ, minutè interruptim liratâ, fusco-rubescenti, infrâ medium ventricosâ; anfractibus 9, inferioribus altis, ad suturam tenuissimè plicatis; aperturâ magnâ, biplicatâ, labio externo suprâ medium sinuatâ; plicâ superiori parvâ, incurvâ; plicâ columellari, altâ, latiusculâ.*

PAREYSS' CLAUSILIA. Shell somewhat pyramidal, minutely interruptedly ridged, reddish brown, ventricose below the middle; whorls nine, the lower ones elevated, very finely plaited at the suture; aperture large, with two plaits; outer lip sinuated above the middle; upper plait small, curved inwards; columellar plait elevated, rather broad.

ZEIGLER. Pfeiffer, Monograph. II. p. 400.

Clausilia marmorata, Parreyss.

Clausilia cerea, Menke.

Hab. Carpathian Mountains.

Species 50. (Mus. Brit.)

CLAUSILIA ANGUSTATA. *Cl. testâ rimatâ, fusiformi, tenui, lævigatâ, conspicuè attenuatâ, apice acuto, suturâ albobiosâ; anfractibus 10-11, planulatis, ultimo infrâ gibbo, striato; aperturâ viz obliquâ, oblongo-ovali; plicâ superiori compressâ, marginum*

non-attenti, inferiori validâ, tortuosâ; plicis internis 4, inæqualibus; peristomate continuo soluto, albo, angustè reflexo.

THE NARROW CLAUSILIA. Shell notched, fusiform, thin, smooth, conspicuously attenuated, with acute apex, suture white-threaded; whorls ten or eleven, flattened, last gibbous below, striated; aperture very slightly oblique; oblong-ovate; upper plait compressed, not touching the margin, lower plait strong, tortuous, inner plaits four, unequal; peristome continuous, detached, white, narrowly reflected.

BIETZ. Pfeiffer.

Hab. Transylvania.

Species 51. (Mus. Benson, Hanley.)

CLAUSILIA BULBUS. *Cl. testâ pupiformi, ventricosissimâ, castaneâ, rimatâ; anfractibus 4, duobus apicalibus parvisculis, tertio magno, alto, valdè inflato, ultimo alto, versâs aperturam angustato; aperturâ parvâ, auriculiformi, peritremate pallidè carneo, crasso, reflexo, columellâ biplicatâ.*

THE BULB CLAUSILIA. Shell pupiform, very ventricose, chestnut, notched; whorls four, two apical, rather small, third large, elevated much inflated, last elevated, narrow towards the aperture; aperture small, ear-shaped, peritreme pale flesh, thick, reflected, columella with two folds.

BENSON. Annals of Natural History, 1863.

Hab. Near Moulmein, Birmah.

Resembling *Clausilia Philippiana*, but with the whorls fewer, much more inflated and unequal.

Species 52. (Fig. a, b, Mus. Brit.)

CLAUSILIA VALIDA. *Cl. testâ subfusiformi, solidâ, pallidè corneâ, vel flavidâ, medio anfractuâ latè unifusciatâ, tenuiter liratâ; anfractibus 8-9 altis, subcylindricis, medianis inflatis, ultimo altissimo, versâs aperturam attenuato; aperturâ magnâ, altissimâ auriformi, plicâ superiori elongatâ, plicis super-columellari unâ validâ, elongatâ, altâ parvâ inferiori.*

May, 1875.

CLAUSILIA.—PLATE VI.

THE STRONG CLAUSILIA. Shell rather fusiform, solid, pale horny, or yellowish with a broad band in the middle of the whorls, finely ridged; whorls eight to nine, elevated, rather cylindrical, middle ones inflated, last very high, attenuated towards the aperture; aperture large, very high, antriform, upper plate elongated, plaits on the columella, one strong, elongated, the other small, lower.

PFEIFFER. Monographia Helicorum III.
Hab. Lien Kien.

Species 53. (Mus. Hanley.)

CLAUSILIA INSIGNIS. *Cl. testâ fusiformi, rimatâ, castaneâ, levigatâ, propè suturam fasciâ pallidâ cinctâ; anfractibus 9, concavis, gradualim versus terminis attenuatis; ultimo altissimo; aperturâ subtrigonâ, margine purpureo crasso; labio externo lato, supernè incrassato, sinuato; plicis superiori et columellari rotatis.*

THE WONDERFUL CLAUSILIA. Shell fusiform, notched, chestnut, smooth, girt with a pale band near the suture; whorls nine, convex: gradually attenuated towards the end; last very high; aperture nearly trigonal, margin purple, thick, outer lip broad, thickened and sinuated above; upper and columellar plaits strong.

GOULD. Proceedings of the Boston Society of Natural History.

Hab. Tavoy, Birmah.

Species 54. (Mus. Brit.)

CLAUSILIA MARGINATA. *Cl. testâ fusiformi, solidâ, fusco-cornèâ, levigatâ; anfractibus 10, ad suturam fîo-marginatis, apicalibus 6 contractis, inferioribus ventricosâ, ultimo rimato, aperturâ contractâ, elevatâ, margine crasso, labio externo ad medium sinuatim plicato, plicis superiori et columellari crassis, marginis.*

THE FORDERED CLAUSILIA. Shell fusiform, solid, brown-horn, smooth; whorls ten, thread-bordered at the suture, the six towards the apex contracted, lower ones ventricose, last notched; aperture contracted, elevated, margin thick, outer lip with a sinuous plait in the middle; upper and columellar plaits thick, large.

ZEIGLER.

Clausilia Democletiana, Menke.

Clausilia bilabiata, Fr.

Clausilia vitrea, Bietz.

Hab. Transylvania.

Species 55. (Mus. Brit.)

CLAUSILIA BINOTATA. *Cl. testâ breviusculâ, subpyramidatâ; pallidè succineâ; anfractibus 9, breviusculis ad suturam denticulato-plicatis, apicalibus sensim contractis, medianis convexis, ultimo ad dorsum lineâ pallidâ semilunaribus duabus notato; aperturâ labi, margine externo supra medium sinuatim plicato, columellâ buplicatâ.*

THE TWO-MARKED CLAUSILIA. Shell rather short, rather pyramidal; pale amber; whorls nine, rather short, with tooth-like plaits at the suture, three apical, sensibly contracted; middle convex, last marked at the back with two pale semilunar lines; aperture broad, external margin with a sinuous plait above the middle; columellar with two plates.

ROSMÄSLE. Pfeiffer, Monog. II.

Clausilia consentanea, Zeigler.

Clausilia bipustulata, Kuster.

Hab. Istria.

Species 56. (Mus. Brit.)

CLAUSILIA ITALA. *Cl. testâ fusiformi, fusco-plumbeâ, medio ventricosâ; anfractibus 9-10, ad suturam denticulato-plicatis, apicalibus sensim contractis, medianis inflatis, ultimo infrâ angustato, ad dorsum lineâ pallidâ flexuosi notato; aperturâ subovâtâ, labio externo intus incrassato, plicis superiori et columellari superiori elongatis, inferiori parvis.*

THE ITALIC CLAUSILIA. Shell fusiform, plum-brown, ventricose in the middle; whorls nine to ten, with tooth-like plaits on the suture, apical sensibly contracted, middle inflated, last narrowed below, marked with a flexuous pale line on the back.

MARTENS. Pfeiffer, Monog. II.

Clausilia alboguttulata, Meyner.

Clausilia punctata, Michaud.

Clausilia crenata, Menke.

Hab. Lombardy; Tyrol; Balia, &c.





38



37



39



41



40



42



43



44



45



46

CLAUSILIA.

PLATE VII.

Fig. 53 b. (Mus. Benson.)

CLAUSILIA INSIGNIS. This shell is figured in Mr. Hanley's work on Indian Shells as a more slender variety of the species figured in Plate VI.

Species 57. (Mus. Brit.)

CLAUSILIA BILABIATA. *Cl. testâ brevi, sulcâ, levi, anfractibus 9, brevibus, medianis ventricosis, ut suturam minutissimè plicatis; aperturâ subquadratâ, marginæ crasso, labio interno buplicato, labio externo duplicato, suprâ medium plicâ dentiformi sinuato.*

THE DOUBLE-LIPPED CLAUSILIA. Shell short, fulvous, smooth, whorls 9, short, middle ventricose, very finely plaited at the suture; aperture rather square, margin thick, inner lip with two plaits, outer lip doubled, sinuated with a tooth-like plait above the middle.

WAGNER. Pfeiffer, Mon. II.

Clausilia rylea, Zeigler.

Clausilia ryle-cilabris, Cautraîne.

Clausilia labiocrassa, Muhlfeldt.

Clausilia planilabris, Rossmâster.

Hab. Dalmatia.

Remarkable for the thickness and double character of the outer lip.

Species 58. (Mus. Brit.)

CLAUSILIA SANDERII. *Cl. testâ fusiformi, obscurè rosco-albidâ, levi, medio ventricosissimâ, anfractibus 10-11, apicalibus parvis, medianis inflatis, altis, ultimo rimato, versûs aperturam contracto, aperturâ magnâ, marginæ crasso; labio columellari validè buplicato, labio externo suprâ medium sinuatim tumido.*

SANDER'S CLAUSILIA. Shell fusiform, dull rose-white, smooth, very ventricose in the middle; whorls 10-11, apical small, middle inflated, high, last notched, contracted towards the aperture; aperture large, margin thick, columellar lip strongly plaited, outer lip sinuously swelled above the middle.

KÜSTER. Pfeiffer, Mon. II.

Clausilia honorifica, Parreyss.

Clausilia magnifica, Parreyss.

Hab. Dalmatia.

Species 59. (Mus. Brit.)

CLAUSILIA SUMATRANA. *Cl. testâ solidâ, brevi, ventricosâ, plumbeâ et succineâ, anfractibus 8, supernè albo-fusciatis, 6 apicalibus convexis, brevibus, penultimo alto, ventricoso, ultimo alto infrâ contracto; aperturâ auriformi, magnâ, buplicatâ, labio externo medio tumido, plicâ columellari obliquè tortuâ.*

THE SUMATRA CLAUSILIA. Shell solid, short, ventricose, plum-coloured and amber; whorls 8, white-banded above, 6 apical convex, short, penultimate high, ventricose, last high, contracted below; aperture auriform, large, buplicate, outer lip swelled in the middle, columellar plait obliquely tortuous.

MARTENS. Berlin Akad. Pfeiffer, Mon. VI.

Hab. Island of Sumatra.

Species 60. (Mus. Benson.)

CLAUSILIA OVATA. *Cl. testâ brevi, ventricosâ, fumosocastaneâ, lævigatâ, solidâ, anfractibus 6, supernè albo-fusciatis, duobus apicalibus parvis, brevibus, tribus, medianis altis, inflatis, ultimo altissimo, rimato, versûs aperturam subcontracto; aperturâ auriformi, margine purpurascens, crassiâculo, rotundo, plicâ superiori parvâ, plicâ columellari elevatâ, tenui, parvâ.*

THE OVATE CLAUSILIA. Shell short, ventricose, smoky-chestnut, smooth, solid; whorls 6, white-banded above, two apical small, short, three middle high, inflated, last very high notched, a little contracted towards the aperture; aperture auriform, margin purplish, rather thick, rounded, superior plait small, columellar plait raised, thin, small.

BLANFORD. Journal of Asiatic Society of Bengal, 1872.

Hab. Tongbu, Birmah.

Species 61. (Mus. Benson.)

CLAUSILIA LOXOSTOMA. *Cl. testâ fusiformi, fusco-cornâ, laxigatâ; anfractibus 9, ad suturam plicatis, medianis ventricosis, altis, ultimo alto, infra subangustato, rimato; aperturâ magnâ, obliquè subtrigonâ, margine reflexo, albo, planisculo, labio externo supernè sinuatim tumido, labio interno bicipitato.*

THE OBLIQUE-MOUTHED CLAUSILIA. Shell fusiform, horn-brown, smooth; whorls 9, plaited at the suture, the middle ones ventricose, high, last high, rather narrowed below, notched; aperture large, obliquely subtrigonal, margin reflected, white, rather flat, outer lip sinuously swelled above, inner lip bicipitate.

BENSON. Pfeiffer, Mon. II. p. 404.

Clausilia Bengalensis, Busch.

Hab. Bengal.

Species 62. (Mus. Hanley.)

CLAUSILIA FUSIFORMIS. *Cl. testâ flavidâ, minutè striatâ, fusiformi, ventricosâ; anfractibus 8, convexis, versùs apicem gradatim angustatis, medianis ventricosis, altis, ultimo angustiori, altissimo; aperturâ albâ, auriformi, margine crasso, labio externo propè suturam sinuatim angustato, medio et infra tumido; labio interno bicipitato, plicâ columellari alto, planato.*

THE FUSIFORM CLAUSILIA. Shell yellow, minutely striated, fusiform, ventricose; whorls 8, convex, gradually narrowed towards the apex, middle ventricose, high, last narrower, very high; aperture white, auriform, margin thick, outer lip sinuously narrowed near the suture, tumid in the middle and below; inner lip with two plaits.

BLANFORD. Contributions to Indian Malacology, v. 1865, p. 16.

Hab. Arakan Mountains.

Species 63. (Mus. Brit.)

CLAUSILIA CYCLOSTOMA. *Cl. testâ fusco-rubescenti, tenuiter liratâ, brevi, fusiformi; anfractibus 9, apicalibus parvis, medianis altis ventricosis, ultimo altissimo, rimato, ad dorsum obliquè bicaricoso; aperturâ latâ, rotundâ, margine albo, crasso, late reflexo, plicis labii interni parvis, acutis.*

THE ROUND-MOUTHED CLAUSILIA. Shell reddish-brown, finely ridged, short, fusiform; whorls 9, apical small, middle high, ventricose; last very high,

notched, with two oblique varices at the back; aperture broad, rounded, margin white, thick, broadly reflected, plaits of the inner lip small, acute.

PFEIFFER. Monographia Heliceorum, IV. p. 784.

Hab. Central America.

Species 64. (Mus. Brit.)

CLAUSILIA CATTARENSIS. *Cl. testâ subpyramidatâ, medio paulò inflatâ, plumbeâ et castaneâ; anfractibus 11, albo, marginatis, apicalibus 6, parvis, brevibus, medianis latioribus, ad laterâ rectiusculis, ultimo alto, versùs aperturam rix angustato; aperturâ magnâ, subquadratâ, plicâ superiori validâ, plicâ columellari altâ, obliquâ, plicis internis supernè duobus linearibus, infra columellam, unâ parvâ, obliquâ.*

THE CATTARO CLAUSILIA. Shell somewhat pyramidal, a little inflated in the middle, plum-coloured and chestnut; whorls 11, white-bordered, 6 apical small, short, middle wider, rather straight at the sides, last high, scarcely narrowed towards the aperture; aperture large, subquadrate, upper plait strong, columella plait high, oblique, inner plaits two linear above, one small, oblique, below the columella.

ZEIGLER. Pfeiffer, Monog. II. 437.

Clausilia laxigata, Mühlf.

Clausilia lesinucensis, Parreyss.

Hab. Cattaro.

Species 65. (Mus. Hanley? copied.)

CLAUSILIA TURRITELLA. *Cl. testâ flavidâ, angustissimâ, elongatâ, pyramidatâ; anfractibus 14, lentè crescentibus, convexisculis, ultimo oblongo; aperturâ oblongo-subquadratâ, suprâ columellam uniplicatâ, columellâ rectâ.*

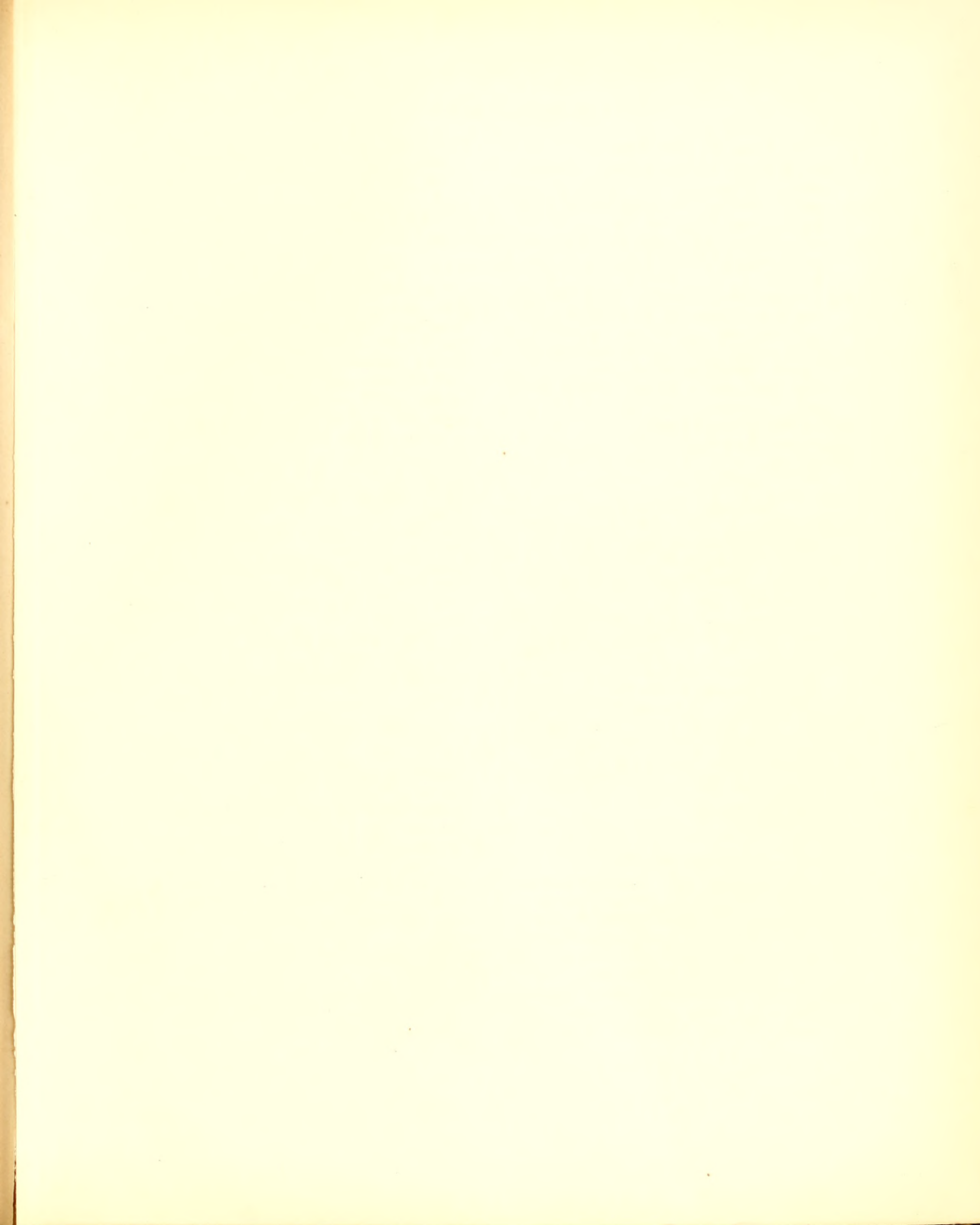
THE TURRITELLA CLAUSILIA. Shell yellow, very narrow, elongated, pyramidal; whorls 14, slowly increasing, rather convex, last oblong; aperture oblong, rather square, with a single plait over the columella, columella straight.

SOWEBY.

Clausilia cylindrica, Hanley, as of Gray, MS.

Hab. Landour.

This shell seems so different from the type specimens in the Brit. Mus. that after figuring it I have felt compelled to give it a new name.





CLAUSILIA.

PLATE VIII.

Species 66. (Mus. Brit.)

CLAUSILIA EVGENSEATA. *Cha. testâ parvâ, brevi, subfusiformi, obscure succineâ, tenuissimè striatâ, anfractibus 10, apicalibus 5 parvis, attenuatis; medianis ventricosis, ultimo elongato, ad dorsum pliato; apertura ovato; plâcâ superiori subdistanti, plâcâ columellari magnâ; labio externo supra medium dentiformi, tumido.*

THE AMBER CLAUSILIA. Shell small, short, subfusiform, dull amber, very finely striated, whorls 10; apical 5 small, attenuated, middle ventricose, last plaited at the back; aperture ovate, upper plait rather distant, columellar plait large; outer lip with a tooth-like swelling above the middle.

ZEIGLER. Pfeiffer, Monograph. II.

Clausilia nympba, *C. striatâ dilis*, Parreyss.

Hab. Croatia.

Species 67. (Mus. Brit.)

CLAUSILIA FIMBRATA. *Cha. testâ brevi, ventricosâ, fusiformi, albâ, lævigatâ, anfractibus 10, ad suturam fimbriatâ, convexâ, apicalibus sensim attenuatis, medianis magnis, ultimo altiusculo, propè aperturam contracto, ad dorsum propè marginem tumido; apertura subquadratâ, labio ext. rursus supra medianâ sinuâ tumido, subdentato; plâcâ columellari latâ, plâcâ superiori parvâ.*

THE FRINGED CLAUSILIA. Shell short, ventricose, fusiform, whitish, smooth; whorls 10, fringed at the suture, convex, the apical ones notably attenuated, middle large, but rather high, contracted near the aperture, tumid near the margin at the back; aperture rather square, outer lip sinuated with a tooth-like swelling above the middle, columellar fold broad, upper fold small.

MUHLFELD. Pfeiffer, Mon. H. p. 399.

Clausilia saturata and *C. phoderato*, Zeigler.

Clausilia viridis, Mühlfeldt.

Clausilia striatâ, Parreyss.

Hab. Illyria—Croatia.

Species 68. (Mus. Brit.)

CLAUSILIA BLANDA. *Cha. testâ subpyramidatâ, lævigatâ, pallidè succineâ, semipellucidâ; anfractibus 10, apicalibus tribus parvis, convexis, alteris subventricosis, ad laterâ rotâcularis; ultimo alto; apertura suborâtâ, margine albo, tenuissculo, labio externo propè suturam undulato, labio interno lato, plâcâ superiori parvâ, plâcâ columellari latâ, inferiori parvâ, rotulâ.*

THE BLAND CLAUSILIA. Shell rather pyramidal, smooth, pale amber, semi-pellucid; whorls 10, three at the apex small, convex, the others rather ventricose, rather straight at the sides, last high, aperture rather ovate, margin white, rather thin, outer lip with a tooth near the suture, inner lip broad, upper plait small, columellar plait broad, lower small, strong.

ZEIGLER. Pfeiffer, Mon. H. p. 118.

Clausilia castanea, Kuster.

Clausilia striatâ, Mühlfeldt.

Hab. Dalmatia.

Species 69. (Mus. Theobald? copied.)

CLAUSILIA MASOBI. *Cha. testâ fusiformi, fuscâ, gracili, anfractibus 10, medianis et inferioribus altis, obliquè ventricosis, propè suturam depressis, ultimo elongato, attenuato, supra aperturam profundè rimato; apertura maximâ, margine effuso, labio interno superè triplicato.*

MASON'S CLAUSILIA. Shell fusiform, brown, rather slender, whorls 10, middle and lower high, obliquely ventricose, depressed near the suture, last elongated, attenuated, deeply notched above the aperture; aperture very large, margin effuse, inner lip three-plaited above.

THEOBALD. Journal of Asiatic Society of Bengal, v.

Hab. Near Tunghoo mountains, Pegu, and Martaban.

Species 70. (Mus. Crosse? copied.)

CLAUSILIA SANDBERGERI. *Cha. testâ rimatâ, solidâ, fusiformi, ventricosâ, regulariter tenuissimè liratâ,*

griseo-cornio, albo strigatâ; anfractibus 12, apicalibus angustis, brevibus, alteris tumidis usque ad ultimum gradatim crescentibus; aperturâ ovatâ, margine tenui, albo, labio interno triplicato, plicâ superiori validâ, plicâ columellari superiori latâ, inferiori parvi.

SANBERGER'S CLAUSILIA. Shell notched, solid, greyish-horn, striped with white, whorls 12, the apical ones narrow, short, the others tumid, gradually increasing to the last; aperture ovate, margin thin, white, inner lip with three plaits; upper plait strong, upper columellar plait broad, lower small.

MOUSSON. *Crosse, Journal de Conchyliologie, 1873.*

Hab. Borschoim, Russia.

Species 71. (Mus. Crosse? copied.)

CLAUSILIA FUNICULUM. *Cl. testâ subcylindricâ, pallidissime conca, tenuiter lirata; anfractibus 8-9, altis, paulo convexis, gradatim crescentibus, ultimo oblique descendenti; aperturâ pyriformi, labio externo tenui, labio interno super anfractuum ultimum paralleliter quadriplecato.*

THE LITTLE-CHIMNEY CLAUSILIA. Shell subcylindrical, very pale horn, finely lirated; whorls eight to nine, high, a little convex, gradually increasing; last obliquely descending; aperture pyriform, outer lip thin; inner lip with four parallel plaits upon the body whorl.

MOUSSON. *Crosse, Journ. de Conchyliologie, 1873.*

Hab. — ?

The four parallel plaits on the part of the inner lip where it laps over the body whorl is a peculiar characteristic of this species.

Species 72. (Mus. Hanley.)

CLAUSILIA TURA. *Cl. testâ elongatâ, eleganter fusiformâ, tenuiter lirata; anfractibus 12, obliquis, cæcis apicem sensim attenuatis, brevibus, medianis altis, ultimo elongato, supra aperturam oblique rimatâ; aperturâ maximâ, auriformi, margine albo, effuso, expanso, labio interno medio biplicato, plicis validis, approximatis.*

THE TUBE CLAUSILIA. Shell elongated, elegantly fusiform, finely ridged; whorls twelve, oblique,

sensibly attenuated towards the apex, middle-high, last elongated, obliquely notched above the aperture; aperture very large, auriform, margin white, effuse, expanded, inner lip with two plaits in the middle, plaits strong, approximate.

HANLEY. *Proc. Zool. Soc., 1868.*

Hab. Shan States.

Species 73. (Mus. Brit.)

CLAUSILIA GRACILICOSTA. *Cl. testâ gracili, fusiformi, tenuiter regulariter liris laminiformibus sculptâ, anfractibus 12, gradatim in medio inflatis, ad laterâ rectilænsis, ultimo profunde rimato, autè rimam oblique carinato, prope aperturam soluto; aperturâ ovatâ, rectâ, infra subacuminatâ, intus rimatâ, labio externo supra medium sinuatim tumido, labio interno angusto, plicâ superiori brevi, plicâ columellari altâ.*

THE THIN-RIBBED CLAUSILIA. Shell slender, fusiform, regularly sculptured with thin laminated ridges; whorls twelve, gradually inflated in the middle, rather straight at the sides, the last deeply notched, obliquely keeled in front of the notch, uncoiled near the mouth; aperture oval, straight, rather acuminate below, notched within; outer lip sinuously tumid above the middle; inner lip narrow, upper plait short, columella plait high.

ZEBELE. *Pfiffer, Monograph, II. 414.*

Clausilia variata and *Clausilia porcata*, Zeigler.

Hab. Russian Mountains.

Species 74. (Mus. Brit.)

CLAUSILIA CRASSICOSTATA. *Cl. testâ pallide fulvâ, brevi, fusiformi, costis solidis substantibus, rectilænsis, lirata, medio ventricosa; anfractibus paucis, apicalibus sensim contractis, medianis altis, ad laterâ rectilænsis, ultimo altissimo, infra attenuato, profunde rimato, costis ad dorsum infra volutatis; aperturâ obliquâ, margine effusâ, reflexâ, albâ, labio externo crasso, labio interno angusto, plicis columellari et superiori validis, approximatis.*

THE THICK-RIBBED CLAUSILIA. Shell pale fulvous, short, fusiform, ridged with solid, rather distant, rather straight ribs, ventricose in the middle; whorls few, apical ones notably contracted, middle

lip rather straight at the sides, last very high, attenuated below, deeply notched, ribs waved at the lower part of the back; aperture oblique, margin effuse, reflected white, outer lip thick, inner lip narrow; columella and upper plaits strong, approximate.

Benson, Pfeiffer, Monograph, IV, p. 753.

Hab. Sicily.

Species 75. (Mus. Benson, Hanley.)

CLAUSILIA Jos. *Cha. testâ brevis, fusiformi, cornuâ, orati, medio inflati; anfractibus medianis albis, ultimo altissimo rimato, aperturâ subtrigoniâ,*

marginâ albo, tenuiusculo, labio externo prop-saturam sinuato supra medium tumido; labio interno biplicato; placiâ superiori distanti, brevi, placiâ columellari obliquâ, valvâ.

THE JOS CLAUSILIA. Shell short, fusiform, horny, ridged, middle inflated; middle whorls high, the last very high, notched, aperture nearly trigonal, margin white, rather thin, outer lip sinuous near the suture, tumid above the middle; inner lip with two folds; upper fold distant, short; columellar fold oblique, strong.

Benson, Pfeiffer, Monograph, IV, p. 761.

Hab. Darjiling, Himalayas.





CLAUSILIA.

PLATE IX.

Species 76. (Mus. Brit.)

CLAUSILIA BIDENS. *Cl. testâ parvâ, ventricosâ, ferè albâ, brevî, lævigatâ; anfractibus 8, medianis ventricosis, ad suturam minutè distanter plicatis, ultimo infra subcontracto, aperturâ latè oratâ intus propè marginem externum incrassato, labio interno tenui, plicâ superiori minutâ, plicâ columellari magnâ.*

THE TWO-TOOTHED CLAUSILIA. Shell small, ventricose, nearly white, smooth; whorls eight, middle ones ventricose, minutely distantly plaited at the suture, last a little contracted below; aperture broadly ovate, thickened within near the outer margin, inner lip thin, upper plait minute; columellar plait large.

LINNEUS. Syst. Nat. Pfeiffer Monog. VI. 454.

Helix papillaris, Bruguière, &c.

Clausilia Mediterranea, Gray.

Clausilia vitrea, Stutz.

Clausilia virgata, Jan.

Clausilia sulcitana, Gené.

Hab. Countries of the Mediterranean.

Species 77. (Mus. Brit.)

CLAUSILIA DUBIA. *Cl. testâ plumbeâ, parvâ, subfusiformi, regulariter liratâ; anfractibus 10, ultimo paulò contracto, aperturâ majusculâ, obliquâ, plicis palatalibus prominentibus, plicâ superiori labii interni acutâ, plicâ columellari duplicatâ.*

THE DOUBTFUL CLAUSILIA. Shell plum-coloured, small, rather fusiform, regularly ridged; whorls ten, last a little contracted; aperture rather large, oblique, palatal plaits prominent, upper plait of the inner lip sharp, columellar plait duplicate.

DRAPANAUD. Moll. fluv. et ters.

Clausilia speciosa, Hindebomski, Transylvanien, Tettelbachiana et gracile, Pfeiffer.

Clausilia Scheelei, Zeeb.

Clausilia obietana, Dupuy.

Hab. Central Europe.

Species 78. (Mus. Hanley.)

CLAUSILIA ARAKANA. *Cl. testâ fusiformi-pyramidatâ, flavidâ, lævigatâ; anfractibus 12, suprâ medium*

sensim contractis, brevissimâ, infvâ medium convexis, ventricosis; aperturâ albâ, margine externo suprâ medium tumido, labio interno bipticato, plicâ columellari elevatâ.

THE ARAKAN CLAUSILIA. Shell fusiform, pyramidal, yellow, smooth; whorls twelve, those above the middle notably contracted; very short below the middle convex, ventricose; aperture white, outer margin tumid above the middle; inner lip with two plaits, columellar plait elevated.

THORPOLD. Journ. Asiat. Soc. Bengal, 1872.

Hab. Moulemein, Birmanh.

Species 79. (Mus. — ? Copied.)

CLAUSILIA INDEX. *Cl. testâ pupiformi, tenuiter striatâ, rufotricosâ, fuscâ, costano striatâ, anfractibus 10, apicalibus 5, lævibus, alteris convexis, altiusculis; aperturâ oratâ, margine fulvæ, labio interno triplicato, plicis æquidistantibus, lævibus.*

THE INDEX CLAUSILIA. Shell pupa-shaped, finely striated, ventricose, brown, striped with chestnut, whorls ten, five apical smooth, the others convex, rather higher; aperture ovate, margin fulvous, inner lip with three equidistant short plaits.

MUSSON. Cross, Journ. de Conch., 1873, p. 215.

Hab. Borschom, in Russia.

Species 80. (Mus. Brit.)

CLAUSILIA CECILLE. *Cl. testâ fusiformi-pyramidatâ, solidâ, leviter striatâ; corneo-plumbeâ, medio et infvâ ventricosâ, anfractibus 12, apicalibus 7 contractis, lævibus, alteris gradatim latioribus, altis; aperturâ oblongâ, margine albo, crasso; propè suturam sinuato, attenuato, labio interno bipticato.*

CECILLE'S CLAUSILIA. Shell fusiform, pyramidal, solid, lightly striated, horny-plum-coloured; ventricose in the middle and under; whorls twelve, apical ones seven, contracted, short, the rest gradually broader, elevated; aperture oblong, margin white, thick, sinuous near the suture, attenuated, inner lip bipticate.

PHILIPPI. Pfeiffer, Novit. Conch., p. 122.

Hab. China.

May, 1875.

Species 81. (Mus. Brit.)

CLAUSILIA DOBENI. *Cl. testā elongatā, subfusiformi, corneo-rubescenti, infri castaneā, levigatā; anfractibus circa 10, apicalibus 4 contractis, brevibus, alteris altissimis, moderatē ventricosis; ultimo elongato, attenuato, supra aperturam rimato; aperturā obliquā, anticē productā, margine crasso, albo, rotundo, labio interno buplicato, plicis elongatis; plicā internā unā obliquā conspicuā.*

DOBEN'S CLAUSILIA. Shell elongated, rather fusiform, reddish horn, chestnut below, smooth; whorls about ten, the four apical ones contracted, short, the others very high, moderately ventricose; last elongated, attenuated, notched above the aperture; aperture oblique, produced anteriorly; margin thick, white, rounded, inner lip with two plaits, plaits elongated; an inner plait oblique, conspicuous.

PFEIFFER. Malak. Bl., 1860, p. 213.

Hab. Venezuela.

Species 82. (Mus. Crosse.)

CLAUSILIA YOKOHAMENSIS. *Cl. testā ventricosā, fusiformi, crassiusculā, fusco-connecā, leviter et irregulariter striatā; anfractibus 9-10, altis, moderatē conccis, apicali obtusissimo, penultimo latissimo, ultimo elongato, non rimato; aperturā violacēā, pyriformi-oratā, prorsum productā; margine late reflexo, plicā superiori labii internē validā, compressā, plicā superiori columellari obliqua, inferiori parvā.*

THE YOKOHAMA CLAUSILIA. Shell ventricose, fusiform, rather thick, horny-brown, slightly and irregularly striated; whorls nine to ten, high, moderately convex, apical one very obtuse, penultimate very broad, last elongated, not notched; aperture violet, pyriform-ovate, produced forwards; margin broadly reflected; upper plait of the inner lip strong, compressed; upper columellar plait oblique, lower small.

CROSSE. Journal de Conchyliologie, 1873, p. 133.

Hab. Yokohama, Japan.

Species 83. (Mus. —? Copied.)

CLAUSILIA SEMILAMELLATA. *Cl. testā tenui, parvā, albā, levigatā, fusiformi, medio subventricosā; anfractibus 8-9, inferioribus altis, moderatē conccis, ultimo elongato, attenuato, dorso propē aperturam*

lirato, supra aperturam rimato; aperturā obliquā productā, ovatā, subulatā, margine tenui, angustē reflexo, plicā superiori, labii interni elongatā, columellā, arcuatā, angustā, plicis 5 parvis, parallelibus equalibus instructā.

THE HALF-LAMINATED CLAUSILIA. Shell thin, small, white, smooth, fusiform, rather ventricose in the middle; whorls eight or nine, lower ones high, moderately convex, last elongated, attenuated, ridged near the aperture on the back, notched above the aperture; aperture obliquely produced, ovate, rather solid, margin thin, narrowly reflected, upper plait of the inner lip elongated, columella arched, narrow, set with five small, parallel equal plaits.

MOUSEN —? Crosse Journ. Conch.

Hab. —? —————

Species 84. (Mus. —? Copied.)

CLAUSILIA SIEVERI. *Cl. testā albidā, parvā, subcylindricā, attenuatā levigatā, anfractibus 9-10, viz conccis, ultimo obliquē elongato, supra aperturam rimato; aperturā pyriformi, plicā superiori labii interni prominenti, columellā angustā, arcuatā, cerebrimē transversē plicatā.*

CLAUSILIA SIEVERI. Shell whitish, small, rather cylindrical, attenuated, smooth, whorls nine or ten, very little convex, the last obliquely elongated, notched above the aperture; aperture pyriform, upper plait of the inner lip prominent, columella narrow, arched, very closely transversely plaited.

PFEIFFER —? Crosse Journ. Conch., 1873, p. 214.

Hab. Lenkoran, Russia.

The granulations, or plaits on the arched columella, are much more numerous in this than in the preceding species, and the last whorl has no ridges on the back.

Species 85. (Mus. Brit.)

CLAUSILIA COMMUTATA. *Cl. testā parvā, pallidē conccā, levigatā, fusiformi, anfractibus brevibus, versū apicem gradatim contractis, medio moderatē inflatis; aperturā oratā, buplicatā.*

THE COMMUTED CLAUSILIA. Shell small, pale horny, smooth, fusiform, whorls short, gradually contracted towards the apex, moderately inflated in the middle, aperture ovate, buplicate.

ROSSMASLER. Pfeiffer, Monog. Hel. II. p. 401.

Hab. Spain, Sicily, &c.



87



88



89



86



89



92



93



90



91



94

CLAUSILIA.

PLATE X.

Species 86. (Mus. Brit.)

CLAUSILIA Plicatula. *Cl. testâ fusiformi, rufo-fulvâ, tenuissimè striatâ, versus apicem attenuatâ, medio ventricosâ; anfractibus duodecenis, ultimo sub-contracto; aperturâ subquadratâ, superâ ad suturam subacuminatâ, columellâ inter laminae dentato-plicatâ.*

THE PLEATED CLAUSILIA. Shell fusiform, reddish-fawn, very finely striated, attenuated towards the apex, ventricose in the middle; whorls twelve, the last contracted; aperture rather square, acuminated above at the suture, columella tooth-pleated between the folds.

MONTAGU. Pfeiffer, Mon. Helv. VI. p. 498.

Hab. Pyrmont.

Species 87. (Mus. Brit.)

CLAUSILIA MEISNERIANA. *Cl. testâ oblongo-fusiformi, pallidè fulcâ, tenuiter liratâ, superâ attenuatâ, medio inflatâ, apice rotundo; anfractibus tridecenis, moderatè convexis; aperturâ mediocri, lamina columellari prominenti, labio externo superâ flexuoso, prope suturam incrassato.*

MEISNER'S CLAUSILIA. Shell oblong-fusiform, pale fulvous, finely ridged, attenuated above, inflated in the middle, apex rounded; whorls thirteen, moderately convex; aperture middle-sized, columellar lamina prominent, outer lip flexuous above, thickened near the suture.

SHUTTLEWORTH. Pfeiffer, Mon. Helv. VI. p. 405.

Hab. Corsica, Sardinia, &c.

Species 88. (Mus. Brit.)

CLAUSILIA CUMINGIANA. *Cl. testâ levigatâ, fusco-purpureâ, elongatâ, subpyramidalâ, versus apicem gradatim attenuatâ; anfractibus decenis, albis, perobliquis, ad latera rectissimis; aperturâ magnâ, auriformi, laminae columellaribus duabus, approximatis, margine albo, crasso.*

CUMING'S CLAUSILIA. Shell smooth, brown-purple, elongated, subpyramidal, gradually attenuated towards the apex; whorls ten, white, very oblique, rather straight at the sides; aperture

large, ear-shaped, columellar laminae two, approximate, margin white, thick.

PFEIFFER. Mon. Helv. VI. p. 406.

Hab. Philippines.

Species 89. (Mus. Brit.)

CLAUSILIA EXCELLENS. *Cl. testâ pallidè coracâ, solidâ, tenuiter sulcatâ, magnâ, ventricosâ, subfusiformi; anfractibus undecenis, perobliquis; aperturâ magnâ, auriformi, lamina parietali prominenti, columellari elevatâ, plicâ tuberculiformi trans labrum infra trajectâ; labio externo supra medium incrassato.*

THE EXCELLING CLAUSILIA. Shell pale horn, solid, finely sulcated, large, ventricose, rather fusiform; whorls eleven, very oblique; aperture large, auriform, parietal lamina prominent, columellar raised, tuberculiform plate below crossing the inner lip, outer lip thickened above the middle.

PFEIFFER. Mon. Helv. VI. p. 427.

Hab. Loo Choo.

A fine species, nearly white, with the last whorl more strongly wrinkled than the others.

Species 90. (Mus. Brit.)

CLAUSILIA PLATYDEIRA. *Cl. testâ solidâ, subventricosâ, solidissimâ, pallidè coracâ, pyramidalâ, tenuissimè striatâ; anfractibus undecenis, gradatim attenuatis; aperturâ subauriformi, lamina columellari angustâ, subverticali, margine albo, incrassato, supra medium labii externi tumido.*

THE FLAT-SCAPED CLAUSILIA. Shell solid, rather ventricose, pale horny, pyramidal, very finely striated; whorls eleven, gradually attenuated; aperture rather auriform, columellar lamina narrow, nearly vertical, margin white, thick, swelled above the middle of the outer lip.

MARTENS. — ?

Hab. Japan.

Species 91. (Mus. Brit.)

CLAUSILIA FLUVIATILIS. *Cl. testâ ventricosâ, solidâ, pyramidalâ, medio et infra inflatâ; pallidè fuscâ,*

tenuissimè striatà, versus apicem attenuatà; anfractibus undecenis, obliquis, convexis, ultimo infra carinato; apertura magnà; labio interno crenulato, laminà columellari angustà, elevatà, ferè perpendiculari; labio interno in tuberculum dentiformem desinenti.

THE FLUVIATILE CLAUSILIA. Shell ventricose, solid, pyramidal, inflated in the middle and below; pale brown, very finely striated, attenuated towards the apex; whorls eleven, oblique, convex; last keeled below; aperture large, inner lip crenulated, columellar lamina narrow, raised, almost perpendicular; inner lip ending in a tooth-shaped tubercle.

BENSON. — ?

Hab. Chusan.

The last whorl is keeled at the bottom. In this and the preceding species the columellar lamina is closely pressed against the edge, and is almost perpendicular.

Species 92. (Mus. Brit.)

CLAUSILIA KOBENSIS. *Cl. testà solidà, ventricosà, pyramidalà, rubro-fuscà, tenuissimè liratà; anfractibus duodecenis, obliquis, versus apicem attenuatis, infra medium convexis, ultimo ad terminum rotundo; apertura magnà, margine albo, crasso, supra medium labii externi tumido; laminà columellari elongatà, peculiariter arcuatà, plicà minori infra instructà.*

THE KOBE CLAUSILIA. Shell solid, ventricose, pyramidal, red-brown, finely ridged; whorls twelve, oblique, attenuated towards the apex, convex below the middle, last rounded at the end; aperture large, margin white, thick, swelled above the middle of the outer lip; columellar lamina elongated, peculiarly arched, with a smaller inserted below.

SMITH. Quarterly Journal of Conchology.

Hab. Kobe, Japan.

Species 93. (Mus. Brit.)

CLAUSILIA VETUSTA. *Cl. testà brevi, subventricosà, fuscà vel albà, tenuissimè liratà; anfractibus unde-*

cenis, tribus inferioribus valdè inflatis; apertura parvâ, auriformi; laminà columellari prominenti, elevatà, seminternâ.

THE ANTIQUATED CLAUSILIA. Shell short, subventricose, brown or white, very finely ridged; whorls eleven, three lower much inflated; aperture small, auriform, columellar lamina prominent, raised, half internal.

ZEIGLER. Pfeiffer. Mon. Helv. VI. 499.

Hab. Illyria.

Species 94. (Mus. Brit.)

CLAUSILIA ACULES. *Cl. testà subfusiformi, cornèà, tenuissimè striatà; anfractibus decenis, superioribus attenuatis, rectiusculis, inferioribus inflatis; apertura simpli, margine angustè incrassato, laminà columellari percrevatà, parvâ.*

THE NEEDLE CLAUSILIA. Shell subfusiform, horny, very finely striated; whorls ten, upper attenuated, rather straight, lower inflated; aperture simple, margin narrowly thickened, columellar lamina much raised, small.

BENSON. Pfeiffer. Mon. Helv. VI. p. 482.

Hab. China.

Species 95. (Mus. Brit.)

CLAUSILIA OLYMPICA. *Cl. testà parvâ, fusiformi, fuscâ, tenuissimè striatà; anfractibus duodecenis, superioribus attenuatis, medianis inflatis, ultimo elongato, soluto, tortuo, profundè rimato; apertura auriformi, subquadrato, margine incrassato, laminà columellari nullo.*

THE OLYMPIC CLAUSILIA. Shell small, fusiform, fulvous, very finely striated; whorls twelve, upper attenuated, middle inflated, last lengthened, un-wound, twisted, deeply notched; aperture ear-shaped, rather square, margin thickened, columellar lamina none.

FRIVOLDT. Pfeiffer. Mon. Hel. VI. p. 514.

Hab. The Olympic Mountain.

A tortuous swelling of the part above the mouth is remarkable in this species.



97.



96.



98.



99.



100.



101.



102.



103.



104.



105.

CLAUSILIA.

PLATE XI.

Species 96. (Mus. Brit.)

CLAUSILIA DALICICA. *Cha. testâ ventricosâ, succinea et plumbeâ, levigatâ; anfractibus undecenis, ultimo angustato, dorso rugato; apertura oblongâ, posticâ angustatâ; labio externo superne sinuato, marginem supra medianam truncato, lamina columellari, magna, lamina interna inconspicua.*

THE DACIAN CLAUSILIA. Shell ventricose, amber and plum, smooth; whorls eleven, last narrow, wrinkled at the back; aperture oblong, posteriorly narrowed; outer lip sinuous above, margin tumid above the middle, columellar lamina large, inner lamina inconspicuous.

FRIVALDSKY. Pfeiffer. Mon. Helv. VI. p. 440.
Hab. Serbia.

Species 97. (Mus. Brit.)

CLAUSILIA SUDANA. *Cha. testâ angustatâ, subpyramidalâ; anfractibus undecenis, dorsali costellis reticulâtilis latis; ultimo elongato, dorso infusâ sulcato, carinato; apertura magna, lamina columellaribus duobus, superiori obliquâ, inferiori brevi, prominenti.*

THE GROOVED CLAUSILIA. Shell narrow, rather pyramidal; whorls eleven, obsolete ridged with small rather straight ribs, last elongated, back grooved and keeled below; aperture large, columellar laminae two, upper oblique, lower short, prominent.

WAGNER. Pfeiffer. Mon. Helv. VI. p. 499.
Clausilia irregularis. Zeigler.
Hab. Dahmatia.

Species 98. (Mus. Brit.)

CLAUSILIA SOMCHETICA. *Cha. testâ brevi, ventricosâ, fere levigatâ; pallidi cornu; anfractibus undecenis, mediis latis; apertura subquadratâ, lamina columellari nullâ, lamina parietali brevi; labio externo sinuato.*

THE SOMCHETICA CLAUSILIA. Shell short, ventricose, almost smooth, pale horn; whorls eleven, middle white; aperture subquadrate, columellar lamina

none, parietal lamina short, outer lip sinuous above.

PFEIFFER. Mon. Helv. VI. p. 446.
Hab. ———?

Species 99. (Mus. Brit.)

CLAUSILIA FRAUENFELDTI. *Cha. testâ elongato-fusiformi, fusâ, levigatâ; anfractibus decenis, medianis et inferioribus inflatis, ad suturam albo angustâ fasciatâ; ultimo elongato, angustato; apertura pyriformi, expansâ, costatâ; labio externo supra medianam tumido, lamina columellari lato.*

FRAUENFELDT'S CLAUSILIA. Shell elongate-fusiform, brown, smooth; whorls ten, middle and lower inflated, narrowly banded with white at the suture, last elongated, narrow; aperture pyriform, expanded, chestnut; outer lip tumid above the middle, columellar lamina broad.

ZEIGLER. Pfeiffer. Mon. Helv. VI. p. 440.
Hab. Serbia.

Species 100. (Mus. Brit.)

CLAUSILIA PAGANA. *Cha. testâ parvâ, brevi, fusiformi, obscure fusâ, tenuissimè striatâ; anfractibus decenis, apicali rotundo, superioribus attenuatis, inferioribus subventricosis; apertura auriformi, marginè crasso, labio externo supra medianam sinuato, tumido, lamina columellari interne extensa.*

THE PAGAN CLAUSILIA. Shell small, short, fusiform, dull brown, very finely striated; whorls ten, apical round, upper attenuated, lower rather ventricose; aperture auriform, margin thick, outer lip sinuous above the middle, tumid, columellar lamina extended within.

ZEIGLER. Pfeiffer. Mon. Helv. VI. p. 505.
Hab. Serbia.

Species 101. (Mus. Brit.)

CLAUSILIA SEMI-PENTICULATA. *Cha. testâ breviusculâ, fusiformi, plumbeâ, levigatâ, apice succinea; anfractibus undecenis, medianis ventricosis, ultimo ad dorsum elongato, soluto, tortuo, medio sulcato;*

CLAUSILIA.—PLATE XI.

aperturâ succineâ, labio externo, superne emarginato, supra medium sinuatim tumido, margine crenulato; columellâ infra laminaam triplicato.

THE HALF-DENTICULATED CLAUSILIA. Shell rather short, fusiform, plum, smooth, apex amber; whorls eleven, middle ventricose, last elongated at the back, unwooned, tortuous, with a groove in the middle; aperture amber, outer lip emarginated, sinuously tumid above the middle, margin crenulated; columella triplicate below the lamina.

PFEIFFER. Mon. Helic. VI. p. 509.

Hab. Turkey; on the banks of the Bosphorus.

Species 102. (Mus. Brit.)

CLAUSILIA FORTUNEI. *Cl. testâ elongato-fusiformi, solidâ, obscure plumbeâ, tenuissimè striatâ; anfractibus quaterdecenis, superioribus attenuatis, medianis et inferioribus ventricosis; ultimo elongato, medio compresso; aperturâ magnâ, auriformi, succineâ, margine albo, crasso, lamina columellari magnâ, crassâ, margine columellari medio sinuato.*

FORTUN'S CLAUSILIA. Shell elongated-fusiform, solid, dull plum, very finely striated; whorls fourteen, upper attenuated, middle and lower ventricose; last elongated, middle compressed; aperture large, ear-shaped, amber, margin white, thick; columellar lamina large, thick, columellar margin sinuous in the middle.

PFEIFFER. Mon. Helic. VI. p. 494.

Hab. Shanghai.

Species 103. (Mus. Brit.)

CLAUSILIA BERGEEI. *Cl. testâ subfusiformi, fusco-plumbeâ, levi; anfractibus undecenis, medianis ventricosis, ultimo elongato, birigato; aperturâ*

subtrigonâ, labio externo supra infrâque acuminato.

BERGER'S CLAUSILIA. Shell subfusiform, brown-plum, smooth, whorls eleven, middle ventricose, last elongated, with two wrinkles; aperture rather trigonal, outer lip acuminated above and below.

MAYER. Pfeiffer. Mon. Helic. VI. p. 422.

Hab. Bavaria.

Remarkable for the peculiar triangular form of the mouth.

Species 104. (Mus. Brit.)

CLAUSILIA SERICATA. *Cl. testâ brevi, fusiformi, ventricosâ, levi, fusco-plumbeâ; apice et aperturâ succineis; aperturâ magnâ, margine expanso; lamina columellari lato, elevato, laminis internis quaternis.*

THE SILKEN CLAUSILIA. Shell short, fusiform, ventricose, smooth, brown-plum, apex and aperture amber; aperture large, margin expanded; columellar lamina broad, raised, four internal laminae.

PFEIFFER. Mon. Helic. VI. p. 492.

Hab. Eubœa.

Species 105. (Mus. Brit.)

CLAUSILIA LEROSIENSIS. *Cl. testâ obscure plumbeâ, acutè et crebrè laminatâ, subfusiformi, anfractibus undecenis, apicalibus levigatis, medianis ventricosis, ultimo elongato, ad dorsum costis distantibus lirato; aperturâ triplicatâ, auriformi.*

THE LEROS CLAUSILIA. Shell dull plum, sharply and closely laminated, rather fusiform; whorls eleven, apical smooth, middle ventricose, last elongated, ridged on the back with distant ribs; aperture with three plaits, auriform.

FERRUSSAC. — ?

Hab. Island Leros.



107.



106.



108.



109.



110.



111.



112.



113.



114.



115.

CLAUSILIA.

PLATE XII.

Species 106. (Mus. Brit.)

CLAUSILIA EXILIS. *Cla. testâ pyroformi, fuscâ, tenuissimè liratâ; anfractibus novenis, mediânis subæqualibus, ultimo contracto; aperturâ parvâ, margine externo superne flexuosius tumido, margine interno prope suturam buplicatâ, plicâ columellari nullâ, laminâ semiinternâ intus productâ.*

THE NARROW CLAUSILIA. Shell pupa-shaped, brown, very finely ridged; whorls nine, middle nearly equal, last contracted, aperture small, outer margin with a tumid band above, inner margin with two plaits near the suture, no columellar plait, internal plaits extended within.

LOWE. Proc. Zool. Soc. 1860, p. 307.

Hab. Madeira.

Species 107. (Mus. Brit.)

CLAUSILIA BELCHERI. *Cla. testâ fusiformi, levigatâ, altâ, fusco-stramineâ; anfractibus decenis, convexis, supra medium attenuatis, medio inflatis, ultimo supra aperturam elongato; aperturâ suboviformi, superne sinuatâ, plicâ columellari magnâ, elevatâ.*

BELCHER'S CLAUSILIA. Shell fusiform, smooth, raised, brown-straw; whorls ten, convex, attenuated above the middle, inflated at the middle, last lengthened above the aperture; aperture rather ear-shaped, sinuated above, columellar fold large, elevated.

PFEIFFER. Mon. Hel. Vol. VI. p. 412.

Hab. Corean Archipelago.

Species 108. (Mus. Brit.)

CLAUSILIA CLAVIFORMIS. *Cla. testâ breviter fusiformi, levissimâ, fusco-stramineâ; anfractibus octonis, convexis, infra medium inflatis, ultimo subtortuoso; aperturâ perpendiculariter oblongâ; labio interno buplicato, plicis parvis.*

THE KEY-SHAPED CLAUSILIA. Shell shortly fusiform, very smooth, brown-straw; whorls eight, convex, inflated below the middle, last rather tortuous; aperture perpendicularly oblong, inner lip with two folds, folds small.

PFEIFFER. Mon. Hel. Vol. VI., p. 412.

Hab. Corean Archipelago.

Much resembling *Clausilia Belcheri*, but shorter and more ventricose.

Species 109. (Mus. Brit.)

CLAUSILIA RUBIS. *Cla. testâ pallidè fuscâ, fusiformi, laminatim liratâ, iris crassis, substantibus; anfractibus duodecenis, supra medium longè attenuatis, medio et infra valdè inflatis, ultimo infra subcontracto; aperturâ oblongâ, subquadratâ, plicis labii interni parvis.*

THE ROUGH CLAUSILIA. Shell pale fulvous, fusiform, laminately ridged, ridges thick, rather distant; whorls eleven, attenuated some length above the middle, much inflated at the middle and under, last somewhat contracted below; aperture oblong, rather square, folds of the inner lip small.

PFEIFFER. Proc. Zool. Soc. Lond. 1864.

Hab. Island of Crete.

Species 110. (Mus. Brit.)

CLAUSILIA PETROSA. *Cla. testâ altâ, breviter liratâ, subfusiformi, cornè; anfractibus duodecenis, superioribus brevibus, attenuatis, inferioribus tribus altis, ultimo elongato, tortuo, obliquè producto; aperturâ auriformi, margine albo, crasso, labio interno valdè buplicato, labio externo supra medium tumido.*

THE STONY CLAUSILIA. Shell high, slightly ridged, subfusiform, horny; whorls twelve, upper short, attenuated, lower three high, last elongated, tortuous, obliquely produced; aperture ear-shaped, margin white, thick, inner lip with two strong folds, outer lip swelled above the middle.

PARREYS. Kuster, p. 226.

Hab. Greece.

The aperture is curiously twisted and brought round, so as to project on the right side.

Species 111. (Mus. Brit.)

CLAUSILIA IDE. *Cl. testâ subfusiformi, solidâ, latâ, pruinosâ, laminis fuscis numerosis, rectiusculis, tenuibus liratâ; aperturâ magnâ, subquadratâ, prope suturam sinuatâ, tumidâ, plicâ parietali parvâ, laminâ columellari mediocrî.*

THE MOUNT IDA CLAUSILIA. Shell subfusiform, solid, broad, plum-colour, ridged with fulvous, numerous, rather straight, thin laminae; aperture large, rather square, sinuated and tumid near the suture; parietal plait small, columellar laminae middle-sized.

PFEIFFER. Mon. Vol. VI. p. 498.

Hab. Mount Ida.

Species 112. (Mus. Brit.)

CLAUSILIA DISTANS. *Cl. testâ fusiformi, elongatâ, lacteâ, angustâ, distanter liratâ; anfractibus quaterdecenis, superioribus attenuatis, medianis et inferioribus latiusculis, ultimo breviter rimato, declivi, aperturâ perpendiculariter oblongâ, superne attenuatâ, margine albo, columellâ rectiusculâ, laminâ columellari obliquè dentiformi.*

THE DISTANT CLAUSILIA. Shell fusiform, elongated, cream-coloured, narrow, distantly ridged; whorls fourteen, upper attenuated, middle and lower rather wide, last shortly notched, sloped down; aperture perpendicularly oblong, attenuated above, margin white, columella rather straight, columellar laminae obliquely tooth-shaped.

PFEIFFER. Proc. Zool. Soc. 1864, p. 605.

Hab. Sudsuro, Crete.

Species 113. (Mus. Brit.)

CLAUSILIA COMPRESSA. *Cl. testâ regulariter fusiformi, lilacâ, strigis brevibus, fuscis variegatâ, tenuiter laminatim liratâ; anfractibus decenis, superioribus parvis, ultimo elongato; aperturâ perpendiculariter oblongâ, labio externo prope medium sinuatim tumido, plicâ parietali parvâ, plicâ columellari prominente.*

THE COMPRESSED CLAUSILIA. Shell regularly fusiform, lilac, variegated with short brown stripes, ridged with fine laminae; whorls ten, upper

small, last elongated; aperture perpendicularly oblong, outer lip sinuously tumid near the middle, parietal fold small, columellar fold prominent.

PFEIFFER. Mon. Hel. Vol. VI. p. 428.

Hab. Island of Cerigo.

Species 114. (Mus. Brit.)

CLAUSILIA SCALARIS. *Cl. testâ brevi, latâ, fulvâ, tenuiter laminatim liratâ; anfractibus senis, prope suturam latioribus angulatis, ultimo altâ, infra contracto; aperturâ auriformi, columellâ infra retrorsim expansâ, labio externo supra medium sinuatim tumido, plicâ parietali parvâ, plicâ columellari mediocrî, obliquâ.*

THE LADDER-LIKE CLAUSILIA. Shell short, broad, fulvous, with fine laminar ridges; whorls six, broader and angular near the suture, last high, contracted below; aperture auriform, columella expanded backwards below, outer lip sinuously tumid above the middle, parietal fold small; columella fold middling, oblique.

PFEIFFER. Mon. Hel. Vol. VI. p. 439.

Hab. Malta.

The whorls are angularly shouldered, so as to give the appearance of steps.

Species 115. (Mus. Brit.)

CLAUSILIA HAEREL. *Cl. testâ breviusculâ, pyramidato-sulfusiformi, latâ, distanter tenuiter liratâ, inter liras pruinosâ; anfractibus decenis, inferioribus magnis; aperturâ auriformi, margine crasso, albo, labio externo supra medium tumido, plicâ parietali minutâ, plicâ columellari altissimâ, ferè perpendiculari.*

HAEREL'S CLAUSILIA. Shell rather short, pyramidally subfusiform, broad, distantly finely ridged, plum-coloured between the ridges; whorls ten, lower large; aperture auriform, margin thick, white, outer lip tumid above the middle, parietal fold minute, columellar fold very high, almost perpendicular.

BIELZ. Pfeiffer, in Novit. Conch. Fasc. XXII. p. 264.

Hab. Transylvania.



117



116



118



120



119



121



123



122



124



125

CLAUSILIA.

PLATE XIII.

Species 116. (Mus. Brit.)

CLAUSILIA LIVEUS. *Cl. testâ dextrali, pruinoso-fuscâ, brevisculâ, fusiformi; anfractibus octonis, altis, inferioribus subinflatis, ultimo contracto, obliquo; aperturâ auriformi, infra obliquè productâ, marginè crasso, albo, plicâ columellari magnâ, plicâ parietali parvâ, labio externo ad medium late tumido.*

THE LIVID CLAUSILIA. Shell dextral, plum-brown, rather short, fusiform; whorls eight, high, rather inflated, last contracted, oblique; aperture ear-shaped, obliquely produced below; margin thick, white, columellar plait large, parietal plait small, outer lip broadly tumid at the middle.

BIELZ. Pflr. Vol. IV. p. 718.

Clausilia Lischkeana. Bielz.

Hab. Transylvania.

Species 117. (Mus. Brit.)

CLAUSILIA BADIA. *Cl. testâ parvâ, brevisculâ, subfusiformi, olivaceo-fuscâ, lavi; anfractibus octonis; aperturâ subobliquè ovatâ, plicâ columellari magnâ, elevatâ, plicâ parietali parvâ.*

THE BAY CLAUSILIA. Shell small, rather short, subfusiform, olive-brown, smooth; whorls eight; aperture rather obliquely oval, columellar plait large, raised, parietal plait small.

ZEIGLER. Pfeiffer. Vol. VI. p. 496.

Clausilia fontana. Schmidt.

Clausilia cruda. Schmidt.

Hab. ———?

Species 118. (Mus. Brit.)

CLAUSILIA SCHMIDTI. *Cl. testâ parvâ, fusiformi, politâ, pruinosâ; anfractibus duodeccenis, superioribus parvis, mediâ et inferioribus subinflatis, ultimo infra subcontracto; aperturâ subaurantiâ, oblongâ, labio externo supra medium sinuatum tumido, plicâ columellari productâ, plicis parietalibus duabus.*

SCHMIDT'S CLAUSILIA. Shell small, fusiform, polished, plum-coloured; whorls twelve, upper small, middle and lower somewhat inflated, last a

little contracted below; aperture rather orange, oblong, outer lip sinuously tumid, columella plait produced, parietal plait two.

PFEIFFER. Mon. Hel. Vol. VI. p. 490.

Hab. Carinthia.

Species 119. (Mus. Brit.)

CLAUSILIA FERRATA. *Cl. testâ latâ, brevî, fusoso-fuscâ, longitudinaliter, proobliquè costatâ; anfractibus senis, ultimo et penultimè altissimis, ultimo infra contractâ et prolongatâ; aperturâ depressâ, subrotundâ, auriformi; marginè ad columellam obliquè exposito; plicâ parietali prominenti; plicâ columellari crassâ.*

THE PLOUGHED CLAUSILIA. Shell broad, short, smoky-brown, longitudinally very obliquely ribbed; whorls six, last and last but one very high, last contracted below and prolonged; aperture depressed, rather round, ear-shaped; margin obliquely expanded at the columella; parietal plait prominent; columellar plait thick.

MARTINI. ———?

Hab. New Granada.

Species 120. (Mus. Brit.)

CLAUSILIA TRES. *Cl. testâ angustâ, altissimâ, levigatâ, lilacâ; anfractibus septendecenis, superioribus caldè attenuatis, inferioribus altis, subinflatis; aperturâ aurantiâ, perpendiculariter oblongâ, labio externo, supra medium tumidâ; plicâ columellari obliquâ, elevatâ, plicâ parietali parvâ, acutâ.*

THE ROLLING-PIN CLAUSILIA. Shell narrow, very high, smooth, lilac; whorls seventeen, upper very attenuated, lower high, subinflated; aperture orange, perpendicularly oblong, outer lip tumid above the middle, columellar plait oblique, raised; parietal plait small, sharp.

OLIVIER. (Buhmus.) Pflr. Mon. Hel. Vol. II. p. 414.

Hab. Crete.

Species 121. (Mus. Brit.)

CLAUSILIA SIEBOLDTI. *Cl. testâ brevisculâ, fusiformi, supernè succinè, infra pruinosâ, levigatâ; an-*

fractibus novenis, superioribus subattenuatis, medianis inflatis; aperturâ magnâ, auriformi; margine albo, crasso, labio externo supra medium tumido, plicâ parietali brevi, acutâ, plicâ columellari prominenti.

SIEBOLDT'S CLAUSILIA. Shell rather short, fusiform, amber above, plum-coloured below, smooth; whorls nine, upper rather attenuated, middle inflated; aperture large, ear-shaped; margin white, thick, outer lip tumid above the middle, parietal plait short, sharp; columella plait prominent.

PFEIFFER. Malak. Bl. 1869.

Hab. Japan.

Species 122. (Mus. Brit.)

CLAUSILIA MARONHONENSIS. *Cl. testâ brevi, latâ, subcylindricâ, levigatâ, albâ et pallidâ fulvâ; anfractibus senis, altis, ultimo infrâ subcontracto, prolongato, profundè et obliquè rimato; aperturâ rotundo-auriformi, margine albo, expanso, superne rimato, plicâ parietali prominenti; plicâ columellari parvâ, altissimâ.*

THE MARONHON CLAUSILIA. Shell short, broad, rather cylindrical, smooth, white and pale fulvous; whorls six, high, last rather contracted below, prolonged, deeply and obliquely notched; aperture roundly-auriform; margin white, expanded, notched above; parietal plait prominent, columellar plait small, very high.

ALBERS. Pfeiffer. Mon. Hel. IV. p. 785.

Hab. River Maranthon, Columbia.

Species 123. (Mus. Brit.)

CLAUSILIA CORTICINA. *Cl. testâ altâ, subpyramidatâ, levigatâ, pruinôsâ; anfractibus novenis, inferioribus altis, ultimo prolongato; aperturâ maximâ, superne subacuminatâ, prope suturam sinuatim emarginatâ; plicâ parietali tenui, plicâ columellari altâ, parvâ, columellâ arcuatâ.*

THE RIND CLAUSILIA. Shell high, rather pyramidal, smooth, plum-coloured; whorls nine, lower high, last prolonged; aperture very large, rather acuminated above, sinuately emarginated near the suture; parietal plait thin, columellar plait high, small, columella plait curved.

VON BUSCH. Pflr. Mon. Hel. II. p. 404.

Hab. Java.

Species 124. (Mus. Brit.)

CLAUSILIA KUTSCHIGI. *Cl. testâ brevi, ventricosissimâ, lilacinâ, levigatâ; anfractibus octonis, tribus inferioribus altis, inflatis, ultimo subcontracto, ad dorsum plicato; aperturâ magnâ, latâ, margine crasso, plicis parietali et columellari acuminatis, prominentibus.*

KUTSCHIG'S CLAUSILIA. Shell short, very ventricose, lilac, smooth; whorls eight, three lower high, inflated, last a little contracted, plaited at the back; aperture large, broad; margin thick, parietal and columellar plaits acuminated, prominent.

KÜSTER, p. 274.

Clausilia corticicola. Parr.

Clausilia corpulenta. Kutschig.

Hab. Dalmatia.

Species 125. (Mus. Brit.)

CLAUSILIA CASTALIA. *Cl. testâ subpyramidatâ, superne attenuatâ, medio et infrâ inflatâ, fuscâ, levi, anfractibus novenis, inflatis; aperturâ parvâ, obliquè subproductâ, superne acuminatâ; margine crasso, plicâ columellari altâ.*

THE CASTALIA CLAUSILIA. Shell rather pyramidal, attenuated above, inflated in the middle and below; brown, smooth; whorls nine, inflated; aperture small, a little obliquely produced, acuminated above; margin thick, columellar plait high.

ROTH. Rossmäsl. Icon. III. p. 54.

Hab. Mount Parnassus.



127.



126.



128.



129.



130.



131.



132.



133.



135.



134.

CLAUSILIA.

PLATE XIV.

Species 126. (Mus. Brit.)

CLAUSILIA CONTAMINATA. *Cl. testâ brevissimâ, latâ, levigatâ, lilacinâ; anfractibus senis; apertura latâ, subquadratâ, subaureâ, plicis nullis.*

THE CONTAMINATED CLAUSILIA. Shell very short, broad, smooth, lilac; whorls six; aperture broad, rather square, rather golden-tinted; no plaits.

ZEIGLER. Pfeiffer. Mon. Hel. II. 436.

Hab. Cephalonia.

Species 127. (Mus. Brit.)

CLAUSILIA MADENSIS. *Cl. testâ dextrali, pyramidatâ, hecâ, cornuâ et pruinôsâ, brevi; anfractibus novenis, superioribus angustis, inferioribus ventricosis; apertura obliquâ, auriformi, supernè angustatâ; plicâ columellari prominenti, plicâ parietali elongatâ.*

THE MADEN CLAUSILIA. Shell dextral, pyramidal, short, horny, plum-coloured, smooth; whorls nine, upper narrow, lower ventricose; aperture oblique, ear-shaped; narrow above; columellar fold prominent, parietal fold lengthened.

FUSSENDORF. — ?

Hab. Transylvania.

Species 128. (Mus. Brit.)

CLAUSILIA CANALICULATA. *Cl. testâ brevi, pyramidatâ, anfractibus octavis, inferioribus latis; apertura latâ, subaureâ, subrotundâ, prope suturam canaliculatâ, sinuatâ, margine crasso, plicâ columellari elevatâ, latâ.*

THE CHANNELLED CLAUSILIA. Shell short, pyramidal, whorls eight, lower broad; aperture broad, rather golden, rather rounded, channelled near the suture, sinuated, margin thick, columellar plait raised, broad.

PFEIFFER. Mon. Hel. III. 599.

Clausilia Eubœa. Parreys.

Hab. Eubœa.

Species 129. (Mus. Sowerby.)

CLAUSILIA REINIANA. *Cl. testâ magud, solidâ, subfusiformi, latâ, fuscâ, tenuissimè striatâ; anfractibus decenis, apicalibus quaternis brevibus, rotundis, medianis magnis, inflatis, ultimo maximo, infra contracto; apertura magnâ, subauriformi, subauriculatâ; plicâ parietali angustâ, plicâ columellari parvâ, planâ, subelevatâ, plicâ minutâ, infra columellam tenui.*

THE REINI CLAUSILIA. Shell large, solid, subfusiform, broad, brown, very finely striated; whorls ten, four apical short, round, middle large, inflated, last very large, contracted below; aperture large, subauriform, rather orange; parietal fold narrow, columellar plait small, flattened, rather raised; minute plait below the columella small.

KOBELL. — ?

Hab. Japan.

Species 130. (Mus. Brit.)

CLAUSILIA SYRACUSANA. *Cl. testâ subfusiformi, pallidè fulvâ, lunaris acutis rectis crebris levatâ; anfractibus decenis, apicalibus quaternis parvis, rotundis, brevibus; apertura subovata, margine expanso, albo; labio externo, supernè tumido, dentato, dente interno continuo, plicâ parietali minutâ, plicâ columellari crassi, elevatâ; plioc subinternâ obliquâ, ad marginem inferiorem desinenti.*

THE SYRACUSE CLAUSILIA. Shell subfusiform, palefulvous, ridged with numerous sharp, straight laminae; whorls ten, four apical small, rounded, smooth; aperture rather ovate, margin white, expanded; outer lip tumid above, toothed, inner lip continuous, parietal plait minute, columellar plait thick, raised; a subinternal oblique plait ending at the lower margin.

PHILIPPI. Pfeiffer Mon. Hel. IV. 739.

Clausilia macrostoma. Cantraine.

Clausilia inflata. Delle Chiaje.

Hab. Sicily.

Species 131. (Mus. Brit.)

CLAUSILIA STICULA. *Cla. testâ breviusculâ, pallidâ, latâ, levigatâ, medio et infra ventricosâ; anfractibus paucis, tenuissimè striatis, fusco strigatis, ultimo elongato; aperturâ obliquâ, subauriformi, labio externo crasso, infra subexpanso, columellâ triplicatâ.*

THE SICILIAN CLAUSILIA. Shell rather short, pale, broad, smooth, ventricose in the middle and below; whorls few, very finely striated, striped with brown, last elongated; aperture oblique, rather auriform, outer lip thick, expanded below, columella three-plaited.

BENOIT. — ?

Hab. Sicily.

Species 132. (Mus. Brit.)

CLAUSILIA RUGILABRIS. *Cla. testâ subfusiformi, brevi, brevi, corneâ et pruinosâ; anfractibus apiculibus parvis, rotundis; aperturâ latâ, margine crasso, albo, labio externo superne tumido, sinuato; plicâ parietali acutâ; columellâ bicipitatâ.*

THE ROUGH-LIPPED CLAUSILIA. Shell subfusiform, short, smooth, horny and plum-coloured; apical whorls small, round; aperture broad, margin thick, white, outer lip tumid above, sinuous; parietal fold sharp; columella with two plaits.

MOUSSON. Pfeiffer. Mon. Hel. VI. p. 475.

Hab. Near Janina, Greece.

Having a singularly broad and thick-lipped mouth.

Species 133. (Mus. Brit.)

CLAUSILIA STRAMINICOLLIS. *Cla. testâ pruinosâ, fusiformi, levi, infra medium subventricosâ; anfractibus novenis, stramineo ad suturam tenuitatis; aperturâ aurantâ, oblongâ, posticè angustatâ et attenuatâ, labio interno bicipitato.*

THE STRAW-NECKED CLAUSILIA. Shell plum-coloured, fusiform, smooth, ventricose below the middle;

whorls nine, with a straw-coloured band at the suture; aperture orange, oblong, posteriorly narrow and attenuated, inner lip with two plaits.

PARREYS. Küster, Claus. p. 341.

Hab. Transylvania.

Species 134. (Mus. Sowerby?)

CLAUSILIA CALCAREA. *Cla. testâ brevi, fusiformi, levigatâ, corneâ; anfractibus undecenis, medianis et inferioribus altis, ventricosis; aperturâ magnâ, margine crasso; plicâ parietali parvâ, plicâ columellari elevatâ, plicâ subinternâ infra prope columellam curvâ.*

THE CALCAREAN CLAUSILIA. Shell short, fusiform, smooth, horny; whorls eleven, middle and lower high, ventricose; aperture large, margin thick; parietal plait small, columellar plait raised, subinternal plait curved below near the columella.

PHILIPPI. Pfeiffer. Mon. Hel. II. 453.

Clausilia assimilis, Zeigler.

Hab. Sicily.

Species 135. (Mus. Brit.)

CLAUSILIA BILAMATA. *Cla. testâ subfusiformi, fulcâ, tenuiter striatâ; anfractibus paucis, inferioribus convexis, ventricosis; aperturâ subovatâ, prope suturam subacuminatâ; labio externo crasso, supra medium tumido, extâs duplicato; columellâ quadruplicatâ, plicâ superiori brevi, latâ, plicâ parietali productâ.*

THE DOUBLE-LIPPED CLAUSILIA. Shell subfusiform, fulvous, finely striated; whorls few, lower convex, ventricose; aperture subovate, slightly acuminate near the suture; outer lip thick, tumid above the middle, double outside; columella with four plaits, upper plait short, broad, parietal plait produced.

SMITH. Proc. Zool. Soc.

Hab. Japan.



CLAUSILIA.

PLATE XV.

Species 136. (Mus. Brit.)

CLAUSILIA FILOGRANA. *Cl. testâ parvâ, fusiformi, pruinosa, tenuiter licatâ, iris filiformibus; apertura pallidè aurantiâ, parvâ, columellâ medio latè plicatâ, plicâ inferiori minutâ, plicâ parietali inconspicuâ, labio externo superè acuminatâ, sinuato.*

THE THREAD-GRAINED CLAUSILIA. Shell small, fusiform, plum-coloured, finely ridged, ridges thread-like; aperture pale orange, small, columella broadly plaited in the middle, lower plait minute, parietal plait inconspicuous, outer lip acuminated above, sinuous.

ZEIGLER. Pfl. Mon. Hel. II. p. 499.

Clausilia interrupta. —?

Hab. Silesia, Croatia, Austria.

Species 137. (Mus. Brit.)

CLAUSILIA AQUILA. *Cl. testâ brevî, latâ, loricatâ, superè angustâ, infèri ventricosâ, pallidè lilacinâ; aperturaâ marciâ, aurantiâ; marginè crasso, plicâ columellari magnâ, prominatâ.*

THE EAGLE CLAUSILIA. Shell short, broad, smooth, narrow above, ventricose below, pale lilac; aperture very large, orange; margin thick, columella large, prominent.

PARREYS. Rossmâsler, Icon. III. p. 43.

Hab. Dalmatia.

Species 138. (Mus. Brit.)

CLAUSILIA CANA. *Cl. testâ brevî, ventricosâ, fusiformi, striatâ, fasci, nubilâ dussuribus variegatâ; anfractibus nubilâ, superioribus attenuatis; apertura auriformi, plicâ parietali ad suturam approximâtâ, plicâ columellari latè laminatâ.*

THE HOARY CLAUSILIA. Shell short, ventricose, fusiform, striated, brown, varied with darker coloured spots; whorls nine, upper attenuated; aperture ear-shaped, parietal plait near the suture, columellar plait broadly laminar.

HELDEMAN. Küst. p. 193.

Clausilia tessellata. Parreys?

Species 139. (Mus. Brit.)

CLAUSILIA STIGMATICA. *Cl. testâ brevissimâ, ventricosâ, levî; anfractibus medianis et inferioribus inflatis, ad suturam tuberculis parvis albis oratis; apertura subquadratâ, magnâ, labio interno biphicâto, superè interrupto.*

THE STIGMATIC CLAUSILIA. Shell very short, ventricose, smooth, middle and lower whorls inflated, orbiculated at the suture with small white tubercles; aperture rather square, large, inner lip two-plaited, interrupted above.

ZEIGLER. Pfl. Mon. Hel. II. 424.

Hab. Dalmatia.

Species 140. (Mus. Brit.)

CLAUSILIA BUSCHI. *Cl. testâ brevî, pyramidatâ, pallidè corneâ, levî, semipellucidâ; anfractibus nubilâ, convexis; aperturaâ parvâ, auriformi, plicâ parietali et columellari parvis.*

BUSCH'S CLAUSILIA. Shell short, pyramidal, pale horny, smooth, semipellucid; whorls nine, convex; aperture small, auriform, parietal and columellar plaits small.

KÛSTER. Martens in Malak. Bl. VII.

Hab. Japan.

Species 141. (Mus. Brit.)

CLAUSILIA BORNEENSIS. *Cl. testâ altâ, pyramidali, fuscâ; anfractibus decem, inflatis; apertura aurantiâ, auriformi, tortuosâ versus latas dextram productâ, superè acuminatâ, marginè crasso, labio interno biphicâto.*

THE BORNEAN CLAUSILIA. Shell high, pyramidal, brown; whorls ten, inflated; aperture orange, ear-shaped, tortuously bent back towards the right side, acuminated above, margin thick, inner lip two-plaited.

PEEFIEFFER. Mon. Hel. IV. 736.

Hab. Borneo.

The mouth is peculiarly bent over towards the right side of the shell.

Species 142. (Mus. Brit.)

CLAUSILIA MACASCARIENSE. *Cla. testâ lilacinâ, subventricosâ, pyramido-fusiformi; anfractibus decenis, inferioribus altis, latis, rectilateralibus, ultimo elongato, ad medium dorsi depresso, liris inequalibus, irregularibus rugato; aperturâ aurantiâ, magnâ, obliquâ, subauriformi, superiâ acuminatâ, plicâ parietali acutâ productâ, plicâ columellari magnâ, angulatim productâ.*

THE MACASCAR CLAUSILIA. Shell lilac, subventricose, pyramidal, fusiform; whorls ten, lower high, broad, rectilateral, last elongated, depressed at the middle of the back, wrinkled with unequal irregular ridges; aperture orange, large, parietal plait sharply produced, columellar plait large, angularly produced.

SOEWERY.

Clausilia corrigata. Menke.

Clausilia Macarona. Zeigler.

Hab. Macassar.

Species 143. (Mus. Sowerby.)

CLAUSILIA DELESSETHI. *Cla. testâ fusiformi, pruinosa, tenuissimè lirata; anfractibus undecenis, albo marginatis, obliquis; ultimo prope terminum ad dorsum depresso et subcarinato; aperturâ prominenti, subovatâ, margine albo, lato, reflexo, plicâ columellari magnâ, obliquè productâ.*

DELESSETH'S CLAUSILIA. Shell fusiform, plum-coloured, finely ridged; whorls eleven, bordered

with white, oblique; last depressed or partly keeled near the end at the back; aperture prominent, subovate, margin white, broad, reflected, columellar plait large, obliquely produced.

BOUBOIGNAT. Mon. Hel. IV. 774.

Hab. Syria.

Figure 144. (Mus. Brit.)

CLAUSILIA FUNICULUM. Already given in Plate VIII. f. 71, and repeated here by error.

Species 145. (Mus. Brit.)

CLAUSILIA CALLOSA. *Cla. testâ pruinosa, laminatim tenuissimè lirata, elongatâ, angustissimâ medio et infra rectilaterali; anfractibus decenis, altis, ultimo elongato, ad dorsum infra obliquè sulco impresso; aperturâ auriformi, infra productâ, margine crasso, plicâ parietali minutâ, plicâ columellari obliquè acuminatâ; altissimâ, plicâ internâ conspicuâ.*

THE CALLOUS CLAUSILIA. Shell plum-coloured, with fine laminar ridges, elongated, very narrow, straight-sided in the middle and below; whorls ten, high, last elongated, impressed at the back below with an oblique groove; aperture auriform, produced below, margin thick, parietal plait minute, columellar plait obliquely acuminate, very high; a conspicuous inner plait.

MUHLFELDI. Pflr. Mon. Hel. II. 419.

Hab. Dalmatia.

CLAUSILIA.

PLATE XVI.

Species 146. (Mus. Sowerby.)

CLAUSILIA CINEREA. *Cla. testā brevi, brevi, subovata, anfractibus octonis, apicalibus quaternis fusco-nigrescentibus, medianis et inferioribus subventricososis, ultimo profunde rimato, apertura pallidē castanea, latā, rotundā, margine tenui, paritū reflexā, plicā columellari levatā, linearī, plicā parietali suturæ approximata, acutā.*

THE ASHY CLAUSILIA. Shell short, smooth, bluish; whorls eight, four apical blackish brown, middle and lower rather ventricose, last deeply notched; aperture pale chestnut, broad, rounded, margin thin, a little reflected; columellar plait raised, linear parietal plait close to the suture, sharp.

PHILIPPI. A. Schmidt. *Clausilia*, p. 108.

Clausilia omisiosa. Ziegler.

Clausilia bees. Delle Chiaje.

Hab. Naples.

Species 147. (Mus. Sowerby.)

CLAUSILIA COCHIN-CHINENSIS. *Cla. testā hecicōsensitā, solidā, fusco-griseā, tenuissimā, obliquē liratā; anfractibus novenis, infusā latā, albā, convexo-ventris, ultimo profunde rimato; apertura auriformi, pallidē castaneā, superne subconvexatā, sinuatā; margine crasso, cōtorto. plicā parietali parvā, tenui, plicā columellari angustā, pedeculatā.*

THE COCHIN-CHINA CLAUSILIA. Shell rather short, solid, brownish-grey, very finely obliquely ridged; whorls nine, broad below, high, rather convex, last deeply notched; aperture auriform, pale flesh, rather acuminate above, sinuated; margin thick, reflected, parietal plait small, thin, columellar plait large, much raised.

PFEIFFER. *Mon. Hel. VI.* p. 443.

Hab. Cochin-China.

Species 148. (Mus. Sowerby.)

CLAUSILIA GOULDIANA. *Cla. testā solidā, pallidē fulvā, brevi, fusiformi, ventricosisimā; anfractibus septenis, inferioribus altis, convexis, ultimo obliquē contracto, suturā distinctā; apertura latā, labio externo albo, crasso, late reflexo, superne sinuato, submarginato, plicā parietali prominenti, acutā; plicā columellari obliquā, elevatā, linearī.*

GOULD'S CLAUSILIA. Shell solid, pale fulvous, smooth,

fusiform, very ventricose; whorls seven, lower high, convex, last obliquely contracted, suture distinct; aperture wide, outer lip white, thick, broadly reflected, sinuous above, submarginate, parietal plate prominent, sharp; columellar plait oblique, elevated, linear.

PFEIFFER. *Novil. Conch.* p. 123.

Hab. Burmah.

Species 149. (Mus. Sowerby.)

CLAUSILIA TRISTRAMI. *Cla. testā pruinosa, fusiformi, tenuissimē lirata; anfractibus trilobis, superioribus brevibus, attenuatis, medianis et inferioribus ventricososis, ultimo denticulato impresso; apertura castanea, margine albo, plicis parietali et columellari tenuibus.*

TRISTRAM'S CLAUSILIA. Shell plum-coloured, fusiform, very finely ridged; whorls thirteen, upper smooth, attenuated, middle and lower ventricose, last impressed divergently; aperture chestnut, margin white, parietal and columellar folds thin.

PFEIFFER. *Mon. Hel. VI.* p. 481.

Hab. Tunis.

The former figure of this species, given in Plate V, was not so characteristic as the present, which, however, is only introduced by inadvertence.

Species 150. (Mus. Sowerby.)

CLAUSILIA RAYMONDI. *Cla. testā fulvā, inter costas pruinosa, costellis filiformibus lirata, angustā, rectilaterali, altā; anfractibus decenis, medianis et inferioribus altis, ultimo infusā contracto, prolongato, lacato, tortuo, ad dorsum obliquē bicarinato; apertura distantī, productā, auriformi, margine tenui expanso, plicis parietali et columellari tenuibus, approximatis.*

RAYMOND'S CLAUSILIA. Shell fulvous, plum-coloured between the ribs, ridged with filiform ribs, narrow, straight-sided, high; whorls ten, middle and lower high, last contracted, prolonged, uncoiled, tortuous, obliquely bicarinate at the back; aperture distant, produced, ear-shaped, margin thin and expanded, parietal and columellar plaits thin, close together.

BOURGUIGNAT. Pfeiffer. *Mon. Hel. VI.* p. 513.

Hab. Syria.

CLAUSILIA.—PLATE XVI.

Species 151. (Mus. Sowerby.)

CLAUSILIA BOISSIERI. *Cla. testâ subcoruleâ, fusiformi, breviusculâ, levigatâ; anfractibus decenis, apicalibus fusco-nigrescentibus, medianis et inferioribus gradatim inflatis, ultimo prolongato, lirato, tortuoso, laevato, carinis duabus convergentibus desinenti; aperturâ latâ, fulvâ, productâ, margine tenui, expanso, supernè sinuato, plicâ parietali minutâ, plicâ columellari altâ, prominente.*

BOISSIER'S CLAUSILIA. Shell blueish, fusiform, rather short, smooth; whorls ten, apical blackish-brown, middle and lower gradually inflated, last prolonged, ridged, tortuous, uncoiled, ending in two converging keels; aperture broad, fulvous, produced, margin thin, expanded, sinuous above, parietal plait minute, columellar plait high, prominent.

CHARPENTIER. Pflr. Mon. Hel. p. 513.

Hab. Syria.

This species has a couple of wrinkled keels converging at the bottom of the last whorl.

Species 152. (Mus. Sowerby.)

CLAUSILIA VARIANS. *Cla. testâ pallidè corneâ, semipellucidâ, tenuissimè liratâ, tenui, subfusiformi, medio gradatim inflatâ; aperturâ subovata, parvâ, margine supernè sinuato emarginato, plicis parietali et columellari tenuibus, subapproximatis.*

THE VARYING CLAUSILIA. Shell pale horn, semipellucid, very finely ridged, thin, subfusiform, gradually swelled in the middle; aperture subovate, small, margin sinuously notched above, parietal and columellar plaits thin, rather approximate.

ZIEGLER. Pflr. Mon. Hel. II. p. 409.

Hab. Germany.

Species 153. (Mus. Sowerby.)

CLAUSILIA PROXIMA. *Cla. testâ brevi, ventricosâ, levî, subcoruleâ, apice aperturæque succineis; anfractibus octonis apicalibus parvis, medianis, inferioribusque latis, altis, inflatis; ultimo profundè rimato, ad dorsum perpendiculariter rugato; aperturâ latâ, subquadratâ, margine tenui, reflexo, plicâ parietali parvâ, plicâ columellari altâ, latâ.*

THE NEAR CLAUSILIA. Shell short, ventricose, smooth, blueish, apex and aperture amber; whorls eight, apical small, middle, lower broad, high, inflated; last deeply notched, perpendicularly wrinkled at the back; aperture broad, rather square, margin thin, reflected, parietal plait small, columellar plait high, broad.

WALDERDORFF. Syst. Verz. Call. 1864.

Hab. Cattar.

Species 154. (Mus. Sowerby.)

CLAUSILIA LUNELLARIS. *Cla. testâ parvâ, fulvâ et pruinosâ, brevî, tenuissimè striatâ; anfractibus novenis, inferioribus inflatis, altis; ultimo rimato, ad dorsum maculâ semilunari notato; aperturâ fulvâ, margine paulò expanso, supernè sinuato, emarginato, plicis parietali et columellari minutis, approximatis.*

THE LUNELLAR CLAUSILIA. Shell small, fulvous and plum-coloured, short, very finely striated; whorls nine, lower inflated, high, last notched, marked at the back with a semilunar spot, aperture fulvous, margin a little expanded, sinuous, emarginated, parietal and columellar plaits minute, near together.

PFFIFFER. Mon. Hel. III. p. 608.

Clausilia lunularis by error, Pl. IV. 38.

Hab. Eubœa.

Species 155. (Mus. Sowerby.)

CLAUSILIA BLANDIANA. *Cla. testâ brevî, sordidè pruinosâ, tenuissimè striatâ, subfusiformi; anfractibus septenis, suturâ profusâ separatis, convexis, ultimo altissimo, prolongato, profundè rimato, laevato, tortuoso; aperturâ magnâ, castaneâ, obliquè auriformi, trans latus dextrale extenso, expanso; plicâ parietali prominente, plicâ columellari nullâ.*

BLAND'S CLAUSILIA. Shell short, dull plum-colour, very finely striated, rather fusiform; whorls seven, separated by a deep suture, convex, last very high, prolonged, deeply notched, uncoiled, tortuous; aperture large, chestnut, obliquely auriform, extended across the right side, expanded, parietal plait prominent, no columellar plait.

PFFIFFER. Mon. Hel. IV. p. 785.

Hab. Santa de Bogota, Columbia.



157



158



159



160



161



162



163



164



165



166

CLAUSILIA.

PLATE XVII.

Species 156. (Mus. Sowerby.)

CLAUSILIA CYRENEA. *Cl. testâ brevi, subcarnali, brevi, fusiformi; anfractibus decem, medianis et intermedioribus inflatis, apicalibus parvis, nigrescentibus, ultima infra producta, angustata, eoque ad dorsum tuberculato; apertura intus castanea, margine aeneo-fulvo, obliquâ, margine tenui, reflexâ.*

THE TESTISH CLAUSILIA. Shell short, blueish, smooth, fusiform; whorls ten, middle and lower inflated, apical small, blackish; last produced below, narrow, wrinkled, with two tubercles; aperture chestnut within, margin golden-fawn, oblique, margin thin, reflected.

FERRUSSAC. Kuster, p. 216.

Clausilia cyrena.

Hab. Morca.

Species 157. (Mus. Sowerby.)

CLAUSILIA DALMATINA. *Cl. testâ brevissima, ventricosa, pallide fulva, tenuissime striatâ; anfractibus octois, brevibus, ultimo albo, infra angustato, post marginem aperturae auricigato, dorso albo solido; apertura brevi, margine albo, expanso, plicâ columellari labi.*

THE DALMATIAN CLAUSILIA. Shell very short, ventricose, pale fulvous, very finely striated; whorls eight, short, last high, narrow below, with a wrinkle behind the margin of the mouth; marked with white at the back, aperture broad, margin white, expanded, columellar plait broad.

PARTSCH. Pfeiffer. Mon. Hel. II. 432.

Clausilia dalmatica. Zeigler.

Clausilia epidaurica. Kutsch.

Hab. Dalmatia.

Species 158. (Mus. Brit.)

CLAUSILIA CRITICA. *Cl. testâ parvâ, tenaciter litatâ, stramineâ, fusiformi; apertura subovata, superne sinuatâ, plicâ parietali suturâ approximâtâ, columellâ triplicatâ, labio externo supra medianum sinuato.*

THE CRITICAL CLAUSILIA. Shell small, finely ridged, straw-coloured, fusiform; aperture subovate, sinuous above, parietal plait near the suture,

columella two-plaited, outer lip sinuated above the middle.

BEELZ. Kuster, p. 263.

Hab. Transylvania.

Species 159. (Mus. Brit.)

CLAUSILIA DUBOISII. *Cl. testâ parvâ, fulvâ, fusiformi, tenaciter laminatim litatâ; apertura ovata, labio externo supra medianum tumido, sinuato; columellâ infra plicam crenulatâ, plicâ parietali et columellari ad terminum approximatis, plicâ parvâ intermedii.*

DUBOIS'S CLAUSILIA. Shell small, fulvous, fusiform, finely laminately ridged; aperture ovate, outer lip tumid and sinuous above the middle, columella crenulated below the plait, parietal and columellar plaits approximated at the ends with a small intermediate plait.

CHARPENTIER. Kuster, p. 270.

Hab. — ?

Species 160. (Mus. Sowerby.)

CLAUSILIA DISTANTILIRATA. *Cl. testâ brevi, subpyramidalâ, solidâ, labi, costis distantibus, crassiusculis litatâ, inter costas primâs, anfractibus novem, apicalibus parvis, rotundis, fuscis, brevibus, altris ad suturam subsculptis, apertura subauriculatâ, plicâ parietali parvâ, plicâ columellari nullâ.*

THE DISTANT-RIDGED CLAUSILIA. Shell short, pyramidal, solid, broad, ridged with distant, rather thick ribs, plum-coloured between the ribs; whorls nine, apical small, round, brown, smooth, others with slight steps at the suture; aperture slightly orange, parietal plait small, columellar plait none.

SOWERBY.

Hab. — ?

Species 161. (Mus. Sowerby.)

CLAUSILIA KÜSTERI. *Cl. testâ tenui, cornuâ, subfusiformi, brevi, anfractibus duodecim, apicali brevi, ultimo infra subattenuato; apertura oblongâ, ad suturam elevatâ, plicâ columellari magis.*

KÜSTER'S CLAUSILIA. Shell thin, horny, subfusiform, smooth, whorls twelve, apical turbinated, last attenuated below: aperture oblong, raised at the suture; columellar plait large.

ROSSMÄSLER. Pfeiffer. Mon. Hel. II. 399.

Clausilia substriata. Küster?

Hab. Sardinia, Corsica.

Species 162. (Mus. Brit.)

CLAUSILIA SEPTEMPLICATA. *Cl. testâ fuscâ, levi, fusiformi, medio ventricosâ; anfractibus novenis, ad suturam minutè albo tuberculatis, ultimo prolongato, ad dorsum stigmatè albo elongato flexuoso molato; aperturâ magnâ, margine albo, plicâ parietali minutâ, plicâ columellari elongatâ, plicis internis et subinternis quinis.*

THE SEVEN-PLATED CLAUSILIA. Shell brown, smooth, fusiform, middle ventricose; whorls nine, with minute white tubercles at the suture, last prolonged, marked at the back with a white, long, flexuous stigma; aperture large, margin white, parietal plait minute, columellar plait elongated, interior and subinterior plaits five.

PHILIPPI. Pflr. Mon. Hel. II. p. 452.

Clausilia prasina. Benson.

Clausilia subterris. Zeigler.

Clausilia sericina. Rossmäsler.

Hab. Sicily.

Species 163. (Mus. Sowerby.)

CLAUSILIA MONTANA. *Cl. testâ parvâ, pruinosâ, tenuissimè striatâ, fusiformi; anfractu ultimo ad dorsum infusè subcarinato, ante aperturam tumido, tam convexato, aperturâ fuscâ, oblongâ, plicâ internâ perpendiculari, columellâ buplicatâ.*

THE MOUNTAIN CLAUSILIA. Shell small, plum-

coloured, very finely striated, fusiform; last whorl with a keel at the back below, tumid before the aperture, then drawn in; aperture fulvous, oblong, with a perpendicular internal plait; columella two-plaited.

MOUSSON. —?

Hab. Mountains in Europe.

Species 164. (Mus. Sowerby.)

CLAUSILIA LOWEL. *Cl. testâ parvâ, pruinosâ, subdistanter liratâ, liris filiformibus; anfractibus decenis, medianis inferioribus convexis; aperturâ subovata, multiplicatâ.*

LOWE'S CLAUSILIA. Shell small, plum-coloured, rather distantly ridged, ridges filiform; whorls ten, middle and lower convex; aperture pale orange, many-plaited.

ALBERS. Küster, p. 177.

Clausilia delostoma. De Paiva.

Hab. Madeira.

Species 165. (Mus. Sowerby.)

CLAUSILIA VIREX. *Cl. testâ brevi, ventricosâ, pallidè pruinosâ; anfractibus novenis, ad suturam minutissimè plicatis, ultimo profundè rinuato, infusè subcarinato; aperturâ magnâ, margine tenui, expanso, plicis parietali et columellari crassis; labio externo supero incrassato.*

THE BRUISE-MARK CLAUSILIA. Shell short, ventricose, pale plum-colour; whorls nine, very finely plaited at the suture, last deeply notched, with a slight keel below; aperture large, margin thin, expanded, parietal and columella thick, outer lip thickened above.

ROSSMÄSLER. Pfeiffer. Mon. Hel. II. p. 455.

Clausilia diploma. Heutz.

Hab. Central Croatia.

CLAUSILIA.

	Plate	Species		Plate	Species
<i>Aschiana</i> , Dupuy	IX.	77	<i>Chersoneasis</i> , Ferrussac	V.	41
aculus, Adam	X.	94	cinerea, Schmidt	XVI.	146
albocincta, Pfr. <i>brissana</i>			<i>clathrata</i> , Rossmäslér	III.	23
<i>albuginulata</i> , Meyner	VI.	56	claviformis, Pfeiffer	XII.	108
anatolica, Rothman	II.	11	Cochin-chinensis, Pfeiffer	XVI.	147
anceps, Zeigler	IV.	30	colbeaniana-plumbea		
angustata, Bielez	VI.	56	commutata, Rossmäslér	IX.	85
aquilla, Parreys	XV.	137	compressa, Pfeiffer	XII.	113
Arakana, Theobald	IX.	78	concilians-pugnata		
<i>assialis</i> , Zeigler	XIV.	134	<i>conspersa</i> , Zeigler	VI.	55
bacillum, Benson	VI.	48	conspersa, Parreys	IV.	29
Badia, Zeigler	XII.	117	consimilis, Zeigler	IV.	30
Bartletti, A. Adams	I.	2	contaminata, Zeigler	XIV.	126
Belcheri, Pfeiffer	XII.	107	cornea-binolabra		
Bergeri, Mayer	XI.	103	corpulenta, Kutschitz	XIII.	124
<i>Bengalensis</i> , Busch	VII.	61	<i>corragata</i> , Menke	XV.	142
bidens, Linnæus	IX.	76	corticina, Von Busch	XIII.	123
bidentula, Macch	IV.	31	<i>corticella</i> , Parr	XIII.	124
Bielzi, Parreys	III.	23	<i>costulata</i> , Wood	I.	1
binotata, Rossmäslér	VI.	55	crassicostrata, Benoit	VIII.	74
bilabiata, Wapner	VII.	57	<i>crenata</i> , Menke	VI.	56
bilabrata, Smith	XIV.	135	<i>crenulata</i> , Ferrussac	V.	45
biplacata, Montagne	I.	3	crispa, Lowe	III.	26
<i>hipustulata</i> , Küster	VI.	55	critica, Bielez	XVII.	158
Blanda, Zeigler	VIII.	68	<i>cruda</i> , Schmidt	XIII.	117
Blandiana, Pfeiffer	XVI.	155	cyclostoma, Pfeiffer	VIII.	63
Boissieri, Charpentier	XVI.	151	cylindrellaformis, Bourguignat	III.	22
Bornensis, Pfeiffer	XV.	141	<i>eglobrieta</i> , Hanley	VII.	65
bulbus, Benson	VI.	51	cylindrica, Gray	II.	18
Buschii, Küster	XV.	140	camingiana, Pfeiffer	X.	88
cerulea, Ferrussac	XVII.	156	dacia, Fribaldskij's	XI.	96
calcareo, Philippi	XIV.	134	Dalmatina, Partsch	XVII.	157
callosa, Mühlb. <i>feldi</i>	XV.	145	<i>decepiens</i> , Zeigler	III.	19
cambojensis			<i>decurata</i> , Zeigler	II.	15
Caná, Heldebrunn	XV.	138	Delessertii, Bourguignat	XV.	143
canaliculata, Pfeiffer	XIV.	128	deltostoma, Lowe	III.	28
candidilabris, Porro	II.	17	Democletiana, Menke	VI.	54
cattaroensis, Zeigler	VII.	64	<i>decepihalis</i> , Zeigler	II.	14
castanea, Küster	VIII.	68	denticulata		
castalia, Roth	XIII.	125	<i>deplana</i> , Stentz	XVII.	165
cecillei, Philippi	IX.	80	<i>deragata</i> , Jeffreys	II.	13
<i>cerea</i> , Menke	VI.	49	<i>dilyma</i> , Parreys	IV.	31
Charpentieri-cattaroensis			discolor, Pfeiffer	III.	20

CLAUSILIA.

	Plate.	Species.		Plate.	Species.
distantiibrata, Sowerby	XVII.	160	interrupta	XV.	136
distans, Pfeiffer	XII.	112	irregularis, Zeigler	XI.	97
Dohrnii, Pfeiffer	IX.	81	Itala, Martens	VI.	56
Duboisii, Charpentier	XVII.	159	Javana, Pfeiffer	IV.	33
dubia, Draparnaud	IX.	77	Jos, Benson	VIII.	75
elata-somchetica			Kobensis, Smith	X.	92
elegantula, Parreys	IV.	31	Küsteri, Rossmüller	XVII.	161
elegans, Bielz	II.	12	Kutschii, Küster	XIII.	124
elongata, Cantraine	III.	27	labiata, Sowerby	I.	1
epidaurica, Kutsch	XVII.	157	labioscissa, Muhlfecht	VII.	57
Eubuca, Parreys	XIV.	128	laevigata, Muhlfecht	VII.	64
exarata, Zeigler	II.	14	laevigata, Muhlfecht	II.	15
exilis (succineata var.), Lowe	XII.	106	laevissima, Zeigler	II.	15
excavata			lamellata, Leach	II.	13
excellens, Pfeiffer	X.	89	laminata, Montagu	II.	13
exigua			latilabris, Muhlfecht	II.	17
exilis, Adams	I.	8	latistriata, Parreys	IV.	34
fuscularis, Parreys	V.	41	lerocicensis, Ferrassac	XI.	105
fallax, Rossmüller	III.	19	lesinacensis, Parreys	VII.	64
filiformis, Parreys	V.	39	lineolata, Pfeiffer	IV.	36
filigrana, Zeigler	XV.	136	Lischenna, Bielz	XIII.	116
fimbriata, Muhlfecht	VIII.	67	litigiosa, Zeigler	IV.	30
fluviatilis, Benson	X.	91	livens, Bielz	XIII.	116
fontana, Schmidt	XIII.	117	Loweii, Küster	XVII.	164
formosa			loxostoma, Benson	VII.	61
Formosenses, H. Adams	I.	4	lucida, Menke	II.	13
Fortunei, Pfeiffer	XI.	102	lucostigma, Zeigler	II.	17
Frauenfeldi, Zetehor	XI.	99	lunellaris, Pfeiffer	XVI.	154
Fregerii, Küster	III.	27	Macarone	I.	7
fulvata			Macaroneensis, Sowerby	I., XV.	7, 142
fulginea, Parreys	II.	15	Macrostoma, Cantraine	XIV.	130
funiculum, Crosse	VIII.	71	Marcelin, Risso	IV.	31
fusiformis, Blaufarbl	VII.	62	madensis, Passendorff	XIV.	127
gastrolepa, Zeigler	III.	27	marginata, Parreys	VII.	58
glabrata, Muhlfecht	II.	15	marginata, Zeigler	VI.	54
Gouldiana, Pfeiffer	XVI.	148	Maranhensis, Albers	XIII.	122
gracile, Pfeiffer	IX.	77	marxiana, Parreys	VI.	49
gracilicosta, Kryn	VIII.	73	Masoni, Thobold	VIII.	69
gracillima, Zeigler	II.	13	Meisneriana, Shuttleworth	X.	87
grassa, Parreys	IV.	30	maxima, Parreys	IV.	30
Gravci, Bielz	XII.	115	mediterranea, Gray	IX.	76
Hadabonensis, Pfeiffer	IX.	77	minima, Parreys	III.	21
haemorrhica, Parreys	VII.	58	Molluccensis=commutata		
Idaei, Pfeiffer	XII.	111	Montagne, Gray	I.	3
imbecilis, Parreys	III.	27	Montana, Monsson	XVI.	163
index, Monsson	IX.	79	Mortilleti, Dumont	III.	24
inflata, Belle	XIV.	130	Monhoti, Pfeiffer	II.	16
insignis, Gould	VI.	53	musalis, Studer	IV.	39
intercedens, Schmidt	II.	12	nigricans, Pulleney	IV.	31

CLAUSILIA.

	Volume	Page		Plate	Figure
<i>acutifolia</i> , Muhlfeldt	V.	41	<i>rugilabris</i> , Monson	XIV.	132
<i>albipha</i> , Parreys	VIII.	66	<i>rugosa</i> , <i>Draparnaud</i>	V.	44
<i>albosericea</i> , Parreys	III.	19	<i>rustica</i> , Zeigler	IV.	30
<i>albata</i> , Pfeiffer	IV.	31	<i>Sandlergeri</i> , Monson	VIII.	70
<i>albiflora</i> , aniceps	IV.	30	<i>Sanderii</i> , Küster	VII.	58
<i>Olivieri</i> , Roth	IV.	37	<i>satelles</i> , Schundl	III.	24
<i>Olympiae</i> , Friessli	X.	95	<i>sericeata</i> , Zeigler	VIII.	67
<i>ovimana</i> , Zeigler	XVI.	146	<i>scularis</i> , Pfeiffer	XII.	114
<i>opulenta</i> , Zeigler	II.	17	<i>Schuberti</i> , Zetek	IX.	77
<i>orthostoma</i> , Muls	V.	3	<i>Schmidti</i> , Pfeiffer	XIII.	11
<i>ovata</i> , Blaufloed	VII.	69	<i>Seiversi</i> , Pfeiffer	IX.	84
<i>pachygastris</i>			<i>semidenticulata</i> , Pfeiffer	XI.	101
<i>pagana</i> , Zeigler	X.	100	<i>semilamellata</i> , Monson	IX.	83
<i>papillaris</i> , Bruguère	IX.	76	<i>semirugata</i> , Zeigler	V.	41
<i>paradoxica</i> , Zeigler	IV.	30	<i>sericata</i> , Pfeiffer	XI.	104
<i>Parreysii</i> , Zeigler	VI.	49	<i>sericea</i> , Rossmäsler	XVII.	162
<i>parvula</i> , Stöckl	III.	21	<i>septemplicata</i> , Philipp	XVII.	162
<i>perarata</i> , Martini	XIII.	119	<i>Shanghaiensis</i> , Pfeiffer	V.	46
<i>Phalacra</i> , Zeigler	VIII.	67	<i>siacula</i> , Beauv	XIV.	131
<i>Phaedusa</i> , A. Adams	I.	5	<i>Sieboldti</i> , Pfeiffer	XIII.	121
<i>Philippiana</i> , Pfeiffer	IV.	35	<i>Somchetica</i> , Pfeiffer	XI.	98
<i>pikormaniana</i>			<i>speciosa</i> , Pfeiffer	IX.	77
<i>petrosa</i> , Parreys	XII.	110	<i>stigmatica</i> , Zeigler	XV.	139
<i>plavilabris</i> , Rossmäsler	VII.	57	<i>Stimpsonii</i> , Adams	V.	47
<i>Platydera</i> , Martens	X.	90	<i>stranguhata</i> , Ferrasse	V.	42
<i>plicata</i> , <i>Draparnaud</i>	IV.	30	<i>strobilifera</i> , Parreys	VIII.	66
<i>plicatula</i> , <i>Montagne</i>	X.	86	<i>stramineicollis</i> , Parreys	XIV.	133
<i>plivosa</i> , Ferrusac	IV.	30	<i>striata</i> , Muhlfeldt	VIII.	68
<i>plebeja</i> , Zeigler	IV.	30	<i>stylata</i> , Parreys	VIII.	67
<i>plumbea</i> , Rossmäsler	V.	40	<i>substriata</i> , Küster	XVII.	161
<i>porcata</i> , Zeigler	VII.	73	<i>subsericea</i> , Zeigler	XVII.	162
<i>posita</i> , Benson	XVII.	102	<i>succinata</i> , Zeigler	VIII.	66
<i>proxima</i> , <i>Waltershoff</i>	XVI.	153	<i>sulcatipes</i> , Gué	IX.	76
<i>pusilla</i> , Parreys	V.	41	<i>sulcosa</i> , <i>Wagn</i>	XI.	97
<i>pulcherrima</i> , Parreys	IV.	30	<i>sumatrana</i> , Martens	VII.	59
<i>punctata</i> , Michaud	VI.	56	<i>superstrata</i> , Parreys	II.	15
<i>pygmaea</i> , Pygmaea	V.	41	<i>Swinhoei</i> , Pfeiffer	III.	25
<i>pygmaea</i> , Charpentier	V.	45	<i>syraacusana</i> , Philipp	XIV.	130
<i>raribus</i> , Zeigler	VIII.	73	<i>tabula</i> , Küster	III.	27
<i>Raymondi</i> , <i>Bourguignat</i>	XVI.	150	<i>taeniata</i> , Zeigler	V.	39
<i>Rebouliti</i> , Charpentier	V.	45	<i>taurica</i>		
<i>reflexa</i> , Zeigler	VII.	57	<i>Taylori</i> , Pfeiffer	I.	6
<i>reflexilabris</i> , <i>Cantraine</i>	VII.	57	<i>tenax</i> , Parreys	III.	23
<i>regalis</i> = <i>plumbea</i>			<i>teres</i> , Olivier	XIII.	120
<i>Rewiana</i> , <i>Kobelt</i>	XIV.	129	<i>Tetelbachiana</i> , Pfeiffer	IX.	77
<i>relata</i> , Parreys	V.	42	<i>torticollis</i> , Olivier	II.	10
<i>Rolphii</i> , <i>Leach</i>	III.	24	<i>Transylvanica</i> , Stentz	II.	13
<i>rudis</i> , Pfeiffer	XII.	189	<i>tridens</i> , <i>Chomnitz</i>	I.	1
<i>rugata</i> , Parreys	V.	41	<i>Tristani</i> , Pfeiffer	V., XVI.	45

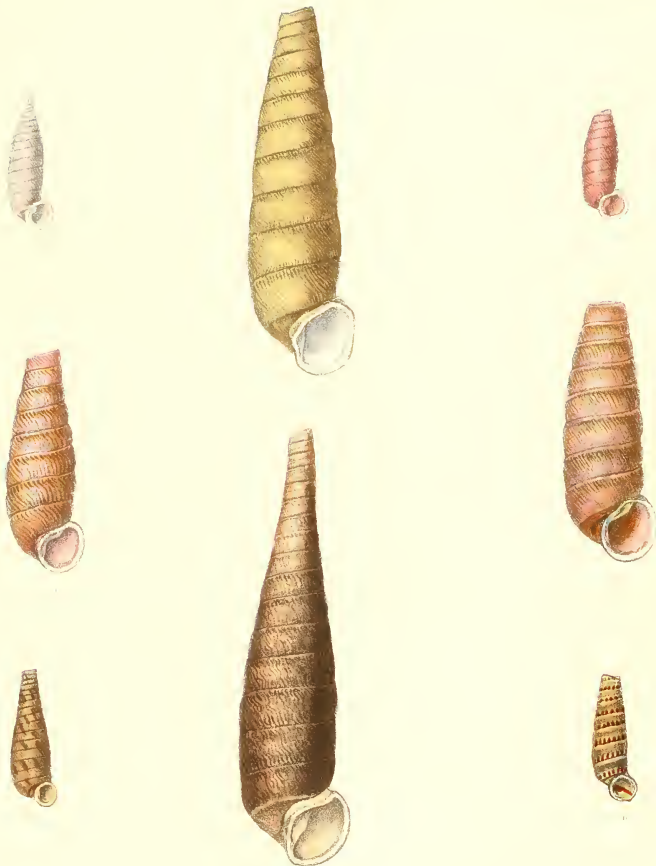
CLAUSILIA.

	Plate.	Species.		Plate.	Species.
tuba, <i>Hanley</i>	VIII.	72	vetusta, <i>Zeigler</i>	X.	93
turritella, <i>Sowerby</i>	VII.	65	virgata, <i>Muhlfeldt</i>	VIII.	67
vallata, <i>Mousson</i>	V.	43	virgata, <i>Jan</i>	IX.	76
valida, <i>Pfeiffer</i>	VI.	52	vitrea, <i>Bielz</i>	VI.	54
varians, <i>Zeigler</i>	XVI.	152	vitrea, <i>Stentz</i>	IX.	76
vellata, <i>Adams</i>	V.	43	Walderdorffii = <i>Gouldiana</i> .		
ventricosa, <i>Draparnaud</i>	IV.	34	Yokohamensis, <i>Crosse</i>	IX.	82
ventricosa = <i>Montana</i> .					

MONOGRAPH
OF THE GENUS
CYLINDRELLA.

O LORD of heaven, and earth, and sea,
To Thee all praise and glory be ;
How shall we show our love to Thee,
Who givest all ?

Bishop Christopher Wordsworth.



CYLINDRELLA.

PLATE I.

Genus CYLINDRELLA, Pfeiffer.

Testa terrestris, elongato-turrita, plerumque dextralis; anfractibus numerosis, apicalibus, deciduis; apertura plerumque orata, margine continuo.

Shell terrestrial, elongate-turreted, generally dextral; whorls numerous, apical, deciduous; aperture usually ovate, with continuous margin.

The *Cylindrella* are much more variable in form than the *Chansilia*, and are without the internal plate or *chansium* which distinguish that genus. The first-formed whorls generally fall off when the shell is advanced in growth. In many species the aperture is brought round suddenly, so as to form a sort of crease (*rima*) with the coiled part of the body-whorl. In others the last whorl is distorted or uncoiled (*solutus*), so as to place the aperture at a distance from the body of the shell. In a very few, the margin of the aperture is interrupted by the ventral bulge of the whorl. Considerably more than one-third of the reported species are from the island of Cuba, one-fifth from Jamaica; another fifth would be made up between Haiti and Mexico; leaving very few for a dozen other isolated localities, including Great Britain, which produces four or five.

Species 1. (Mus. Brit.)

CYLINDRELLA ASPERA. *Cyl. testâ solidâ, pupiformi, albâ vel rosâ, striatâ, versus apicem pyramidalitâ; medio et infâ cylindricâ; anfractibus sexdecimis, apicalibus inclusis, ultimo rimato; apertura subrotundâ, margine crasso, columellâ intus plicatâ.*

THE ROUGH CYLINDRELLA. Shell solid, pupiform, whitish or rose, striated, pyramidal towards the apex, cylindrical in the middle and below; whorls sixteen (including apical), last notched; aperture rather round, margin thick, columella plated within.

ADAMS, Pfeiffer, Mon. III. p. 564.

Hab. Jamaica.

Species 2. (Mus. Brit.)

CYLINDRELLA SPECIOSA. *Cyl. testâ magnâ, solidiusculâ, cylindrico-subpyramidalâ, obliquè striatâ, olivaceâ,*

centricâ; anfractibus permanentibus nucleosis, paulò convexis, ad suturam creatis, quibus inferioribus subequalibus, ultimo angulato, contracto, longè rimato, supra aperturam arcuato; apertura auriformi, margine superiori subhyaloso, columellâ rix plicatâ.

THE SPECIOUS CYLINDRELLA. Shell large, rather solid, cylindrico-subpyramidal, obliquely striated, olive, ventricose; permanent whorls eleven, a little convex, erenated at the suture, five lower nearly equal, last angular, contracted, with a long crease, arched above the aperture; aperture auriform, upper margin rather flexuous, columella hardly plaited.

DUNKER, Pfeiffer, Mon. IV. p. 695.

Hab. Columbia.

This handsome species loses its primary whorls far down from the apex, so as to make a broadly-truncated brook.

Species 3. (Mus. Brit.)

CYLINDRELLA SPLENDIDA. *Cyl. testâ ventricosâ, solidiusculâ, obliquè costatâ, cono-cylindricâ; anfractibus permanentibus octois, mediis inflatis, ultimo contracto, longè rimato, supra marginem apertura arcuato; apertura auriformi, columellâ leviter biphicatâ.*

THE SPLENDID CYLINDRELLA. Shell ventricose, rather solid, obliquely ribbed, fleshy violet; permanent whorls eight, middle inflated, last contracted, with a long notch, arched above the margin of the aperture; aperture auriform, columella slightly biphicated.

PFEIFFER, Proc. Zool. Soc. 1860, p. 139.

Hab. Mexico.

Species 4. (Mus. Brit.)

CYLINDRELLA GRANDIS. *Cyl. testâ magnâ, cylindricâ, latâ, tenuiusculâ, tenuiter striatâ, fusco-rubescens, suturâ albidâ-marginatâ; anfractibus permanentibus octois, altis, quateris inferioribus subequalibus, ultimo contracto, angulato, profundè rimato; apertura magnâ, latè suborata; columellâ rectiusculâ.*

CYLINDRELLA.—PLATE I.

THE LARGE CYLINDRELLA. Shell large, cylindrical, broad, finely striated, reddish-brown, suture bordered with whitish; permanent whorls eight, high, the four lower nearly equal, last contracted, angular, deeply notched; aperture large, broadly subovate; columella rather straight.

PFEIFFER. Proc. Zool. Soc. 1860, p. 139.

Hab. Mexico.

Much more cylindrical than the preceding, and more finely sculptured.

Species 5. (Mus. Brit.)

CYLINDRELLA ARISTIFIDA. *Cyl. testâ solidâ, subpyramidatâ, infra medium tumidâ, fusco-olivaceâ, fusco-rubescenti strigatâ, regulariter striatâ, superne contractâ, mediâ et infra subventricosâ; anfractibus permanentibus senescentis, depressis, ultimo contracto, rimato; aperturâ subrotundâ, margine crasso, rotundo, columellâ subplicatâ.*

THE CORN-SPIKE CYLINDRELLA. Shell solid, rather pyramidal, tumid below the middle, olive-brown, striped with reddish-brown, regularly striated, contracted above, rather ventricose in the middle and below; permanent whorls sixteen, depressed, last contracted, notched; aperture roundish, margin thick, round, columella slightly plaited.

PFEIFFER. ? MS. Mus. Brit.

Hab. — ?

Species 6. (Mus. Brit.)

CYLINDRELLA EXIMIA. *Cyl. testâ solidâ, cylindricâ, retigonâ, lorigatâ, griseâ, supra suturam fascia-*

fulvâ, maculis rubris articulatâ, infra suturam fascia-fulvâ, immaculatâ, ornatâ; anfractibus permanentibus octonis, ultimo angulato, subcontracto; aperturâ subtrapezoidâ.

THE EXQUISITE CYLINDRELLA. Shell solid, cylindrical, straight-sided, smooth, grey, ornamented above the suture with a fulvous band articulated with red spots, and under the suture with a spotless fulvous band; permanent whorls eight, last angular, rather contracted; aperture subtrapezoidal.

PFEIFFER. Proc. Zool. Soc. 1858, p. 23.

Hab. Haiti.

Species 7. (Mus. Brit.)

CYLINDRELLA GHEISBREGHTI. *Cyl. testâ magnâ, solidâ, fumoso-fuscâ, mediâ et infra latâ, bulbosâ, superne contractâ; sulcis irregulariter undatis rugatâ; anfractibus permanentibus senescentis, superioribus senis angustis, alteris gradatim crescentibus, ultimo infra contracto, angulato, rimato, supra marginem superiorem aperture fornicato; columellâ uniplicatâ.*

GHEISBREGHT'S CYLINDRELLA. Shell large, solid, smoky-brown, broad and bulbous in the middle and below, contracted above, wrinkled with irregular, wavy grooves; permanent whorls sixteen, upper six narrow, others gradually increased, last contracted below, angular, notched, vaulted above the upper margin of the aperture; columella single-plaited.

PFEIFFER. Mon. IV. p. 694.

Hab. Chiapa, Mexico.

A large shell of remarkably bulbous form and wrinkled texture.



CYLINDRELLA.

PLATE II.

Species 8. (Mus. Brit.)

CYLINDRELLA FLAMMULATA. *Cyl. testā pupaeformi, solidā, griseā, fusco-corneo flammulata, levigati; anfractibus rectiusculis, ultimo contracto, angusto, 5 medianis subaequalibus, deinde versus apicem contractis; labio integro subrotundo, simplici.*

THE FLAMUL CYLINDRELLA. Shell pupa-shaped, solid, grey with horn-brown flames, smooth; whorls rather straight, the last contracted, narrow, five middle nearly equal, thence towards the apex contracted; lip entire, rather round, simple.

PEIFFER. Monograph ii.

Cylindrella plumulata, Pfeiffer.

Hab. Hayti—St. Domingo.

Species 9. (Fig. a, b, Mus. Brit.)

CYLINDRELLA CYLINDREUS. *Cyl. testā pupaeformi, tenuiter striatā, rosā, purpureā vel albidi, anfractibus rectiusculis, ultimis 5 subaequalibus, deinde versus apicem contractis; apertura productā, labio simplici, columellā intus planatā.*

THE CYLINDER CYLINDRELLA. Shell pupa-shaped, finely striated; pink, purple, or white whorls rather straight, five last nearly equal, thence towards the apex contracted; aperture produced; lip simple; columella flattened within.

CHEMNITZ. Conchological Cabinet.

Cylindrella purpurea, Gray.

Pupa rosea, Adams.

Cylindrella rubella, Adams.

Cylindrella proceri, Adams.

Hab. Jamaica.

Species 10. (Mus. Brit.)

CYLINDRELLA ZONATA. *Cyl. testā pupaeformi, tenuiter striatā, purpureā, purpureo-nigrescenti latē zonatā; anfractibus lotis, altis, 5 ultimis subaequalibus,*

deinde gradatim contractis; apertura subproductā, subpupaeformi, intus flexuosa, labio rotundo.

THE BANDED CYLINDRELLA. Shell pupa-shaped, finely striated, purple, broadly banded with blackish-purple; whorls broad, elevated, five last nearly equal, then gradually contracted; aperture rather produced, rather auriform, flexuous within, lip rounded at the margin.

C. B. ADAMS. Pfeiffer's Monograph.

Hab. Jamaica.

Species 11. (Mus. Brit.)

CYLINDRELLA ROSEA. *Cyl. testā angustā, cylindricā, acutē tenuiter striatā, rosā, anfractibus rectiusculis, 5 ultimis subaequalibus, ultimo infimi contracto, apertura vir subatā, apertura subquadratā; columellā intus latā.*

THE PINK CYLINDRELLA. Shell narrow, cylindrical, sharply and finely striated, pink, whorls rather straight; five last whorls rather equal, last contracted below; aperture scarcely uncoiled, aperture rather square; columella broad within.

CHEMNITZ. Conch. tab. 2. f. 31, 32.

Hab. Jamaica.

In this species, as in *C. aspera*, the striae are sharp and fine.

Species 12. (Mus. Brit.)

CYLINDRELLA SANGUINEA. *Cyl. testā subpupaeformi, sanguineā, tenuiter striatā, medio subinflatā, versus apicem contractā; anfractibus depressis, numerosis; apertura subquadratā, labio incassato.*

THE SANGUINEOUS CYLINDRELLA. Shell rather pupa-shaped, blood-coloured, finely striated, a little inflated in the middle, contracted towards the apex; whorls depressed, numerous; aperture rather square, lip thickened.

CHEMNITZ. Conch. 7, t. 1, figs. 18-20.

Cylindrella cornea, Adams.

Hab. Jamaica.

CYLINDRELLA.—PLATE II.

Species 13. (Mus. Brit.)

CYLINDRELLA OVIEDOIANA. *Cyl. testâ elongato-cylindricâ, versûs apicem gradatim attenuatâ, cornuâ, mediâ rubrâ, striis rectiâsculis tenuiter liratâ; ultimo anfractu alto; aperturâ lateraliter productâ, rotundâ, margine întegro, rotundo.*

THE OVIEDO CYLINDRELLA. Shell elongated-cylindrical, gradually attenuated towards the apex, horny, red in the middle, finely ridged with rather straight striae; last whorl elevated; aperture laterally produced, rounded, margin entire, rounded.

D'OBIGNY. Mollusca of the Isl. of Cuba, tab. 12, f. 15-17.

Hab. Cuba.

Species 14. (Mus. Brit.)

CYLINDRELLA PROCERA. *Cyl. testâ ventricosâ, pupæformâ, tenuissimè striatâ; anfractibus 4 ultimis subæqualibus, altis, latis, deinde alteris gradatim angustioribus; aperturâ rotundo-subquadratâ; columellâ leviter plicatâ, labio crasso, rotundo.*

THE ELEVATED CYLINDRELLA. Shell ventricose, pupa-shaped, very finely striated; four last whorls nearly equal, elevated, broad, thence others gradually narrowing; aperture roundly-subquadrate; columella lightly plaited, lip thick, round.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica.

Species 15. (Mus. Brit.)

CYLINDRELLA AMETHYSTINA. *Cyl. testâ cylindricâ, rectiâsculâ levigatâ, rubro-purpureâ; anfractibus supermè fusco fasciatis; aperturâ magnâ, subrotundâ, labio subspanso, profundè incrassato.*

THE AMETHYSTINE CYLINDRELLA. Shell cylindrical, rather straight, smooth, purplish-red; whorls banded above with brown; aperture large, rather rounded, lip somewhat expanded, deeply thickened.

CHITTY. Pfeiffer's Monograph I.

Hab. Jamaica.

A more straight-sided shell than others of the same group.

Species 16. (Mus. Brit.)

CYLINDRELLA ADAMSIANA. *Cyl. testâ breviter cylindricâ, tenui, levi, cornu variegatâ, ad suturam fusco alboque articulatâ; aperturâ obliquâ, lateraliter subproductâ, labio rotundo.*

THE ADAMSIAN CYLINDRELLA. Shell shortly cylindrical, thin, smooth, variegated with horn-colour, articulated with brown and white at the suture; aperture oblique, a little produced laterally; lip rounded.

PFEIFFER. Monographia Heliceorum, I.

Hab. Hayti.



CYLINDRELLA.

PLATE. III.

Species 17. (Mus. Brit.)

CYLINDRELLA VENTRIQUOSA. *Cgl. testâ brevi, ventricosâ, medio inflatâ, spirâli inâque angustatâ, anfractibus purpureo alboque strigatis, ultimo brevi, angusto, post columellam excavato: apertura parvâ, rotundâ.*

THE VENTRIQUOSE CYLINDRELLA. Shell short, ventricose, inflated in the middle, narrowed above and below, whorls striped with purple and white, last short, narrow, hollowed behind the columella; aperture small, round.

GUÉDIAUL. Pflr. Novit. Conch. p. 250.

Hab. Cuba.

Species 18. (Mus. Brit.)

CYLINDRELLA GRAVESII. *Cgl. testâ brevi, subcylindricâ, intus fuscâ, spirâ albâ, anfractibus rectis, subulatis, ultimis subæqualibus, deinde versus apicem subito contractis: ultimo rimatâ, breviter solutâ: apertura lateraliter subproductâ, rotundâ, margine rotundâ.*

GRAVES'S CYLINDRELLA. Shell short, subcylindrical, brown below, whitish above, whorls rather straight, the last nearly equal, thence towards the apex suddenly contracted; last notched, shortly loosened; aperture rather produced laterally, rounded, with rounded edge.

ADAMS. Pfeiffer, Monographia Heliceorum, iii. 570.

Hab. Jamaica.

Species 19. (Mus. Brit.)

CYLINDRELLA SUTURALIS. *Cgl. testâ brevi, pupâformi, rimâ rimatâ, tenuisculâ, obliquè minutissimè striatâ, nitens, cornâ, medio ventricosâ, apice attenuatâ, acutâ, suturâ castaneo marginatâ: anfractibus 12, convexiusculis, ultimo rimâ solutâ, apertura obliquâ, subcirculâri, margine tenui, breviter expanso.*

THE SUTURED CYLINDRELLA. Shell short, pupa-shaped, scarcely notched, rather thin, obliquely very minutely striated, shining, horn-coloured, ventri-

quose in the middle, apex attenuated, sharp, suture bordered with chestnut; whorls twelve, rather convex, last very slightly loosened; aperture oblique, rather circular, with thin edge, slightly expanded.

WEINLAND. Mal. Bl. ix. 1862, p. 194.

Hab. Haiti.

Species 20. (Mus. Brit.)

CYLINDRELLA SOWLEYANA. *Cgl. testâ subpyramidatâ, griseo-fuscâ, subrimatâ, anfractibus rix convexè elegantè obliquè latis, versus apicem gradatè attenuatis, ultimo infra subcarinatâ: apertura subrotundâ; columellâ intus laminatâ plicatâ.*

SOWLEY'S CYLINDRELLA. Shell subpyramidal, brown grey, slightly notched; whorls scarcely convex, elegantly obliquely ridged, gradually attenuated towards the apex, the last slightly keeled below; aperture rather rounded; columella with a laminar plait within.

PETITFER. Monographia Heliceorum, iii. 372.

Hab. Isl. of Cuba.

Species 21. (Mus. Brit.)

CYLINDRELLA CÆRLANS. *Cgl. testâ angustatâ, elongatâ, subarcuatâ, fusco-griseo undulatim strigatâ, versus apicem attenuatâ, medio rix inflatâ, anfractibus convexiusculis, numerosis, ultimo contracto, apertura subobliquâ, intus uniplicatâ, margine tenui.*

THE BLuish CYLINDRELLA. Shell narrow, elongated, bluish, with undulating greyish-brown stripes, attenuated towards the apex, slightly inflated in the middle; whorls rather convex, numerous, last contracted; aperture rather oblique, single-plaited within, margin thin.

POEY. Pfeiffer, Mon. Hel. iv. 700.

Hab. Cuba.

Species 22. (Mus. Brit.)

CYLINDRELLA DENTICULATA. *Cyl. testâ angustâ, attenuatâ, elongatâ, fusco strigatâ, ad suturam denticulatâ, versus spiram contractâ, suprâ medium et infrâ rectiusculo, cylindraco; aperturâ subobliquè productâ.*

THE DENTICULATED CYLINDRELLA. Shell narrow, attenuated, elongated, striped with brown, denticulated at the suture, contracted towards the spire, rather straight and cylindrical above the middle and below, aperture rather obliquely produced.

PFEIFFER. Chem. p. 65.

Hab. Mexico.

The suture is denticulated with little white points.

Species 23. (Mus. Brit.)

CYLINDRELLA SHUTTLEWORTHIANA. *Cyl. testâ elongatâ, angustâ, cylindraco, subpellucidâ, pallidè fulvâ; anfractibus sublinter obliquè liris, superioribus contractis, medianis et inferioribus subæqualibus, rectiusculis; ultimo elongato, infrâ subcorinato, soluto; aperturâ subtrigonâ, obliquè productâ.*

SHUTTLEWORTH'S CYLINDRELLA. Shell elongated, narrow, cylindrical; rather pellucid, pale fulvous, whorls rather distantly obliquely ridged, the upper ones contracted, middle and lower ones rather equal, rather straight, last elongated, slightly keeled below, loosened; aperture subtrigonal, obliquely produced.

PÖEY. Chemnitz, p. 18.

Hab. Cuba.

Species 24. (Mus. Brit.)

CYLINDRELLA PUNCTURATA. *Cyl. testâ pupæformi, brevi, suprâ subrosâ, infrâ albidâ, medio inflato, versus apicem gradatim contracto; suturâ articulatim punctatâ; anfractibus rectiusculis, ultimo subcontracto; aperturâ magnâ, subcontractâ, margine rotundo.*

THE PUNCTURED CYLINDRELLA. Shell pupa-shaped, short, rather pink above, whitish below, inflated in the middle, gradually contracted towards the apex, suture marked with articulated spots; whorls rather straight, the last a little contracted; aperture large, somewhat contracted, margin rounded.

PFEIFFER. Proc. Zool. Soc., 1852.

Hab. St. Domingo.

Species 25. (Mus. Brit.)

CYLINDRELLA HUMBOLDTIANA. *Cyl. testâ sinistrorsâ, subcylindricâ, pallidè fulvâ, tenuissimè striatâ; anfractibus rectiusculis versus spiram angustatis; ultimo elongato; aperturâ obliquâ, columellâ uniplicatâ.*

HUMBOLDT'S CYLINDRELLA. Shell sinistral, subcylindrical, pale fulvous, very finely striated; whorls rather straight, narrowed towards the spire, last elongated; aperture oblique, with one plat on the columella.

PFEIFFER. Chem. p. 14, t. 2, f. 20, 24.

Hab. Columbia, Fert.

Hab. Cuba.

Species 26. (Mus. Brit.)

CYLINDRELLA MACROSTOMA. *Cyl. testâ brevi, profunde rimatâ, solidâ, confertè striatâ, spirâ sursum attenuatâ, medio et infrâ subventricosâ; anfractibus vicè convexis, ultimo infrâ subattenuato, basi corinato; aperturâ ovatâ, labio albo, incrassato, expanso.*

THE LARGE-MOUTHED CYLINDRELLA. Shell short, deeply notched, solid, closely striated, spire attenuated above, rather ventricose above and below; whorls scarcely convex, the last a little lengthened below, keeled at the base, aperture ovate, lip white, thickened, expanded.

PFEIFFER. Chem. p. 73.

Hab. Jamaica.



CYLINDRELLA.

PLATE IV.

Species 27. (Mus. Brit.)

CYLINDRELLA ALBO-CRENATA. *Cyl. testâ brevi, subrotundâ, solidâ, obliquè striatâ, conico et albidis variegatâ; spirâ medio subinflatâ, versùs apicem attenuatâ, anfractibus superâ ad suturam nodulis albis crenatis, ultimo angustato, subsolato, infra curvato; aperturâ obliquè subrotundâ, columellâ multiplicatâ.*

THE WHITE-CRENATED CYLINDRELLA. Shell small, rather ventricose, rather solid, obliquely striated, variegated with horn-colour and white; spire a little inflated in the middle, attenuated towards the apex; whorls crenated above at the suture with white nodules, last narrow and somewhat uncoiled, keeled at the bottom; aperture obliquely somewhat rounded; columella single-plaited.

GÜNDLACH. *Pflanzl.* Malak. Bl. xi. 1863, p. 7.
Hab. Isl. Cuba.

Species 28. (Mus. Brit.)

CYLINDRELLA OBLIQUA. *Cyl. testâ angustâ, subcylindricâ, fulvâ albuque nebulatâ, fusco-griseiscenti hinc-illuc strigatâ, obliquè liratâ, ad suturam crenulatâ, anfractibus rectâsculis angustis, penultimo et suprâ quoque subequalibus, spirâ versùs apicem attenuatâ; aperturâ perobliquè ovatâ, labio externo producto.*

THE OBLIQUE CYLINDRELLA. Shell narrow, subcylindrical, clouded with brown and white, striped here and there with greyish brown, obliquely ridged, crenulated at the suture, whorls rather straight, narrow, the penultimate and five above nearly equal; spire attenuated towards the apex; aperture very obliquely ovate, outer lip produced.

PFEIFFER. *Malak.* Bl. xi. 1863.
Hab. Isl. of Cuba.

Species 29. (Mus. Brit.)

CYLINDRELLA PERPLICATA. *Cyl. testâ subfusiformi, angustâ, conicâ, anfractibus convexis plicatis apicalibus angustatis, medianis inflatis, ultimo convexato, longè laxato, plicis anfractuâ obliquis, distantibus, prominentibus, medio depressis; aperturâ rotundâ, subrotundâ, margine rotundo, columellâ haud plicatâ.*

THE WELL-PLAITED CYLINDRELLA. Shell rather fusiform, narrow, horny; whorls convex, plaited, the apical ones narrow, middle ones inflated, last contracted, much uncoiled, plaits of the whorls oblique, distant, prominent, depressed in the middle; aperture remote, a little rounded, margin round, columella not plaited.

FERRUSSAC. *Pfeiffer.* *Mon. Helic.* ii.

Hab. West Indies.

Species 30. (Mus. Brit.)

CYLINDRELLA PALLIDA. *Cyl. testâ parvâ pallidâ, fusiformi, versùs apicem attenuatâ, medio inflatâ, anfractibus rix convexis, ultimo infra angustato, longè laxato, plicis anfractuâ arcuatis, acutis subobtusis; aperturâ rotundâ, rotundâ; columellâ haud plicatâ.*

THE PALE CYLINDRELLA. Shell small, pale, fusiform, attenuated towards the apex, inflated in the middle; whorls scarcely convex, the last narrow beneath, a long portion unrolled; plaits of the whorls curved, sharp, rather distant; aperture remote, rounded, columella not plaited.

GÜLDING. *Bland in Adams's Contributions to Conchology.*

Brachypus costatus, Gray.

Cylindrella costulosa, Adams.

Hab. Porto Rico, Isl. St. Thomas.

Species 31. (Mus. Brit.)

CYLINDRELLA PRUINOSA. *Cyl. testâ pallidâ purpureâ, elongatâ, angustâ, suprâ medium paulo inflatâ, anfractibus distanter fusco strigatis, plicis eleganter arcuatis, tenuibus num.osis lyratis, ultimo elongato, paulo obliquè solato; aperturâ obliquè, ovatâ, columellâ multiplicatâ.*

THE PLUM-COLOURED CYLINDRELLA. Shell pale purple, elongated, narrow, a little inflated above the middle, whorls distantly striped with brown, ridged with elegantly curved, thin, numerous plaits; the last elongated, a little obliquely loosened; aperture oblique, oval.

MORELET. *In Chemnitz,* p. 39.

Hab. Isl. of Pines, near Cuba.

Species 32. (Mus. Brit.)

CYLINDRELLA HERORATA. *Cyl. testâ cylindrica, angustâ, rectâ, elongatâ, strigis undulatis parvis, interruptis variegatâ, anfractibus rectis, altis, versis apicem contractis; aperturâ magnâ, auriformi, obliquâ, labio exte: no anticè producto, superne depresso; columellâ uniplicatâ.*

THE STRIPKED CYLINDRELLA. Shell cylindrical, narrow, straight, elongated, varied with undulating, small, interrupted stripes; whorls straight, elevated, contracted towards the apex; aperture large, auriform, oblique, outer lip produced anteriorly, depressed above; columella with one plait.

GUNDLACH. Chem. p. 64.

Hab. Cuba.

Species 33. (Mus. Brit.)

CYLINDRELLA ELONGATA. *Cyl. testâ sinistrâ, albâ, tenuiter striatâ, gracile, fusiformi; anfractibus 14, convexis, altis, versis apicem contractis, infrâ medium inflatis, ultimo brevi, infrâ validè carinato, aperturâ magnâ, ovatâ, infrâ subacuminatâ, labio externo expanso, infrâ vix plicatâ.*

THE ELONGATED CYLINDRELLA. Shell sinistral, white, finely striated, slender, fusiform; whorls fourteen, convex, elevated, contracted towards the apex; inflated towards the middle, the last short, with a strong keel below; aperture large, oval, rather acuminate below, inner lip expanded, with a very slight plait below.

CHEMNITZ. Conch. Cab. p. 58.

Helix Chemnitziana, FÉRRUSSAC.

Papa gracilis, SOWERBY.

Cylindrella Cumingii, ADAMS.

Hab. Jamaica.

Species 34. (Mus. Brit.)

CYLINDRELLA FASTIGIATA. *Cyl. testâ breviter rimatâ, subulatâ, solidiâ, subtiliter validè costatâ, griseo-albidâ; inter costas purpureo; spirâ gracile, longè productâ, anfractibus brevibus, numerosis, rotundis, ultimo infrâ validè compresso, carinato, infrâ carinam striato, breviter soluto; aperturâ subtrigoniâ, lateraliter breviter productâ, columellâ vix plicatâ.*

THE BOUND CYLINDRELLA. Shell shortly notched, subulate, rather solid, rather distantly strongly ribbed, greyish white, purple between the ribs; spire slender, much produced, whorls short, numerous, rounded; last much compressed beneath, keeled, striated below the keel, shortly uncoiled; aperture subtrigonal, laterally shortly produced; columella very slightly plaited.

GUNDLACH. MS. Pfeiffer in Malak. Bl. viii. 1860.

p. 20.

Hab. Baracoa, Cuba.

Species 35. (Mus. Brit.)

CYLINDRELLA GOSSEL. *Cyl. testâ pallidè fulvâ; tenuiter acutè striatâ, subpyramidatâ, versis apicem gradatim attenuatâ, infrâ medium vix inflatâ; anfractibus rectiusculis, ultimo infrâ carinato, subcontracto, infrâ carinam subexcavato; aperturâ magnâ, ovatâ, columellâ plicatâ.*

GOSSE'S CYLINDRELLA. Shell pale fulvous; finely acutely striated, subpyramidal, gradually attenuated towards the apex, very little inflated below the middle; whorls rather straight, the last keeled below, slightly contracted, somewhat excavated below the keel; aperture large, ovate, columella plaited.

PFEIFFER. Chem. p. 70.

Hab. Jamaica.

Species 36. (Mus. Brit.)

CYLINDRELLA ELEGANS. *Cyl. testâ subfusiformi, rubro-fulvâ, levi, medio subinflatâ; anfractibus brevibus, paulò convexis, ultimo obliquè soluto, declivi; aperturâ obliquè ovatâ, margine incrassato, expanso, columellâ intus leviter plicatâ.*

THE ELEGANT CYLINDRELLA. Shell subfusiform, reddish-brown, smooth, slightly inflated in the middle, whorls short, a little convex, the last obliquely uncoiled, sloped downwards; aperture obliquely ovate, margin thickened, expanded; columella very slightly plaited within.

PFEIFFER. Chem. p. 23.

Papa oblorta, MÜNCK.

Papa lituus, GOULD.

Papa Auberiana, ORBIGNY.

Cylindrella nobilis, STENZ.

Hab. Western part of Cuba.



CYLINDRELLA.

PLATE V.

Species 37. (Mus. Brit.)

CYLINDRELLA HANLEYANA. *Cyl. testâ parvâ, tenui, rursus, subpyramidalâ, ut p. 183. nucleis raris, im-
patis, versis apicem contractis; anfractibus angustis,
mucronis, rectiusculis. Lixâ tenuibus, ovatis
subtilis; ultimo contractiusculis, infra acutè
resaratis, versis aperturam longè soluto; aperturâ
remotâ, subquadratâ, declivâ.*

HANLEY'S CYLINDRELLA. Shell small, thin, brown,
rather pyramidal, narrow, scarcely inflated in the
middle, contracted towards the apex; whorls
narrow, numerous, rather straight, sculptured
with fine curved ridges; the last rather convex,
sharply keeled below, much uncoiled; aperture
remote, rather square, sloped downward.

PELLEU. Chemnitz, p. 42, Monog. iv. 152.

Hab. Venezuela, New Grenada.

A neatly sculptured little shell.

Species 38. (Mus. Brit.)

CYLINDRELLA CORDATA. *Cyl. testâ parvâ, albâ, tenui,
subpyramidalâ, angustâ, medio inflatâ; anfractibus
14. lixâ obliquè subarcuatis distantibus rubris
sculptis, ultimo longè soluto, infra valitè carinato,
versis aperturam declivi; aperturâ anticè biangula-
tâ, superâ rectâ.*

THE CORDED CYLINDRELLA. Shell small, white, thin,
rather fusiform, narrow, inflated in the middle;
whorls fourteen, sculptured with obliquely rather
arched, distant, strong ridges; the last much un-
coiled, sloped downwards towards the aperture;
aperture anteriorly biangular, straight above.

PFEIFFER. Chem. p. 48, Monog. 1866, No. 202.

Hab. Isl. St. Croix.

An exquisitely beautiful little white species.

Species 39. (Mus. Brit.)

CYLINDRELLA CRISPULA. *Cyl. testâ papaverformi, fuscâ,
regularitè liratâ, superâ medio inflatâ, infra
incolè ad ultimam anfractum gradatim attenuatâ;
ultimo anfractu parvâ, protè soluto; aperturâ
obliquè oblongâ, quadrangulatâ.*

THE LITTLE CRIST CYLINDRELLA. Shell fusiform, brown,
regularly ridged, inflated above the middle; thence
gradually attenuated towards the last whorl; last
whorl small, slightly uncoiled; aperture obliquely
oblong, with four angles.

PELLEU. Monograph ii. 377.

Hab. Cuba.

Species 40. (Mus. Brit.)

CYLINDRELLA SALLEANA. *Cyl. testâ elongatâ, sub-
pyramidalâ, fusco-cornuâ, tenui r obliquè striatâ;
anfractibus angustis 18, quarum 6 apicalibus albis,
contractis, medianis contractiusculis, alteris versis
aperturam rix angustatis; ultimo contracto, sub-
soluto, infra carinato; aperturâ productâ, angulâ,
labio expanso, infra biangulatâ.*

SALLE'S CYLINDRELLA. Shell elongated, subpyramidal,
horny-brown; finely obliquely striated; whorls
narrow, eighteen, of which the six apical are
white and narrowed, rather convex, the middle-
ones a little convex, the others slightly narrowed
towards the aperture; aperture produced, large,
with expanded lip, biangular below.

PELLEU. Chev. p. 58.

Hab. Haiti.

Species 41. (Mus. Brit.)

CYLINDRELLA TRINITYANA. *Cyl. testâ succinea-cornuâ,
tenui, gracili, subdiaphanâ, medio subinflatâ,
superâ attenuatâ; anfractibus, angustis, convexis,
tenuiter liratâ; ultimo basi acutè carinato, infra
carinam mucroni, anticè longè soluto, obliquè
declivo; aperturâ remotâ obliquè ovatâ, anticè
biangulatâ.*

THE TRINITY ISLAND CYLINDRELLA. Shell amber-horn,
thin, slender, rather diaphanous, slightly inflated
in the middle, attenuated above, whorls narrow,
convex, finely ridged; the last sharply keeled at
the base, concave below the keel, anteriorly much
uncoiled, obliquely bent downwards.

PFEIFFER. In Malak. Bl. vii. 1860.

Hab. Trinity Island.

April, 1875.

CYLINDRELLA.—PLATE V.

Species 42. (Mus. Brit.)

CYLINDRELLA MICROSTOMA. *Cyl. testâ subperforatâ, pupæformi, cretaceâ; suprâ mediâ inflatâ, indè versûs ultimum anfractum gradatim attenuatâ; anfractibus angustis, mucronatis, ultimo contracto, infrâ excavato; aperturâ parvâ, verticali, subtrigona.*

THE SMALL-MOUTHED CYLINDRELLA. Shell slightly perforated, pupa-shaped, chalky; inflated above the middle, thence gradually attenuated towards the last whorl; whorls narrow, numerous, the last contracted, excavated below; aperture small, vertical, subtrigonal.

PEIFFER. Proc. Zool. Soc. 1861, p. 27.

Hab. —?

A curious little pupæform shell, which has the greatest inflation above the middle of its length.

Species 43. (Mus. Brit.)

CYLINDRELLA AGNESIANA. *Cyl. testâ elongatâ, cylindricâ, angustâ, albidâ, tenuiter striatâ; anfractibus 18, sinistrorsis, convexiusculis; ultimo recto, infrâ carinato, infrâ carinam excavato, versûs aperturam longè soluto, bicarinato, valdè deflexo, aperturâ remotâ, obliquè subquadratâ, margine interno rotundo, labio externo biangulato.*

THE AGNESIAN CYLINDRELLA. Shell elongated, cylindrical, narrow, whitish, finely striated; whorls eighteen, sinistral, rather convex; the last straight, keeled below, excavated below the keel, uncoiled some length towards the aperture, much bent downwards; aperture remote, obliquely subquadrate, inner margin round, outer lip biangular.

ADAMS, C. B. Chem. p. 35.

Hab. Jamaica.

A graceful white shell.

Species 44. (Mus. Brit.)

CYLINDRELLA MONTANA. *Cyl. testâ brevi, rectiusculâ, rosâ, tenuiter striatâ; ultimo anfractu angustato,*

rotundato, lateraliter soluto; aperturâ subrotundâ, subrenatâ, margine crassiusculo, rotundo.

THE MOUNTAIN CYLINDRELLA. Shell short, rather straight, pink, finely striated; last whorl narrow, rounded, laterally uncoiled; aperture rather round, rather distant, margin rather thick, round.

C. B. ADAMS. Chem. p. 29.

Cylindrella rosea, var., Pfeiffer.

Hab. Jamaica.

Species 45. (Mus. Brit.)

CYLINDRELLA TERES. *Cyl. testâ crassiusculâ, levigatâ, subpyramidatâ, albâ, supernè fuscâ, attenuatâ; anfractibus convexiusculis, ultimo paulò angustato, infrâ subcarinato, infrâ carinam excavato; aperturâ proximâ magnâ, subrotundâ; columellâ supernè subcallosâ.*

THE TAPER CYLINDRELLA. Shell rather thick, smooth, rather pyramidal, white; brown above, attenuated; whorls rather convex, the last a little narrowed, slightly keeled beneath, hollowed beneath the keel; aperture approximate, large, rather rounded; columella with a slight callosity above.

MEXEE. (Hospira) Chem. p. 56.

Hab. Cuba.

Species 46. (Mus. Brit.)

CYLINDRELLA SEMINUDA. *Cyl. testâ parvâ, gradataturribi, pupæformi; anfractibus scalariformibus supernè angulatis; ad angulum prominentè noduloso-squamatis; ultimo infrâ angustato, lateraliter longè soluto; aperturâ remotâ, latere columellari rotundâ, latere externo angulatim acuminato.*

THE HALF-NUDE CYLINDRELLA. Shell small, pupa-shaped; whorls angular above, prominently nodosely squamose at the angle; the last narrowed below, laterally much uncoiled; aperture remote, rounded on the columellar side, angularly acuminated at the inner side.



CYLINDRELLA.

PLATE VI.

Species 47. (Fig. *h*, *b*, Mus. Sowerby.)

CYLINDRELLA ELLIOTI. *Cyl. testâ angustissimâ cylindricâ, purpureo-fuscâ, tubulis albis angularibus supra mediâ anfractuosa prominentibus continuis ornatâ; anfractibus numerosis, angustis; ultimo lateraliter obliquè solato; aperturâ remotâ, parvâ, subquadratâ.*

ELLIOT'S CYLINDRELLA. Shell very narrowly cylindrical, purple-brown, ornamented with white angular tubes, prominent above the middle of the whorls; whorls numerous, narrow; last laterally obliquely uncoiled; aperture remote, small, rather round.

Poly. Mon. Cuba.

Hab. Cuba.

The tubes or hollow varices continued from whorl to whorl up the spire of this shell make it a remarkably interesting species.

Species 48. (Mus. Sowerby.)

CYLINDRELLA PILOCELI. *Cyl. testâ subcervico-albâ, tenuiter liratâ, pupæformi, mediâ et infri rectâ, supra mediâ inflatâ, inde versûs apicem contractâ, anfractibus numerosis, angustis, ultimo parvo, infri angulatâ, infri angulum lævigatâ, mediâ rimatâ; aperturâ proximâ, majusculâ, superiâ subquadratâ.*

PILOCELI'S CYLINDRELLA. Shell bluish-white, finely ridged, pupa-shaped, straight at the middle and below; inflated above the middle, thence contracted towards the apex; whorls numerous, narrow; the last small, angular below, smooth below the angle, notched in the middle; aperture near, rather large, rather square above.

PFEIFFER. Chem. p. 64, Mon. ii. 382.

Hab. Mexico.

Species 49. (Mus. Sowerby.)

CYLINDRELLA ARCATA. *Cyl. testâ brevi, ventricosâ, liris tenuibus, sublistantibus, eleganter arenatis*

ornatâ supra mediâ inflatâ; anfractibus 8, raris, conveis; suturâ profundè excavatâ; ultimo anfracta angusto, crenulatim carinatâ, infri carinam concavo, medio rimatâ; aperturâ subquadratâ, margini expanso.

THE ARCHED CYLINDRELLA. Shell short, ventricose, ornamented with thin, rather distant elegantly curved ridges; inflated above the middle; whorls eight, scarcely convex, with deeply excavated suture; last whorl narrow, crenulated, keeled, concave below the keel, notched in the middle; aperture rather square, with expanded margin.

WEINLAND AND MARTENS. Malak. Bl. vi. 1859.

Hab. Haiti.

Species 50. (Mus. Sowerby.)

CYLINDRELLA SAUVALLIANA. *Cyl. testâ lævigatâ, fusco-cornâ, angustâ cylindricâ, propè apicem pyramidatâ; anfractibus altis, infri lineâ rubrâ angulatâ; aperturâ proximâ, magnâ, margini tenui, expanso.*

SAUVALLI'S CYLINDRELLA. Shell smooth, horny-brown, narrowly cylindrical, pyramidal near the apex; whorls elevated, belted below with a red line; aperture near, large, margin thin, expanded.

GUNDLACH. Chem. p. 64, Pflr. Monog. iv. 710.

Hab. Cuba.

A smooth elevated species with a pretty red line at the bottom of the whorls partly hidden by the suture.

Species 51. (Mus. Sowerby.)

CYLINDRELLA WALPOLEI. *Cyl. testâ magis, epidermidè olivaceo-fusco indatâ, cylindrico-subpyramidatâ, tenuiter obliquè striatâ, anfractibus altis paulò conveis; ultimo declivi, versûs arcem angustatâ, post aperturam profundè rimatâ; aperturâ paulò laxatâ, perpendiculariter oratâ, columellâ multiplicatâ.*

WALPOLE'S CYLINDRELLA. Shell large, covered with an olive-brown epidermis, cylindrically subpyrami-

dal, finely obliquely striated; whorls elevated, a little convex; last sloped, narrowed towards the axis, deeply notched behind the aperture; aperture a little uncoiled, perpendicularly ovate; columella with a plait.

SOEWERY.

Hab. — ?

Species 52. (Mus. Sowerby.)

CYLINDRELLA BROOKESIANA. *Cyl. fusiformi, tenui, gracili, corned, obliquè tenuiter striatâ; anfractibus convexiusculis, ultimo longissimè soluto, carinato, flexuoso, subspiraliter descendenti; aperturâ longè remotâ, subcirculari, margine expanso.*

THE BROOKESIAN CYLINDRELLA. Shell fusiform, thin, slender, horny, obliquely finely striated; whorls rather convex, the last uncoiled a great length. keeled, flexuous, rather spirally descending; aperture very remote, rather rounded, with expanded margin.

GUNDLACH. MS. Pfeiffer in Malak. Bl. vi. 1859.

Hab. Monte Libano, Isl. of Cuba.

Species 53. (Mus. Sowerby.)

CYLINDRELLA NOBLEOR. *Cyl. testâ cylindricâ, tenuiter striatâ, corneo-subrosâ; anfractibus vicè convexis,*

superne ad suturam rubro tenuatis; anfractu ultimo brevi, infra rimato, breviter soluto; aperturâ productâ, fulvâ, ad marginem subexpansâ, columellâ internè latâ, subplicatâ.

THE NOBLER CYLINDRELLA. Shell cylindrical, finely striated, horny-pinkish; whorls scarcely convex, banded with pink above at the suture; last whorl short, notched below, shortly uncoiled; aperture produced, fulvous, a little expanded at the margin, columella broad within, with a slight plait.

ADAMS. Chém. p. 9.

Cylindrella Dinneyana, Pfeiffer.

Hab. Jamaica.

Species 54. (Mus. Sowerby.)

CYLINDRELLA MEGACHEILA. *Cyl. testâ roseo-corned, cylindricâ, ventricosâ, tenuissimè striatâ; anfractibus brevibus, superne ad suturam rubro tenuatis, ultimo profundè rimato; aperturâ annexâ, magnâ, superne subquadratâ; margine rotundo, expanso.*

THE LARGE-THROATED CYLINDRELLA. Shell horny-rose, cylindrical, ventricose, very finely striated; whorl short, with a red band above at the suture; last whorl deeply notched; aperture annexed, large, rather square above, margin rounded, expanded.

CRITTY. Shells of Jamaica.

Hab. Jamaica.



CYLINDRELLA.

PLATE VII.

Species 55. (Mus. Brit.)

CYLINDRELLA STRIATELLA. *Cyl. testâ rimatâ, pyramidato-cylindraceâ, solidâ, tenuissimè obliquè striatâ, levi, corneâ, medio rubescenti, usque ad medium subcylindricâ, diânte ad apicem leviè attenuatâ, anfractibus brevissimâ; rectiusculis; aperturâ subrotundâ, intus subrosâ; columellâ rîe plicatâ.*

THE FINELY STRIATED CYLINDRELLA. Shell notched, pyramidal, cylindrical, rather solid, very finely obliquely striated, smooth, horny, a little red in the middle; cylindrical up to the middle, afterwards slowly attenuated; whorls rather short, rather straight; aperture rather rounded, a little rosy within; columella scarcely plicated.

WRIGHT. MS. Pfeiffer, Mahk. Bl. xi. p. 216.

Hab. The western part of the Isl. of Cuba.

Species 56. (Mus. Sowerby.)

CYLINDRELLA LAVALLIANA. *Cyl. testâ fulvo-corneâ, tenui, semiplicatâ, angustâ, elongatâ, cylindricâ, rimatâ; anfractibus brevibus, annularis, convexiusculis; ultimo rotundo, contracto, soluto; aperturâ subrotundâ, columellâ rectiusculâ.*

LAVALLI'S CYLINDRELLA. Shell fulvous horn, thin, semi-plicate, narrow, elongated, cylindrical, notched; whorls short, numerous, rather convex; the last rounded, contracted, uncoiled; aperture rather distant, columella rather straight.

ORBIGNY. Shells of the Isl. of Cuba.

Hab. Cuba.

The whorls of this cylindrical little species are peculiarly short.

Species 57. (Mus. Sowerby.)

CYLINDRELLA POLYGYRA. *Cyl. testâ parvâ, fuscâ, elongatâ, angustissimâ, versâ apicem fuscâ, gradatim attenuatâ, medio paulò inflato, anfractibus 20, brevibus, liris arcuatis ornatis, ultimo rimato, longè soluto; aperturâ subtrigona remota, margine superne recto.*

THE MANY-WHOELED CYLINDRELLA. Shell small, elongated, very narrow, gradually attenuated towards the apex, a little inflated in the middle; whorls twenty, short, ornamented with curved ridges; last notched, with a long portion uncoiled; aperture rather trigonal, remote, margin straight above.

PFEIFFER. Monog. iv. p. 206.

Hab. Cordova, Mexico.

Species 58. (Mus. Sowerby.)

CYLINDRELLA LATA. *Cyl. testâ rimatâ, cylindricâ, ventricosâ, corneo-rubescenti, tenuiter obliquè limatâ; anfractibus brevissimâ, tenuâ rubrâ superâ ad suturam cinctâ, ultimo soluto, infra carinato; aperturâ disjunctâ, productâ, fuscâ, columellâ multiplicatâ, margine rotundè reflexo, expanso.*

THE BROAD CYLINDRELLA. Shell notched, cylindrical, ventricose, reddish-horn, finely obliquely ridged; whorls rather short, beveled above at the suture with a red band, last uncoiled, keeled below; aperture disconnected, produced, fulvous, columella single-plicated, margin roundly reflected, expanded.

A. B. ADAMS. Chemn. 22. Pfeiffer. Monog. iii. 567.

Hab. Jamaica.

Resembling *Cylindrella Biancyana* and others in general appearance, but with the mouth detached and produced.

Species 59. (Mus. Brit.)

CYLINDRELLA MORELETI. *Cyl. testâ elongato-cylindricâ, angustâ, rîe rimatâ, corneo-rubescenti, pallidè variegatâ, tenuiter undulatim rugatâ, anfractibus subleventis, convexiusculis, infra lîvâ rubrâ tenuatis, ad suturam crenatis; aperturâ obliquâ; columellâ multiplicatâ.*

MORELET'S CYLINDRELLA. Shell elongate-cylindrical, narrow, scarcely notched, reddish-horn, pale-variegated, finely wavyly wrinkled, whorls rather raised, rather narrow, banded at the lower part

April, 1875.

with a red line, crenated at the suture: aperture oblique, columella single-plaited.

PFEIFFER. Chemn. p. 16. Monograph iii. 566.

Hab. — ?

Species 60. (Mus. Brit.)

CYLINDRELLA VIOLACEA. *Cyl. testâ solidiusculâ, sub-cylindricâ, angustâ, purpureo-variegatâ, filo-lirâtâ, infrâ rimatâ, anfractibus connexis, distinctis; ultimo obliquè soluto; aperturâ semicirculari, margine interno .ctâusculo; columellâ leviter uniplicatâ.*

THE VIOLET CYLINDRELLA. Shell rather solid, rather cylindrical, narrow, variegated with purple, with thread-like ridges; notched below, whorls convex, distinct; the last obliquely uncoiled; aperture semicircular; inner margin nearly straight; columella with a slight plait.

WRIGHT. MS. Pfeiffer, Malak. Bl. xi. 1864, p. 128.

Hab. West Cuba.

Species 61. (Mus. Brit.)

CYLINDRELLA MEXICANA. *Cyl. testâ magnâ, cylindrico-subpyramidatâ, stramineâ, ventricosâ, tenuiter striatâ; anfractibus rectiusculis, paulò convexis, ultima infrâ subcarinato, infrâ carinam levigatâ; aperturâ subauriformi, infrâ cuneatâ, columellâ tortuâ, plicatâ.*

THE MEXICAN CYLINDRELLA. Shell large, cylindrical, subpyramidal, straw-coloured, ventricose, finely ridged; whorls rather straight, a little convex, the last keeled below, smooth below the keel; aperture somewhat auriform, cuneate below, columella tortuous, plicated.

CUMING. MS. Pfeiffer. Proc. Zool. Soc. 1860.

Hab. Mexico.

Species 62. (Mus. Brit.)

CYLINDRELLA ACUS. *Cyl. testâ cornâ, semipellucidâ, angustâ cylindricâ, versis apicem pyramidatâ, levigatâ; anfractibus superioribus laxissimis inferiori-*

bus filo-lirâtis; ultimo infrâ validè carinato, infrâ carinam rimato, excavato; aperturâ subquadratâ infrâ labium externum cuneato, columellâ leviter uniplicatâ.

THE SPEAR CYLINDRELLA. Shell horny, semipellucid, narrowly cylindrical, pyramidal towards the apex, smooth, upper whorls very smooth, lower with thread-like ridges; last strongly keeled below, notched below the keel, excavated; aperture rather square, outer lip cuneate below, columella with a slight plait.

PFEIFFER. Monograph ii. No. 383.

Hab. Cuba.

Species 63. (Mus. Brit.)

CYLINDRELLA AUGUSTE. *Cyl. testâ cylindricâ, angustâ, subrosâ, tenuissimè striatâ, anfractibus rectiusculis, infrâ angustè truncatis; aperturâ connexâ, margine obliquo, rotundo.*

AUGUSTA'S CYLINDRELLA. Shell cylindrical, narrow, rather rose-coloured, very finely striated, whorls rather narrow, with a narrow band below; aperture connected, margin white, rounded.

C. B. ADAMS. Pfeif. Monog. iii.

Hab. Jamaica.

Species 64. (Mus. Brit.)

CYLINDRELLA INTUSMALLATA. *Cyl. testâ subfusiformi, albâ, angustâ, elongatâ, medio paulò ventricosâ; anfractibus brevibus, distanter validè costatis, costis subtilioribus, medio anfractuum nullentis; ultimo anfractu infrâ carinato, subrimato, obliquè soluto; aperturâ remotâ, obliquè ovatâ, margine rotundo.*

THE HAMMERED CYLINDRELLA. Shell somewhat fusiform, white, elongated, a little ventricose in the middle; whorls short, distantly strongly ribbed; ribs rather distant, flattened in the middle of the whorls; last whorl keeled below, with a slight notch; aperture removed, obliquely ovate with rounded margin.

GUNDLACHER.—Pfeiffer, Monog. iv. 705.

Hab. Cuba.



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10

CYLINDRELLA.

PLATE VIII.

Species 65. (Mus. Sowerby.)

CYLINDRELLA TUMIDIORA. *Cyl. testâ tenui, fulvâ, fusco-corneo variegatâ, subpyramidatâ; anfractibus brevibus, converisculis ad suturam leviter crenatis, infra angustissimè rubro tenentis, ultimo rinato; aperturâ aeneâ, anticâ productâ, expansâ, supra medium subcontractâ.*

THE MORE TUMID CYLINDRELLA. Shell thin, fulvous, variegated with horny brown, rather pyramidal; whorls short, rather convex, slightly crenated at the suture, with a very narrow red band below, the last notched; aperture connected, anteriorly produced, expanded, a little contracted above the middle.

SOULSBY.

Hab. Cuba.

The whorls are much shorter and more convex than in *Cylindrella irrorata*.

Species 66. (Fig. a, b, Mus. Brit.)

CYLINDRELLA GARCIANA. *Cyl. testâ brevi, cylindricâ, minutè liratâ, fulvâ vel albâ; anfractibus rectisculis, medianis vie inflatis, ultimo infra validè carinato, infra carinam excavato, vie rinato, brevissimè soluto; aperturâ magnâ, ovatâ, subdisjunctâ, columellâ simplici.*

GARCIA'S CYLINDRELLA. Shell short, cylindrical, minutely ridged, fawn-coloured or white; whorls rather straight, the middle ones very little inflated in the middle, the last strongly keeled, hollowed below the keel, scarcely notched, very shortly uncoiled; aperture large, oval, a little disjoined, columella simple.

WRIGHT. MS. Pfeif. Mal. Bl. xiii.

Hab. Isl. of Cuba.

Species 67. (Mus. Brit.)

CYLINDRELLA CARINATA. *Cyl. testâ angustâ, elongatâ, subcylindricâ, corneo-rubescenti, levigatâ; anfractibus elevatis, rectisculis, tenuiter striatis, ultimo breviter soluto, infra subcontracto, validè carinato, infra carinam excavato, rinato; aperturâ obliquè ovatâ, productâ.*

THE KEELED CYLINDRELLA. Shell narrow, elongated, subcylindrical, reddish-horn, smooth; whorls elevated, rather straight, finely striated, the last shortly uncoiled, a little contracted below, with a strong keel, excavated, notched; aperture obliquely ovate, produced.

PEIFFER. Monographia Helicorum, iii. p. 574.

Hab. — ?

The last whorl is rather rounded, then contracted and terminated by a very strong keel, between which and the inner edge of the aperture there is a narrow excavation.

Species 68. (Mus. Brit.)

CYLINDRELLA CYLINDRUS. *Cyl. testâ angustâ, elongatâ, rubrâ, supra medium levissimè attenuatâ; anfractibus elevatis, levibus, ad laterâ rectissimis, ultimo converisculo, infra carinam excavato; aperturâ perpendiculariter ovatâ.*

THE CYLINDER CYLINDRELLA. Shell narrow, elongated, red, very slowly attenuated; whorls raised, smooth, very straight, the last rather convex, keeled below, excavated under the keel, aperture perpendicularly ovate.

CHEMNITZ. New Ed. p. 6. Pfeiffer Monog. ii. p. 6.

Pupa cylindrica, purpurea, Gray.

Pupa rubella, rosea, C. B. Adams.

Cylindrella procerâ, C. B. Adams.

Hab. Jamaica.

A narrow shell with straighter whorls than *Cylindrella carinata*, with the keel on the last whorl less prominent.

Species 69. (Mus. Brit.)

CYLINDRELLA DUNKERIANA. *Cyl. testâ angustissimâ, elongatâ, corneo-rubescenti, levigatâ, medio vie inflatâ; anfractibus elevatis, ad laterâ rectisculis, ultimo elevatissimo, ad laterâ concavo, subcontracto, infra angulatâ; aperturâ concavâ, obliquè ovatâ, anticâ subcontractâ, subcaminatâ.*

April, 1875.

CYLINDRELLA.—PLATE VIII.

DUNKEE'S CYLINDRELLA. Shell very narrow, elongated, reddish-brown, smooth, very little inflated in the middle; whorls elevated, rather straight at the sides, the last very elevated, concave at the sides, a little contracted, angular below; aperture connected, obliquely ovate, anteriorly a little produced and acuminate.

DUNKEE. Chemn. p. 67.
Hab. Jamaica.

Species 70. (Mus. Brit.)

CYLINDRELLA FABREANA. *Cyl. testâ albâ, diaphanâ, subpupæformi, medio subinflato, anfractibus convexisculis, liris tenuibus obliquè arcuatis, distantibus, ornatis, ultimo elevato, subcontracto, subrotundo, rimato, breviter soluto, tenuiter unicarinato; aperturâ subnotatâ, obliquè producta, margine unilique expanso, columellâ obliquè uniplicatâ.*

FABRE'S CYLINDRELLA. Shell white, transparent, rather pupæform, a little inflated in the middle; whorls convex, ornamented with thin, obliquely curved, distant ridges; last elevated, a little contracted, a little rounded, notched, shortly uncoiled, with a thin keel; aperture a little removed, obliquely produced, margin expanded all round, columella with an oblique fold.

POEY. MS. Pfeiffer, Malak. Bl. vi. 1859.
Hab. "Lebourcau de San Antonio." Cuba.

Species 71. (Mus. Brit.)

CYLINDRELLA INTERRUPTA. *Cyl. testâ fuscâ, cylindricâ, subpupæformi, supra medium subinflatâ, infra paulò contractâ, anfractibus brevibus, convexisculis, costis distantibus prominentibus, medio anfractuum interruptis sculptis; ultimo anfractu parvo, rimato, obliquè longè soluto; suturâ profundâ; aperturâ obliquè ovali, parvâ, margine subrepensâ.*

THE INTERRUPTED CYLINDRELLA. Shell brown, cylindrical, slightly pupa-shaped, a little inflated above

the middle; a little contracted below; whorls short, rather convex sculptured with distant prominent ribs interrupted in the middle of the whorls, last whorl small, notched, with a large part obliquely uncoiled; suture deep, aperture obliquely ovate, small, with expanded margin.

GUNDLACH. Chemn. p. 29, Pfeiffer. Mon. iv. 705.
Hab. Cuba.

The rib is nearly, if not quite obliterated in the middle of each whorl.

Species 72. (Mus. Brit.)

CYLINDRELLA GONISTOMA. *Cyl. testâ, pupæformi, elongatâ, cornèi, tenuiter, distanter et obliquè fii-striatâ; supra medium paulò inflatâ; apice obtuso, infra subattenuatâ; anfractibus convexisculis, brevibus, ultimo rimato, soluto; aperturâ subtriangulâ, superne biangulatâ; margine angusto, rotundo.*

THE ANGLE-MOUTHED CYLINDRELLA. Shell pupa-shaped, long, horny, with fine, distant, oblique thread-like striae, a little inflated above the middle; apex obtuse, a little attenuated beneath; whorls a little convex, short, the last notched, uncoiled; aperture rather trigonal, with two angles above; margin narrow, rounded.

PFEIFFER. Chemn. p. 63. Monog. iv. p. 740.

Species 73. (Mus. Brit.)

CYLINDRELLA OBESA. *Cyl. testâ brevi, ventricosâ, solidisculâ, rubro-succinâ, tenuiter striatâ, anfractibus 5, convexisculis; aperturâ magnâ, rotundâ, convexâ margine crasso, rotundâ.*

THE STOUT CYLINDRELLA. Shell short, ventricose, rather solid, reddish-amber, finely striated, whorls five, rather convex; aperture large, rounded, connected with thick, rounded margin.

WEINLAND AND MARTENS. Malak. Bl. vi. 1859, p. 55.
Hab. Haiti.



74



75



76



77



78



79



80



81



82



83

CYLINDRELLA.

PLATE IX.

Species 74. (Mus. Sowerby.)

CYLINDRELLA SCALARIXA. *Cyl. testâ pallidâ fulcâ, pupaformi; anfractibus 12, costis obliquis, crassis, approximatis minutis, superioribus parvis, mediânis latis, inflatis, inferioribus angustis; ultimo longè lacato; apertura subtransversa, margine crasso, rotundo.*

THE SCALARIFORM CYLINDRELLA. Shell pale fulvous, pupa-shaped; whorls 12, provided with oblique, thick, approximate ribs, superior small, middle broad, inflated, lower narrow; last much uncoiled; aperture subtransverse, margin thick, rounded.

SHUTTLEWORTH. Pfl. Mon. VI., No. 209.

Hab. Cuba.

Species 75. (Mus. Sowerby.)

CYLINDRELLA SOLITA. *Cyl. testâ fusiformi, solidiusculâ, minutè striatâ, pallidâ crassâ; anfractibus 11, concentricis; ultimo infusè angustato, longè lacato, apertura obliquâ, circulari, margine subexpanso.*

THE UNCOILED CYLINDRELLA. Shell fusiform, rather solid, finely striated, pale horn; whorls 11, rather convex; last narrowed below, uncoiled some length, aperture oblique, circular, margin slightly expanded.

PFEIFFER. *Malak.* Vol. XI., 1863.

Hab. West Cuba.

Species 76. (Mus. Brit.)

CYLINDRELLA HOLLANDI. *Cyl. testâ rectiusculâ, subcylindricâ, pallidâ fulcâ, medio anfractuum fusca fasciatâ; anfractibus permanentibus decem, altiusculis, rectilateralibus; apertura approximâtâ, perpendiculariter oblongâ.*

HOLLAND'S CYLINDRELLA. Shell rather straight, rather cylindrical, pale fulvous, banded with brown in the middle of the whorls; permanent whorls ten, rather high, straight-sided; aperture approximate, perpendicularly oblique.

ADAMS, C. B. Pfl. Mon. VI., p. 369.

Hab. Jamaica.

Species 77. (Mus. Sowerby.)

CYLINDRELLA TRANSVERSA. *Cyl. testâ latâ, subcylindricâ, subfusâ, tenuissimè striatâ; anfractibus permanentibus 9-10, rectilateralibus, superioribus angustatis; ultimo subquadrato, longè cuneato; apertura transversè oblongatâ; labio interossibus linguati, crasso, albo.*

THE CROSS-MOUTHED CYLINDRELLA. Shell broad, sub-cylindrical, brownish, very finely striated; permanent whorls 9 or 10, straight-sided, upper narrow; last rather square, with a long notch; aperture transversely oblong; inner lip touching, thick, white.

SOWERBY.

Hab. — ?

The inner margin of the mouth touches the middle of the last whorl, across which it is extended.

Species 78. (Mus. Sowerby.)

CYLINDRELLA GRACILIS. *Cyl. testâ sinistrali, albâ, altissimâ, elongatâ, subfusiformi, tenuissimè striatâ; anfractibus 18, obliquis, concentricis, gradatim crassis; ultimo subcuneato; apertura magnâ, ovatâ, columellâ plicatâ.*

THE SLENDER CYLINDRELLA. Shell sinistral, white, very high, elongated, subfusiform, very finely striated; whorls 18, oblique, convex, gradually increasing; last slightly keeled; aperture large, ovate, columella plicated.

WOOD. Pfl. Monog. VI., p. 383.

Hab. Jamaica.

Mentioned at No. 33 as a var. of *Cy. oblonga*; but it is much more elongated.

Species 79. (Mus. Sowerby.)

CYLINDRELLA MULTISPIRALIS. *Cyl. testâ elongatissimâ, angustâ, fulcâ; anfractibus 24, rectiusculis; ultimo longè lacato; apertura distinctâ, sinuatâ.*

THE MULTISPIRAL CYLINDRELLA. Shell very long.

narrow, fawn; whorls 24, rather straight; last loosened some length; aperture distant, subovate.

SOWERBY?

Hab. —?

The writer has the name with the shell in MS., but does not find it in Pfeiffer's Monograph.

Species 80. (Mus. Sowerby.)

CYLINDRELLA TROCHLEFORMIS. *Cyl. testâ brevi, latâ, densè striatâ, raris, spirâ subconicâ; anfractibus permanentibus 7, tribus inferioribus latissimis; ultimo longè rimato; aperturâ magnâ, obliquâ, labio interno producto.*

THE TROCHLEFORM CYLINDRELLA. Shell short, broad, closely striated, pink, spire subconical; permanent whorls 7, three lower very broad; last with a long notch; aperture large, oblique, inner lip produced.

SOWERBY.

Hab. —?

Species 81. (Mus. Sowerby.)

CYLINDRELLA ALABASTRINA. *Cyl. testâ albâ, cylindricâ, semipellucidâ, gradatim attenuatâ; anfractibus permanentibus 12, rectilateralibus; ultimo infra angulato, longè laxato; aperturâ magnâ, subrotundâ, distantî, margine rotundo.*

THE ALABASTER CYLINDRELLA. Shell white, cylindrical, semipellucid, gradually attenuated; permanent whorls 12, straight-sided; last angular be-

low, with a long notch; aperture large, rather rounded, distant, margin rounded.

PFEIFFER. Monog. VI., p. 375.

Hab. Jamaica.

Species 82. (Mus. Sowerby.)

CYLINDRELLA CLARA. *Cyl. testâ fulvâ, lævigatâ, subfusiformi, versus apicem attenuatâ; anfractibus medio et infra subquartibus, concentricis; ultimo costulato breviter laxato, longè rimato; aperturâ obliquâ, majusculâ; margine rotundo, columellâ lamellatâ.*

THE CLEAR CYLINDRELLA. Shell fulvous, smooth, subfusiform, attenuated towards the apex; whorls nearly equal at the middle and under, rather convex; last ribbed, shortly uncoiled, with a long notch; aperture oblique, rather large; margin rounded, columella lamellated.

WEIGHT. Pfeiffer Mon. VI., p. 363.

Hab. Cuba.

Species 83. (Mus. Sowerby.)

CYLINDRELLA VIGNALENSIS. *Cyl. testâ brevisculâ, subventricosâ, carneo-cerrulâ, sursum subattenuatâ, obliquè costulatâ; anfractibus permanentibus septem, altis; ultimo infra contracto; aperturâ magnâ, subquadratâ; margine tenui.*

VIGNAL'S CYLINDRELLA. Shell rather short, rather ventricose, ashy-flesh, slightly attenuated upwards, obliquely ribbed; permanent whorls seven, raised; last contracted below; aperture large, rather square; margin thin.

WEIGHT. Pfeiffer Monog. VI., p. 367.

Hab. Cuba.



85.



84.



86.



87.



88.



89.



90.



91.



93.



92.

CYLINDRELLA.

PLATE X.

Species 84. (Mus. Sowerby.)

CYLINDRELLA TENERIENSIS. *Cyl. testâ subvaricopata, seu albâ, solidâ sculi, confertim arcuato-costulata, spirâ supra medium et infra inflatâ; anfractibus permanentibus 11, angustatis, ad suturam crassatis; ultimo angustato, obliquè rimato, longè soluto; apertura distant, obliquè suboblongâ.*

THE TENERIAN *CYLINDRELLA*. Shell rather variegated, or white, rather solid, closely curve-ribbed, spire inflated above the middle and below; permanent whorls 11, narrow, crenulated at the suture; last narrow, obliquely notched, with long part uncoiled; aperture distant, obliquely rather oblong.

WRIGHT. Pfr. in Malak. Bl. Monog. VI., p. 387.

Hab. La Tereria, West Cuba.

Species 85. (Mus. Sowerby.)

CYLINDRELLA WRIGHTII. *Cyl. testâ albâ, attenuatâ, subfusiformi, obliquè leviter striatâ; anfractibus 20, superioribus angustissimis, volutans convexâ sculis; ultimo elongato, infra angustato, longè soluto; apertura distant, rotundâ, magnâ; margine crassiusculo.*

WRIGHT'S *CYLINDRELLA*. Shell high, attenuated, subfusiform, obliquely slightly striated; whorls 20, upper very narrow, middle rather convex; last elongated, narrow below, with a lengthened uncoiled portion; aperture distant, rounded, large; margin rather thick.

PREIFFER. Malak. Bl. 1862, p. 132.

Hab. Cayo del Ray, Cuba.

Species 86. (Mus. Sowerby.)

CYLINDRELLA LATERADII. *Cyl. testâ elongatâ, sordidè fuscâ; anfractibus permanentibus 14, angustis, tenuiter striatis; ultimo subrotato; infra angulato; apertura subtriangulâ; margine tenui.*

LATERAD'S *CYLINDRELLA*. Shell elongated, dull brown; permanent whorls 14, narrow, finely striated; last rather expanded, angular below; aperture subtriangular; margin thin.

GRATELOUP (Clausilia). Pfr. Mon. III., p. 574.

Hab. Haïti.

Species 87. (Mus. Sowerby.)

CYLINDRELLA ILAMELLATA. *Cyl. testâ subfusiformi, diaphanâ, pallidè coracâ, obliquè striatâ; anfractibus permanentibus 10, mediis et inferioribus inflatis; ultimo parvè contracto; apertura obliquè oratâ; margine crassiusculo; columellâ intâ simplici.*

THE UNLAMELLATED *CYLINDRELLA*. Shell subfusiform, diaphanous, pale horn, obliquely striated; permanent whorls 10, middle and lower inflated; last a little contracted; aperture obliquely ovate, margin rather thick; columella simple within.

WRIGHT. Pfeiffer Mon. Vol. VI., p. 373.

Hab. La Palma, West Cuba.

Species 88. (Mus. Sowerby.)

CYLINDRELLA PERLATA. *Cyl. testâ brevi, cylindricâ, albâ, tenui, semipellucidâ; anfractibus permanentibus novem ad decem costulato-rilatis, suturâ crenulatâ; ultimo anfractu subcontracto, rimato; apertura majusculâ, obliquè subovatâ.*

THE BROAD *CYLINDRELLA*. Shell short, cylindrical, whitish, thin, semipellucid; permanent whorls nine or ten, straight-sided, suture crenulated; last whorl subcontracted, notched; aperture rather large, obliquely semiovate.

GUNDLACH. Pfeiffer Malak. Bl. VI., 1859.

Hab. Yateras, Cuba.

Species 89. (Mus. Sowerby.)

CYLINDRELLA PRODUCTA. *Cyl. testâ subfusiformi, fusco coracâ, brevitatâ; anfractibus permanentibus 13, medio et infra subequalibus, convexâ sculis, superioribus angustis; ultimo leviter soluto; apertura majusculâ, suboblongâ.*

THE PRODUCED *CYLINDRELLA*. Shell rather fusiform, brownish horn, smooth; permanent whorls 13.

CYLINDRELLA.—PLATE X.

middle and lower nearly equal, rather convex, upper narrow; last slightly unwound; aperture rather large, distant.

GUNDLACH. Pfeiffer Mon. Vol. VI., p. 361.

Hab. Cuba.

Species 90. (Mus. Sowerby.)

CYLINDRELLA NOBILIOR. Adams. Species 53. var.

C. Bianegata, Adams.

Species 91. (Mus. Sowerby.)

CYLINDRELLA INTERMEDIA. *Cyl. testā cylindricā, altā, angustā, fuscā, versus apicem contractā; anfractibus permanentibus unicecim, striatis, rectiusculis; aperturā paulo disjunctā, magnā, obliquē ovatā; margine crasso.*

THE INTERMEDIATE CYLINDRELLA. Shell cylindrical, high, narrow, brown, contracted towards the apex; permanent whorls eleven, striated, rather straight; aperture a little disjoined, large, obliquely ovate; margin thick.

SOWERBY?

Hab. — ?

The writer is obliged to adopt the name, not having the authority.

Species 92. (Mus. Sowerby.)

CYLINDRELLA BRUNNESCENS. *Cyl. testā subfusiformi, fuscā, tenuiter striatā, solidiusculā; anfractibus permanentibus 14, angustis, convexiusculis; ultimo rimato, ad aperturam leviter soluto.*

THE BROWNISH CYLINDRELLA. Shell subfusiform, brown, finely striated, rather solid; permanent whorls 14, narrow, rather convex; last notched, slightly unwound at the aperture.

GUNDLACH. Pfeiffer Mon. Vol. VI., p. 376.

Hab. Cuba.

Species 93. (Mus. Sowerby.)

CYLINDRELLA INTEGRA. *Cyl. testā levigatā, altā, attenuatā, fulvo-corneā; anfractibus secelexim, convexis, obliquis, ultimo soluto; aperturā majusculā, distantī; margine crasso.*

THE ENTIRE CYLINDRELLA. Shell smooth, raised, attenuated, fulvous-horny; whorls sixteen, convex, oblique; last unwound; aperture rather large, distant; margin thick.

PFEIFFER. Mon. Vol. VI., p. 379.

Hab. Cuba.



95.



94.



96.



97.



98.



99.



100.



101.



103.



102.

CYLINDRELLA.

PLATE XI.

Species 94. (Mus. Sowerby.)

CYLINDRELLA RÜSEL. *Cyl. testâ aculeatâ, corneâ, sursum attenuatâ, medietate infri rotundâ; anfractibus superioribus septenis, angustis, inferioribus septenis subequalibus, obliquè costatis; costis ad suturam tuberculatis; anfractu apicali papilloso, ultimo infri angulato, soluto; aperturaâ superâ subquadratâ, infri obliquè subovata.*

RÜSEL'S CYLINDRELLA. Shell aculeated, horny, attenuated above, straight-sided at the middle and under; upper whorls seven, narrow, lower seven nearly equal, obliquely ribbed; ribs tuberculated at the suture; apical whorl papillary, last angular below, unrounded; aperture squared above, obliquely acuminate below.

PFEIFFER, Mon. III. p. 378.

Hab. Porto Rico.

Species 95. (Mus. Sowerby.)

CYLINDRELLA COLLARIS. *Cyl. testâ fuscâ, subfusiformi, obliquè densè costatâ; anfractibus permanentibus 15, convexis, medianis latiusculis, ultimo longè soluto; aperturaâ rotundâ, margine crasso, rotundâ.*

THE NECKED CYLINDRELLA. Shell brown, subfusiform, obliquely closely ribbed; permanent whorls 15, convex, middle rather broad, last with a long uncoiled piece; aperture round, margin thick, round.

FERRUSSAC, Pfr. Mon. II. 375.

Cylindrella antiperevra. Pfeiffer.

Pupa truncatula. Sowerby.

Hab. Guadeloupe.

Species 96. (Mus. Sowerby.)

CYLINDRELLA HILLEL. *Cyl. testâ corneâ, fuscis fuscis semilunariibus variegatâ, tenuiter striatâ, fusiformi, gracili; anfractibus permanentibus quindecim, superioribus angustissimis, rotiusculis, medianis subangulatis; ultimo parvo, longissimè soluto; aperturaâ rotundâ, distant, margine subopacato.*

HILLEL'S CYLINDRELLA. Shell horny, variegated with brown semilunar bands, finely striated, fusiform, slender; permanent whorls fifteen, upper very

narrow, rather straight, middle rather inflated, last small, with very long portion unrounded; aperture round, distant, margin a little expanded.

PFEIFFER, Malak. Bl. IX. 1862. p. 132.

Hab. Cuba.

Species 97. (Mus. Sowerby.)

CYLINDRELLA ANGSTORF. *Cyl. testâ subcylindricâ, breviusculâ, corneâ, anfractibus 19, rectilateribus, superioribus contractis, medianis inferioribusque altis, subequalibus, ultimo infri rimato, angulato, aperturaâ angustâ, margine rotundâ.*

THE NARROWER CYLINDRELLA. Shell subcylindrical, rather short, horny; whorls 19, straight-sided, upper contracted, middle and lower high, nearly equal, last notched below, angular; aperture large, margin rounded.

WRIGHT, Pfeiffer, Mon. Vol. VI. p. 384.

Hab. Cayo de San Felipe, Cuba.

Species 98. (Mus. Sowerby.)

CYLINDRELLA ASPERA. *Cyl. testâ fuscâ, fusiformi, superâ contractâ, medio inflatâ, infri subangustatâ; anfractibus quindecim, obliquè densè striatis, ultimo paulis soluto; aperturaâ obliquè oblongâ, subdistanti, margine rotundâ.*

THE ROUGH CYLINDRELLA. Shell fulvous, fusiform, contracted above, inflated in the middle, a little narrowed below; whorls 15, obliquely densely striated, last a little unrounded; aperture obliquely oblong, rather distant, margin rounded.

ADAMS, Shells of Jamaica. Pfeiffer, Mon. Vol. VI. p. 359.

Hab. Jamaica.

Species 99. (Mus. Sowerby.)

CYLINDRELLA INORNATA. *Cyl. testâ brevi cylindricâ, perobliquè striatâ; anfractibus arenis, rectilateribus, tribus superioribus subangustatis, alteris subequalibus, ultimo rimato; aperturaâ approximâtâ, angustâ, rotundâ, margine rotundâ.*

THE PLAIN CYLINDRELLA. Shell short, cylindrical, very obliquely striated; whorls nine, straight-sided, three upper rather narrow, others nearly

CYLINDRELLA.—PLATE XI.

equal, last notched; aperture approximate, large, rounded, margin round.

ADAMS. Sh. of Jamaica. Pfeiffer. Mon. Vol. VI. p. 377.
Hab. Jamaica.

Species 100. (Mus. Sowerby.)

CYLINDRELLA PORRECTA. *Cyl. testâ fulvâ, gracili, fusiformi, levigatâ; anfractibus 17, superioribus sensu angustissimis, pellucidis, alteris subinflatis, ultimo subcontracto, longè soluto; aperturâ obliquâ distanti, rotundo.*

THE UPRIGHT CYLINDRELLA. Shell fulvous, slender, fusiform, smooth, whorls 17, upper 6 very narrow, pellucid, others a little inflated, last rather contracted, unwound some length; aperture oblique, distant, round.

GOULD. Pfeiffer. Mon. Vol. VI. p. 384.
Hab. Cuba.

Species 101. (Mus. Sowerby.)

CYLINDRELLA TENELLA. *Cyl. testâ fulvâ, levigatâ, cylindricâ, superiè subattenuatâ; anfractibus permanentibus duodecim, rectilateralibus, lentissimè crescentibus, ultimo alto; aperturâ magnâ, approximâtâ, obliquè subquadratâ.*

THE THIN LITTLE CYLINDRELLA. Shell fulvous, smooth, cylindrical, rather narrowed above; permanent whorls twelve, straight-sided, slowly increased, last high; aperture large, approximate, almost obliquely square.

ADAMS. Pfeiffer. Mon. Vol. VI. 359.
Hab. Jamaica.

Species 102. (Mus. Sowerby.)

CYLINDRELLA NOTATA. *Cyl. testâ gracillimâ, fusiformi, pellucidâ, sublevigatâ, cornuâ; anfractibus 17, angustis, convexis, superioribus contractis, apicali rotundo, ultimo vix soluto; aperturâ obliquâ; margine rotundo.*

THE MARKED CYLINDRELLA. Shell very slender, fusiform, pellucid, rather smooth, horny; whorls 17, narrow, convex, upper contracted, apical round, last hardly unwound; aperture oblique; margin round.

GUNDLACH. MS. Pfeiffer in Malak. Bl. XI. 1863, p. 10.

Hab. — 'Sierra de Guaira.' Cuba.

The spiral band above the suture, spoken of in the description, and whence the species derives its name, is not visible in the specimen in our hands.

Species 103. (Mus. Sowerby.)

CYLINDRELLA BULBIFORMIS. *Cyl. testâ breviter fusiformi, rosâ, tenuissimè striatâ, ventricosâ; anfractibus apicalibus contractis, medianis convexis, inflatis, ultimo angustato, rimato, vix soluto; aperturâ magnâ subrotundâ; margine rotundo.*

THE BULB-SHAPED CYLINDRELLA. Shell shortly fusiform, pink, very finely striated, ventricose; apical whorls contracted, middle convex, inflated, last narrow, notched, hardly unwound; aperture large, rather round; margin round.

SOWERBY.

Hab. — ?



CYLINDRELLA.

PLATE XII.

Species 104. (Mus. Sowerby.)

CYLINDRELLA CASTULATA. *Cyl. testâ brevi, pyramidatâ, rotâbâ distincte costatâ, albâ; anfractibus novenis, aequaliter crescentibus, concavis; ultimo longissimè soluto et producto; apertura distantî, subquadralatâ.*

THE SMALL RIBBED CYLINDRELLA. Shell short, pyramidal, strongly distinctly ribbed, whitish; whorls 9, equally increasing, convex; aperture distant, subquadralateral.

ADAMS. Sh. of Jamaica. Pfeiffer. Mon. Vol. VI. p. 381.
Hab. Cuba.

Species 105. (Mus. Sowerby.)

CYLINDRELLA Plicata. *Cyl. testâ brevî, pyramidatâ, fusiformi, tenuiter striatâ costatâ; anfractibus superioribus subâ attenuatis, no tione et inferioribus contractis, ultimo subangustatis, soluto; apertura distinctâ, rotundâ.*

THE PLEATED CYLINDRELLA. Shell short, whitish, pyramidal-fusiform, finely closely ribbed; upper whorls much attenuated, middle and lower ventricose, last rather narrow, unround; aperture distant, rounded.

POER. Pfeiffer. Mon. Vol. VI. p. 389.
Hab. Cuba.

Species 106. (Mus. Sowerby.)

CYLINDRELLA ARTEMESIAE. *Cyl. testâ roseo-fusâ, subfusiformi, solidiusculâ, obliquè striatâ; anfractibus permanentibus decenis, subrectilatis rotatis, ultimo subcontracto, breviter soluto; apertura subappraemiatâ, rotundâ, margine rotundâ.*

THE ARTEMESIAN CYLINDRELLA. Shell pinkly-fulvous, rather fusiform, rather solid, obliquely striated; permanent whorls ten, nearly straight-sided, last a little contracted, with a short unwinding; aperture rather near, round, margin round.

GÜNDLICH. Pfeiffer. Mon. Vol. VI. p. 380.
Hab. Artemesia, Cuba.

Species 107. (Mus. Sowerby.)

CYLINDRELLA FILIFORMIS. *Cyl. testâ fusiformi, purpurâ fusâ, ventricosâ, costâ filiformibus frequentibus, albis ornatâ; anfractibus permanentibus 19, superioribus angustatis, molibus subingulatis, ultimo rimato, levato; apertura pyriformi, superâ minus minata.*

THE THREE-RI-BBED CYLINDRELLA. Shell fusiform, purple-brown, ventricose, ornamented with numerous filiform ribs; permanent whorls 19, upper narrow, middle rather inflated, last notched, unround; aperture pyriform, acuminated above.

SHUTTLWORTH. Pfeiffer. Mon. Vol. VI. p. 378.
Hab. Mexico.

Species 108. (Mus. Sowerby.)

CYLINDRELLA CORONADO. *Cyl. testâ sinistrali, subcylindricâ, albâ, solidiusculâ, costâ tenuibus, subremotis sculptâ; anfractibus permanentibus decenis, superioribus angustatis, ultimo rimato; apertura approximâtâ, rotundâ, margine rotundâ.*

THE CORONADO CYLINDRELLA. Shell sinistral, subcylindrical, whitish, rather solid, sculptured with thin rather remote ribs; permanent whorls ten, superior narrow, last notched; aperture approximate, rounded, margin round.

ARANGO. Pfeiffer. Mon. Vol. VI. p. 379.
Hab. Near Havana, Cuba.

Species 109. (Mus. Sowerby.)

CYLINDRELLA COSTATA. *Cyl. testâ brevî, stramineâ, subcylindricâ, sursum subattenuatâ; anfractibus permanentibus novenis, subrectè striatis, subrectilatis rotatis, ultimo longè rimato; apertura subobliquè productâ.*

THE RIBBED CYLINDRELLA. Shell short, straw, subcylindrical, attenuated upwards; permanent whorls nine, with rather straight striae, nearly straight-sided, last with a long notch; aperture rather obliquely produced.

GUILDING. Pfeiffer. Mon. Vol. VI. 381.
Hab.—?

Species 110. (Mus. Brit.)

CYLINDRELLA HYALINA. *Cyl. testâ pupæformi, ventricosâ, albâ, semipellucidâ; anfractibus permanentibus decenis, subobliquè costatis, tribus superioribus sensim contractis, alteris subæqualibus, ultimo contracto, longè rimato, breviter soluto; aperturâ magnâ, superâ subacuminatâ.*

THE HYALINE CYLINDRELLA. Shell pupa-shaped, ventricose, whitish, semipellucid; permanent whorls ten, rather obliquely ribbed, three upper sensibly contracted, the others nearly equal, last contracted with a long notch, shortly unwound; aperture large, ovate, subacuminated above.

PFEIFFER. Mon. Hel. Vol. VI. p. 359.

Hab. Mexico.

Species 111. (Mus. Sowerby.)

CYLINDRELLA ROBERTSII. *Cyl. testâ brevi, cylindricâ, fuscâ, striatâ; anfractibus permanentibus septenis, subæqualibus, superioribus rix angustatis, ultimo infra angulato, longè soluto; aperturâ distantî, subtrigoniâ, superâ lato, infra subacuminatâ.*

ROBERTS'S CYLINDRELLA. Shell short, cylindrical, brown, striated; permanent whorls seven, nearly equal, upper scarcely narrowed, last angular below, unwound for a long part; aperture distant, subtriangular, broad above, rather acuminated below.

ADAMS. Pfeiffer. Mon. Vol. VI. p. 383.

Hab. Jamaica.

Species 112. (Mus. Sowerby.)

CYLINDRELLA ORNATA. *Cyl. testâ cylindricâ, griseâ, sparsim tenuiter costatâ, costis ad suturam in tuberculis regularibus terminatis; anfractibus permanentibus decenis, superioribus tribus contractis, alteris subæqualibus, ultimo alto, rimato, breviter soluto; aperturâ subdistanter obliquè productâ.*

THE ADORNED CYLINDRELLA. Shell cylindrical, grey, sparsely thin-ribbed, ribs terminating at the suture in regular tubercles; permanent whorls ten, upper three contracted, others nearly equal, last high, notched, shortly uncoiled; aperture rather distantly obliquely produced.

GUENLACH. Pfeiffer. Mon. Vol. VI. p. 382.

Hab. Yateras, Cuba.

Species 113. (Mus. Sowerby.)

CYLINDRELLA CONCRETA. *Cyl. testâ brevi, subfusiformi, lævi, albâ, semipellucidâ, medio ventricosâ, infra paulo contractâ; anfractibus decenis, ultimo subangustato, rimato; aperturâ approximâtâ, subrotundâ.*

THE CONCRETE CYLINDRELLA. Shell short, subfusiform, smooth, whitish, semipellucid, ventricose in the middle, a little contracted below; whorls 10, last rather narrow, notched; aperture near, rather rounded.

GUENLACH. Pfeiffer. Mon. Vol. VI. p. 363.

Hab. Cuba.



115 a



114.



115 b



116.



117



119.



118.

CYLINDRELLA.

PLATE XIII.

Species 114. (Mus. Brit.)

CYLINDRELLA PEYFFERANA. *Cyl. testā brevissimā, subbilobata, glabrā, albīdā; anfractibus permanentibus septem, brevissimē crenatulis, undulata et costatis; inter costas angulatum et undulatum irregulariter sculptis; ultimo subangustato, cincto, aperturā obliquē subovate, marginē duplicato.*

PEYFFER'S CYLINDRELLA. Shell rather short, solid, cylindrical, whitish; permanent whorls seven, very slowly increased, with wavy ribs, angularly and wavyly sculptured between the ribs; last rather angular, notched; aperture obliquely subovate, margin double.

FERUSSAC. Pfeiffer, *Mon.* Vol. VI, p. 391.

Hab. Antilles.

Species 115. (Fig. a, b, Mus. Brit.)

CYLINDRELLA CLAVA. *Cyl. testā succinea-fusca seu albīdā, tenui, altissimā, gracillimā, supra medium gradatim attenuatā; anfractibus depressis, tenuissimē striatis, permanentibus viginti, deciduis decem, ultimo infusā angulato, longē cincto, soluto; aperturā subobtusā, obliquē ovate, superne subacuminatā.*

THE KEY CYLINDRELLA. Shell amber brown or whitish, thin, much raised, slender, gradually attenuated above the middle; whorls depressed, very finely striated, twenty permanent, ten deciduous, last angular below, with a long notch; aperture rather distant, obliquely ovate, slightly acuminate above.

PEYFFER. *Mon.* Vol. VI, p. 365.

Hab. Chiappa, Mexico.

Species 116. (Mus. Brit.)

CYLINDRELLA LEHMANNI. *Cyl. testā solidā, ventricosisimā, larvigatā, glabrā-coffea, prope suturas densiori; anfractibus permanentibus octo, concavis, medio latissimis; supra infraque gradatim angustioribus, ultimo cincto ad aperturam, paulo soluto; aperturā obliquē pyriformi, superne subacuminatā.*

LEHMANN'S CYLINDRELLA. Shell solid, very ventricose, smooth, yellowish-coffee, more dense at the sutures; permanent whorls eight, convex, very wide in the middle, gradually narrower above and below; last notched at the aperture, a little unwhorled; aperture obliquely pyriform, slightly acuminate above.

PEYFFER. *Mon.* II, p. 370.

Hab. Mexico.

Species 117. (Mus. Brit.)

CYLINDRELLA TURBIS. *Cyl. testā albā, ventricosā, superne attenuatā, coffea, tenuiter striatā; anfractibus circa triginti, inferioribus duodecim subequalibus, rectilabaculis, latis; ultimo truncato, cincto, aperturā approximātā, subobliquā, latā, columella latā, infusā canaliculatā.*

THE TOWER CYLINDRELLA. Shell high, ventricose, attenuated above, coffee-coloured, finely striated; whorls about thirty, lower twelve rather equal, straight-sided, broad; last truncated, notched; aperture near, rather oblique, broad, columella broad, with a channel below.

PREELLE. *Mon.* IV, p. 636.

Hab. Chiappa, Mexico.

Species 118. (Mus. Brit.)

CYLINDRELLA BOCCARDI. *Cyl. testā albā, cylindricā, subequaliter ventricosā, stramineā; anfractibus permanentibus novem, altis, rectilabaculis, ultimo infra contracto, rimato, supra marginem aperturæ arcuato; aperturā obliquē subpyriformi, superne subacuminatā.*

BOCCARD'S CYLINDRELLA. Shell high, cylindrical, rather equally ventricose, straw; permanent whorls nine, high, rectilaberal, last contracted below, notched, arched above the margin of the aperture; aperture obliquely subpyriform, slightly acuminate above.

SALLÉ. *Proc. Zool. Soc.* 1853, T. XXXIII, f. 1.

Hab. Cordova and Orizaba, Mexico.

CYLINDRELLA.—PLATE XIII.

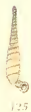
Species 119. (Mus. Brit).

CYLINDRELLA RECTICOSTA. *Cyl. testâ albidâ, costis solidis, rectis, distantibus sculptâ, medio infrâque cylindricâ, superiô sensim contractâ; anfractibus permanentibus tredecim, septenis inferioribus sub-æqualibus, vix convexis; suturâ profundâ, ultimo rimatâ; aperturâ approximâtâ, latâ, margine crasso.*

THE STRAIGHT-RIBBED CYLINDRELLA. Shell whitish, sculptured with solid, straight, distant ribs, cylindrical in the middle and below, sensibly contracted above; permanent whorls thirteen, seven lower nearly equal, hardly convex; suture deep, last notched; aperture approximate, broad, margin thick.

PFEIFFER. Mon. II. p. 369.

Hab. Oajaca, Mexico.



CYLINDRELLA.

PLATE XIV.

Species 120. (Mus. Sowb.)

CYLINDRELLA DOMINICENSIS. *Cyl. testā brevis, fulvā, subfusiformi; anfractibus novem, subconvexis, ultimo longi solato; aperturā distant, parvā, obliquē subrotatā, marginē rotundō.*

THE DOMINICAN CYLINDRELLA. Shell short, fulvous, subfusiform; whorls nine, rather convex, last with long part unwoound; aperture distant, small, obliquely subrotate, margin rounded.

PFEIFFER. Mon. III. p. 574.

Hab. Haïti, Peru.

Species 121. (Fig. a, b, Mus. Brit.)

CYLINDRELLA VOLUBLEIS. *Cyl. testā altā, fuscā, semipellucidā, angustē cylindricā, laevigatā, nitentē; anfractibus undecim, inferioribus decem subaequalibus, rectilatis; ultimo solato, obliquē ad aperturam declivē; aperturā obliquē ovatā.*

THE VOLUBLE CYLINDRELLA. Shell high, fulvous, semipellucid, narrowly cylindrical, smooth, shining; whorls eighteen, lower ten nearly equal, straight-sided; last unwoound, sloped down obliquely towards the aperture; aperture obliquely ovate.

MORELET. Pfeiffer. Mon. III. p. 576.

Cylindrella succosa. Poey.

Hab. Cuba.

Species 122. (Fig. a, b, Mus. Brit.)

CYLINDRELLA SCHEVA. *Cyl. testā sinistrali, pupiformi, tenuissimē striatā, coffeā; anfractibus perantennalibus decem, convexiusculis, superioribus contractis, mediis inflatis, inferioribus subangustatis; aperturā subrotatā, latā.*

THE LEFT-HANDED CYLINDRELLA. Shell sinistral, pupa-shaped, very finely striated, coffee-coloured; permanent whorls ten, rather convex, upper contracted, middle inflated, lower rather narrowed; aperture a little distant, broad.

GRUNDLACH. Pfeiffer. Malak. Bl. 1863.

Hab. Near Matanzas, Cuba.

Species 123. (Mus. Brit.)

CYLINDRELLA ARCHIPELAGA. *Cyl. testā altā, solatā, albā, cylindricā, medio subinflatā; anfractibus perantennalibus quindecim, compressis, caldi convexis, costis calidis, arcuatis, crebris, sculptis; ultimo rimato; aperturā magnā, rotundā, marginē crasso.*

THE BOW-SHED CYLINDRELLA. Shell raised, solid, white, cylindrical, middle rather inflated; permanent whorls fifteen, compressed, very convex, sculptured with strong, arched, numerous ribs; last notched; aperture large, rounded, margin thick.

PEDDIE. Proc. Zool. Soc. 1860, p. 139.

Hab. Juquila, Mexico.

Species 124. (Mus. Brit.)

CYLINDRELLA TOMATELLA. *Cyl. testā altā, subcylindricā, tenuissimē striatā, succineo-rubescenti; anfractibus perantennalibus duodecim, octonis inferioribus subaequalibus, rectilatis; ultimo subcontracto, rimato, solato; aperturā obliquē subpyriformi, distant, superius subacuminatā.*

THE LONG-PUDDING CYLINDRELLA. Shell high, subcylindrical, very finely striated, reddish amber; permanent whorls twelve, eight lower nearly equal, rectilateral, last a little contracted; notched, uncoiled; aperture obliquely subpyriform, distant, acuminated above.

MORELET. Pfeiffer. Mon. III. p. 568.

Cylindrella Moreletii. Deshayes.

Hab. Guatemala.

Species 125. (Mus. Brit.)

CYLINDRELLA SPITHUIS. *Cyl. testā gracili, altā, subfusiformi, griseofusca, laevigatā, superius longi contracta, infra medium subconvexa; anfractibus viginti, inferioribus quinque semis, superioribus quindecim angustissimis, ultimo infra attenuato, solato; aperturā majusculā, ovatā, distant, marginē reflexo.*

CYLINDRELLA.—PLATE XIV.

THE SUBTLE CYLINDRELLA. Shell slender, high, rather fusiform, grey-brown, smooth, with a long part contracted above, rather ventricose below the middle; whorls twenty, lower five full, upper fifteen extremely narrow, last attenuated below, unwoound; aperture rather large, oval, distant, margin reflected.

MOELET. Pfeiffer. Mon. III. p. 577.

Hab. Guatemala.

Species 126. (Mus. Brit.)

CYLINDRELLA CINEREA. *Cyl. testâ fusiformi, altâ, griseâ, obliquè costatâ, ultimo anfractu mediò torto, contracto, elongato, longè subulo; aperturâ rotundâ, distanti, declivi.*

THE CINEREOUS CYLINDRELLA. Shell fusiform, high, grey, obliquely ribbed, last whorl tortuous in

the middle, contracted, lengthened, much unwoound; aperture rounded, distant, sloped.

PFEIFFER. Mon. III. p. 578.

Hab. Cuba.

Species 127. (Mus. Brit.)

CYLINDRELLA ZEBRINA. *Cyl. testâ solidiâsculâ, subventricosâ, subpyramidatâ, fulvâ, fasciis perpendicularibus fuscis pictâ; anfractibus permanentibus nerenis, ltrigatis, concezis; aperturâ ovatâ, margine crasso.*

THE ZEBRA CYLINDRELLA. Shell rather solid, rather ventricose, subpyramidal, fulvous, painted with perpendicular brown bands; permanent whorls nine, smooth, convex; aperture ovate, margin thick.

PFEIFFER. Mon. III. p. 584.

Hab. Jamaica.



129



128



130



132



131



133



134 a.



134 b.



134 d.



134 c.

CYLINDRELLA.

PLATE XV.

Species 128. (Mus. Brit.)

CYLINDRELLA SEXDECIMALIS. *Cyl. testâ gracillimâ, fusiformi, fulvâ, tenui, semipellucidâ, levigatâ; anfractibus sedecenis, convexis; apicali globoso, sequentibus senis attenuatis, mediânis inflatis, ultimo longissimè obliquè soluto, striato; aperturâ distantî, rotundâ, margine crasso.*

THE SIXTEEN-WHOELED CYLINDRELLA. Shell very narrow, fusiform, fulvous, thin, semipellucid, smooth; whorls sixteen, convex; apical subglobose, six following attenuated, middle inflated, last with a long piece uncoiled, striated; aperture distant, rounded, margin thick.

JIMENEZ. MS. Pflr. Mon. Vol. VI, p. 384.

Hab. Bermeja vieja, Cuba.

The variegation spoken of in the original description is not perceptible in the British Museum specimens.

Species 129. (Mus. Brit.)

CYLINDRELLA APISTOMA. *Cyl. testâ gracillimâ, subcylindricâ, fulvâ; anfractibus octodecenis, supra medianam attenuatis, infra subæqualibus, ultimo distorto, striato, soluto; aperturâ subdistanti, subtrigonâ, superne latâ, infra subcontractâ.*

THE DESCENDING-MOUTHED CYLINDRELLA. Shell very slender, subcylindrical, fulvous; whorls eighteen, attenuated above the middle, nearly equal, last distorted, striated, uncoiled; aperture rather distant, subtrigonal, broad above, rather contracted below.

PFEIFFER. Mon. IV, p. 703.

Hab. Cordova, Mexico.

Species 130. (Mus. Brit.)

CYLINDRELLA GRACILLIMA. *Cyl. testâ gracillimâ, fulvâ, prope apicem contractâ, supra medianam subinflatâ, medio et infra subcontractâ; ultimo exfracta elongato, infra attenuato, perobliquè soluto; aperturâ latâ, margine subæparso.*

THE VERY SLENDER CYLINDRELLA. Shell very thin, fulvous, contracted near the apex, somewhat inflated above the middle, rather contracted at

and below the middle; last whorl elongated, attenuated below, very obliquely uncoiled; aperture broad, margin a little expanded.

POEY. Pfeiffer, Mon. III, p. 576.

Hab. Cuba.

The swelled portion of this narrow shell is above the middle of the lengthened spire.

Species 131. (Mus. Brit.)

CYLINDRELLA VARIEGATA. *Cyl. testâ brevissimâ, latiusculâ, cylindricâ, tenaciter fixatâ, fulvâ et subrosâ, obliquè fasciis fasciis variegatâ; anfractibus permutantibus novenis, moderate convexis, supra medianam gradatim attenuatis, ultimo rimato, bisectis soluto; aperturâ subdistanti, ovatâ, obliquâ, margine subrotundo.*

THE VARIEGATED CYLINDRELLA. Shell rather short, rather broad, cylindrical, finely ridged, fulvous and pinky, variegated with oblique brown bands; permanent whorls nine, moderately convex, gradually attenuated above the middle, last notched, shortly uncoiled; aperture rather distant, ovate, oblique, margin rather rounded.

PFEIFFER. Mon. II, p. 374.

Hab. Cuba, Florida.

Species 132. (Mus. Brit.)

CYLINDRELLA PHILIPPANA. *Cyl. testâ gracili, fusiformi, fulvâ, regulariter, subdistanter, tenaciter costatâ; anfractibus octodecenis, apicalibus inflatis, globosis, sequentibus septenis angustis, mediânis subinflatis, ultimo subcontracto, longè soluto; aperturâ obliquè ovatâ, margine crasso.*

PHILIPPINA'S CYLINDRELLA. Shell slender, fusiform, fulvous, regularly, rather distantly, finely ribbed; whorls eighteen, apical inflated, globose, seven following narrow, middle rather inflated, last rather narrowed, with long uncoiling; aperture obliquely ovate, margin thick.

PFEIFFER. Mon. II, p. 378.

Cylindrella acedens. Morelet.

Hab. Cuba.

CYLINDRELLA.—PLATE XV.

Species 133. (Mus. Brit.)

CYLINDRELLA CUMINGIANA. *Cyl. testâ brevi, papæformi, levigatâ, versus apicem inflatâ, infra attenuatâ; anfractibus octonis, ultimo contracto, rimato, longè soluto; apertura auriformi, superne subacuminato.*

CUMING'S CYLINDRELLA. Shell short, papa-shaped, smooth, inflated towards the apex, attenuated below; whorls eight, last contracted, notched, with lengthened portion unwoound; aperture ear-shaped, rather acuminated.

PEFFIFFER. *MOB.* II. p. 385.

Hab. Philippine Islands.

Species 134. (Fig. a, b, c, d, Mus. Brit.)

CYLINDRELLA MAUGERI. *Cyl. testâ pyramidatâ, levi-*

gatâ, albâ, vel flavidâ, ad aperturam rosâ, vel fusco-nigrescenti, ad suturam albo fasciatâ, medio paulò inflatâ; anfractibus circâ decenis, ultimo contracto; apertura subovata, margine reflexo, interrupto, columellâ flexuosa.

MAUGER'S CYLINDRELLA. Shell pyramidal, smooth, white or yellowish-pink at the aperture, or blackish-brown, with white banded suture, a little inflated in the middle; whorls about ten, last contracted; aperture subovate, margin reflected, interrupted, columella flexuous.

WOOD (Helix). *Index Testaceologicus.*

Papa splendens. Menke.

Helix ignifera. Ferrussac.

Papa fusiformis. Adams.

Hab. Jamaica.



136



135



137



138



139



140



a



141



b



142



144



143

CYLINDRELLA.

PLATE XVI.

Species 135. (Mus. Brit.)

CYLINDRELLA LUCENS. *Cyl. testâ subpyramidalâ, angustâ; albâ, semipellucidâ, anfractibus duodecenis, gradatim crescentibus, concavis, ultimo angustâculo, paulo soluto; aperturâ subrotundâ, supernè depressâ, cuneatâ.*

THE LUCID CYLINDRELLA. Shell subpyramidal, narrow, whitish, semipellucid, whorls twelve, gradually increased, convex, last rather narrow, a little unwound; aperture rather round, depressed above, cuneate.

WRIGHT. MS. Brit. Mus.

Hab. Cuba.

Species 136. (Mus. Brit.)

CYLINDRELLA MORINI. *Cyl. testâ fuscâ, pyramidato-subfusiformi; anfractibus quindecenis, brevibus, perobliquè latis, superioribus attenuatis, inferioribus paulo magis ventricosis, ultimo longè soluto, subtortuo; aperturâ distinctâ, transverse oblongâ, utriusque subacuminatâ.*

MORINI'S CYLINDRELLA. Shell brown, pyramido-fusiform; whorls fifteen, short, very obliquely ridged, upper attenuated, lower a little more ventricose; last with a long unwinding, a little twisted; aperture distant, transversely oblong, slightly acuminated on each side.

MORELET. Pfeiffer, Mon. Helic. VI. p. 388.

Hab. Verapaz, Guatemala.

Species 137. (Mus. Brit.)

CYLINDRELLA PLANOSPIRA. *Cyl. testâ angustâ, cylindricâ, semipellucidâ, pallidè succineo-cornuâ; anfractibus permanentibus, undecenis brevibus, concavis; aperturâ distantî, supernè infrâque angulatâ.*

THE PLAINSPIRED CYLINDRELLA. Shell narrow, cylindrical, semipellucid, pale horny amber; permanent whorls eleven, rather short, a little convex; aperture distant, angular above and below.

PFEIFFER. Mon. Helic. p. 371.

Hab. Monte Cuzco, Cuba.

Species 138. (Mus. Brit.)

CYLINDRELLA MALLEATA. *Cyl. testâ solidâ, albâ, fuscâ, distanter strigatâ, irregulariter rugis punctulatis angulatis sagittatâ, ventricosâ, medio inflatâ; anfractibus octonis, latis, breviusculis; ultimo infrâ subangustato, cunicato; aperturâ irregulariter subquadrato, margine crasso, rotundo, inæquali.*

THE HAMMERED CYLINDRELLA. Shell solid, whitish, distantly striped with brown, irregularly shagreened with punctured angular wrinkles, ventricose, inflated in the middle; whorls eight, broad, rather short, last a little narrowed and keeled below; aperture irregularly subquadrate, margin thick, round, unequal.

PFEIFFER. Mon. Helic. VI. p. 363.

Hab. St. Domingo.

Species 139. (Mus. Brit.)

CYLINDRELLA CAMOENSIS. *Cyl. testâ fusiformi, attenuatâ, altissimâ, fumoso-castaneâ, anfractibus viginti, brevibus, medio subinflatis, lunatis crebris ad suturam superâ infrâque prominentibus, medio obsolete, sculptis; ultimo angustato, soluto; aperturâ rotundâ.*

CAMOENS' CYLINDRELLA. Shell fusiform, attenuated, much elevated, smoky chestnut, whorls twenty, short, a little inflated in the middle, sculptured with numerous laminae, prominent above and below, and obsolete in the middle; last narrow, unwound; aperture rounded.

PFEIFFER. Mon. Helic. VI. p. 388.

Hab. Cuba.

The fine laminated ridges form rounded scales at the top and bottom of each whorl, and are almost lost in the middle.

Species 140. (Mus. Brit.)

CYLINDRELLA BEARDSLEYANA. *Cyl. testâ pallidè fuscâ, tenuiter liratâ, subpyramidalâ; anfractibus novenis, subconcavis, gradatim crescentibus, liris frequentibus, curvis, interstitiis latioribus.*

CYLINDRELLA.—PLATE XVI.

BEARDSLEY'S CYLINDRELLA. Shell pale brown, finely ridged, somewhat pyramidal; whorls nine, rather convex, gradually increased, ridges numerous, curved, interstices wider.

C. B. ADAMS. — ?

Hab. Jamaica.

Species 141. (Mus. Brit.)

CYLINDRELLA TURKASIANA. *Cyl. testâ fusiformi, angustâ, semipellucidâ, lavi, pallidè succineâ; anfractibus septemdecenis, superioribus inferioribusque attenuatis, medianis subinflatis, ultimo longissimè soluto, declivi, rugato, tortuoso; apertura parvâ, distantissimâ.*

THE TURKASIAN CYLINDRELLA. Shell fusiform, narrow, semipellucid, smooth, pale amber; whorls seventeen, upper and lower attenuated, middle a little inflated, last with a long piece unwound, sloped downward, wrinkled, twisted; aperture small, very distant.

GUNDLACH. Pfeiffer. Mon. Helic. VI. p. 385.

Lesallei. Gandlach ?

Hab. Monte Toro, Cuba.

Species 142. (Mus. Brit.)

CYLINDRELLA RUGELIANA. *Cyl. testâ parvâ, angustè pyramidatâ, opacâ, fulvâ, distanter strigatâ; anfractibus quaterdecenis, tenuiter acutè liris, brevissimis ultimo longè soluto, tortuoso; apertura parvâ, distantî; apice attenuato, acuminato.*

RUGEL'S CYLINDRELLA. Shell small, narrowly pyramidal, opaque, fulvous, distantly striped; whorls fourteen, finely, acutely ridged, very short, last with long portion unwound, twisted; aperture small, distant; apex attenuated, acuminated.

SHUTTLEWORTH. Pfeiffer. Mon. Hel. VI. p. 368.

Hab. Cuba.

Species 143. (Mus. Brit.)

CYLINDRELLA PUPIFORMIS. *Cyl. testâ brevî, lavi, cylindricâ, semipellucidâ, albâ, vel castaneâ; anfractibus permanentibus senis, brevibus, convexis; ultimo breviter soluto, apertura subdistanti, magud, margine crasso, subrotundo.*

THE PUPA-SHAPED CYLINDRELLA. Shell short, smooth, cylindrical, semipellucid, white or chestnut; permanent whorls six, short, convex; last with short unwinding; aperture rather distant, large, margin thick, rather rounded.

C. B. ADAMS. Pfeiffer, Mon. Helic. VI. p. 370.

Hab. Jamaica.

Species 144. (Mus. Brit.)

CYLINDRELLA UNCATA. *Cyl. testâ cylindricâ, solidiusculâ, latiusculâ, pallidè corneâ, medio paulo inflata; anfractibus undecenis, brevibus, subdistanter liris; ultimo subangustato, soluto, versus aperturam coarctato; liris anfractuum ad suturam supra infriorque quasi uncinatis, apertura distantî, subtrigoniâ.*

THE HOOKED CYLINDRELLA. Shell cylindrical, very solid, rather broad, pale horn; a little inflated in the middle; whorls eleven, short, rather distantly ridged, last rather narrow, unwound, contracted towards the aperture; ridges of the whorls, as it were, hooked at the suture above and below; aperture distant, subtrigonal.

GUNDLACH. Pfeiffer. Mon. Helic. VI. p. 382.

Hab. Yateras, Cuba.

The tubercles formed at the sutures on the ridges have the appearance of little hooks.

CYLINDRELLA.

	Plate.	Species.		Page.
<i>aculeata</i> , Morelet	XV.	132	<i>Cuningiana</i> , Pfeiffer	XV. 133
<i>acuta</i> , Pfeiffer	VII.	62	<i>cylindrus</i> , <i>Chenault</i>	II. 30
<i>Adamsiana</i> , Pfeiffer	II.	16	<i>cyliodens</i> . See <i>alta</i>	VIII. 68
<i>Agnesiana</i> , Adams	V.	43	<i>denticulata</i> , Pfeiffer	III. 22
<i>alabastrina</i> , Pfeiffer	IX.	81	<i>Dominicensis</i> , Pfeiffer	XIV. 129
<i>albo-arenata</i> , Pfeiffer	IV.	27	<i>Dunkeriana</i> , Pfeiffer	VIII. 59
<i>alta</i> , <i>Sowerby</i> (<i>Cylindrus</i> by error)	VIII.	58	<i>elegans</i> , Pfeiffer	IV. 36
<i>amethystina</i> , <i>Chitty</i>	II.	15	<i>Ellioti</i> , <i>Poey</i>	VI. 47
<i>angusta</i> , Adams	VII.	63	<i>elongata</i> , <i>Chenault</i>	IV. 33
<i>angustior</i> , <i>Wright</i>	XI.	97	<i>eximia</i> , Pfeiffer	I. 6
<i>antipercreta</i>	XI.	35	<i>Fabreana</i> , <i>Poey</i>	VIII. 70
<i>apiostoma</i> , Pfeiffer	XV.	129	<i>fastigiata</i> , <i>Gundlach</i>	IV. 34
<i>arctispira</i> , Pfeiffer	XIV.	123	<i>fibrosa</i>	
<i>arcuata</i> , <i>Mortens</i>	VI.	49	<i>filicostata</i> , <i>Skottleworth</i>	XII. 107
<i>aristipica</i> , Pfeiffer	I.	5	<i>flammulata</i> , Pfeiffer	II. 8
<i>artemesia</i> , <i>Gundlach</i>	XII.	106	<i>fusiformis</i> , Adams	XV. 131
<i>asperata</i> , <i>Sowerby</i> (<i>aspera</i> by error).	XI.	98	<i>Garciana</i> , <i>Wright</i>	VIII. 66
<i>aspera</i> , Adams	I.	1	<i>Gheisbrihti</i> , Pfeiffer	I. 7
<i>Auberiana</i> , <i>Orbigny</i>	IV.	36	<i>goniostoma</i>	VIII. 72
<i>Beardsleyana</i> , Adams	XVI.	149	<i>Gossi</i> , Pfeiffer	IV. 35
<i>Bineynna</i> , Pfeiffer	VI.	53	<i>gracilis</i> , <i>Wood</i>	IX. 78
<i>Boncardi</i> , <i>Sallé</i>	XIII.	118	<i>gracillima</i> , <i>Poey</i>	XV. 130
<i>Brookesiana</i> , <i>Gundlach</i>	VI.	52	<i>grandis</i> , Pfeiffer	I. 4
<i>brunnescens</i> , <i>Gundlach</i>	X.	92	<i>Gravesii</i> , Adams	III. 18
<i>bulbiformis</i> , <i>Sowerby</i>	XI.	103	<i>Hanleyana</i> , Pfeiffer	V. 37
<i>carinata</i> , Pfeiffer	VIII.	67	<i>Hilleri</i> , Pfeiffer	XI. 96
<i>camoensis</i> , Pfeiffer	XVI.	139	<i>Hollandi</i> , Pfeiffer	IX. 76
<i>cecurulans</i> , <i>Poey</i>	III.	21	<i>Humboldtiana</i> , Pfeiffer	III. 25
<i>Chenaultiana</i> , <i>Ferrussac</i>	IV.	33	<i>hyalina</i> , Pfeiffer	XII. 110
<i>chordata</i> , Pfeiffer	V.	38	<i>ignifera</i> , <i>Ferrussac</i>	XV. 134
<i>cinerea</i> , Pfeiffer	XIV.	126	<i>illamellata</i> , <i>Wright</i>	X. 87
<i>clara</i> , <i>Wright</i>	IX.	82	<i>inornata</i> , Adams	XI. 99
<i>clava</i> , Pfeiffer	XIII.	115	<i>lata</i> , Adams	X. 93
<i>collaris</i> , <i>Ferrussac</i>	XI.	95	<i>intermedia</i> , <i>Sowerby</i>	X. 91
<i>colunella</i>	III.	25	<i>interrupta</i> , <i>Gundlach</i>	VIII. 71
<i>concreta</i> , <i>Gundlach</i>	XII.	113	<i>intransmalleata</i> , <i>Gundlach</i>	VII. 64
<i>cornea</i> , Adams	II.	12	<i>irrorata</i> , <i>Gundlach</i>	IV. 32
<i>Coronadoi</i> , <i>Trango</i>	XII.	108	<i>lata</i> , Adams	VII. 58
<i>costata</i> , <i>Guilding</i>	XII.	109	<i>Lateradii</i> , <i>Orbigny</i>	X. 86
<i>costatus</i> , <i>Gray</i>	IV.	39	<i>Lavalliana</i> , <i>Orbigny</i>	VII. 56
<i>costulata</i> , Adams	XII.	104	<i>Leibmani</i> , Pfeiffer	XIII. 116
<i>costulosa</i> , Adams	IV.	39	<i>Lescalei</i>	XVI. 141
<i>crispula</i> , Pfeiffer	V.	39	<i>liticus</i> , <i>Gould</i>	IV. 36
<i>Cuningii</i> , Adams	IV.	33	<i>lucens</i> , <i>Wright</i>	XVI. 135

CYLINDRELLA.

	PLATE.	SPECIES.		PLATE.	SPECIES.
macrostoma, Pfeiffer	III.	26	Rusei, Pfeiffer	XI.	94
malleata, Pfeiffer	XVI.	138	Salleana, Pfeiffer	V.	40
mangerii, Wood	XV.	134	sanguinea, Chemnitz	II.	12
megacheila, Chilly	VI.	54	Sauvalliana, Gundlach	VI.	50
Mexicana, Pfeiffer	VII.	61	saucosa, Poey	XIV.	121
microstoma, Pfeiffer	V.	42	scæva, Gundlach	XIV.	122
montana, Adams	V.	44	scalarina, Shuttleworth	IX.	74
Moreleti, Pfeiffer	VII.	59	seminuda, Adams	V.	46
Morini, Morelet	XVI.	136	sexdecimalis, Jimeno	XV.	128
multispiralis, Sowerby	IX.	79	Shuttleworthiana, Poey	III.	23
nobilior, Adams	VI.	53	soluta, Pfeiffer	IX.	75
nobilis, Heutz	IV.	36	Sowerbiana, Pfeiffer	III.	20
notata, Gundlach	XI.	102	speciosa, Dunker	I.	2
obesa, Martens	VIII.	73	splendens, Menke	XV.	134
obliqua, Pfeiffer	IV.	28	splendida, Pfeiffer	I.	3
aborta, Menke	IV.	36	striatella, Wright	VII.	55
ornata, Gundlach	XII.	112	subtilis, Morelet	XIV.	125
ovideoiana, D'Ochigny	II.	13	suturalis, Weindand	III.	19
pallida, Guibling	IV.	30	teneila, Adams	XI.	101
perlata, Pfeiffer	X.	88	teres, Menke	V.	45
perplicata, Ferrussac	IV.	29	tomacella, Morelet	XV.	124
Petiveriana, Ferrussac	XIII.	114	Teneriensis, Wright	X.	84
Philippiana, Pfeiffer	XV.	132	transparenta, Sowerby	IX.	77
Piloceri, Pfeiffer	VI.	48	Trinitaria, Pfeiffer	V.	41
planospira, Pfeiffer	XVI.	137	trochæiformis, Sowerby	IX.	80
planulata	II.	8	truncatula	XI.	35
plicata, Poey	XII.	105	tumidiore, Sowerby	VIII.	65
polygyra, Pfeiffer	VII.	57	turris, Pfeiffer	XIII.	117
porrecta, Gaudl.	XI.	100	Turkassiana, Gundlach	XVI.	141
proccra, Adams	II.	14	uncata, Gundlach	XVI.	144
producta, Gundlach	X.	89	variegata, Pfeiffer	XV.	131
pruinosa, Morelet	IV.	31	Vignalensis, Wright	IX.	83
puncturata, Pfeiffer	III.	24	violacea, Wright	VII.	60
pupæformis, Adams	XVI.	143	ventricosa, Gundlach	III.	17
purpurea, Gray	II.	9	volubilis, Morelet	XIV.	121
recticosta, Pfeiffer	XIII.	119	Walpolei, Sowerby	VI.	51
Robertsi, Adams	XII.	111	Wrightii, Pfeiffer	X.	85
rosca, Adams	II.	11	zabrina, Pfeiffer	XIV.	127
rubella, Adams	II.	9	zonata, Adams	II.	10
Rugliana, Shuttleworth	XVI.	142			

MONOGRAPH

OF THE GENUS

P U P A .

Things that were not, at Thy command
In perfect form before Thee stand;
And all to their Creator raise
A wondrous harmony of praise.



2 a



1



2 b



3 a



4 a



4 b



3 b



5



6



7

P U P A.

PLATE I.

Genus PUPA. *Desjardins*.

Testa levissimis, cylindrica, rimata, perimargo deorsum decurritis, nonconspicuis striatis plerumque chrysalidiformis multispicatis, apice obtuso. Apertura frequenter plieata et dentata, marginis reflexi, continui. Operculum nullum.

SHELL TERRESTRIAL. Cylindrical, creased, generally chrysalis-shaped, with many whorls and obtuse apex. Aperture frequently plaited and toothed, margin reflected, continuous. Operculum none.

In the following monograph, which cannot be made absolutely complete in this work, the genera GIBBS, ENNEA, and VERTIGO are included with the undisputed Pupa. The species are found on most European continents and islands, particularly the more southern parts, and are also abundant in the East and West Indies, South Sea Islands, and other localities too numerous to mention. They are only wanting or rare in the colder climates. The *rima* in this and other genera of pupa-shaped land shells is a crease formed by an abnormal doubling as it were of the last whorl, bringing the mouth by a somewhat sudden turn to the front.

Species 1. (Mus. Sowerby.)

PUPA BRYANTI. *Pap. testis breviter cylindricis, breviter rimatis, albidis, costarum ascenduntibus, angustibus rotatis, plieis solidis, substansibus, retinensibus, nullis; apertura ovata, margine rotunda, reflexo, columella biplicata.*

BRYANT'S PUPA. Shell shortly cylindrical, shortly creased, whitish, mottled with chestnut; whorls eight, strengthened with solid, rather distant, rather straight ribs; aperture ovate, margin rounded, reflected; columella with two plaits.

PEIFFER, Mon. Hel. VI. p. 92.

Hab. South Magna, Bahamas.

From its form and mottled colouring, this species would seem to resemble Pupa Chrysalis with its whorls vertically depressed, but with the addition of two plaits on the columella.

Species 2. (Fig. a, b. Mus. Brit.)

PUPA GLANS. *Pap. testis oblonga chrysalidiformi, solida, subcylindrici, nonnigra costarum variegatis, creasis apicem annuatis, angustibus decens, costis validis nullis; apertura intus castanea, margine aureo, columella crassa, calidi biplicata.*

THE ACORN PUPA. Shell obese, chrysalis-shaped, solid, bluish, sometimes varied with chestnut, acuminate towards the apex; whorls ten, strengthened with strong ribs; aperture chestnut within, margin golden, columella thick, strongly biplicate.

KÜSTER, Pfeiffer, Mon. Hel.

Hab. New Providence, Bahamas.

Species 3. (Fig. a, b. Mus. Brit.)

PUPA MEMBA. *Pap. testis oblonga chrysalidiformi, subcylindrici, nonnigra costarum variegatis, creasis apicem annuatis, subobiter costatis; apertura aurea, margine crassissimo, columella calidi biplicata, inter plieis profundis sinuata.*

THE MUMMY PUPA. Shell oblong-chrysalis-shaped, bluish, sometimes mottled with chestnut, acuminate towards the apex, rather lightly ribbed; aperture golden; margin very thick, columella with two strong plaits, deeply sinuated between the plaits.

BRUGUENE, Enc. Met.

Pupa sculpta, Pong (rare.)

Pupa memba? Pfeiffer.

Hab. Cuba.

Species 4. (Mus. Brit.)

PUPA PEGIVUS. *Pap. testis latissimis, breviter cylindrici, subtruncatis, concolori, solidi; angustibus decens, superioribus depressis, alteris costis crassis substansibus nullis; apertura latius, intus aurea, margine crasso, albido, supra columellam implexata.*

THE PROTEUS PUPA. Shell very wide, shortly cylindrical, somewhat truncated, bluish, solid; whorls ten, upper depressed, others strengthened with slightly distant strong ribs; aperture broad golden within, margin thick, whitish, with a plait above the columella.

GÜNDLACH MS. Pfeif. VI. p. 291.

Pupa dimidiata, Pfeiffer (*olim*).

Hab. Cuba.

Species 5. (Mus. Brit.)

PUPA CHEYSALEIS. *Pup. testâ elongato-chrysalidiformi, tubâ castaneo-marmoratâ; costis distantibus, rotulis; spirâ obtusâ; unfructibus undecenis, infriocibus altis, rectilateralibus; aperturae marginis auriformi, albo, rotundo, columellâ rotundâ.*

THE CHEYSALEIS PUPA. Shell elongated, chrysalis-shaped, fulvous, marbled with chestnut; ribs distant, strong; spire obtuse; whorls eleven, lower high, straight-sided; margin of aperture ear-shaped, white, rounded; columella without teeth.

BECK, Pfeiffer, Mon. H. p. 314.

Hab. Cuba.

Of a more straight and lengthened cylindrical form than *Pupa Mumia* and without plaits on the columella.

Species 6. (Mus. Brit.)

PUPA INCRASSATA. *Pup. testâ obesâ, cylindricâ, subtruncatâ, subcervicâ; costis subobliquis, distantibus, brevibus; apertura auriformi, flexuosâ; marginis albido, crassissimo; tubio externo superne flexuoso, tubio interno valvâ buplicato.*

THE THICKENED PUPA. Shell obese, cylindrical, slightly truncated, bluish; ribs rather oblique, distant, smooth; aperture auriform, flexuous; margin whitish, very thick; outer lip flexuous above, inner lip with two strong folds.

SOWBRY.

Hab. Cuba.

The writer having figured this shell under the name of *P. trmida*, and finding that name already used for another species, is obliged to re-name it. It resembles *P. proteus*, but its chief peculiarity is a much thickened and flexuous margin.

Species 7. (Mus. Brit.)

PUPA UVA. *Pup. testâ chrysalidiformi, ovata, crassiosâ; unfructibus undecenis, rectilateralibus; apertura subovata, aureâ, marginis interno vix plicato.*

THE GRAPE PUPA. Shell chrysalis-shaped, bluish, thick-ribbed; whorls eleven, straight sided; aperture subovate, golden, inner margin scarcely plaited.

LINNEUS. Syst. Nat.

Hab. Guadaloupe.



9



10



11



12 a



11



12 b



14



15



16



17

P U P A.

PLATE II.

SPECIES 8. (Mus. Brit.)

PUPA MICHOSTOMA. *Pup. testis brevis, acuminatâ, tenuiter liratâ, griseâ, fusco nublata; apice attenuato, flavido; apertura parvâ, intus castaneâ, margine crasso, rotunda, plati superiori crasso, plati columellari parvâ.*

THE SMALL-MOUTHED PUPA. Shell short, acuminate, finely ridged, grey, clouded with brown; apex attenuated, yellowish; aperture small, chestnut within, margin thick, rounded; upper plait thick, columellar plait small.

PFEIFFER. Monographia Heliceorum, vol. iv. p. 659.

Hab. Haiti.—Porto Rico.—Cuba.

Species 9. (Mus. Sowerby.)

PUPA ANTONI. *Pup. testâ profundè rimatâ, umbilicatâ, brevi, obtusâ, tenuiter liratâ griseo-rubescenti marmoratâ; apertura majusculâ, intus castaneâ, margine albo, sub-apice, platis duobus parvis armato.*

ANTON'S PUPA. Shell deeply notched, umbilicated, short, obtuse, finely ridged, marbled with reddish-grey; aperture rather large, chestnut within, margin white, rather expanded, armed with two small plaits.

KÜSTER. Pfeiffer, Mon. III. p. 539.

Hab. Berbice.

Species 10. (Mus. Sowerby.)

PUPA MARMORATA. *Pup. testâ brevi, levigatâ, angustè rimatâ fulcè, fluminis undisque albidis variegatâ; apice pyramidalâ; apertura magnâ, suprâ columellam unipliatâ.*

THE MARBLED PUPA. Shell short, smooth, narrowly notched; fulvous, variegated with white flames and waves; apex pyramidal; aperture large, with a single plait above the columella.

PFEIFFER. Monograph. III. 323.

Hab. Cuba.—Bahamas.

Very beautifully ornamented with enamelled white markings over a pinky-fawn ground.

Species 11. (Mus. Sowerby.)

PUPA INFANDA. *Pup. testâ cylindricâ, profunde rimatâ; umbilicatâ, solidâ, albâ, latâ; anfractibus superioribus ferè levigatis, ultimis costis regularibus, subdistantibus, sculptis; apertura magnâ, intus fulvâ, suprâ columellam plati dentiformi parvè uniatâ.*

THE UNDESCRIBED PUPA. Shell cylindrical, deeply notched, umbilicated, solid, white, broad; upper whorls almost smooth; the last sculptured with regular ribs; aperture large, fulvous within; provided with tooth-like plait above the columella.

SHUTTLEWORTH, Pfeiffer, Mon. VI. vol. vi. p. 288.

Pupa decemana, Poey.

Hab. Cuba.

This shell differs from *Pupa munia* in the first whorls being partially denuded of ribs.

Species 12. (Fig. a, b, Mus. Brit.)

PUPA ZEBRA. *Pup. brevissima, rimatâ, tenuitratâ, fulvescenti, strigis undulatis fuscis longitudinaliter ornatâ; spirâ cernuo apicem pyramidalâ, apertura parvâ, labio interno angusto, unipliatâ, columellâ obliquè unipliatâ.*

THE ZEBRA PUPA. Shell very short, notched, finely ridged, rather fulvous, longitudinally ornamented with undulated brown stripes; spire pyramidal towards the apex, aperture small, inner lip

PUPA.—PLATE II.

narrow, with one plait, columella obliquely one-plaited.

WEINLAND. MS. Brit. Mus.

Hab. Bahamas.

Species 13. (Mus. Brit.)

PUPA MULTICOSTATA. *Pup. testâ oblongâ, albo-griseo-scenti, rimatâ, liris validis, crebris, longitudinaliter sculptâ; aperturâ subquadratâ, margine crasso, intus castaneo, columellâ latâ, obliquè uniplicatâ, labio interno suprà columellam uniplicato.*

THE MANY-RIBBED PUPA. Shell oblong, greyish-white, notched, sculptured longitudinally with strong close ridges; aperture rather square, margin thick, chestnut within, columella broad, obliquely single-plaited, inner lip with one plait above the columella.

KÜSTER. Pfeiffer, Mon. II. p. 323.

Hab. Cuba.

Species 14. (Mus. Brit.)

PUPA CRASSILABRIS. *Pup. testâ subcylindricâ, obtusâ, roseo-albidâ, fusco nebulatâ, tenuiter limatâ; aperturâ subauriformi, buplicatâ, margine duplicato.*

THE THICK-LIPPED PUPA. Shell subcylindrical, obtuse, pinky-whitish, clouded with brown, finely ribbed; aperture somewhat auriform, two-plaited, margin doubled.

SHUTTLEWORTH — ?

Hab. India.

Species 15. (Mus. Brit.)

PUPA MARTENSI. *Pup. testâ cylindricâ, rimatâ, tenuissimè limatâ, albidâ, fusco nebulatâ; apice obtuso; aperturâ magnâ, auriformi, buplicatâ, margine crasso.*

MARTEN'S PUPA. Shell cylindrical, notched, very finely ridged, whitish, clouded with brown; apex obtuse; aperture large, ear-shaped, with two plaits, margin thick.

WEINLAND. Malak. Bl. ix. 1862.

Hab. Bahamas.

Species 16. (Mus. Sowerby.)

PUPA MARTINIANA. *Pup. testâ brevissimâ, obscurè rosâ, breviter profundè rimatâ, subpyramidatâ liris distinctibus, subarcuatis, propè suturam nodulosâ sculptâ; aperturâ subauriformi, margine crasso, superiè angulatâ, labio interno ad anfractum ultimam uniplicato, columellâ vix plicatâ.*

MARTIN'S PUPA. Shell very short, dull rose, shortly, deeply notched, subpyramidal; sculptured with distant ridges, nodulous near the suture; aperture rather auriform, margin thick, angular above, inner lip with a plait on the last whorl, columella scarcely plaited.

KÜSTER. Pfeiffer, Mon. II. p. 317.

Hab. — ?

This shell is remarkable for having a little knob on the top of each rib at the suture.



P U P A.

PLATE III.

Species 17. (Mus. Brit.)

PUPA OBTUSA. *Pap. testâ brevitatâ, tenuâ, apicula deorsum, et glandis fissatâ, pallidâ; apice obtuso, glaucoscenti; apertura anteriori obliquè productâ; labio interno brevi, plâta minuta mucillo, et columella brevâ, acutâ.*

THE WOOD PUPA. Shell smooth, thin, cylindrical, deeply notched, pale; apex obtuse, yellowish; aperture anteriorly obliquely produced; inner lip thin, provided with a very small plait, columella rather straight.

SHUTTLEWORTH. *Pflz. Mob. VI. as incana* var.

Hab. Florida.

Species 18. (Fig. a. b. Mus. Sowerby.)

PUPA STRIATELLA. *Pap. testâ brevi, pallidâ griseoscenti et suberosâ, fusco-rubescenti variegatâ; tenuitâ et regularitè fissatâ, profundè rimatâ; labio interno plati dentiformi validâ minuto, columellâ profundè, brevi, acutâ.*

THE SMALL-STRIATED PUPA. Shell short, pale greyish or slightly pink, variegated with reddish brown, finely and regularly ridged; deeply notched; inner lip provided with a strong tooth-like plait, columella deep, short, with one fold.

FERRUSSAC. *Pfeiffer Mon. VI. p. 292.*

Hab. Cuba, Haiti, Porto Rico, &c.

Species 19. (Mus. Sowerby.)

PUPA SAGRIANA. *Pap. testâ breviusculâ, subbrevitatâ, griseo-rubescenti, rubro-fuscescenti maculatâ, profundè rimatâ; apertura auriformi, magnâ, margine crasso, labio interno et columellâ uniplatâ.*

SAGRA'S PUPA. Shell rather short, rather smooth, greyish-red marbled with brownish-red, deeply

notched; aperture auriform, large, margin thick, inner lip and columella with one plait each.

PFEIFFER. *Monographia Helicorum II. p. 322.*

Hab. Cuba.

Species 20. (Mus. Sowerby.)

PUPA MARITIMA. *Pap. testâ pallidâ acutâ, subpyramidatâ, distanter, levitè costatâ, inter costas planulatâ, longè rimatâ, profundè umbilicatâ; apertura intus griseo-fabrâ, profundè, subtrigonâ, margine crasso, latè reflexa, columellâ profundissimâ, intus levitè pliatâ, labio interno tenuitè uniplatâ.*

THE MARITIME PUPA. Shell pale blueish, rather pyramidal, distantly, lightly ribbed, flattened between the ribs; with a long notch, and deep umbilicus; aperture fulvous grey within, deep, almost trigonal, margin thick, broadly reflected, columella very deep, slightly plaited within; inner lip with a thin plait.

PFEIFFER. *Monographia II. p. 322.*

Hab. Cuba.

Species 21. (Mus. Sowerby.)

PUPA RUDIS. *Pap. testâ oberâ, albidâ, tenui, costellis acutis, distantibus liratâ, obliquè rimatâ; apertura magnâ, superâ infraqe acuminatâ, margine angustâ, reflexâ, labio interno pliatâ elongatâ validâ minuto; columellâ rive plicatâ.*

THE ROUGH PUPA. Shell obese, whitish, thin, ridged with sharp, distant riblets, obliquely notched; aperture large, acuminated above and below, margin narrow, reflected, inner lip provided with an elongated strong plait, columella scarcely plaited.

PFEIFFER. *Monographia Helicorum IV. 657.*

Hab. — ?

Species 22. (Mus. Brit.)

PUPA IOSTOMA. *Pup. testâ cylindricâ, latâ, distanter leviter liratâ, cœruleo-albidâ, rubro-purpurascenti marmoratâ et strigatâ, anfractibus altis, rectis, apice acuminato, aperturâ crassâ violaceâ, biplicatâ.*

THE PURPLE-MOUTHED PUPA. Shell cylindrical, broad, distantly lightly ridged, blueish-white marbled or striped with reddish-purple, whorls elevated, straight, apex acuminated, aperture thick, violet, two-plaited.

PFIEFFER. Monographia Helicorum IV. p. 656.

Hab. Cuba.

The violet colour of the interior of the mouth is very peculiar.

Species 23. (Fig. a, b, Mus. Brit.)

PUPA ALVEARIA. *Pup. testâ subcylindricâ, angustâ, griseo-rosescenti, vel purpureo inter costas, versâs apicem attenuatâ, acuminatâ, costis crassiusculis numerosis; aperturâ brevi, subrotundâ, labio interno acutâ et minutè multiplicatâ.*

THE BEEHIVE PUPA. Shell cylindrical, narrow, grey-

ish-pink or purple between the ribs, attenuated towards the apex, acuminate, with rather thick, numerous ribs, aperture short, rather round, inner lip with a sharp, small plait.

DILWYN (Turbo). Pfeiffer II. 315.

Bulinus fusus, Brugnière.

Pupa fusus, Lamarck.

Pupa rubicunula, Mentse.

Hab. Bahamas.

Species 24. (Mus. Brit. and Sowerby.)

PUPA WEINLANDI. *Pup. testâ elevatâ, cylindricâ, tenuiter liratâ, pallidè rubescenti, fusco strigatâ; apice attenuato, anfracta altius obliquè breviter rimato; aperturâ magnâ, intus fuscâ, labio interno vir plicato.*

WEINLAND'S PUPA. Shell elevated, cylindrical, finely ridged, pale reddish, striped with brown, apex attenuated; last whorl obliquely, shortly notched; aperture large, brown within, inner lip scarcely plaited.

KUER, MS. Pfeiffer, Mon. VI. p. 290.

Hab. Crooked Island, Bahamas.



P U P A.

PLATE IV.

Species 25. (Mus. Brit.)

Pupa **ITALICA**. *Pup. testâ parvâ, tenui, subcylindrica, rufescente apicem attenuatâ, cinctâ, et fusco-purpureo-roseâ, obliquè cinctâ; aperturâ subquadratâ; margine interno sexseptuplicatâ.*

THE ITAL PUPA. Shell small, thin, subcylindrical, attenuated towards the apex, horny or purplish-brown, obliquely notched; aperture rather square, inner margin five-plaited.

DEPAENNA D. Mol. Fluv. et Ter.

Papa juniperi, Fleming.

Holix cylindrica, Stüder.

Hab. Europe.

Species 26. (Mus. Theolald.)

Pupa **MEMBRIS**. *Pup. testâ parvâ, pallidâ, cylindricâ, tenui et laticâ, supra medium tumidioribâ, rufâ, aperturâ subrotundâ; labiâ inferâ multiplicatâ, labiâ exteriorâ supra medium sinuatâ cinctâ.*

THE BELGIE PUPA. Shell small, pale, cylindrical, finely ridged, rather more tumid above the middle, notched, aperture somewhat auriform; inner lip single-plaited, outer lip sinuously contracted above the middle.

THEOLALD. Journ. Asiat. Soc. Beng. 1879.

Hab. Shan Provinces.

A little like *P. Blaufordi*, but not so tapering downwards, and quite different in the plaits of the mouth.

Species 27. (Mus. Sievers.)

Pupa **PHASIANUS**. *Pup. testâ albâ, parvâ, brevi, tenui, rufâ, cinctâ apicem subattenuatâ; anfractibus quinque, ultimo magno; aperturâ subquadratâ, margine interno labiâ septuplicatâ.*

THE PHASIAN PUPA. Shell white, small, short,

smooth, broad, a little attenuated towards the apex; whorls five, the last large, notched; aperture rather square, inner margin of the lips with six plaits.

DEBOIS. Journ. de Conch. 1873.

Hab. Central Russia.

Species 28. (Mus. Gassies.)

Pupa **LIFUANA**. *Pup. testâ minutâ, latâ, lotè umbilicatâ, tenuissimâ et regulariter striatâ, nitentâ, cornâ, ultimo anfractâ ad medium fusco-aurifasciatâ; suturâ minutissimâ crenulatâ, anfractibus 6, superioribus brevibus, inferioribus altis; aperturâ obliquâ, quadruplicatâ, plicis parietalibus, ad superiorâ maximâ, alterâ parvâ plicis columellari et labiali parvis.*

THE LIFOU PUPA. Shell minute, broad, broadly umbilicated, very finely and regularly striated, shiny, horny, and with a brown band in the middle of the last whorl; suture very finely crenulated; whorls 6, upper ones short, lower ones high; aperture oblique, with four plaits; parietal plaits, one superior, very large, the other small; columellar and labial plaits small.

GASSIES. Fauna Caledonia, Pt. 2, p. 98. 1871.

Hab. Lifou, of the Loyalty Group.

Species 29. (Mus. Sievers.)

Pupa **SIEVERSI**. *Pup. testâ cylindricâ, angustâ, pallidissimâ fuscâ, anfractibus 7, ultimo alta, rimatâ, subperforatâ, medianis subquadralibus; apice obtuso; aperturâ trigonâ, triplicatâ.*

SIEVERS' PUPA. Shell cylindrical, narrow, very pale fulvous, whorls 7, the last high, notched. Slightly perforated, middle ones nearly equal; apex obtuse; aperture trigonal, three-plaited.

MOUSSON. Journ. de Conchylogie, Pl. VII. f. 6.

Hab. Alluvial sands of Asia.

Species 30. (Mus. Hanley.)

PUPA BLANFORDI. *Pup. testâ cylindricâ, albâ, rimatâ, propè apicem ventrosâ, inficâ attenuatâ, tenuiter laticâ, anfractibus 8, ultimo angustato; apertura subquadrata, platis parietali, columnari et labiali mediovalis.*

BLANFORD'S PUPA. Shell cylindrical, whitish, notched, ventricose near the apex, attenuated below, finely ridged, whorls 8, the last narrow; aperture rather square, parietal, columnellar and labial plaits middle-sized.

GODWIN AUSTIN. Proc. Zool. 1872.

Hab. Khasi Hills.

Species 31. (Fig. a, b, Mus. Crosse.)

PUPA MARIEL. *Pup. testâ minutâ, fuscocornâ, brevi, inflatâ, tenui; anfractibus 4, ultimo subumbilicato, superâ medium subcontracto; apertura obliquâ, margine reflexo, tenui, superâ medium sinuatim contractâ, platis parietalibus duabus, parvis.*

MARIE'S PUPA. Shell minute, brown-horny, short, inflated, thin; whorls 4, last slightly umbilicated, a little contracted above the middle; aperture oblique, margin reflected, thin, sinuously contracted above the middle, parietal plaitst wo, small.

CROSSE. Journ. Conch. 1871, p. 202.

Hab. Environs of Noumea.

Species 32. (Mus. Hutton.)

PUPA LAPIDARIA. *Pup. testâ parvâ, corneâ, altâ, rimatâ, cylindricâ, leviter striatâ, anfractibus 7, inferioribus altis, rectis, subquadratis, apicè obtuso; apertura subcavatâ, obliquâ, anticè productâ, platis 4, parietali elongata, valido, columnari et labiali superiorî parvis, inferiorî elongata.*

THE STONY PUPA. Shell small, horny, high, notched, cylindrical, smoothly striated, whorls 7, lower

ones high, straight, nearly equal, apex obtuse; aperture rather oval, oblique, anteriorly produced, plaits 4, parietal one elongated, strong, columnellar and upper labial small, lower elongated.

HUTTON. Asiatic Society of Bengal, 1870, p. 400.

Hab. Afghanistan.

Species 33. (Mus. Hanley.)

PUPA BATHYBOS. *Pup. testâ minutâ, brevitatâ, fuscâ, hercissimâ, subpyramidalâ, spirâ versâ apicem attenuatâ, anfractibus 5, rotundis, ultimo rimato, apertura obliquâ, subcavatâ, margine rubro, platis una parietali, duabus columnaribus, duabus labialibus; columella obliquâ.*

THE DEEP-TOOTHED PUPA. Shell minute, smooth, brown, rather short, rather pyramidal, spire attenuated towards the apex, whorls 5, rounded, last notched, aperture oblique, rather ovate, margin red, plaits one parietal, two columnellar, two labial; columella oblique.

BENSON. Annals of Natural History, 1848.

Hab. Nerbudda.

Species 34. (Mus. Gassies.)

PUPA OBLIQUA. *Pup. testâ albâ, minutâ, subcavatâ, brevi, leviter umbilicatâ, anfractibus 5, convexis, ultimo inflato, alto; apicè pyramidalâ, obtuso; apertura subtrigonalâ, platis parietali, marginâ, perpendiculari, valido.*

THE OBLIQUE PUPA. Shell whitish, minute, subovate, smooth, slightly umbilicated, whorls 5, convex, last inflated, high; apex pyramidal, obtuse; aperture subtrigonal, parietal plait large, perpendicular, strong.

GASSIES. Fauna Caledonia, 1871, p. 97.

Hab. Environs of Noumea and Conception.



P U P A.

PLATE V.

Species 35. (Mus. Hanley.)

PUPA MICROSTOMUS. *Pup. testis bipol., post tubum in*
aperturâ circumâ, crenatâ, levit., marginibus 11;
allium angustè clavatis; aperturâ albiâ, crenatâ;
labiâ subulnariâ; dentibus supra
columnellâ unâ, parvâ; infra, duobus; unâ ad
columnellâ, sursum attingentibus, unâ ad columnellâ in-
teriusculatâ, crenatâ; labiâ planâ.

THE DEVIANT PUPA. Shell short, notched rather convex
behind the lip, horny, thin, semi-pellucid; last
whorl elevated; aperture white, contracted
within; lip rather flattened; teeth, one above
the columella perpendicular, acute; one on the
columella sloped upwards; one on the inner
margin of the outer lip, broadly flattened.

PARVUS (Balimus). Pfe. Bl. Malak. 12, 1865.

Hab. Greece.

Species 36. (Mus. Hanley.)

PUPA TETRASPIS. *Pup. testis bipol., crenatâ, levit.,*
circumâ; levit., marginibus sex, allium subulnariâ,
aperturâ subulnariâ, marginibus bipol., allium, dentibus
duobus transversis acutis.

THE TETRASPIS PUPA. Shell thin, horny, shortly
notched, short, whorls six, the last rather
raised, aperture rather broad, margin thin,
white, armed with three conspicuous teeth.

ROS-MÛSLE (Balimus). Pfe. Mon. Helicorum —
1868, p. 68.

Hab. Asia Minor.

This species has been placed with *Pupa Bergii*,
as a variety, but is much shorter, with fewer whorls
and a thinner peritreme.

Species 37. (Mus. Hanley.)

PUPA BERGII. *Pup. testis elati, subcrenatis, allium*
et purpureâ, levitè crenatâ, angustibus 8,
gradatim crenatis; aperturâ albiâ, crenatâ,
superâ acuminatâ, marginibus crassis, dentibus tribus
crassis acutis acutis.

BERGII'S PUPA. Shell elevated, rather ventricose,
white or purple, shortly notched, whorls 8,
gradually increasing; aperture white, ear-
shaped, pointed above, margin thick, armed
with three thick and sharp teeth.

ROTHMAN (Balimus). Pfeiffer, Monographia Helicorum, 1868, p. 68.

Chondrus Bergii, Moisson.

Hab. Southern Europe.

See observation on the preceding species.

Species 38. (Mus. Hanley.)

PUPA SUBVIA. *Pup. testis ventricosâ, crassiusculâ,*
crenatâ; spirâ elatâ, trochiformi, angustibus
aperturâ crenatis, obliquè levitâ, suturâ post-
fundâ; allium contractâ planiusculâ, transversè
crenatâ, aperturâ obliquè prolata; superâ sub-
quadratâ, marginibus crassis, reflexis; columellâ cren-
atisculâ.

THE GROOVED PUPA. Shell ventricose, rather thick,
horny; spine elated, trochiform, whorls equally
increasing, obliquely ridged, suture deep; last
whorl rather smooth, transversely notched,
aperture obliquely produced, rather square
above, margin thick, reflected; columella rather
straight.

BELGIERI (Balimus). Em. Mel.

Chondrus Goudanus, Adams.

Hab. Mauritius.

Species 39. (Mus. Hanley.)

PUPA ELATA. *Pup. testis subfusiformi, purpureâ*
crenatâ; spirâ elatâ, angustibus 7, levitè cren-
atis, crenatis, allium elatâ, crenatâ;
aperturâ subulnariâ, marginibus albis, crassiusculâ,
subplanatâ, dentibus duobus, parvis, uno superâ
columnellâ acutâ, uno ad marginem interium
labii externi levitè; columellâ edentatâ.

THE ELEVATED PUPA. Shell subfusiform, purplish-
horny; spine elevated, whorls 7, slowly in-
creasing, rather convex, the last raised,
scarcely notched; aperture rather oval, margin
whitish, rather thick, rather flattened, teeth
two, small, one above the columella, sharp; one
on the inner margin of the outer lip, elevated;
columella without teeth.

SCHMIDT. —? MS.

Hab. Carinthia.

This species belongs to the 'Chondrus' group.

Species 40. (Mus. Hanley.)

PUPA QUADRIDENS. *Pup. testā elati, subcylindrica, purpureo-fusca, tenui, angustā, sinistriā; spirā elevatā, anfractibus 8, rectisaculis, levē crescentibus; apertura brevi, subtriangulī; margine albo, planulato; dentibus labii exteriori uno, anfractūs ultimi uno, columellæ duobus.*

THE FOUR-TOOTHED PUPA. Shell raised, subcylindrical, purple-brown, thin, narrow, sinistral; spire raised, whorls 8, rather straight, slowly increasing; aperture short, rather trigonal; margin white, flattened; teeth, one on the body whorl, one on the outer lip, and two on the columella.

MULLER (Pupa). Pfr. (Balimus), Mon. Hel. 1868, p. 69. Genus 'chondrula.'

Hab. Southern Europe.

Species 41. (Mus. Hanley.)

PUPA PAGODA. *Pup. testā solidiōsensū, riculifusca, castaneo-lineatā, tenuiter licatā, ventricosā, latā; spirā trochiformi; ultimo anfractu ad suturam gibbo, tūā declivē, infra profundi, longē et transversē rimato; apertura albā, obliquē productā, subquadrata, margine incrassato, edentulo.*

THE PAGODA PUPA. Shell rather solid, greenish-brown, with chestnut lines, finely ridged, ventricose, broad; spire trochiform; last whorl gibbous at the suture, then sloped downwards, with a deep, long, and transverse notch below; aperture white, obliquely produced, rather square, margin thickened, toothless.

FERRUSSAC (Helix), Pfr. (Pupa), Mon. Hel. 1868, p. 287.

Helix concaveolata, Wood.

Pupa *labia*. Mentse.

Hab. Mauritius.

Belonging to the 'Gibbus' or 'Gonidomus' section.

Species 42. (Mus. Hanley.)

PUPA VARIABILIS. *Pup. testā elongato-cylindrica, purpureo-fusca, solidiōsensū, spirā elevatissimā, anfractibus 13, rectisaculis, levē crescentibus, ultimo transversē rimato; apertura marginē; margine albo, subincrassato, labio exteriori superē medium tumido, plieis anfractūs ultimi minutā, plieis columellaribus duabus, minutis, plieis interioris duabus, lamelliformibus.*

THE VARIABLE PUPA. Shell elongated-cylindrical, purple-brown, rather solid, spire much raised, whorls 13, rather straight, slowly increasing, the last transversely notched; aperture large; margin white, rather thickened, outer lip tumid above the middle, fold of the body whorl minute, columellar folds two, small, interior folds two, lamelliform.

DEAPARNAUD. Coq. Fluv. et Terr.

Helix variabilis. Ferrussac.

Pupa *multidentata*. Olivier.

Hab. France, Spain, Greece.

Species 43. (Mus. Hanley.)

PUPA QUINQUEIDENTATA. *Pup. testā subfusiformi, elongatā, grisea, fusco-variegatā, levigatā; spirā elevatissimā, medio subangulatā, anfractibus 10, concavissimis; ultimo obliquē rimato; apertura ovatā, plieis interioris tribus, plieā columellarī unā, plieā anfractūs ultimi parvā, margine tenui.*

THE FIVE-TOOTHED PUPA. Shell rather fusiform, elongated, grey, variegated with brown, smooth; with elevated spire; a little inflated in the middle; whorls ten, rather convex; the last obliquely notched; aperture ovate, interior folds three, columellar fold one, fold on the body-whorl small; margin thin.

BOEN. — ? Pfr. Mon. Hel.

Balimus similis. Bruguière.

Javanica quinqueidentata. Risso.

Hab. Southern Europe.

Species 44. (Mus. Hanley.)

PUPA FUSIFORMIS. *Pup. testā parvā, subfusiformi, fusca, levigatā; spirā elevatā, medio subangulatā; anfractibus 11, levē crescentibus; ultimo longē rimato; apertura latissimā, columellā profundā, latissimā, labio bicrenatā; dente anfractūs ultimi parvo, plieis interioris quatuor, lamelliformibus, ad dorsum apparuitibus.*

THE COEN PUPA. Shell small, rather fusiform, brown, smooth; spire elevated, a little inflated in the middle; whorls 11, slowly increasing; the last with a long notch; aperture rather broad, columella deep, very broad, with two interior teeth; tooth of the body whorl small, interior folds four, lamelliform.

DEAPARNAUD. Coq. Fluv. et Terr.

Pupa curta. Potiez et Michaud.

Hab. Southern Europe.



PUPA.

PLATE VI.

Species 45. (Mus. Hanley.)

PUPA SPHECIFORMATA. *Pap. testâ brevis, multilobâ, albâ, laevigatâ; spirâ brevissimâ, anfractibus 4, cæcis, cæcescatis, angustis, circumscissis; ultimo cæcescatis, clava, post labium setigerâ oblique leviter rimatâ; aperturâ levit. subovata, marginibus levit. septidentatis, marginibus adscissis.*

THE SEVEN-TOOTHED PUPA. Shell short, ventricose, white, smooth; spire very short, whorls 4, quickly increased, narrow, rather convex; the last rather straight, elevated, with a short oblique notch behind the inner lip; aperture short, rather ovate; inner margin seven-toothed, outer margin sharp.

ROTHMAN. —? Pfr. (Balinus). Mon. Hel. 1868, p. 79.

Hab. Syria.

Belonging to the 'Chondrus' group of species.

Species 46. (Mus. Hanley.)

PUPA QUADRATA. *Pap. testâ parvâ, fuscâ, laevigatâ, cylindricâ; spirâ obtusâ, elongatâ, anfractibus 7, mediânis levit. cæcescatis; ultimo profundè rimatâ, aperturâ levit. angustâ, labio cæcis, labis incrassatis, subovatis, multiplicatâ, anfractu ultimo supra clavam plerâ elongatâ unilatâ.*

THE THROAT PUPA. Shell small, brown, smooth, cylindrical; spire obtuse, elongated, whorls 7, middle ones scarcely increasing; last deeply notched; aperture short, narrow, outer lip thickened within, columnella with one plait; last whorl provided with one plait above the columnella.

ROSSMÄLER. Pfr. Mon. Hel. 1868, vol. 6, p. 305.

Hab. Transylvania, &c.

Species 47. (Mus. Hanley.)

PUPA TRIDENS. *Pap. testâ subovata, pallidissimâ cæcescatis, spirâ elevatâ, anfractibus 6, supericioribus 5 angustis, subangustis, ultimo elevatâ, breviter rimatâ; aperturâ subovata, marginibus reflexis, subplanatis, intus tridentata.*

THE THREE-TOOTHED PUPA. Shell subovate; very pale reddish, spire raised, whorls 6, upper 5 narrow, rather inflated, last raised, with a short notch; aperture rather oval, margin reflected, rather flattened, three-toothed within.

MÜLLER (Helix), Pfr. (Balinus). Mon. Hel. 1868, vol. 6, p. 63.

Hab. Central Europe.

Belongs to the 'Chondrus' group.

Species 48. (Mus. Hanley.)

PUPA TALANCA. *Pap. testâ elongatâ cylindricâ, supra dorsum cornu involutâ, solidâ, regulariter obliquè rimatâ; spirâ elevatâ, obtusissimâ; anfractibus 7, mediânis levit. cæcescatis, ultimo elongatâ, levitè rimatâ; aperturâ subquadratâ; pericoma continuo, margine rotundâ, supra anfractum ultimam multiplicatâ.*

THE CLIP PUPA. Shell elongated, cylindrical, covered with horny epidermis, solid, regularly obliquely ridged; spire elevated, very obtuse; whorls 7, the middle ones slowly increasing, last elongated, shortly notched; aperture rather square; peritreme continuous, margin rounded with a single tooth upon the last whorl.

LESSON. —? Pfr. Mon. Hel. 1868, vol. 6, p. 203.

Papa fovea, Potiez et Mich.

Hab. Isle of France.

Species 49. (Mus. Hanley.)

PUPA QUINQUEIDENTATA. *Pap. testâ pallidâ, fuscâ, subovata, laevigatâ; spirâ elevatâ, pupiformi, inflata; anfractibus 7, levit. cæcescatis, ultimo longè rimatâ; aperturâ subtriangulâ, marginibus albis, continuo, cæcis, reflexis, ad suturam collatis; plerâ dentiformibus quinque unilatâ.*

THE FIVE-TOOTHED PUPA. Shell pale fulvous, subovate, smooth; spire elevated, pupa-shaped, inflated; whorls 7, slowly increasing, the last with a long notch; aperture subtriangular, margin white, continuous, thick, reflected, callous at the suture, provided with five tooth-shaped plaits.

M. BELFOLD. —Pfr. Mon. Hel. 1868, vol. 6. (Balinus), p. 68.

Pupa quinquoplicata. Potiez et Michaud.

Hab. Dahumata.

A species of the 'Chondrus' or 'Chondrula' group, resembling *Irypa tricuspis*, but having a second small plait on the body whorl, and the same on the columella, making, with the large one on the outer lip, five tooth-like projections.

Species 50. (Mus. Hanley.)

PUPA SPRETA. *Pup. testâ ovato-acuminatâ, pallidè fulcâ, tenuiter striatâ; spirâ elevatâ, aufractibus 6, convexiusculis, tribus apicalibus rapidè crescentibus, medianis subequalibus, ultimo alto breviter rimato; aperturâ breviusculâ, subauriformi, margine albo, crasso, reflexo, lato, subplanulato, intis tridentato.*

THE SLIGHTED PUPA. Shell ovate-acuminated, pale fulvous, finely striated; spine elevated, whorls 6, rather convex, the three of the apex quickly enlarging, the middle nearly equal, the last high, with a short notch; aperture rather short; rather auriform, margin white, thick, reflected, broad, rather flattened, three-toothed within.

RYLVE (*Bulimus spretus*). Couch. Icon. Monog. *Bulimus*.

It was not observed, till after figuring this shell, that it had been admitted among the *Bulimi*. It belongs to the 'Chondrus' group.

Species 51. (Mus. Hanley.)

PUPA NEWTONI. *Pup. testâ obliquè elongato-ovata, obliquè costatâ, pallidè luteâ; spirâ subtrochiformi, suturâ profundâ, aufractibus 6, convexiusculis, ultimo profundè rimato, anticè ascendenti; aperturâ obliquè oblongâ, margine breviter expanso, tenuiter rotundo, per callum super aufractum ultimam continens, columellâ obliquâ.*

NEWTON'S PUPA. Shell obliquely elongated ovate, obliquely ribbed, pale yellowish; spine rather trochiform, with a deep suture; whorls 6, rather convex, the last with a deep notch, anteriorly ascending; aperture obliquely oblong, margin shortly expanded, thinly rounded, continued by a callus on the last whorl, columella oblique.

H. ADAMS (*Gilbus*). Proc. Zool. Soc. 1867, p. 305.

Hab. Stag's Cave in the Mauritius.

Thinner, narrower, and more finely sculptured than *Pupa sulcata*.

Species 52. (Mus. Hanley.)

PUPA DEALBATA. *Pup. testâ oblongâ, obtusissimè cylindricâ, albâ, tenuissimè striatâ; spirâ truncatâ, aufractibus 5, superioribus inflatis; ultimo profundè rimato, subangustato; aperturâ subquadratâ, latâ, anticè rotunda, posticè subtruncatâ.*

THE WHITENED PUPA. Shell oblong, very obtusely cylindrical, white, very finely striated; spine truncated, whorls 5, the upper ones inflated, last with a deep notch, rather narrow; aperture subquadrate, broad, anteriorly rounded, posterior rather truncated.

WEBBS. Pir. Mon. Hel. 1868, vol. 6, p. 287.

Hab. Canary Islands.

Differing from 'P. modiolus' (Sp. 54) in the enlargement of the upper whorls.

Species 53. (Mus. Hanley.)

PUPA SEDUCTIVIS. *Pup. testâ sinistrorsâ pallidè, fulcâ, cylindricâ, brevi, spirâ elevatâ, aufractibus 8, medianis lentè crescentibus subequalibus, ultimo indistinctè rimato; aperturâ brevi, margine crasso, intis validè tridentatâ.*

THE SEDUCTIVE PUPA. Shell pale fulvous, cylindrical, smooth, spine elevated, whorls 8, middle ones slowly increasing, nearly equal, last with an indistinct notch; aperture short, margin thick, strong, with three strong teeth within.

ZEIGLER.—Pfr. Mon. Hel. (*Bulimus*), 1868, vol. 6 (*Bulimus*), p. 69.

Bulimus Niso, Pfeiffer. Olim.

Hab. Central Europe.

Of the 'Chondrus' group.

Species 54. (Mus. Hanley.)

PUPA MODIOLUS. *Pup. testâ breviter cylindricâ, albâ, tenuiter obliquè striatâ, spirâ versis apicem paulo attenuatâ, aufractibus 6, apicalibus obtusis, ultimo profundè rimato; aperturâ anticè ascendenti subquadratâ, margine albo, subexpanso, brevi.*

THE BUCKEL PUPA. Shell shortly cylindrical, whitish, finely obliquely striated, spine a little tapering towards the apex, whorls 6, apical ones obtuse, the last deeply notched; aperture raised in front, rather square, margin white, rather expanded, smooth.

FERRUSSAC.—Pfr. Mon. Hel. 1868, vol. 6, p. 293.

Hab. Isle of France (Bourbon).

Of the 'Gibbus' group, much shorter than 'Pupa palanga.'



P U P A.

PLATE VII.

Species 56. (Mus. Hanley.)

PUPA DOLIPM. *Pup. testis coccois, haudae, did-joi-
-celsi, cylindrica, elata; suturalibus tribus, im-
-presso, medianis subquadratis, supero-externis subito
-contractis, ultimo longe exsertis, apertur. obtusa;
-apertur. super. albicans, angustata, elata, mar-
-gina alba; columella biplicata, ultimo infractis
-pre-columellari carinatum multiplicata.*

THE D.S. PUPA. Shell horny, finely obliquely
-striated, cylindrical, raised; whorls ten, de-
-pressed, middle nearly equal, the upper ones sud-
-denly contracted, the last with a long notch,
-spire obtuse, aperture raised on the last whorl,
-margin white; columella two-plaited, last whorl
-with a single plait near the outer lip.

DREPARNAUD. Mol. Terest. et Fluv.

Hab. Spain, France, Germany.

Species 56. (Mus. Hanley.)

PUPA MUSEPTIDA. *Pup. testis fusco-rosei, loricisculi,
-alti, subcylindrica; angustata, quinque, ultimo
-profunde cincta, penultima inflata, super. elata
-gradatim attenuata, apert. obtusa; apertur. sub-
-quadrata, plura tribus, non ad medium latitudo
-tenui, non ad medium cincta, sub later. apert.
-tenui, loricis.*

THE MUS. PUPA. Shell horny-brown, rather
-smooth, elevated, subcylindrical; whorls five,
-last deeply notched, penultimate inflated, upper
-gradually attenuated, apex obtuse; aperture
-subquadrate, plaits three, one placed at the
-middle of the inner lip, one at the middle of the
-columella, and one within the aperture.

BENSON, v. Hanley's Indian Shells.

Hab. Ceylon.

Species 57. (Mus. Hanley.)

PUPA PLANGUNTULA. *Pup. testis albi, pallidi, pellucidii,
-alti, cylindrica; angustata, quinque, cecidatocor-
-tilibus, primo obtusissimè compressa, ultimo obli-
-què cincta, umbilicata; sutur. profunda; aper-
-tur. contracta, pluri columellari crassa, quasi*

*dentata, subululo; abeta, interiore, lobulata, ter-
-tiorum angustis, medio aluminis contracto,
-non fissurata, pluri subululo, acuta.*

THE PUPA PUPA. Shell white, polished, pellucid,
-elevated, cylindrical; whorls five, straight-sided,
-the first very obtusely compressed, the last obli-
-quely notched, umbilicated; suture deep; aper-
-ture contracted, columellar fold thick, as it were
-duplicated, callus of the inner lip very large,
-outer lip neatly bordered, sinuously contracted
-in the middle, with three plaits inside, the middle
-plait elongated, acute.

BENSON, v. Hanley's Ind. Shells.

Hab. Kanah Hills.

Species 58. (Mus. Hanley.)

PUPA SCUTIPUPA. *Pup. testis angusti, attenuati, albida,
-angustata, et c., apertur. longicincta, medianis et
-bifurcatis contractis et ceteris plicatis, ad suturam
-circularis; ultimo cincta, apertur. latiusculi, pluri
-suturati, maximi, pluri columellari lamelliformi,
-pluri laterali rotundi.*

THE SCUTIFIELD PUPA. Shell narrow, attenuated,
-whitish; whorls eight, those at the apex smooth,
-middle and lower neatly and closely plaited,
-crenulated at the suture; the last notched;
-aperture rather broad, sutural plait very large,
-columellar plait lamelliform, inner plait strong.

BENSON, v. Hanley's Ind. Shells.

Hab.—? India.

Species 59. (Mus. Hanley.)

PUPA FIDUSA. *Pup. parvi, fusco-argentei; infrac-
-tilibus quatuor, tribus inflatis, rapidly crescentibus,
-fibris striatis, ultimo brevissimis, breviter cinctis,
-apertur. auriformi, quinque-plicati.*

THE THREADED PUPA. Shell small, blackish brown,
-whorls four, three inflated, rapidly increased,
-with thread-like striae, the last rather short,
-shortly notched; aperture ear-shaped, five-
-plaited.

THEOBALD, Hanley's Indian Shells.

Hab. India.

Species 60. (Mus. Hanley.)

PUPA AVANICA. *Pup. pellucida, parva, lœvi, subcylindrica; anfractibus quinque, depressisculis, rotundis, convexissimis; ultimo breviter rimato, ascendenti; apertura latissimali, callo crasso, magno, hîdo, parietali prope suturam anfractibus ultimis, columella biplicata; labio exteriori albo, lato; plicis palatalibus tribus.*

THE AVA PUPA. Shell pellucid, small, smooth, subcylindrical; whorls five, rather depressed, round, very convex; the last shortly notched, ascending; aperture rather broad, with a thick, large, divided parietal callus near the suture of the last whorl, columella with two plaits, outer lip white, broad; palatal plaits three.

BENSON. Ann. and Mag. of Nat. Hist. Dec. 1863, p. 424.

Hab. Ava. Blanford.

Species 61. (Mus. Hanley.)

PUPA MIMULA. *Pup. testâ minuti, ventricosa, subviridi-cornea, tenuiter striata, anfractibus quatuor, convexis, apicali obtusissimo, ultimo rite ascendenti, brevissimè rimato; apertura subquadrali, acutissimè quinque-dentata.*

THE MIMIC PUPA. Shell minute, ventricose, greenish-horn, finely striated, whorls 4, convex, the apical one very obtuse, the last scarcely raised, very shortly notched, very sharply five-toothed.

BENSON, Hanley's Indian Shells.

Hab. Ceylon.

The five tooth-like plaits, one on the body-whorl, two on the columella, and two on the outer lip, nearly meet in the middle.

Species 62. (Mus. —? Copied.)

PUPA SALEMANENSIS. *Pup. testâ minutissimâ, conicâ, costellati, anfractibus quinque, gradatim crescentibus, ultimo profundè rimato; apertura auriformi, plicis dentiformibus, duabus parietalibus, una medio labii exteriori prominenti armata.*

SALEMAN'S PUPA. Shell very minute, conical, finely ribbed, whorls five, gradually increasing, the last deeply notched; aperture ear-shaped, armed with

tooth-like plaits, two parietal, one prominent on the outer lip.

BLANFORD (Eunca). Contributions to Ind. Mal. No. 2, 1861, p. 13, t. 2. f. 8.

Hab. India.

Species 63. (Mus. Brit.)

PUPA INDICA. *Pupâ testâ parvâ, subcylindricâ, coracâ, semipellucidâ, anfractibus quinque, levissimis, tribus superioribus rapidè crescentibus, rotundis, paulatim et ultimo rectisculis, ultimo sublongato, breviter rimato; apertura subquadrali, margine crasso, reflexo, quadridentata.*

THE INDIAN PUPA. Shell small, subcylindrical, horny, semipellucid, whorls five, rather smooth, the three upper ones quickly increased, rounded, the penultimate and last rather straight, the last rather long, with a short notch; aperture rather square, with thick, reflected four-toothed margin.

PELLEFFER. Mon. Hélic. IV. 679.

Hab. Barrakpore, India.

Species 64. (Mus. —? Copied.)

PUPA CYLINDRICOIDEA. *Pup. testâ parvâ, attenuatâ, albâ, apice obtusa, medio ventricosa, basi subcontracta; anfractibus 10, convexisculis, profundi suturalis; primis tribus levigatis, lœvissimis, ceteris conjunctim costellatis, ultimo infra subaurinato, obliquè saluto, pauli descendenti; apertura pauli obliquâ, acuto-subcolumella, supra prope angulum posteriorem lamella obliquâ, crassissima, callo contracto, labio exteriori superne prope angulum apicalis alata.*

THE CYLINDRICAL-SHAPED PUPA. Shell small, attenuated, white, apex obtuse, middle ventricose, rather contracted at the base; whorls ten, rather convex, with a deep suture; the three first smooth, glassy, the rest closely ribbed, the last slightly keeled below, obliquely separated, a little descending; aperture a little oblique, ovate-rounded, with an oblique, very thick, strongly curved lamina above, near the posterior angle, outer lip with a single tooth on the outer lip above near the angle.

STOLICZKA. Journ. As. Soc. Bengal. Vol. XL. Pt. II. 1871.

Hab. Mouluin, India.



65



66



67



68



69



70



71



72



73



74

aperturâ ovatâ, angustâ, plicis parietalibus super anfractum ultimam duabus, plicâ palatiali infra medium ad labii externi marginem ceterarum extensa.

PHILIPPI'S PUPA. Shell small, brown, elongated, cylindrical, attenuated towards the apex, very finely striated; whorls five, moderately convex; aperture ovate, narrow, with two parietal plates upon the body whorl, a palatal plate below the middle extended to the outer margin of the lip.

CANTERBINE. Pfeiffer, Mon. Hel. II. 350.

Pupa exigua (var.) Mousson.

Hab. Italy—Dalmatia—Isl. Corfu.

Species 70. (Mus. Hanley.)

PUPA AVENACEA. *Pup. testâ elatâ, fuscâ, attenuatâ, anfractibus sex, moderatè convexis; aperturâ ovatâ, callo suturali calido, plicis super ultimam anfractum unâ, ad columellam duabus, intus marginem internam labii externi tribus lamelliformibus aperturam intrantibus.*

THE WHEAT PUPA. Shell raised, brown, attenuated; whorls six, moderately convex; aperture ovate, sutural callus strong, plates on the last whorl one, two on the columella, three within the inner margin of the outer lip, lamelliform, entering the mouth.

BENIGÈRE. Pfeiffer, Mon. Hel. II. 347.

Pupa avena, Draparnaud.

Pupa hordeum, Ferrussac.

Hab. Germany, Austria, Spain, France, &c.

Species 71. (Mus. — ? Copied.)

PUPA METALATA. *Pup. testâ brevissimâ, tenuiter costatâ, pallidè fulcâ, cylindricâ, spirâ obtusâ, anfractibus sex, ultimo profundè rimato; aperturâ oblongâ, vie obliquâ, ovato-pyriformi; columellâ subobliquâ, labio externo vie repleto.*

THE BLUNT-POINTED PUPA. Shell rather short, finely ribbed, pale fulvous, cylindrical, spire obtuse, whorls six, the last deeply notched; aperture without teeth, scarcely oblique, ovate-pyriform; columella rather oblique; outer lip scarcely reflected.

CROSS (Gonospira), Journal de Conchyliologie, 1874, p. 224. Pl. VIII. f. 5.

Gonospira Dupontiana. Crosse (olim).

Hab. Isl. Rodriguez.

Shorter and more ventricose than *P. modiolus*, with larger aperture and a slight obliquity.

Species 72. (Mus. — ? Copied.)

PUPA RODRIGUEZENSIS. *Pup. testâ profundè rimatâ, albâ, subcylindricâ, tenui, translucidâ, tenuiter striatâ, apice conicâ; anfractibus quinque, duobus ultimis cylindricis; aperturâ subquadratâ, edentulâ; labio externo tenui.*

THE RODRIGUEZ PUPA. Shell deeply notched, white, rather cylindrical, thin, translucent, finely striated; apex conical; whorls five, the two last cylindrical; aperture rather square, toothless, outer lip thin.

CROSSE. Journ. de Conch. 1874, p. 224, Pl. VIII. Fig. 4.

Hab. Isl. Rodriguez.

A likeness in miniature of the preceding, but much shorter and thinner, with the mouth straighter.

Species 73. (Mus. — ? Copied.)

PUPA CHLOEIS. *Pup. testâ flavidâ, versus apicem rubescens, brevî, cylindricâ; apice conico, obtuso; anfractibus quinque, densè costatis; aperturâ obliquâ, subquadratâ, edentulâ.*

THE GOLDEN PUPA. Shell yellow, becoming red towards the apex, short, cylindrical; apex conical, obtuse; whorls five, closely ribbed; aperture oblique, rather square, without teeth.

CROSSE (Gonospira), Journ. de Conch. 1874, f. 7.

Hab. Isl. Rodriguez.

Shorter and more solidly ribbed than the two preceding, with the aperture more oblique.

Species 74. (Mus. — ? Copied.)

PUPA SINIATA. *Pup. minutissimâ fulvo-cornuâ, loricâ, brevî, ventricosâ; anfractibus quatuor, rotundis, apicibus duobus rapidè crescentibus, ultimis duobus imbratis, ultimo rimato; aperturâ subquadratâ, dentibus sex contractis et sinuatis.*

THE SINIATED PUPA. Shell very minutely fulvous-horn, smooth, short, ventricose; whorls four, rounded, the two apical quickly enlarged, the last two inflated, the last with a notch; aperture rather square, contracted and sinuated with six teeth.

MOUSSON (Vertigo), Crosse, Journ. de Conch. Pl. VIII.

Fig. 10.

Hab. Araxis.



unijata, *profunde undulatostrigata*: *aperturâ sub-*
ventrali, *callo pupæ sativæ inaccessivâ*; *margi-*
ne expansâ, *reflexâ juxta inflexâ*.

THE CHANGELING PUPA. Shell oblong, cylindrical, white, obliquely costellated; apex very obtuse, whorls six, three first rounded, rapidly increased, the three others with a deeply notched umbilicus; aperture rather rounded, with an inconspicuous callus near the suture; margin expanded, reflected, almost entire.

PELLÉER. *SM* (Vespipolis), *Pfl. Mon. Hel. II. 319.*

Hab. Isle of Bourbon.

Species 89. (Mus. Sowb.)

PUPA EMILLICUS. *Pap. testâ cylindrico-subpyramidalâ*, *apicem rotundâ*, *infusâ fluridâ*; *anfractibus sex*, *ob-*
liquis, *tenaciter costatis*, *superioribus parvis* *ultra*
orbem; *ultimo brevi*, *profundè rimato*; *aperturâ*
adscendente obliquâ, *margine reflexâ*, *subexpansâ*,
callo suturali pupæ sativæ calido.

THE SHAL PUPA. Shell cylindrical-subpyramidal, red above, yellowish below; whorls six, obliquely finely ribbed, the upper a little attenuated, the last short, deeply notched; aperture raised, oblique, margin reflected, slightly expanded, sutural callus near the suture strong.

PELLÉER. *Mon. Hel. IV. 661.*

Hab. Mauritius.

Species 81. (Mus. Sowb.)

PUPA LYONETTI. *Pap. testâ latè pyramidalâ*, *fluridâ*,
costellatâ; *apice obtuso*, *anfractibus superioribus*
quinque granulata crescentibus, *rectiusculis*; *ultimo*
lobatè expanso, *interè sinistè gibboso*, *infusâ*
rimâ elongatâ duplicatâ; *aperturâ obliquè aurifor-*
mâ, *orbis adscendenti*, *margine inaccessivâ reflexâ*.

THE SHAL PUPA. Shell broadly pyramidal, yellowish, ribbed; apex obtuse, five upper whorls gradually increasing, rather straight, the last laterally expanded, gibbous at the left side, doubled below, with a long slit; aperture obliquely auriform, much raised; margin thickened, reflected.

MESCHERT (Lyonetti).

Callus Lygactinus, Pfeiffer.

Hab. Isl. Bourbon.

This species sometimes occurs reversed.

Species 82. (Mus. Sowb.)

PUPA CLAVATULA. *Pap. testâ tenui*, *costatâ*, *cylindricâ*,
supra medium inflatâ; *anfractibus 10*, *costellatis*,
tercis apicem latissimis infusâ contractis, *ultimo*
rimato; *aperturâ parvâ subquadratâ*, *adscen-*
denti, *callo suturali angustâ*.

THE CLUB PUPA. Shell thin, ribbed, cylindrical, inflated above the middle; whorls ten, ribbed, very broad towards the apex, contracted below, the last notched; aperture small, rather square, ascending, sutural callus large.

LAMARCK. *Anim. 8. Vert.*

Hab. Isl. Bourbon.

Species 83. (Mus. Sowb.)

PUPA HOLLANDIOMA. *Pap. testâ tenui*, *costatâ*, *albâ*, *cy-*
lindricâ, *supra medium parvè inflatâ*; *anfractibus*
numerosis, *inferioribus sublatè auratis*; *ultimo*
angustè rimato; *aperturâ parvâ*, *subquadratâ*,
callo suturali angustâ.

THE SPIKE-MOCHED PUPA. Shell thin, ribbed, white, cylindrical, a little inflated above the middle; whorls numerous, the lower ones partly attenuated; the last narrow, notched; aperture small, subquadrate, sutural callus very large.

MOEHLI. *Scv. Conch. II. 1860.*

Hab. Mauritius.

Narrower than the preceding, and with the upper whorls less inflated.

Species 84. (Mus. Sowb.)

PUPA DUSSEMEIL. *Pap. testâ ventricosâ*, *albâ*, *epi-*
dermide coccoâ subcirrâ; *anfractibus 6*, *sub-*
depressis, *ultimo magno infusâ attenuato*, *profundè*
rimato; *aperturâ ovatâ*, *pyriformi*; *margine*
reflexâ.

DUSSEMEIL'S PUPA. Shell ventricose, white, with a greenish horny epidermis; whorls six, rather depressed, the last large, attenuated below, deeply notched; aperture ovate, pyriform; margin reflected.

REVEL (Bolimus), *Conch. Icon. Vol. V.*

Hab. Mauritius.



86



85



87



88



89



90



91



92



93



94

PUPA.

PLATE X.

Species 85. (Mus. —? Copied.)

PUPA FALGIANA. *Pup. testis sinistral, elongato-cylindrica, subulata, alba; spiris octis contractis; alis rudibus; nervis aperturam subulatae contractis; aperturâ subulatae ovata, margine albo, lab. ciliatis, illis simplicibus. Platis octis, productis, tuba setosa ad marginem ciliatis.*

PUPA PARIETIS. Shell minute, hemispherical, sinistral, oblong-ovate, spire obtuse; whorls five, regular, regularly increased, the last scarcely notched, strongly contracted towards the aperture, aperture auriform, almost vertical, plaits three, one columellar, one parietal, one produced within the margin of the outer lip; outer lip contracted.

CROSSI. Journ. de Conch. Vol. XX, p. 359, 1872.
Hab. New Caledonia.

Species 86. (Mus. Hanley.)

PUPA SAUVYI. *Pup. testis sinistral, brev. pallide fulva, subulata decussata; spiris octis contractis, subulata; alis rudibus; nervis aperturam subulatae contractis; aperturâ subulatae ovata, margine albo, lab. ciliatis, illis simplicibus. Platis octis, medio aperturâ; cilia setulosa subulata, elongata.*

SALICIS PUPA. Shell sinistral, smooth, pale, fulvous, ovato-ventricose; spire obtusely conical, slightly inflated in the middle; last whorl obliquely notched, the back contracted before the aperture; aperture subovate, margin white, broadly reflected, with six plaits within, acute, approaching in the middle; satural callus strong, elongated.

BOURGAINVILLE. Pfeff. Mon. IV, p. 684.
Hab. Southern Europe.

Species 87. (Mus. Hanley.)

PUPA SCARIS. *Pup. testis sinistral, elongato-cylindrica, solida, pallida, spirâ superâ conica, medio cylindrica, anfractibus 8, 9, superioribus rotundis,*

superâ, contractis; nervis; aperturâ subulata, oblongo-ventricosa; aperturâ parvâ, subulata, labio ciliatis, medio aperturâ subulatae.

THE STALK PUPA: Shell sinistral, elongated, cylindrical, solid, pale, whorls 8 or 9, the upper ones rounded, rapidly increased, the middle ones rather equal, the last with a very slight notch; aperture small, rather ovate, inner lip with a single plait above the middle.

PUPA P. Pfeiffer (Chondrula), Mon. VI.
Pupa Ruysschii, Bourgainville.
Bulimus bicellusus? Triv.
Hab. Asia Minor.

Species 88. (Mus. —? Copied.)

PUPA PALLIENSIS. *Pup. testis sinistral, subulata, subulata, brev. tenui, bicelle cylindrica; anfractibus quatuor gradatim crescentibus, spirâ ciliatis; aperturâ subulata, columelli ciliata, tubo aperturâ simpliciter.*

PALLIAN PUPA. Shell minute, sinistral, greenish-brown, short, thin, shortly cylindrical; whorl 4, gradually increased, last deeply notched, spire obtuse, aperture subovate, columella reflected, inner lip single-plaited.

CROSSI. Journ. de Conch. 1874, p. 391, Pl. 12, Fig. 5.
Hab. Paiti, Peru.

Species 89. (Mus. Sievers.)

PUPA SIGMATA. *Pup. testis parvâ, alba, perforato-cylindrica, laevigata, superâ media subulata, infra subulata; aperturâ ovata; anfractibus septem, medianis rectis, ultimâ ad basin obscure ciliata, impressione sigmata, aperturâ parvâ, margini crasso, subulata, labio ciliato, medio acut. multiplicato.*

THE MARKED PUPA. Shell small, white, perforated, cylindrical, smooth, inflated above the middle, rather attenuated below, whorls 7, middle ones rather straight, the last very obscurely crested and marked with an impression; aperture small, margin thick, inner lip horizontal, with a sharp tooth in the middle.

Mousson, Journ. de Conch. 1873, p. 211. Pl. VIII.

Fig. 7.

Hab. Araxis.

Species 90. (Mus. Sievers.)

PUPA BILILARIS. *Pup. testâ parvâ, fuscâ, cylindricâ, hexigâ, apice obtuso; anfractibus septem, medianis reclinatis, ultimo arcuâ rimato; aperturâ latâ, margine latè reflexo, columellâ latâ, bifidâ, labio interno prope medianâ multiplicato.*

THE DOUBLE-THREADED PUPA. Shell small, brown, cylindrical, smooth, apex obtuse; whorls 7, middle rather straight, the last with a curved notch; aperture broad, with broadly reflected margin, columella broad, two-threaded, inner lip with a single plait near the middle.

Mousson, Journ. de Conch. 1873, p. 210. Pl. VIII.

Fig. 8.

Hab. Gorkischa.

Species 91. (Mus. Crosse.)

PUPA DESMAZURESII. *Pup. testâ parvâ, fulvâ, brevior, cylindricâ; apice obtusissimâ; anfractibus septem, convexis; ultimo profundi rimato, aperturâ subauriformi, laterali multiplicatâ; labio interno acutè multiplicitè, columellâ acutè multiplicato; labio externo brevi.*

DESMAZURES'S PUPA. Shell small, fulvous, shortly cylindrical, apex very obtuse; whorls seven, rather convex; the last deeply notched; aperture rather auriform, with one interior plait, inner lip with one sharp plait, columella with one sharp plait; outer lip thin.

Crosse, Journ. de Conch. 1874, p. 227. Pl. VIII. f. 3.

Hab. Isl. Rodriguez.

Species 92. (Mus. Hanley.)

PUPA POLYDORUM. *Pup. testâ fulvâ, cylindricâ, fusiformi, leviter levatâ, allè, angustâ, anfractibus novem, convexis; medianis subquadratis, suturâ profunda separatis; ultimo profundi rimato; aperturâ parvâ, ovali, platis numerosis intraventriculis inaequalibus contractis.*

MANY-THREADED PUPA. Shell fulvous, cylindrical fusiform, finely ridged, raised, narrow, whorls nine, rather convex, the middle ones nearly equal, separated by a deep suture; the

last deeply notched; aperture small, oval, contracted by numerous entering unequal plaits.

DESMAZURES, Moll. Ter. et Fluv.

Pupa elongata, Michaud.

Hab. Southern Europe.

Species 93. (Mus. Hanley.)

PUPA NUCIFERMA. *Pup. testâ subovatâ, pallidâ, levatâ, brevi, leviter striatâ; apice obtuso; anfractibus quinque, superioribus quatuor, brevibus, rapidè crescentibus, convexis, ultimo albo, reclinato, latè et profunde rimato; aperturâ ad suturam elevatâ, callusâ, platis tribus magnis et duobus minoribus contractis, margine prope suturam striato.*

THE NUT-BEARING PUPA. Shell rather oval, pale fulvous, short, finely striated; apex obtuse; whorls five, the four upper ones short, rapidly increasing, convex, the last elevated, rather straight, with a broad and deep notch; aperture raised at the suture, with a small sutural callus, contracted by three large and three smaller plaits, and a sinus near the suture.

PARKER'S, Pflr. Mon. Hel. Balinus (Chondrula), Vol. VI. p. 22.

Hab. Isl. Cyprus.

Species 94. (Mus. — ? Copied)

PUPA LEONARDIANA. *Pup. testâ parvâ, fuscoviridatâ, levatâ, subcylindricâ, hexigâ; anfractibus duobus, parvis apicalibus, tunc tribus, altis inflato-cylindricis; ultimo profundi rimato; aperturâ obliquâ subquadratâ; dentibus unâ parietali, unâ columellari, protractis acutis duobus marginalibus infra medianâ labii externi locatis.*

LEONARD'S PUPA. Shell small, horny brown, elevated, subcylindrical, smooth; whorls two, small apical, then three elevated, inflated, cylindrical; the last with a deep notch; aperture oblique, oblong-subquadrate, with one parietal and one columellar tooth, produced, sharp, two marginal, placed below the middle of the outer lip.

Crosse, Journ. de Conch. 1874, p. 228, Pl. VIII. f. 4.

Hab. Coral Point, Isl. Rodriguez.

This is said to bear some resemblance to a little shell named *caeyllian mauritanum* by Mr. H. Adams.



172



173



174



175



176



177



178



179



180



181

P U P A.

PLATE XI.

Species 95. (Mus. — ?)

PUPA CYCLOPA. *Pap. testâ micanti, fusca, luteo-eylindrica, apice obtusissimo; anfractibus 7, subcon-
vexisculis, ultimo arcuato rivato; aperturâ
subquadrata, subquadrata. Plicis parietali orali,
marginæ externæ latæ, cæternæ subplatis.*

THE CASPIAN PUPA. Shell minute, brown, smooth,
shortly cylindrical, apex very obtuse; whorls
five, rather convex, the last with an arched
notch; aperture rather large, rather square,
parietal plait sharp, outer margin thin, columella
oblique.

PIFFER. Malak. Bl. 1871, Vol. XVIII.

Hab. Lenkoran, Transcaucasia.

Species 96. (Mus. — ?)

PUPA LONGICOLA. *Pap. testâ micanti, fusca, breviali,
elongata, angustâ, subeylindrico-pyramidalis; apice
obtusâ; anfractibus quinque, convexisculis, ultimo
eylindrico, elongati, arcuatum rivato; aperturâ
subquadrata, marginæ lutescenti, expansæ, reflexæ;
plicis parietali et columellæ prominentibus, acutis,
plicis internis tribus.*

THE POLE PUPA. Shell minute, brown, smooth, elongated,
narrow; whorls five, rather convex, last
cylindrical-pyramidal; apex obtuse; whorls five,
rather convex, the last cylindrical, elongated,
with a curved slit; aperture rather tending to
square, margin yellowish, expanded, reflected; a
prominent sharp parietal, and a columellar plait;
internal plaits three.

CROSSE. Journ. de Conch. 1873. Pl. I. f. 2.

Hab. Curaçao, Antilles.

Species 97. (Mus. Hanley.)

PUPA ARGONIS. *Pap. testâ angustâ, purpureo-fusca,
subfusiformi; anfractibus 8, gradatim crescentibus;
ultimo profunde rivato; aperturâ parvâ, falcâ,
elevatâ, angustâ oratâ, intus biplicatâ, callo sutu-
rali albâ, conspicuâ, plicâ parietali internâ,
columellâ latâ, elevatâ, multiplicatâ, labio externo
crassiusculo.*

THE ARGO PUPA. Shell narrow, purple-brown, sub-
fusiform; whorls 8, gradually increased, the last
deeply notched; aperture small, fulvous, raised,
narrowly ovate, with two interior plaits, sutural
callus white, conspicuous, parietal plate entering,
columella broad, raised, single-plaited; outer lip
rather thick.

ROSSMÄLLER. Icon. III. 17, p. 195, t. 85, f. 936.

Pupa argonidis, Albers.

Hab. Valentin.

Species 98. (Mus. Hanley.)

PUPA PAGODA. *Pap. testâ fulvescenti, inflato-eylin-
drica, brevi, obliquâ latâ; apice obtusâ; anfractibus
septem, depressis, convexis, mediis inflatis,
ultimo profunde et longè rivato, infra medium
contracto; aperturâ ad suturam anfractibus ultimi
elevatâ, prope suturam sinuatâ, columellâ prope
medium callusâ, labio externo supra medium
tumidâ.*

THE LITTLE PAGODA PUPA. Shell horny-fulvous, in-
flated-cylindrical, short, obliquely ridged; apex
obtuse; whorls seven, depressed, convex; the
middle ones inflated, the last with a deep and
lengthened slit, contracted below the middle;
aperture raised to the suture of the last whorl,
sinuated near the suture, columella callous
near the middle, outer lip tumid above the
middle.

DESMAREST. Mf. Mon. Hel. II. 310.

Hab. South Europe.

Species 99. (Mus. Hanley.)

PUPA VILLE. *Pap. testâ eylindrica, fusca, politâ,
apice obtusissimo, anfractibus ad apicem rapidè
crescentibus, tum tumidâ, mediis rectiusculis,
albis, ultimo profunde et latè rivato; aperturâ
angustâ, paulum elevatâ, obliquâ, marginæ angustâ,
labio externo supra medium sinuato; labio interno
prope suturam callo pliciformi mucosâ, columellâ
obliquâ, rotatâ.*

VILLA'S PUPA. Shell cylindrical, brown, polished,
apex very obtuse, whorls rapidly increased at the

apex, then tumid, middle ones rather straight, elevated, the last deeply and broadly notched; aperture narrow, a little raised, oblique, margin narrow, outer lip serrated above the middle, inner lip provided with a plait-like callus near the suture, columella oblique, toothless.

CHARPENTIER. Pfeiffer, Mon. Hel. II. 339.

Hab. Spain.

Species 100. (Mus. Hanley.)

PUPA STRANGEI. *Pap. testâ sinistrali, cylindrica, tenui, semipellucida, cornâ, anfractibus 4, apicali rotundo, duobus medianis convexisculis, ultimo altissimo, infra profunde rimato; aperturâ subtriangulâ, margine albo, reflexo; labio interno plicis dentiformibus duobus infra medium armato, columellâ plicâ prominenti et alterâ parvâ, et labio interno plicâ parietali duplicatâ munitis.*

STRANGE'S PUPA. Shell sinistral, cylindrical, thin, semipellucid, horny, whorls 4, the apical one rounded, the two middle ones rather convex, the last rather raised, deeply notched below; aperture subtriangular, margin white, reflected; inner lip armed with two tooth-like plaits, columella provided with a prominent plait and another small one, and the inner lip with a doubled parietal plait.

PFEIFFER, Mon. VI. 336.

Hab. Port Jackson.

Species 101. (Mus. Hanley.)

PUPA CONICA. *Pap. testâ fusâ, subpyramidalâ, filostriatâ; apice acutissimo; anfractibus novem, depressis, cæcis apicem attenuatis, ultimo lato, profunde et longe rimato; aperturâ versus suturam ultimi anfractibus elevatâ, columellâ perobliquâ, intus spirâliter bicipitatâ, labio externo intus infra medium multiplicato.*

THE CONICAL PUPA. Shell brown, rather pyramidal, with thread-like striae; apex rather acute; whorls nine, depressed, the last broad with a deep and long slit; aperture raised towards the suture of the last whorl, columella very oblique, with two spiral plaits, outer lip with a plait inside, below the middle.

ROSSMÄSLER. Pfeiffer, Mon. Hel. II. 325.

Hab. Styria.

Species 102. (Mus. Hanley.)

PUPA DOLIOLUM. *Pap. testâ cylindricâ, fusâ, tenuiter liratâ, apicem tumidâ, infra subattenuatâ; anfractibus septem; convexisculis, ultimo arcuatum rimato; aperturâ latâ, albâ; labio externo prope suturam sinuato, labio interno plicâ parietali munito.*

THE LITTLE TEN PUPA. Shell cylindrical, brown, finely ridged, tumid near the apex, a little attenuated below; whorls seven; rather convex, the last with a curved notch; aperture broad, white; outer lip serrated near the suture, inner lip provided with a parietal plait.

BUGUËRE. Linn. Anim. sans Vert.

Helix coronata, Stüder.

Helix spinosa, Ferrussac.

Helix critica, Zöllner.

Helix rilliana, Kokiël.

Hab. South Europe.

Species 103. (Mus. Hanley.)

PUPA RUPESTRIS. *Pap. testâ pyramidalâ, fusco-purpureâ; apice acuminato; anfractibus quinque, convexis, rapide crescentibus, oblique tenuiter liris, ultimo majusculo, rimato; aperturâ parvâ, margine fere continuo, plicâ nullis.*

THE ROCK PUPA. Shell pyramidal, purple-brown; apex acuminated; whorls five, convex, rapidly increased, obliquely, finely ridged; the last rather large, notched; aperture small, margin almost continuous, without plaits.

PHILIPPI. Pfeiffer, II. 314.

Hab. Sicily.

Species 104. (Mus. Hanley.)

PUPA LINCOLNENSIS. *Pap. testâ sinistrali, albâ rufâ fusâ, tenuiter striatâ, breviter cylindricâ, apice obtuso, ultimo anfractu infra breviter rimato; aperturâ parvâ, margine reflexo, labio interno multiplicato.*

THE PORT LINCOLN PUPA. Shell sinistral, white or brown, finely striated, shortly cylindrical, apex obtuse, last whorl with a short notch below; aperture small, margin reflected, inner lip with one fold.

COX. Proc. Geol. Soc. 1867.

Hab. Port Lincoln, S. Australia.



106



105



107



108



109



110



111



112



113



114

P U P A,

PLATE XII.

Species 105. (Mus. Lewis.)

PUPA GOULDII. *Pup. testâ minuti, fusco-cornâ, brevissimâ, breviter subcylindricâ; anfractibus quatuor, tribus inflatis, rotundis, ultimo latè cincto; apertura subtriangulâ, plicis lateralis lamelliformibus tribus, plicâ parietali latâ sub cili acutè productâ; plicis columnaribus duabus.*

GOULD'S PUPA. Shell minute, horny-brown, smooth, shortly sub-cylindrical; whorls four, three inflated, rounded, the last broadly notched; aperture rather auriform, with three interior lamelliform plaits, parietal plait of the inner lip sharply produced; columnar plaits two.

BIXBY. Pfeiffer, Mon. Hel. II. 358.

Hab. Arctic America.

Species 106. (Mus. Hanley.)

PUPA CORTICARIA. *Pup. testâ parvâ, albâ, pellucidâ, in partibus anterioribus subgranosa obtectâ, breviter cylindricâ, apice obtuso, anfractibus quatuor columnaribus, ultimo cincto; apertura auriformi; labiâ interna plicâ marginâ et albiâ parvâ munita, plicâ columnaribus parvâ.*

THE BIRD-COVERED PUPA. Shell small, white, pellucid, covered in parts by a slightly granular crust or rind, shortly cylindrical, apex obtuse; whorls four, rounded, the last notched; aperture auriform, inner lip provided with a large plait and a small one, columnar plait small.

SAY. Pfeiffer, Mon. Hel. II. 328.

Hab. Pennsylvania.

Species 107. (Mus. Hanley.)

PUPA ALPICOA. *Pup. testâ fuscâ, cylindricâ, brevissimâ, brevî, apice obtuso, anfractibus septem, convescensculis, ultimo infra contracto, horizontaliter cincto; apertura subquadratâ, margine intus parvè incressato, plicis nullis.*

THE ALPINE PUPA. Shell brown, cylindrical, rather short, smooth, apex obtuse, whorls seven, rather convex, the last contracted below, with an horizontal notch; aperture rather square, margin a little thickened within, no plaits.

CHARPENTIER. Pfeiffer, Mon. Hel. II. 305.

Hab. Spain.

Species 108. (Mus. Hanley.)

PUPA ANCONOSTOMA. *Pup. testâ subcylindricâ-fuscâ, cylindricâ, anfractibus sex brevibus, rive convexis, ultimo cincto, subumbilicato; apertura subtriangulâ, infra subacuminatâ, superâ prope suturam angulatâ, margine infra angulâ lamellâ sensibili.*

THE ANGLE-MOUTHED PUPA. Shell greenish-brown, cylindrical, whorls six, short, very slightly convex, the last notched, rather umbilicated; aperture rather trigonal, slightly acuminate below, angular above near the suture, margin a little swelled below the angle.

LOWE. Pfeiffer II. 314.

Pupa umbilicata var. De Paiva.

Pupa *Fomalensis*, Lowe.

Hab. Madeira.

Species 109. (Mus. Hanley.)

PUPA CHARPENTIERI. *Pup. testâ parvâ, brevî, inflatâ, fuscâ, semipellucidâ, anfractibus quatuor, tribus columnaribus, rapidè crescentibus, ultimo magno, infra parvè contracto, profundè rimatâ; apertura subtriangulâ, labiâ externa prope suturam sinuatâ, medio et infra intus incressato; plicis dentiformibus, parietali unâ, columnaribus duabus magnis et unâ parvâ, labiâ externa duabus.*

CHARPENTIER'S PUPA. Shell small, short, inflated, brown, semipellucid, whorls four, three round, rapidly increasing, the last large; a little contracted below, with a deep notch; aperture sui-

trigonal, outer lip sinuated near the suture, thickened at and below the middle, tooth-like plaits, one parietal, columellæ two large and one small, and two on the outer lip.

SHUTTLEWORTH. Pfeiffer. Mon. III. p. 555.

Pupa Madagascariæ, Dupuy.

Pupa (vertego) ventrosa, Heynem.

Hab. Spain, France, Germany.

Species 110. (Mus. Hanley.)

PUPA PELLUCIDA. *Pup. testâ clatâ, subpyramidalâ, fusâ, brevi, semipellucidâ, anfractibus sex, inflatis, ultimo breviter rimato; apertura parvâ, plâcis dentiformibus tribus ut quique, plâcis ultimi anfractis novamquam ad terminum duplicatâ.*

THE PELLUCID PUPA. Shell raised, rather pyramidal, brown, smooth, semipellucid, whorls six, inflated, the last with a short notch; aperture small, tooth-like plaits three to five, the plait of the body whorl sometimes doubled at the end.

PFEIFFER. *Mon. Hel. II. 360.*

Pupa scirpilis, Gould.

Pupa Rüssi, Adams.

Hab. Cuba, Jamaica, St. Thomas, Porto Rico.

Species 111. (Mus. Hanley.)

PUPA PACHYGASTRA. *Pup. testâ clatâ, corneâ, tenuiter liratâ, subsififormi, vixens apicem acuminatâ, medio cylindrico; anfractibus decem rectiusculis, ultimo infra acuminatâ, longè et obliquè rimatâ, apertura ovatâ, ascendenti, margine albo, reflexo, subexpanso, callo suturali laminatum continens, plâcis ultimi anfractis uno et columellæ quatuor, lamelliformibus, labii exteriori quatuor, lamelliformibus, intus continens.*

THE THICKENED PUPA. Shell raised, horny, finely ridged, rather fusiform, acuminated towards the apex, cylindrical in the middle; whorls ten, rather straight; the last acuminated below, with a long oblique notch, aperture ovate, raised, margin white, reflected, rather expanded, sutural callus continued in layers, plaits of the last whorl one, and of the columella four, lamelliform, of the outer lip four, lamiform, continued within.

ZEDLER. *Mon. Hel. II. 337.*

Pupa oblongata, Rossmâsler.

Pupa franculata var? Adams.

Hab. Dalmatia.

Species 112. (Mus. Hanley.)

PUPA VARIABILIS. *Pup. testâ clatâ, corneâ, tenuiter liratâ, vixens apicem acuminatâ, medio inflatâ, anfractibus decem, convexiusculis, ultimo infra acuminatâ, longè et obliquè rimatâ; apertura ovatâ, latâ, ascendenti, margine albo, reflexo, expanso; callo suturali intus continens, plâcis lamiformibus intus continens, convergentibus.*

THE VARIABLE PUPA. Shell raised, horny, finely ridged, acuminated towards the apex, inflated in the middle, whorls ten, rather convex, the last acuminated below, with a long, oblique notch, aperture ovate, broad, raised, margin white, reflected, expanded; sutural callus continued within, lamelliform plaits continued within, converging.

DEAFENAUD. *Pfeiffer. Mon. Hel. II. 349.*

Helix variabilis, FORTISSAC.

Pupa multidentata, Olivî.

Hab. France, Switzerland, Spain.

Species 113. (Mus. Hanley.)

PUPA LUSITANICA. *Pup. testâ subpyramidalâ, purpureo-fusâ, vixens apicem attenuatâ, obliquè liratâ, medio paulo inflatâ; anfractibus septem, convexis, ultimo majoribus, obliquè breviter rimatâ; apertura pallidâ fulcâ, labio exteriori paulo elevato, leviter reflexo; columellâ pæginatâ biplicatâ, plâcis internis tribus longis.*

THE LUSITANIAN PUPA. Shell rather pyramidal, purple-brown, attenuated towards the apex; obliquely ridged, a little inflated in the middle; whorls seven, convex, the last rather large, with a short oblique notch; aperture pale fulvous, outer lip a little raised, slightly reflected; columella deep, two-plaited, three internal elongated plaits.

ROSSMÄSLER. *Pfeiffer. Mon. Hel. II. 347.*

Hab. Lusitania.

Species 114. (Mus. Hanley.)

PUPA MOBESTA. *Pup. testâ minutâ, fusâ, brevi, inflatâ, semipellucidâ, anfractibus quatuor, rotundis; ultimo umbilicato; apertura parvâ, brevi, plâcis dentiformibus acutis plurimis contractâ.*

THE MOBLEST PUPA. Shell minute, brown, short, inflated, semipellucid; whorls four, rounded, the last umbilicated; aperture small, short, contracted by several sharp tooth-like plaits.

A. ADAMS. *Proc. Zool. Soc.*

Hab. Mauritius.



116



115



117



118^a



119



120



118^b



121



123



122

P U P A.

PLATE XIII.

Species 115. (Mas. Hanley.)

PUPA RHODA. *Pup. testis angustâ, altâ, pyramidalis, fuscâ, tenuissimè lincatâ; apicè obtusâ; anfractibus sex, superioribus quatuor attenuatis, subrotundis, penultimo ventricoso, ultimo umbilicatâ; apertura parvâ, angustâ, anticè acuminatâ, intus dentibus prominentibus quinque contractâ.*

THE RHODE PUPA. Shell narrow, high, pyramidal, brown, very finely ridged; apex obtuse; whorls six, upper four attenuated, rather rounded, last but one ventricose, last umbilicated; aperture small, narrow, anteriorly acuminated, contracted within by five prominent teeth.

ROTHWELL. Pfeiffer, Monograph V. p. 318.

Pupa acutula. Parreys.

Hab. Rhode, Dalmatia.

Species 116. (Mas. Hanley.)

PUPA EYULA. *Pup. testis clavata, albâ, costellis rectis rotundis sculptâ; apicè obtusâ; anfractibus superioribus ventricosis, duobus ultimis subcylindricis, paulo contractis, ultimo longè cincto; apertura rectâ, justicè subquadratâ, anticè productâ, rotundâ, pæpe subtruncâ plied parietali innatâ.*

THE EYULE PUPA. Shell club-shaped, whitish, sculptured with rounded, straight little ribs; apex obtuse; upper whorls ventricose, two last rather cylindrical, a little contracted, last with a long notch; aperture straight, posteriorly rather square, anteriorly produced, rounded, provided with a parietal plait.

DESHAYES. Conchologie de l'île de la Réunion.

Hab. Isl. Bourbon.

Species 117. (Mas. Hanley.)

PUPA OVALARIS. *Pup. testis ovalis, brevî, ventricosâ, brevî, fusco-rufâ; apicè obtusâ; anfractibus quatuor, tribus superioribus baccibus, ultimo majore,*

baccibus quarto; apertura albâ, semiovatâ, obtusodentibus quinque prominentibus contractâ, margine subexpanso.

THE EGG-SHAPE PUPA. Shell ovate, short, ventricose, smooth, brownish-horny; apex obtuse; whorls four, three upper short, last large, with a short notch; aperture white, semiovate, contracted within by five prominent teeth, margin rather expanded.

OLIVIER. Pfeiffer (Balimus), Mon. 1868, p. 7.

Hab. Syria.

Species 118. (Fig. a, b. Mas. Hanley.)

PUPA SEPTIDENTATA. *Pup. testis oblongo-ovata, fusco-purpureâ vel allidâ, levî, altâ, apicè obtusiuscula; anfractibus sex, tribus superioribus breviusculis, penultimo ventricoso, ultimo longè et arcuatim cincto; apertura ovali, albâ, dentibus septem lamelliformibus intus valdè contractis, margine latè expanso, ad dorsum contracto.*

THE SEVEN-TOOTHED PUPA. Shell oblong-ovate, purple-brown or white, smooth, high; apex rather obtuse; whorls six, three upper rather short, last ventricose, with a long curved notch; aperture ovate, white, strongly contracted within by seven lamelliform teeth, margin broadly expanded, contracted at the back.

ROTHWELL. Pfeiffer (Balimus), Mon. 1868, p. 79.

Hab. Syria.

Species 119. (Mas. Hanley.)

PUPA PRODUCTA. *Pup. testis altissimi, cylindricâ, albâ, densè lincatâ; anfractibus septem, tribus superioribus baccibus, rotundis, tribus medianis rectis, ad suturam compressis, ultimo minutè umbilicatâ; apertura majoreculâ, propè suturam anidentata, margine subincassato, lateraliter paulo producto.*

THE PRODUCED PUPA. Shell very tall, cylindrical, white, closely ridged; whorls seven, three upper

short, rounded, three middle straight, compressed at the suture, last with a small umbilicus; aperture rather large, with a tooth near the suture, margin rather thickened, a little produced laterally.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 120. (Mus. Hanley.)

PUPA FAMPHORODON. *Pup. testâ sinistrali, fuscâ, ovato-oblongâ, subcentricâ, toniter obliquè lincatâ; apice obtuso; anfractibus novem, brevissimis, ultimo longè et latè rimato, ad dorsum aperturæ contracti; aperturâ albâ, obliquè productâ, intus angustissimè dentibus laminatis prominentibus contractâ, margine lato, tenui, producto.*

THE BEAK-TOOTHED PUPA. Shell sinistral, brown, ovate-oblong, rather ventricose, finely obliquely ridged; apex obtuse; whorls nine, very short, last with a long and broad notch, contracted at the back of the aperture; aperture white, obliquely produced, contracted within very narrowly by laminated prominent teeth, margin broad, thin, produced.

BENSON. Ann. and Mag. Nat. Hist. 3rd series, June 1864.

Hab. Near Simon's-Town, Cape of Good Hope.

Species 121. (Mus. Hanley.)

PUPA CALATHISCUS. *Pup. testâ parvâ, fuscâ, brevî, ventricosâ, costis validis, distantibus, prominentibus, rotundis lincatis, medio anfractu fuscâ nudi-fasciatâ; apice obtuso; anfractibus septem, apicalibus parvis, hecigatis, medianis tumidis, latis, ultimo medio infusque contracto, breviter rimato; aperturâ brevi, plicâ suturali magnâ, columellari parvâ, labio externo intus triplicato.*

THE LITTLE-BACKED PUPA. Shell small, brown, short, ventricose, ridged with strong, distant, prominent, rounded ribs, with a brown band in the

middle of the whorls; apex obtuse; whorls seven, apical, small, smooth, middle tumid, broad, last contracted in the middle and under, with a short notch; aperture short, sutural plait large.

LOWE. Pfeiffer, Mon. 1868.

Hab. Porto Santo, Madeira.

Species 122. (Mus. Hanley.)

PUPA CYLINDRELLUS. *Pup. testâ albâ, tenui, semipellucidâ, hecigatâ, clavatâ; apice obtuso; anfractibus octo, superioribus brevissimis, rapidè crescentibus, medianis et inferioribus gradatim attenuatis, altissimis, convergentibus, ultimo profundè rimato, infra contracto; aperturâ subovata, plicâ suturali magnâ.*

THE LITTLE-CYLINDER PUPA. Shell white, thin, semipellucid, smooth, club-shaped; apex obtuse; whorls eight, upper very short, rapidly increasing, middle and lower gradually attenuated, rather high, rather convex, last deeply notched, contracted below; aperture rather oval, with large sutural plait.

A. ADAMS. Proc. Zool. Soc.

Hab. Isl. Bourbon.

Species 123. (Mus. Hanley.)

PUPA STRIATOCOSTATA. *Pup. testâ albâ, solidissimâ, subpyramidatâ, densè obliquè costellatâ, costellis elevatis, lœvibus, incisîs; ultimo anfractu umbilicato et breviter rimato; aperturâ majusculâ, subquadratâ, edentatâ; columellâ intus medio tumidissimâ.*

THE STRIA-RIBBED PUPA. Shell white, rather solid, subpyramidal, closely obliquely ribbed, ribs raised, smooth, incised; last whorl umbilicated and shortly notched; aperture rather large, rather square, toothless; columella rather tumid within at the middle.

MORELET. Rev. et Mag. Zool. XVIII., 1866.

Hab. Mauritius.



125



124



126



127



128



129



130



131



132



133

P U P A.

PLATE XIV.

Species 124. (Mus. Hanley.)

PUPA ROSSMASLEEL. *Pup. brevis, ventricosa, conica, pallide cornu, tenuiter oblique costellata; anfractibus sex, brevibus, rapidly latitudinaliter crescentibus, ultimo longi rimati; apertura parva, ad medium ultimi anfractus elevata, intus marginem septendecimata.*

ROSSMASLEEL'S PUPA. Shell short, ventricose, conical, pale horny, finely obliquely ribbed; whorls six, short, rapidly widening, last with a long notch; aperture small, raised to the middle of the last whorl, with seven teeth within the margin.

SCHMIDT. Pfeiffer, Monog. 1868, p. 323.

Hab. Illyria.

Species 125. (Mus. Hanley.)

PUPA STENOCHYLIS. *Pup. testâ parvâ, albâ, semipellucida, costata, papiformi, brevis; anfractibus sex, apicalibus duobus parvis, levigatis, medianis ventricosis, inferioribus gradatim attenuatis, ultimo infra angustata, longi rimati; apertura parvâ, angustata, prope suturam ultimi anfractus elevata, labio externo supra medium rotule sinuato, undulato, placo suturali maximo, descendenti.*

THE NARROW-LEAFED PUPA. Shell small, white, semipellucid, ribbed, chrysalis-shaped, short; whorls six, two apical small, smooth, middle ventricose, lower gradually attenuated, last narrow below, with a long notch; aperture small, narrow, raised to near the suture of the last whorl, outer lip with a strong bend above the middle, with one tooth, sutural plait very large, descending.

BENSON. Fid. Hanley.

Hab. Khasi.

Species 126. (Mus. Hanley.)

PUPA NOVÆZELANDIÆ. *Pup. testâ cylindrica, fusca rubâ costata; anfractibus sex, apicalibus subcomplanata-*

is, ultimo umbilicato: apertura parvâ, subcylindrica, simplici.

THE NEW ZEALAND PUPA. Shell cylindrical, brown, coarsely ribbed; whorls six, apical rather flattened, last umbilicated; aperture rather small, simple.

PFEIFFER. (Vertigo) Mon. 1868, p. 299.

Hab. New Zealand.

Species 127. (Mus. Hanley.)

PUPA MONDRAINI. *Pup. testâ solidiusculâ, albâ, breviter cylindricâ, tenuiter costatâ; anfractibus septem, apicalibus rapidly crescentibus, brevissimis, duobus medianis ventricosis, rotundis, ultimo alto, infra umbilicato; apertura subquadrata, elevata, levata, marginem simpliciter anguste reflecto.*

MONDRAINE'S PUPA. Shell rather solid, white, shortly cylindrical, finely ribbed; whorls seven, apical, quickly increasing, very short, two middle ventricose, rounded, last high, umbilicated below; aperture rather square, toothless, raised, margin simple, narrowly reflected.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 128. (Mus. late Deshayes.)

PUPA BOUBIGNATI. *Pup. testâ crassiusculâ, albâ, irregulariter striatâ, breviter subpyramidatâ; ultimo anfractu breviter rimato; apertura subobliquè quadrata, ad anfractum ultimum medio undulata, marginem medio subdepresso.*

BOUBIGNAT PUPA. Shell rather thick, white, irregularly striated, short, subpyramidal; last whorl shortly notched; aperture rather obliquely square, with a single tooth at the last whorl, in the middle, margin rather depressed in the middle.

DESHAYES. Conch. ile. Réunion, Pl. XXXVII., Fig. 27, 28.

Hab. Isl. Bourbon.

Species 129. (Mus. late Deshayes.)

PUPA INTERSECTA. *Pup. testâ crassiâsculâ, albâ, subpyramidatâ, prope apicem tumidiâsculâ; anfractibus octo, tribus superioribus levibus, cæteris levitè crescentibus, liris inæqualibus irregularibus, distantibus, obliquis sculptis; aperturâ subquadratâ, superne unidentatâ.*

THE INTERSECTED PUPA. Shell rather thick, rather white, rather pyramidal, a little swelled near the apex; whorls eight, three upper smooth, the others slowly increased, sculptured with unequal, irregular, distant oblique ridges; aperture rather square, with a single tooth above.

DESHAYES. *Conch. de l'île de la Réunion*, Pl. XXVIII.

Fig. 1.

Hab. Isl. Bourbon.

Species 130. (Mus. Hanley.)

PUPA FERRARI. *Pup. testâ cylindricâ, altâ, fuscâ, crebricostatâ; anfractibus octo, superioribus brevissimis, ultimo alto, recto, infra latè umbilicato, carinâ desinenti; aperturâ parvâ, angustâ, plieis duobus, prominentibus, acutis, subinternis ad columellam et anfractum ultimum armatâ, labio externo, superne sinuato, tunc dente magno incrassato.*

FERRARI'S PUPA. Shell cylindrical, high, brown, close-ribbed; whorls eight, upper very short, last high, straight, broadly umbilicated below, ending in a keel; aperture small, narrow, armed with two prominent short subinternal teeth at the columella and last whorl, outer lip sinuated above, then thickened with a large tooth.

PEREO. Pfeiffer, *Mon.* 1868, p. 309.

Pupa plicata, Rossmäslar.

Papa guttata, Porro.

Hab. Upper Italy.

Species 131. (Mus. Hanley.)

PUPA VENTRICOSA. *Pup. testâ parvâ, brevissimâ, subglobosâ, tenui, fusco-cornâ; anfractibus quatuor, apicalibus pyramidatis, ultimo subgloboso; aperturâ rotundâ, superne unidentatâ.*

THE VENTRICOSE PUPA. Shell small, very short, rather globose, thin horny brown; whorls four, apical pyramidal, last rather globose; aperture rounded, with a single tooth above.

ADAMS. *Proc. Zool. Soc.*

Hab. Mauritius.

Species 132. (Mus. Hanley.)

PUPA PUPULA. *Pup. testâ minutâ, cornâ, levî, cylindricâ; apice obtuso; ultimo anfractu breviter rimato; aperturâ brevi subquadratâ, intus tridentatâ, columellâ obliquâ.*

THE PUPULA PUPA. Shell minute, horny, smooth, cylindrical; apex obtuse; last whorl shortly notched; aperture short, rather square, tridentate within, columella oblique.

DESHAYES. *Conch. de l'île de la Réunion*. Pl. XXXVIII, Fig. 2.

Hab. Isl. Bourbon.

Species 133. (Mus. late Deshayes.)

PUPA TURGIDA. *Pup. testâ brevissimâ, parvâ, obtusâ, breviter rimatâ, dense liratâ, ventricosissimâ; aperturâ edentulâ, brevi, subobliquâ, superne quadratâ, infra rotundâ.*

THE TURGID PUPA. Shell very short, small, obtuse, with a short notch, closely ridged, very ventricose; aperture toothless, short, rather oblique, square above, rounded below.

DESHAYES. *Conch. de l'île de la Réunion*.

Hab. Isl. Bourbon.



135



134



136



137



138



139



a



b



140



141 c



142

PUPA.

PLATE XV.

Species 134. (Mus. Hanley.)

PUPA FERRARIA. *Pup. testā parvā, albā, cylindricā, ferequadrā; apice obtuso; anfractibus sex, compressis, tenuissimē costulatis, ultimo rimato; aperturā subquadratā, intūs quadruplicatā, superiōrē proproturam unilobatā.*

THE IRON PUPA. Shell small, high, cylindrical, ferruginous; apex obtuse; whorls six, convex, very finely ribbed, last notched; aperture subquadrate, with five plaits inside; one tooth above, near the suture.

LOWE. Pfeiffer, Mon. 1868.

Hab. Porto Santo.

Species 135. (Mus. Hanley.)

PUPA VINCIA. *Pup. testā subpyramidalī, fereconico, politā; apice obtuso; ultimo anfracto lato, longē rimato; aperturā parvā, subquadratā, columellā pliatā albā, tenui, elongatā, ultimo anfractu pliaea duabus inaequalibus, arcuatis, superiōrē elongatissimā, instructis lobiō exteriori superiōrē sinuato, unilobato; lamina internā filiformi.*

THE ROUND PUPA. Shell rather pyramidal, horny brown, polished; apex obtuse; last whorl broad, with a long notch; aperture small, rather square, columella set with a white thin long plait, last whorl with two unequal, arched, the upper very long; outer lip sinuous above, with a tooth; internal lamina filiform.

LOWE. Pfeiffer, Mon. 1868, p. 21.

Hab. Madeira.

Species 136. (Mus. Hanley.)

PUPA SPHINCTOSTOMA. *Pup. testā altā, conico, tenui, inaequaliter liratā; ultimo anfracto rimato et umbilicato, ad dorsū medianū per lamina internam contracto, ad aperturam pliaea parvā, et pliaea*

superiōrē elongatissimā, sinuato, unilobato, columnella quadruplicatā, lobiō exteriori superiōrē sinuato et unilobato.

THE SPHINX-MOUTHED PUPA. Shell high, horny, thin, unequally ridged; last whorl notched and umbilicated, contracted at the middle of the back by the internal lamina, furnished at the aperture with a small plait and a very far extended sutural plait; columella with one plait, outer lip with a sinus and a tooth above.

LOWE. Pfeiffer, Mon. 1868.

Hab. Madeira.

Species 137. (Mus. Hanley.)

PUPA CASSIDA. *Pup. testā brevi, ventricosi, rubrofusci, dimidiatim albosmaculatā, tenuiter liratā, lirīs rectissimis; apice obtuso, anfractibus septem, brevissimis; ultimo brevi, usque ad medianā umbilicato, infra medianā immutato, brevitate; aperturā subtriangulā, infri acuminatā, per pliaea albas, calidas, contractā.*

THE HELMET PUPA. Shell short, ventricose, red-brown, half white-spotted, finely ridged, ridges rather straight; apex obtuse, whorls seven, very short; last short, white-spotted as far as the middle: not spotted below the middle; smooth; aperture rather trigonal, acuminated below, contracted by white strong plaits.

LOWE. Pfeiffer, Mon. 1868, p. 373.

Hab. Madeira.

Species 138. (Mus. Hanley.)

PUPA ARMIFERA. *Pup. testā pallidā, conico, semipellucidā, brevi, obtusā; anfractibus sex, brevibus, medianis inflatis, ultimo umbilicato; aperturā elevatā, brevi, intūs quadruplicatā.*

THE ARM-BEARING PUPA. Shell pale, horny, semipellucid, short, obtuse; whorls six, short; middle inflated, last umbilicated; aperture raised, short, four-plaited within.

SAY. Pfeiffer, Mon. 1868, p. 29.

Hab. N. America.

Species 139. (Mus. Hanley.)

PUPA CONCINNA. *Pup. testâ fuscâ, tenuissimè striatâ, brevî; apice obtuso; anfractibus sex, brevibus, medianis ventricosis, ultimo longè rimato; aperturâ elevatâ, plicis quinque principalibus, cæteris minutis, suturali latissimè expansa, descendenti.*

THE NEAT PUPA. Shell brown, very finely striated, short; apex obtuse, whorls six, short, middle ventricose, last with a long notch; aperture raised, five principal plaits, others minute, sutural very broadly expanded, descending.

LOWE. Pfeiffer, Mon. 1868, p. 310.

Hab. Madeira.

Species 140. (Mus. Hanley.)

PUPA PENTODON. *Pup. minutâ, conicâ lævigatâ, brevî, ventricosâ, anfractibus tribus rotundis, aperturâ brevî, latissimâ, dentibus quinque, ad anfractum ultimum uno, ad columellam uno, ad marginem internum labii externi tribus, mediano longè producto.*

THE FIVE-TOOTHED PUPA. Shell minute, horny, smooth, short, ventricose; whorls five, one on the last whorl, one on the columella, three on the inner edge of the outer lip, middle long, produced.

SAY. Binney, Terrestrial Mollusca, p. 143.

P. curvicolis, Gould.*P. Toppiniana*, Ward.*Hab.* North America.

Species 141. (Fig. a, b. Mus. Hanley.)

PUPA LAYARDI. *Pup. testâ lævigatâ, fuscâ, vel albocitratâ; altâ, pyramidalâ, versus apicem attenuatâ, medio subventricosâ; anfractibus novem, convezâsculis, ultimo angustiusculo, longè rimato, ante aperturam subsolato, producto, coarctato; aperturâ subovatâ, marginè externo tenuissimâ, interno quinqueplicato, plicis laminatis, productis, medio approximatis.*

LAYARD'S PUPA. Shell smooth, brown, or glassy white; high, pyramidal, attenuated towards the apex, rather ventricose in the middle; whorls nine, rather convex, last rather narrow, with a long notch, a little uncoiled before the aperture, produced, narrowed; aperture ovate, outer edge very thin, inner five-plaited, plaits laminar, produced, nearly meeting in the middle.

BENSON. Ann. and Mag. Nat. Hist., 3 Ser. XIII.

June, 1864.

Hab. Cape Bredasdorp.

Species 142. (Mus. Hanley.)

PUPA SHUTTLEWORTH. *Pup. testâ minutâ, fuscâ, brevî, brevî, ventricosâ; anfractibus quinque, ventricosis, ultimo longè rimato; aperturâ parvâ, brevî, ad anfractum ultimum uniplicatâ.*

SHUTTLEWORTH'S PUPA. Shell minute, brown, smooth, short, ventricose; whorls five, ventricose, last with a long notch; aperture small, short, with a single plait on the body whorl.

ALBERS. Pfeiffer (Bulimus), Mon. 1868.

Hab. Columbia.



111



112



113



114



115



116



117



118



119



120

P U P A.

PLATE XVI.

Species 143. (Mus. Hanley.)

PUPA PIRREEL. *Pup. testâ albâ, latâ, laevi, septem-*
tibus septem, tribus superioribus brevibus, ânticis dis-
partitis, quatuor inferioribus rectilatis callosis, stri-
atis, albis, ad suturam subangulatis, ultimo infri
subangulato, rimato; aperturâ rectâ, perpendicular-
iter oblongâ, callo suturali conspicuo, nunguâ.

PIRREEL'S PUPA. Shell white, high, smooth; whorls seven, three upper short, round, polished, four lower straight-sided, striated, high, with a slight angle at the suture, the last angular below, notched; aperture straight, perpendicularly oblong, with a conspicuous large, sutural callus.

PEIFFER. (Eneea.) Proc. Zool. Soc. 1854, p. 295.

Hab. Koondah Mountains, near Calicut.

Species 144. (Mus. Hanley.)

PUPA VARA. *Pup. testâ albâ, fusiformi, cylindrical*
costatâ; anfractibus septem, superioribus duobus
rotundis brevissimis, medianis inflatis, convexis,
ultimo contracto, toctoso; aperturâ elevatâ, aurî-
focim, labio exteriori supra medium callosissimè
sinuatim plicato.

THE VARA PUPA. Shell white, fusiform, regularly ribbed; whorls seven, upper two rounded, very smooth; middle inflated, convex, last contracted, tortuous; aperture raised, ear-shaped, outer lip very strongly sinuously plaited.

BENSON. (Eneea.) Ann. Nat. Hist. 1859.

Hab. Khasi Hills.

Species 145. (Mus. Hanley.)

PUPA CEYLANICA. *Pup. testâ albâ, brevitatâ, semi-*
pellucidâ; anfractibus sex, brevissimis, promi-
nentibus; aperturâ elevatâ, obliquè crenatâ, tri-
plicatâ, callo suturali conspicuo, margine reflexo.

THE CEYLON PUPA. Shell white, smooth, semipellucid; whorls six, rather short, prominent; aperture raised, obliquely bent backwards, with three plaits, sutural callus conspicuous, margin reflected.

PEIFFER. (Eneea.) Proc. Zool. Soc. 1855.

Hab. Ceylon.

Species 146. (Mus. Sir D. Barclay.)

PUPA BARCLAYI. *Pup. testâ brevi, obtusâ, subcylind-*
ricâ, albâ, obliquè costatâ; anfractibus quinque,
rectilatis, ultimo alto, infri umbilicato et
rimato; aperturâ unguâ, perpendiculariter ob-
longâ, anticè obliquè productâ, plerâ medianâ an-
fractis ultimi unguâ, columellâ crenatâ, profundâ.

BARCLAY'S PUPA. Shell short, obtuse, subcylindrical, white, obliquely ribbed; whorls five, rectilateral, last high, umbilicated and notched below; aperture large, perpendicularly oblong, anteriorly obliquely produced, median plait of the last whorl large, columella toothless, deep.

H. ADAMS. Proc. Zool. Soc. 1868, Pl. IV.

Hab. Mauritius.

Species 147. (Mus. Hanley.)

PUPA LAPIDARIA. *Pup. testâ, albâ, cornu, laevi, versus*
apicem subpyramidatâ, apicè obtusâ, supra me-
diâ et infra cylindricâ; anfractibus septem,
rectilatis, ultimo alto, profundè rimato;
aperturâ ovatâ, albâ, prominenter triplicatâ, labio
exteriori supra medianâ tumido.

THE LAPIDARY PUPA. Shell raised, horny, smooth, rather pyramidal towards the apex, apex obtuse, cylindrical above the middle and below; whorls seven, straight-sided, last high, deeply notched; aperture ovate, white, with three prominent plates, outer lip tumid above the middle.

HUTTON. Journ. As. Soc. Beng. 1849.

Hab. Afghanistan.

Species 148. (Mus. Hanley.)

PUPA BICOLOR. *Pup. testâ altissimâ, hyalinâ, albâ;*
anfractibus septem, apicalibus tumidis, alteris sub-
quadatis, ultimo alto, infri subcontracto, rimato;
aperturâ subauriformi, conspicuè triplicatâ, labio
exteriori supra medianâ profundè sinuato, callo
suturali conspicuo.

THE TWO-COLOURED PUPA. Shell very high, glassy, white; whorls seven, apical tumid, others rather square, last high, a little contracted below,

notched; aperture rather auriform, conspicuously three-plaited, outer lip with a deep sinus above the middle, sutural callus deep sinuous.

HUTTON. Journ. As. Soc. Beng. 1834.

Pupa mellita, Gould.

Hab. Mirzapore, Tavoy, Ceylon.

Species 149. (Mus. Sir D. Barclay.)

PUPA CERNICA. *Pup. testâ brevi, apicâ, sordidè albâ, crebrè linatâ, cylindricâ; apicè obtuso; anfractibus sex, superioribus brevissimis, alteris latissimis, ultimo profundè rimato et umbilicato; apertura ad ultimum anfractum multiplicatâ.*

THE MAERITIAN. Shell short, opaque, dull white, closely ridged, cylindrical; apex obtuse; whorls six, upper very short, others wide, last deeply notched and umbilicated; aperture with a single plait on the last whorl.

A. ADAMS. Proc. Zool. Soc. 1868, Pl. IV.

Hab. Mauritanis.

Species 150. (Mus. Hanley.)

PUPA SALWINIANA. *Pup. testâ latè pyramidalâ, heri, coracâ, apicè acuminatâ, anfractibus sex, crepantibus, ultimo longè rimato; apertura frè ad suturam ultimâ anfractibus elevatâ, subauriformi, anticè obliquè productâ, prominenti quatuorplicatâ, margine albo, labiis externis superiorem sinuato.*

SALVIN'S PUPA. Shell broadly pyramidal, short, horny, apex acuminate; whorls six, rapidly increasing, last with a long notch; aperture raised almost to the suture of the last whorl, rather

auriform, anteriorly obliquely produced, with four prominent plaits, margin white, outer lip sinuous above the middle.

THEOBALD. Journ. As. Soc. Beng. 1870.

Hab. Shan States.

Species 151. (Mus. Hanley.)

PUPA PLECHENS. *Pup. testâ brevî, latâ, coracè-subricidi, heri, spirè pyramidalâ, apicè obtuso; anfractibus quatuor, rotundè prominentibus, ultimo angustâ, infra subangustatâ, longè rimatâ; apertura obliquè subauriformi, calidè dentato-plicatâ.*

THE TOOTHPLATED PUPA. Shell short, broad, green ish-horny, smooth, spire pyramidal, apex obtuse; whorls four, roundly prominent, last large, rather narrow below with a long notch; aperture obliquely rather auriform, with strong tooth-plaits.

BENSON. Ann. Nat. Hist. 1849.

Hab. Himalaya.

Species 152. (Mus. Hanley.)

PUPA BATHYDON. *Pup. testâ parvâ, pyramidalâ, heri, fuscâ, apicè acuminatâ; anfractibus quinque, rotundis, ultimo profundè rimato; apertura auriculatâ, quinqueplicatâ, anticè obliquè productâ.*

THE DEER-TOOTHED PUPA. Shell small, pyramidal, smooth, brown, apex acuminate; whorls five, rounded, last deeply notched; aperture orange, five-plaited, anteriorly obliquely produced.

BENSON. Ann. Nat. Hist. 1863.

Hab. Narbuida.



151



152



153



154



155



156



157



158



159



160

P U P A.

PLATE XVII.

Species 153. (Mus. Hanley.)

PUPA SCALABINA. *Pap. testâ fusâ, fusiformi, profundè conatâ; spirâ acuminatâ; anfractibus quinque, angulatis, plicatis; ultimo ad medium contracto; apertura auriformi, plicis tribus, lobis externis supra medium similia contracto.*

THE SCALABIFORM PUPA. Shell brown, fusiform, deeply notched; spiræ acuminated; whorls five, angular, plaited, last contracted in the middle; aperture ear-shaped, with three plaits, outer lip simously contracted above the middle.

GUNDLACH. Pfeiffer, Malak. Bl. 1860.

Hab. Sicily (?), Cuba.

Species 154. (Mus. Hanley.)

PUPA NITIDA. *Pap. testâ parvâ, levi, subventricosi, lavi, fusâ; anfractibus quinque, rotundis, hecribus, suturâ profundâ; apertura hevi, edentulâ.*

THE SHINING PUPA. Shell small, short, rather ventricose, smooth, brown; whorls five, round, short, suture deep; aperture short, without teeth.

ANTONELLI. Pfe. Mon. II. p. 335.

Hab. Greece.

Species 155. (Mus. Hanley.)

PUPA BOREALIS. *Pap. testâ minutâ, subopaqueâ, succinâ; anfractibus quinque ad sex, altissimis, subrotundis, ultimo rimato; apertura hevi, dentibus minutissimis.*

THE BOREAL PUPA. Shell minute, a little transparent, amber; whorls five or six, rather high, rather ventricose, the last notched; aperture short, with very minute teeth.

MORELET. Journ. Conch. VII. 1858.

Hab. Kamtschatka.

Species 156. (Mus. Hanley.)

PUPA GRANUM. *Pap. testâ elongatâ, fusiformi, fusâ, albâ, angustâ; anfractibus octo, altissimis, superi-*

oribus rebus apicem attenuatis, ultimo levi, longè rimato; apertura parvâ, plicis circâ quinque.

THE GRAIN PUPA. Shell elongate, fusiform, brown, high, narrow; whorls eight, rather raised, upper attenuated towards the apex, last short with a long notch; aperture small, plaits about five.

DEPARNAUD. Conch. Terrest. et Fluv.

Hab. France, Spain, Greece, Italy, &c.

Species 157. (Mus. Hanley.)

PUPA FARINISIL. *Pap. testâ pyramidalâ, albâ, purpureo-fusâ, levi; anfractibus sex, gradatim crescentibus, coarctatissimis, ultimo angustâ, ventricoso, longè rimato; apertura ovali, edentulâ, margine tenui.*

FARINE'S PUPA. Shell pyramidal, raised, purple-brown, smooth; whorls six, gradually increased, rather convex, last large, ventricose, with long notch; aperture ovate, without teeth, margin thin.

DUMAREST. Rev. et Mag. Zool. XV. 1862.

Hab. Pyrenees.

Species 158. (Mus. Hanley.)

PUPA TRUNCATELLA. *Pap. testâ albâ, cylindricâ, costâ limatâ; anfractibus sex, inferioribus tribus subequalibus, duobus apicalibus minutis, ultimo alto, cylindrico, heviter rimato et umbilicato.*

THE TRUNCATELLA PUPA. Shell whitish, cylindrical, straightly ridged; whorls six, lower three nearly equal, two apical minute, last raised, cylindrical; shortly notched and umbilicated.

POLLER. Mon. Vol. IV. 1868.

Hab. Transylvania, Turkey.

Species 159. (Mus. Hanley.)

PUPA BIGANATA. *Pap. testâ cylindricâ, minutâ, hevi, fulvâ, levi; anfractibus septem, medianis subequalibus; ultimo heviter rimato; apertura parvâ, margine profundè incrassato, ultimo anfracta accidentato.*

PUPA.—PLATE XVII.

THE TWO-GRAINED PUPA. Shell cylindrical, minute, short; whorls seven, middle ones nearly equal, last shortly notched; aperture small, margin deeply thickened, last whorl with a single tooth.
 ROSSMÄSLER. Pflr. Mon. II. p. 354.
Hab. Germany.

Species 160. (Mus. Hanley.)

PUPA ROWELLI. *Pup. testâ minutâ, fuscâ, politâ, ventricosâ; anfractibus quatuor, ultimo et penultimo ventricosis, altis, ultimo longè rimato; aperturâ subtrigonâ, plicis dentiformibus tribus vel quatuor.*

ROWELL'S PUPA. Shell minute, brown, smooth, ventricose; whorls four, last and last but one ventricose, high, last with a long notch; aperture subtrigonal, with three or four tooth-like plaits.

NEWCOMB. Ann. Lye. New York, VII. 1861.
Hab. Oakland, California.

Species 161. (Mus. Hanley.)

PUPA CUPA. *Pup. testâ breviter cylindricâ, cornâ, apice obtuso; anfractibus quinque, brevibus, tribus inferioribus latis, levibus, ultimo profundè rimato,*

ad aperturam unidentatâ; aperturâ parvâ, subrotundâ, margine profundè incrassatâ.

THE BUTT PUPA. Shell shortly cylindrical, horny, apex obtuse; whorls five, short, three lower broad, smooth, last deeply notched, with a single tooth at the aperture; aperture small, rather round, margin deeply thickened.

KÜSTER. Fide Hanley.

Hab. Switzerland.

Species 162. (Mus. Hanley.)

PUPA NITENS. *Pup. testâ parvâ, pallidè cornâ, subpyramidatâ, apice obtuso; anfractibus quatuor, declivibus, ultimo magno, profundè rimato; suturâ profundâ; aperturâ parvâ, subquadratâ, plicis quatuor, unâ ad anfractum ultimum productâ, bifidâ, unâ columellari, duobus intus labium externum instructis parvis, rotundis.*

THE SHINING PUPA. Shell small, pale, horny, rather pyramidal, apex obtuse; whorls four, sloped, last large, deeply notched; suture deep, aperture small, rather square, with four plaits, one at the last whorl, produced, bifid, one columellar, two small, round, placed within the outer lip.

PEASE. Proc. Zool. Soc. 1860, p. 439.

Hab. Isl. Ebon, Marshall's Group.



165



166



167



168



169



170



171



172



173



174

P U P A.

PLATE XVIII.

Species 163. (Mus. Sowb.)

PUPA MINUTISSIMA. *Pup. testâ minutâ, fuscâ, cylindricâ, lœvi, apicè obtusâ; anfractibus quinque, rotundis, tribus inferioribus subæqualibus, ultimo prænotâ cinctâ; apertura parvâ, subrotundâ, ad anfractum ultimum unidentatâ.*

THE VERY SMALL PUPA. Shell minute, brown, cylindrical, smooth, with obtuse apex; whorls five, rounded, three lower nearly equal, last with a deep notch; aperture small, rather oval, with a single tooth on the last whorl.

HARTMAN. Pfeiffer, Mon. 1868, p. 391.

Hab. Central Europe.

Species 164. (Mus. Hanley.)

PUPA MILLIUM. *Pup. testâ minutâ, coracâ, subdiaphanâ, pullidâ, cylindricâ, apicè obtusâ; anfractibus quatuor, inferioribus subæqualibus; apertura parvâ, quinqueplicatâ.*

THE MILLET PUPA. Shell minute, horny, rather transparent, polished, cylindrical, apex obtuse; whorls four, the lower ones nearly equal; aperture small, five-plaited.

GOULD. Pfeiffer, Mon. 1868, p. 335.

Hab. North America.

Species 165. (Mus. Hanley.)

PUPA DEFORA. *Pup. testâ minutâ, pullidâ, coracâ, subcylindricâ, subdiaphanâ, lœvi; anfractibus quinque, apicalibus subattenuatis, ultimo breviter cinctâ; apertura parvâ, quadridentatâ.*

THE DECOROUS PUPA. Shell minute, pale horny, subcylindrical, a little transparent, smooth; whorls five, apical ones rather attenuated, last shortly notched; aperture small, four-toothed.

GOULD. Otia Conchologia, p. 292.

Hab. North America.

Species 166. (Mus. Hanley.)

PUPA POTTEBERGENSIS. *Pup. testâ sinistrossâ, pullidissimè coracâ, subcylindricâ, subventricosâ, lœvi,*

apicè obtusâ, fuscâ; anfractibus novem, superioribus subattenuatis, alteris subæqualibus, ultimolongè prænotâ profundè unidentatâ; apertura ad anfractum ultimum elatâ, pæpæ marginem quinqueplicatâ, marginem tenui.

THE POTTEBERG PUPA. Shell sinistral, very pale rose, rather cylindrical, rather ventricose, smooth, apex obtuse, brown; whorls nine, upper rather attenuated, the others nearly equal, last with a long notch, deeply umbilicated; aperture raised on the last whorl, five-plaited near the margin, margin thin.

KRAUSS. Pfeiffer, Mon. 1868, p. 297.

Hab. Cape of Good Hope.

Species 167. (Mus. Hanley.)

PUPA RECTA. *Pup. testâ elongatâ, cylindricâ, angustâ, lœvi, coracâ, fuscâ, cuneocordâ trifasciatâ, apicè obtusâ; anfractibus septem, duobus apicalibus parvis, alteris subæqualibus, rectis, ultimo longè rimatâ; apertura parvâ, unifornâ, plisâ ad anfractum ultimum duabus, ad columellam unâ, cinctâ unâ, elongatâ, labio exteriori supra medium sinistram incrassatâ.*

THE STRAIGHT PUPA. Shell elongated, cylindrical, narrow, smooth, horny, three-banded with reddish-brown, apex obtuse; whorls seven, two apical small, others nearly equal, straight, last with a long notch; aperture small, ear-shaped, plaits on the last whorl two, on the columella one, inside one elongated, outer lip sinuously thickened above the centre.

LOWE. Pflr. Mon. 1858, p. 309.

Hab. Madeira.

The whorls are banded with a vinous brown.

Species 168. (Mus. Hanley.)

PUPA MONTICOLA. *Pup. testâ lœvi, cylindricâ, coracâ, libidâ, mediâ anfractuum et ad suturam cubra fasciatâ; anfractibus sex, apicalibus duabus obtusissimè compressis, alteris subæqualibus, ultimo ad medium subcompressis, longissime rimatâ; aper-*

turā angustā, subovatā, ad anfractum ultimum intus multiplicatā, ad marginem prope suturam plicā callosā supra infroque extensā instructā, labio externo intus biplicato.

THE MOUNTAIN PUPA. Shell short, cylindrical, closely ribbed, banded with red in the middle and at the suture of the whorls; whorls six, two apical very bluntly flattened, the others nearly equal, last rather compressed in the middle, with a very long notch; aperture narrow, subovate, with a single plait within on the body whorl, near the suture at the margin set with a callous plait extended over and under, outer lip with two inner plaits.

LOWE. Pflr. Mon. 1868, p. 311.

Hab. Porto Santo, Madeira.

Species 169. (Mus. Hanley.)

PUPA PLANTI. *Pup. testā concentricā, tenui, subdiaphanā, albā, tenuiter oblique lincatā, apice obtuso; anfractibus septem, latis, convexiusculis, ultimo breviter rimato, aperture laterisubcompressa; apertura brevi, latā, callo suturali acuto, plicā columellari internā latā, laminatā.*

PLANT'S PUPA. Shell very ventricose, thin, subdiaphanous, whitish, finely obliquely ridged, apex obtuse; whorls seven, broad, rather convex, last shortly notched, rather flattened on the side of the aperture; aperture short, broad, sutural callus sharp, columellar plait broad, laminated.

PERIFFER. Proc. Zool. Soc.

Hab. Port Natal.

Species 170. (Mus. Hanley.)

PUPA SAXICOLA. *Pup. testā minutā, subviridē corneā, subcylindricā, nitenti, subdiaphanā, apice obtuso; anfractibus quatuor, ultimo magno, longē rimato; apertura subovatā, plicis ad anfractum ultimum duabus, columellari unā, intus duabus parvis, margine angusto, albo.*

THE ROCK-INHABITING PUPA. Shell minute, greenish-

horny, subcylindrical, shining, rather transparent, apex obtuse; whorls four, the last large, with a long notch; aperture rather oval, with two plaits on the last whorl, one columellar and two small within, margin narrow, white.

LOWE. Pflr. Mon. 1868, p. 321.

Hab. Madeira.

Species 171. (Mus. Hanley.)

PUPA IREIOGA. *Pup. testā fusco-corneā, levigatā, subcylindricā, superiōre subattenuatā; anfractibus septem, suturā profundā separatis, ultimo longē rimato; apertura subvaciformi, superiōre cuneatā, supra medianā contractā, callo suturali et plicā ultimi anfractūs valdē elongatis, plicā internā rotundā, plicā columellari elongatā, declivi.*

THE BROOK PUPA. Shell brown-horn, smooth, rather cylindrical, rather attenuated above; whorls seven, separated by a deep suture, last with a long notch; aperture partly anfriform, cuneate above, contracted above the middle, sutural callus and plait of the last whorl much elongated, internal plait strong, columellar plait elongated, sloped downwards.

LOWE. Pflr. Mon. 1868, p. 321.

Hab. Madeira.

The plaits in the mouth seem to fill it up by their great extension.

Species 172. (Mus. Hanley.)

PUPA EDENTULA. *Pup. testā parvā, corneā, brevi, politā, semipellucidā, spirā versus apicem paulō attenuatā; anfractibus septem, rotundis, ultimo breviter rimato; apertura brevi, edentulā, margine tenui.*

THE TOOTHLESS PUPA. Shell small, horny, short, polished, semipellucid, spire a little attenuated towards the apex; whorls seven, rounded, last shortly notched; aperture short, without teeth, margin thin.

DRAEPAENAUD. Moll. Terr. et Fluv.

Hab. Europe.



P U P A.

PLATE XIX.

Species 173. (Mus. Hanley.)

PUPA ANTELLA. *Pup. testâ minuto, ventricosa, fusca, luteo; anfractibus quatuor, hecibus, contrivosis, cetero scilicet unguibus, infra umbilicatus; apertura obliqua, subauriformi, quadrilobata, labio exteriori supra medium tumido, sinuato.*

THE TINY PUPA. Shell minute, ventricose, brown, short; whorls four, short, ventricose, round, last rather large, umbilicated below; aperture oblique, rather auriform, four-toothed, outer lip tumid and sinuated above the middle.

GOULD. (Vertigo) Pfr. Mon. III.
Hab. Tahiti.

Species 174. (Mus. Hanley.)

PUPA ELEGANTULA. *Pup. testâ albâ, pellucidâ, clavata, superâ obtusâ, ventricosâ, infra gradatim attenuatâ; anfractibus sex, apicali planulatis, ultima rimata, contractâ; apertura subtriangulâ, calli suturali conspicuo.*

THE ELEGANT LITTLE PUPA. Shell white, pellucid, club-shaped, obtuse above, ventricose, gradually attenuated below; whorls six, apical flattened, last notched, contracted; aperture subtriangular with conspicuous sutural callus.

PFEIFFER. Proc. Zool. Soc. 1846, p. 185.
Hab. Liberia.

A curiously formed little shell, very thick towards the apex, and gradually tapering downwards.

Species 175. (Mus. Hanley.)

PUPA ANGSTOR. *Pup. testâ minuto, sinistroversâ, fuscâ; anfractibus quinque, convexis, ultimo hecibus umbilicatus; apertura parvâ, latâ, triplicatâ, labio exteriori supra medium sinuato et dentato-plicatâ.*

THE NARROW PUPA. Shell minute, sinistral, fulvous; whorls five, convex, last shortly umbilicated; aperture small, broad, three-plaited, outer lip sinuous above the middle, with a tooth plait.

JEFFREYS. (Vertigo) Pfr. Mon. 1868, p. 336.

Vertigo ~~Font.~~, Charpentier.

Vertigo ~~Font.~~, Held.

Hab. Britain, France, Germany, Spain, &c.

Species 176. (Mus. Hanley.)

PUPA MENKEANA. *Pup. testâ hecibuscili, albâ, tenuiter et regulariter laticâ, ventricosâ, apice obtusâ; anfractibus septem, inclivatis ventricosis, ultimus longi rimato, infra contracto, dorso post apertura marginem contractâ et profundè foveolatus; apertura subquadratâ, intus et prope marginem latè et profunde plicatâ, margine reflexo, expanso.*

MENKE'S PUPA. Shell rather short, whitish, finely and regularly ridged, ventricose, apex obtuse; whorls seven, middle ventricose, last with a long notch, contracted below, contracted and deeply pitted at the back, behind the margin of the aperture; aperture subquadrate, within and near the margin broadly and deeply plaited, margin reflected, expanded.

PFEIFFER. (Azusa) Mon. 1868, p. 255.

Hab. Central Europe.

In the later monographs, Pfeiffer seems to have mixed up this shell with the well-known European *Azusa trilevis*, with which it has little affinity.

Species 177. (Mus. Hanley.)

PUPA CARIATA. *Pup. testâ albâ, semipellucidâ, cylindricâ, hecibus, prope apicem inflatâ; anfractibus quinque, obliquè tenuiter laticis, ultimo obliquè profundè rimato, infra rimam tumido et subcucullatus; apertura subauriformi, ceteris contractâ, intus dentato-plicatâ, pliatâ suturali unguis, expansâ, margine reflexo et expanso.*

THE BEADED PUPA. Shell whitish, semipellucid, cylindrical, short, inflated near the apex; whorls five, obliquely finely ridged, last obliquely deeply notched, tumid and partly keeled below the notch; aperture rather ear-shaped, contracted

PUPA.—PLATE XIX.

without, tooth-plaited within, sutural plait large, expanded, margin reflected and expanded.

GOULD. —? (quoted by Hanley.)

Hab. Cape Patmos.

Species 178. (Mus. Hanley.)

PUPA FUNICULA. *Pup. testâ altâ, cylindricâ, solidâ, subroseâ, obliquè liratâ, apice obtuso; anfractibus sex, rectiusculis, medianis subequalibus, ultimo obtusissimè angulato rîe rimato; aperturâ subquadratâ, edentulâ; margine reflexo, subrepanso; columellâ latâ.*

THE FUNNEL PUPA. Shell high, cylindrical, solid, rather pink, oblique-ridged, apex obtuse; whorls six, rather straight, middle nearly equal, last very obtusely angular, scarcely notched; aperture rather square, toothless; margin reflected, rather expanded; columella broad.

VALENCIENNES. *Piff. Mon.* 1868, p. 287.

Hab. Isle of France.

Species 179. (Mus. Hanley.)

PUPA CYCLOTOMA. *Pup. testâ brevi, ventricosâ, costis rectiusculis sculptâ, subroseâ, apice obtusiusculo, medio inflato; anfractibus sex, brevibus, ultimo profundè rimato; aperturâ subovatâ, columellâ et anfractâ ultimo implicatis; margine albo reflexo, rotundo.*

THE ROUND-MOUTHED PUPA. Shell short, ventricose, sculptured with rather straight ribs, rather pink, apex rather obtuse, inflated in the middle; whorls six, short, last deeply notched; aperture rather ovate, columella and last whorl single-plaited; margin white, reflected, round.

KISTNER. *Pfeiffer, Mon.* 1868, p. 293.

Pupa Küsteri, Pfeiffer (var.)

Hab. Cuba.

Species 180. (Mus. Hanley.)

PUPA LACHRYMA. *Pup. testâ albâ, pellucidâ, clavatâ, cylindricâ, superiè tumidâ, infriè rectâ, apice obtuso; anfractibus sex, ultimo alto, infriè obliquè breviter rimato; aperturâ trigonâ, plîcâ suturali et plîcis dentiformibus tribus conspicuis, crassis.*

THE TEAR PUPA. Shell whitish, pellucid, club-shaped, cylindrical, tumid above, straight below, apex obtuse; whorls six, last high, with a short oblique notch below; aperture trigonal, sutural plait and three dentiform plaits conspicuous, thick.

AUCT. —? (Mus. Brit.)

Hab. Liberia.

Species 181. (Mus. Hanley.)

PUPA TERES. *Pup. testâ altâ, cylindricâ, eleganter obliquè liratâ, albâ, opacâ, superiè tumidâ, infriè subattenuatâ; anfractibus septem, inferioribus angustioribus, ultimo arcuatim rimato, suturâ profundâ; aperturâ edentulâ, perpendiculariter oblongâ.*

THE LONG-ROUNDED PUPA. Shell raised, cylindrical, elegantly obliquely ridged, white, opaque, tumid above, slightly attenuated below; whorls seven, lower half-way, last with a curved notch, suture deep; aperture toothless, perpendicularly oblong.

PFEIFFER. *Mon.* 1868, p. 297.

Helis yalugula, Ferussac.

Hab. Mauritius.

Species 182. (Mus. Hanley.)

PUPA KURRI. *Pup. testâ sinistrosâ, latè pyramidalâ, lævi, cæruleo-albidâ, apice acuminato; anfractibus octo, gradatim crescentibus, ultimo profundè et longè rimato, infriè rimam tumido et subcurvato; aperturâ elevatâ, subtrigonâ, intus quadruplicato callo suturali obliquè elongato, laminato, margine tenui, rîe reflexo.*

KURRI'S PUPA. Shell sinistral, broadly pyramidal, smooth, bluish-white, apex acuminated; whorls eight, gradually increasing, last with a deep long notch, tumid and slightly keeled below the notch; aperture raised, subtrigonal, with four plaits within sutural callus obliquely elongated, laminar, margin thin, scarcely reflected.

KRAUSS. *Pfeiffer, Mon.* 1868, p. 297.

Pupa ocellaris, Kurri.

Pupa fontis, Deshayes.

Hab. Cape of Good Hope.



185



186



187



188



189



190



191



192



193



194



195



196

P U P A.

PLATE XX.

Species 183. (Mus. Brit.)

PUPA ANTI-VERTEGOS. *Pup. testâ minutâ, dextrali, brevi, ventricosa, levigatâ; anfractibus quatuor cæcis; apice obtuso; apertura trigonâ, inflexâ acuminatâ, dentibus octonis aut novocis, utroque latere tribus.*

THE OPPOSITE WHORLED PUPA. Shell minute, dextral, short, ventricose, smooth; whorls four; apex obtuse; aperture trigonal, acuminated below, teeth, eight or nine, three on each side.

DRAPARNAUD. 'Tabl. des Mollusques de la France,' p. 59.

Pupa Obolobolata, Hartman.

Hab. Great Britain, Ireland, and France.

The aperture is triangular, with two or three teeth on each side between the angles. The small shells belonging to the group named 'VERTIGO,' by some authors being sinistral, this species, exactly resembling them in other respects, receives the above name because it is dextral.

Species 184. (Mus. Hanley.)

PUPA MODICA. *Pup. testâ ovatâ; pallidè fulcâ, parvâ, sublevigatâ; anfractibus quinque, altiusculis, convexis, suturâ profundâ; ultimo anfractu oblongo, rimato; apertura subovatâ, margine simplici, reflecto.*

THE UNPRETENDING PUPA. Shell ovate, pale fulvous, small, rather smooth; whorls five, rather elevated, convex, with deep suture; last whorl oblong, creased; aperture subovate; margin simple, reflected.

GOULD. — ?

Hab. Florida.

A Balimus-like little shell.

Species 185. (Mus. Brit.)

PUPA SUBSTRIATA. *Pup. testâ minubi, fuscâ, dextrali, heciter cylindricâ, latâ, obliquè striatâ, anfractibus quaterenis, brevibus; apertura subauriformi, margine reflexo, albo, sex-dentato.*

THE SUBSTRIATED PUPA. Shell minute, brown, dextral, shortly cylindrical, broad, obliquely striated, whorls four, short; aperture somewhat auriform, margin reflected, white, six-toothed.

GRAY. (Vertigo) Brit. Mus. MS.

Hab. Great Britain and Germany.

Species 186. (Mus. Brit.)

PUPA PUSILLA. *Pup. testâ minutâ sinistrali, fuscos-fuscosâ, brevi; anfractibus obliquis, apicali obtuso, ultimo subbelleri; apertura sinuatim trigonâ, margine externo bidentato, interno superne bidentato, columella multiplicatâ.*

THE DWARF PUPA. Shell minute, sinistral, smoky brown, smooth; whorls oblique, apical obtuse, last a little sloped; aperture sinuously trigonal, outer margin with two teeth, inner with two teeth above, columella with one fold.

MÜLLER. Pflüger Mon. Hel. VI. p. 336.

Pupa vertig. Draparnaud.

Hab. Germany, Spain, England.

Species 187. (Mus. Brit.)

PUPA WALBERGI. *Pup. testâ subturbinatâ, cylindricâ, albâ, brevi, semiplicicatâ, anfractibus septenis, apicalibus duobus depressis, alteris subequalibus, ultimo angustato, breviter rimato; apertura brevis, subauriformi; plicâ suturali magnâ, dente columellari prominente, labio externo tridentato.*

WALBERG'S PUPA. Shell rather turbinated, cylindrical, white, smooth, semiplicid; whorls seven; apical two depressed, others nearly equal, last narrow, shortly creased; aperture short, rather auriform; sutural plait large, columellar tooth prominent, outer lip tridentate.

PEIFFER. Mon. Hel. Vol. VII.

Hab. S. Africa.

Species 188. (Mus. Hanley)

PUPA DESHAYESI. *Pup. testâ parvâ, albâ, cylindricâ, subturbinatâ; anfractibus octonis, brevibus costatis; ultimo profundè rimato; apertura sursum acclivi, brevis; plicâ suturali conspicuâ.*

DESHAYES'S PUPA. Shell small, white, cylindrical, slightly turbinated; whorls eight, short, ribbed; last deeply creased; aperture turned upwards, short; sutural plait conspicuous.

ADAMS. — ?

Hab. — ?

Species 189. (Mus. Hanley.)

PUPA DORMEYER. *Pup. testā cylindricā, turbinatā, cornēā, brevi; anfractibus novenis, apicalibus parvis, sequentibus superioribus latis, inferioribus gradatim angustatis, ultimo profundē rinato, aperturā subquadratā, margine albo, profundo, plicā suturali prominenti.*

DORMEYER'S PUPA. Shell cylindrical, turbinate, horny, smooth; whorls nine, apical small, following upper wide, lower gradually narrowed, last deeply creased; aperture subquadrate, margin white, deep, sutural plait prominent.

PARRELS — ?

Hab. Greece.

Species 190. (Mus. Hanley.)

PUPA TRICOLOR. *Pup. testā pruinosa, subpyramidalī, brevi, apice fusco, acuminato; anfractibus octenis, convexoconvexis, tribus inferioribus altis; ultimo profundē cincto, umbilicato, inflexo umbilicenu carinato; aperturā subovata, margine foveo, interrupto, plicā suturali conspicuā; plicis internis atque duabus.*

THE THREE-COLOURED PUPA. Shell plum-coloured, subpyramidal, smooth, apex brown, acuminate; whorls eight, rather convex, three lower high; last deeply creased, umbilicated, keeled

below the umbilicus, aperture subovate, margin fulvous, interrupted, sutural plait conspicuous, inner plaits two on each side.

VILLA. — ?

Hab. Lombardy.

Species 191. (Mus. Hanley.)

PUPA FUSCA. *Pup. testā minutā, breviter cylindricā, fuscā, tenuiter liratā, anfractibus senis convexis, lamina internis tenuibus, numerosis, plicā suturali proximā, albā, elongatā.*

THE BROWN PUPA. Shell minute, shortly cylindrical, brown, with thin ridges; whorls six, convex; inner lamina thin, numerous, sutural plait approximate, white, elongated.

LOWE. De PAVIA Mon. Moll. p. 130.

Hab. Madeira.

Species 192. (Mus. Hanley.)

PUPA FALLAX. *Pup. testā oblongo-ovata, fuscā, brevi, subacuminatā; anfractibus senis; aperturā ovata, edentatā.*

THE DECEPTIVE PUPA. Shell oblong-ovate, brown, smooth, a little acuminate; whorls six; aperture ovate, toothless.

SAY. Pflr. Mon. Hel. II. p. 309.

Bolivius exiguus. Reeve.

Hab. N. America.

Species 32. (Fig. 32,* Plate XX. Mus. Brit.)

PUPA ANGLICA. *Pup. testā minutā, cornēā, subpyramidalī, brevi; anfractibus senis; aperturā subtriangulā, latē plicatā, margine albo, labio externo supra medianā sinuatim incrassatā; plicā suturali parva.*

THE ANGLO-AN PUPA. Shell minute, horny, somewhat pyramidal, smooth; whorls six; aperture subtriangular, plaited within, margin white, outer lip sinuously thickened above the middle; sutural plait small.

FERRUSSAC — ?

Hab. Britain and other parts of Europe.

Errata.—FOR SEPTIDENTATUS (Species 118), read RINGENS, *Sowerby.*

FOR VARIABILIS (Species 32), read MULTI-DENTATA, *Olivier.*

Pupa *Lapidaria* and Pupa *Variabilis* having been inadvertently repeated, the two following species take their numbers.

Species 152. (Fig. 152,* Plate XX., Mus. Brit.)

PUPA PYGMAEA. *Pup. testā minutā, brevissimā cylindricā, ventricosā, brevi; anfractibus quateris aut quinis; aperturā subovata, margine albo sedentato.*

THE PYGMY PUPA. Shell minute, very shortly cylindrical, ventricose, smooth; whorls four or five; aperture subovate, margin white, six-toothed.

DRAPARNAUD. 'Tab. des Mollusques de France.'

Pupa quinquesdentata. Hartman.

Vertigo alpestris. Ferrussac.

Hab. Britain and Central Europe.

P U P A.

	Plate.	Species.		Plate.	Species.
<i>acutula</i> , <i>Parreys</i>	XIII.	115	<i>conica</i> , <i>Rossmäslcr</i>	XI.	101
<i>alpicola</i> , <i>Charpentier</i>	XII.	107	<i>contracta</i> , <i>Gulman</i>	VIII.	67
<i>alvearea</i> , <i>Dilthey</i>	III.	23	<i>cononata</i> , <i>Stüder</i>	XI.	102
<i>aneonostoma</i> , <i>Lowe</i>	XII.	108	<i>corticaria</i> , <i>Say</i>	XII.	106
<i>anglica</i> , <i>Ferrussac</i>	XX.	32*	<i>critica</i> , <i>Zellius</i>	XI.	102
<i>angustior</i> , <i>Jeffreys</i>	XIX.	175	<i>crassilabris</i> , <i>Shuttleworth</i>	II.	14
<i>antivertigo</i> , <i>Draparnaud</i>	XX.	183	<i>cupa</i> , <i>Küster</i>	XVII.	161
<i>Antonii</i> , <i>Küster</i>	II.	9	<i>curta</i> , <i>Potiez</i>	V.	44
<i>Arigonis</i> , <i>Rossmäslcr</i>	XI.	97	<i>curvidens</i> , <i>Gould</i>	XV.	140
<i>armifera</i> , <i>Say</i>	XV.	138	<i>cyclostoma</i> , <i>Küster</i>	XIX.	179
<i>avatica</i> , <i>Benson</i>	VII.	60	<i>cylindrelloidea</i> , <i>Stålckza</i>	VII.	64
<i>avona</i> , <i>Draparnaud</i>	VIII.	70	<i>cylindrellas</i> , <i>Adams</i>	XIII.	122
<i>avenacea</i> , <i>Brugnière</i>	VIII.	70	<i>cylindrica</i> , <i>Stüder</i>	IV.	25
<i>bacillus</i> , <i>Pfeiffer</i>	IX.	80	<i>dealbata</i> , <i>Webbs</i>	VI.	52
<i>Baillii</i> (muscorum)	IX.	77	<i>decora</i> , <i>Gould</i>	XVIII.	165
<i>Barelayi</i> , <i>H. Adams</i>	XVI.	146	<i>decurvata</i> , <i>Poey</i>	II.	11
<i>bathyodon</i> , <i>Benson</i>	IV.	33	<i>Deshayesii</i> , <i>Adams?</i>	XX.	188
<i>Bergonii</i> , <i>Rothman</i>	V.	37	<i>Desmazuresii</i> , <i>Crosse</i>	X.	91
<i>beallensis?</i> <i>Irw.</i>	X.	87	<i>detrita</i> , <i>Shuttleworth</i>	III.	17
<i>biocolor</i> , <i>Hutton</i>	XVI.	148	<i>doliolum</i> , <i>Brugnière</i>	XI.	102
<i>bidentata</i> , <i>Pfeiffer</i>	IX.	77	<i>doliium</i> , <i>Draparnaud</i>	VII.	55
<i>bifilaris</i> , <i>Mousson</i>	X.	90	<i>Dormeyeri</i> , <i>Parreys?</i>	XX.	189
<i>bigranata</i> , <i>Rossmäslcr</i>	XVII.	139	<i>Dupontiana</i> , <i>Crosse</i>	VIII.	71
<i>biplicata</i> , <i>Rossmäslcr</i>	XIII.	130	<i>Dussumacriæ</i> , <i>Reeve</i>	IX.	84
<i>Blanfordi</i> , <i>Austria</i>	IV.	30	<i>edentula</i> , <i>Draparnaud</i>	XVIII.	172
<i>Borealis</i> , <i>Morlet</i>	XVII.	155	<i>elata</i> , <i>Schmidt</i>	V.	39
<i>Bourgnignati</i> , <i>Deshayes</i>	XIV.	128	<i>elegantula</i> , <i>Pfeiffer</i>	XIX.	174
<i>Bryanti</i> , <i>Pfeiffer</i>	I.	1	<i>exigua</i> , <i>Mousson</i>	VIII.	69
<i>calathiscus</i> , <i>Lowe</i>	XIII.	121	<i>exiguus</i> , <i>Reeve</i>	XX.	192
<i>callifera</i> , <i>Morlet</i>	IX.	78	<i>Fabræna</i> , <i>Crosse</i>	IX.	85
<i>capitata</i> , <i>Gould?</i>	XIX.	177	<i>fallax</i> , <i>Say</i>	XX.	192
<i>carinata</i> , <i>Gould</i>	VIII.	66	<i>Finlandensis</i> , <i>Lowe</i>	XII.	108
<i>caspia</i> , <i>Pfeiffer</i>	XI.	95	<i>farinesii</i> , <i>Desmarest</i>	XVII.	157
<i>causida</i> , <i>Lowe</i>	XV.	137	<i>fastoides</i> , <i>Theobald</i>	IV.	26
<i>cernica</i> , <i>A. Adams</i>	XVI.	149	<i>fevriaria</i> , <i>Lowe</i>	XV.	134
<i>Ceylonica</i> , <i>Pfeiffer</i>	XVI.	145	<i>Ferrarii</i> , <i>Porro</i>	XIV.	130
<i>Charpentieri</i> , <i>Shuttleworth</i>	XII.	109	<i>flosa</i> , <i>Theobald</i>	VII.	59
<i>Chloris</i> , <i>Crosse</i>	VIII.	73	<i>fonticola</i> , <i>Deshayes</i>	XIX.	182
<i>chrysalis</i> , <i>Pfeiffer</i>	I.	5	<i>frumentum</i> , <i>Draparnaud</i>	V.	44
<i>clavatula</i> , <i>Linnæus</i>	IX.	82	<i>funicula</i> , <i>Valenciennes</i>	XIX.	178
<i>concomerata</i> , <i>Wood</i>	V.	41	<i>furtoïdes</i> , <i>Theobald</i>	IV.	26
<i>concinna</i> , <i>Lowe</i>	XV.	139	<i>fusca</i> , <i>Lowe</i>	XX.	191

PUPA.

	Plate.	Species.		Plate.	Species.
<i>fusus</i> , Bruguière	III.	23	<i>molita</i> , Gould	XVI.	148
<i>glans</i> , Küster	I.	2	<i>Mondrainii</i> , Adams	XIV.	127
<i>Gonidomus</i> , Adams	V.	38	<i>monticola</i> , Lowe	XVIII.	168
<i>Gouldii</i> , Binney	XII.	105	<i>Moricandi</i> , Fer	VIII.	65
<i>granum</i> , Draparnaud	XVII.	156	<i>Masiliana</i> , Dupuy	XII.	109
<i>gularis</i> , Rossmäslcr	VI.	46	<i>Muhlfeldti</i> , Küster	VIII.	68
<i>guttata</i> , Porro	XIII.	130	<i>multicoestata</i> , Küster	II.	13
<i>hauiata</i> , Held	XIX.	175	<i>multidentata</i> , Olivier	V.	42
<i>holostoma</i> , Morelet	IX.	83	<i>mumia</i> , Bruguière	I.	3
<i>horiteum</i> , Ferrussac	VIII.	70	<i>muniola</i> ? Pfeiffer	I.	3
<i>idolum</i> , Mentze	V.	41	<i>muscerda</i> , Benson	VII.	56
<i>incrassata</i> , Sowerby	I.	6	<i>muscorum</i> , Linnaeus	IX.	77
<i>indica</i> , Pfeiffer	VII.	63	<i>mutabilis</i> , Ferrussac	V.	42
<i>infanda</i> , Shuttleworth	II.	11	<i>Newtoui</i> , Adams	VI.	51
<i>intersecta</i> , Deshayes	XIV.	129	<i>nisa</i> , Pfeiffer	VI.	53
<i>iostoma</i> , Pfeiffer	III.	22	<i>nitens</i> , Pease	XVII.	162
<i>irrigua</i> , Loce	XVIII.	171	<i>nitida</i> , Antonelli	XVII.	154
<i>juniperi</i> , Fleming	IV.	25	<i>Novazelandica</i> , Pfeiffer	XIV.	126
<i>Kokieli</i> , Rossmäslcr	VIII.	65	<i>nucifraga</i> , Parreys	X.	93
<i>Kurrii</i> , Krauss	XIX.	182	<i>oblongata</i> , Rossmäslcr	XII.	111
<i>Küsteri</i> , Pfeiffer	XIX.	179	<i>obscura</i> , Muhlfeldt	VIII.	68
<i>lachryma</i> , Auct.	XIX.	180	<i>obstructa</i> , Gossies	IV.	34
<i>Layardi</i> , Benson	XV.	141	<i>ocheloidata</i> , Hartman	XX.	183
<i>lapidaria</i> (pygmaea)	XX.	152	<i>ovularis</i> , Olivier	XIII.	117
<i>lapidaria</i> , Hutton	XVI.	147	<i>pachygastra</i> , Zeigler	XII.	111
<i>Lienardiana</i> , Crosse	X.	94	<i>pagoda</i> , Ferrussac	V.	41
<i>Licversi</i> , Mousson	IV.	29	<i>pagodula</i> , Desmarest	XI.	98
<i>Lifoana</i> , Gossies	IV.	28	<i>Paitensis</i> , Crosse	X.	88
<i>Lincolnensis</i> , Coz	XI.	104	<i>palanga</i> , Lessou	VI.	43
<i>longurio</i> , Crosse	XI.	96	<i>palangula</i> , Ferrussac	XIX.	181
<i>Lusitanica</i> , Rossmäslcr	XII.	113	<i>pamphorodon</i> , Benson	XIII.	129
<i>Lyonetii</i> , Montfort	IX.	81	<i>pellucida</i> , Pfeiffer	XII.	119
<i>Lyonetianus</i> , Pfeiffer	IX.	81	<i>pentodon</i> , Say	XV.	140
<i>Marginata</i> , Draparnaud	IX.	77	<i>phasianus</i> , Dubois	IV.	27
<i>Mariei</i> , Crosse	IV.	31	<i>Philippii</i> , Cautrain	VIII.	69
<i>maritima</i> , Pfeiffer	III.	20	<i>Pircei</i> , Pfeiffer	XVI.	143
<i>marmorata</i> , Pfeiffer	II.	19	<i>plauguncula</i> , Benson	VII.	57
<i>Martensii</i> , Weinland	II.	15	<i>Pianti</i> , Pfeiffer	XVIII.	169
<i>Martiniana</i> , Küster	II.	16	<i>plicidens</i> , Benson	XVI.	151
<i>megachilos</i> , Albers	XI.	97	<i>polyodon</i> , Draparnaud	X.	92
<i>Menkeana</i> , Pfeiffer	XIX.	176	<i>Pottebergensis</i> , Krauss	XVIII.	166
<i>metabla</i> , Crosse	VIII.	71	<i>procera</i> , Gould	VIII.	66
<i>microstoma</i> , Pfeiffer	II.	8	<i>producta</i> , Adams	XIII.	119
<i>microtragus</i> , Parreys	V.	35	<i>proteus</i> , Guallach	I.	4
<i>millium</i> , Gould	XVIII.	164	<i>pupula</i> , Deshayes	XIV.	132
<i>mimula</i> , Benson	VII.	61	<i>pusilla</i> , Müller	XX.	186
<i>minutissima</i> , Hartman	XVIII.	163	<i>pygmaea</i> , Draparnaud	XX.	152*
<i>modesta</i> , A. Adams	XII.	114	<i>quadridens</i> , Muller	V.	40
<i>modiolus</i> , Ferrussac	VI.	54	<i>quinquedentata</i> , Born	VI.	49
<i>modica</i> , Gould	XX.	184	<i>quinqueolamellata</i> , Risso	V.	43

PUPA.

	Plate.	Fig.		Plate.	Specimens.
<i>quinqueplvata</i> , Mühlfeldt	VIII.	68	<i>spinosa</i> , Ferrussac	XI.	102
<i>ularis</i> , Rossmeisler	VI.	46	<i>spreti</i> , Rovero	VI.	50
<i>Raymondii</i> , Bourgainville	X.	87	<i>stenophyllis</i> , Bousson	XIV.	125
<i>recta</i> , Loew	XVIII.	167	Strangoi, Pfeiffer	XI.	100
<i>rhodia</i> , Pfeiffer	XIII.	115	<i>striatella</i> , Ferrussac	III.	18
<i>ringens</i> , Szecechy	XIII.	118	<i>striaticostata</i> , Mordet	XIII.	120
<i>ringulata</i> , Michaud	X.	92	<i>substriata</i> , Gray	XX.	183
<i>Rodriguezensis</i> , Crosse	VIII.	72	<i>sulcata</i> , Braquaere	V.	38
<i>Rossmäsleri</i> , Schawdt	XIV.	121	<i>tantilla</i> , Gould	XIX.	173
<i>Rowellii</i> , Newcomb	XVII.	160	<i>Tappaniana</i> , Mord.	XV.	140
<i>rubicincta</i> , Mentse	III.	23	<i>teres</i> , Pfeiffer	XIX.	181
<i>radix</i> , Pfeiffer	III.	21	<i>tricolor</i> , Villa—?	XX.	190
<i>rupestris</i> , Philippj	XI.	103	<i>tricuspis</i> , Rossmeisler	V.	36
<i>rupicola</i> , Say	IX.	75	<i>tridens</i> , Muller	VI.	47
<i>Rosci</i> , Adams	XII.	110	<i>truncatella</i> , Pfeiffer	XVII.	158
<i>Sagraiana</i> , Pfeiffer	III.	19	<i>tumida</i>	I.	6
<i>Salemensis</i> , Blanchard	VII.	62	<i>turgidula</i> , Deshayes	XIV.	133
<i>Salwiniana</i> , Theobald	XVI.	150	<i>umbilicata</i> , De Paiva	XII.	108
<i>Saulecyi</i> , Bourgainville	X.	86	<i>unidentata</i> , Pfeiffer	IX.	77
<i>saxicola</i> , Loew	XVIII.	170	<i>uva</i> , Linnaeus	I.	7
<i>scalarina</i> , Gnathach	XVII.	153	<i>uvula</i> , Deshayes	XIII.	116
<i>scapus</i> , Parreys	X.	87	<i>vara</i> , Bousson	XVI.	144
<i>sculpta</i> , Bousson	VII.	58	<i>variabilis</i> , Draparnaud	V.	42
<i>secale</i> , Draparnaud	IV.	25	<i>variabilis</i> (multidentata)	XII.	112
<i>seductilis</i> , Zeigler	VI.	53	<i>Venzli</i> , Charpentier	XIX.	175
<i>septemdentata</i> , Rothman	VI.	45	<i>ventricosa</i> , Adams	XIV.	131
<i>septemdentata</i> (ringens)	XIII.	118	<i>ventrosa</i> , Heynem	XII.	109
<i>servilis</i> , Gould	XII.	110	<i>versipellis</i> , Ferrussac	IX.	79
<i>Shuttleworthii</i> , Albers	XV.	142	<i>vertigo</i> , Draparnaud	XX.	186
<i>Sieversi</i> , Monsson	IV.	29	<i>Villa</i> , Charpentier	XI.	99
<i>signata</i> , Monsson	X.	89	<i>villosula</i> , Kokiell	XI.	102
<i>similis</i> , Brugniere	V.	43	<i>vineta</i> , Loew	XV.	135
<i>simplex</i> , Gould	IX.	76	<i>Walbergi</i> , Pfeiffer	XX.	187
<i>sinnata</i> , Monsson	VIII.	74	<i>Weinlandi</i> , Kurr	III.	24
<i>sphinctostoma</i> , Loew	XV.	136	<i>Zebra</i> , Weinland	II.	12

MONOGRAPH

OF THE GENUS

VANIKORO.

“Nature, enchanting Nature, in whose form
And lineaments divine I trace a hand
That errs not.”—*Cæsar*.



VANIKORO.

PLATE I.

GENUS VANIKORO, Quoy et Gaimard.

Testa subglobosa, plerumque alba, cancellata et decessata, epidermide tenui induta, perforata, umbilicata, umbilico in canalum desinente; marginis aperturae simplici. Operculum corneum unguiculatum, non-spirale.

Shell subglobose, generally white, cancellated or decessated, covered with a thin epidermis, perforated, umbilicus ending in a canal; margin of the aperture simple. Operculum horny, unguiculate, non-spiral.

Synonyma. MURIA, Gray. WARICA, Recluz.

The greater part of the species now known were described by Recluz in the Proceedings of the Zoological Society for 1843, many of them being from specimens in the late Mr. Cuming's collection. A few species have been subsequently discovered. The home of the genus seems to be the Pacific, particularly southwards.

Species 1. (Fig. a, b, Mus. Brit.)

VANIKORO CANCELLATA. *Van. testâ latâ, patulâ, crassiusculâ, costis concentricis obliquis, subminutis, cætantibus et liris tenuibus spiratibus cancellatâ; apertura latâ, columellâ arcuatâ, canali angustato, elongato; spirâ brevissimâ, depressâ, epidermide crassâ.*

THE CANCELLATED VANIKORO. Shell broad patulate, rather thick, cancellated with oblique, rather laminae outstanding concentric ribs and thin spiral ridges; aperture broad, columella arched, canal narrow, elongated; spire very short, depressed; epidermis saffron.

Quoy et Gaimard, Voyage de l'Astrolabe.

Narica Quoyi, Recluz.

Hab. Vanikoro, S. Pacific.

In this species the oblique ribs are rather laminated in form, and rise to angular ridges in the most prominent parts. The colour of the epidermis is bright saffron on the younger specimens.

Species 2. (Mus. Brit.)

VANIKORO GURMANS. *Van. testâ brevi, crassâ, latâ, costis distantibus, crassis, perobliquis, et striis spiratibus cancellatâ; apertura latâ, dilatâ, canali obliquè rectiusculo, canali lato, semilunari.*

GURMANS VANIKORO. Shell short, thick, broad cancellated with distant, thick, very oblique ribs and spiral striae; aperture broad, sloped downwards; canal obliquely nearly straight, canal broad, semilunar.

Recluz, Proc. Zool. Soc., 1843.

Hab. Isl. of Capal, Philippines.

The ribs are broad, thick, and distant.

Species 3. (Mus. Brit.)

VANIKORO Plicata. *Van. testâ globosâ, tenuiusculâ, costis numerosis tenuibus et striis spiratibus sculptâ; apice subacuminato; canali semilunari; columellâ rectiusculâ.*

THE Plicated VANIKORO. Shell globose, rather thin, sculptured with numerous thin ribs and spiral striae; apex rather acuminated; canal semilunar; columella rather straight.

Recluz, Proc. Zool. Soc., 1843.

Hab. Isl. Ticao.

Species 4. (Mus. Brit.)

VANIKORO CIPARIIS. *Van. testâ rotundâ, crassâ, costis latis, substantibus et striis spiratibus sculptâ; spirâ depressâ, acuminatâ; apertura magna, canali moderatè angustatâ, columellâ rectiusculâ.*

THE CIPARIIS VANIKORO. Shell rounded, thick, sculptured with broad, rather distant ribs and spiral striae; spire depressed, acuminated; aperture large, canal moderately narrow, columella rather straight.

Recluz, Proc. Zool. Soc., 1843.

Hab. Isl. Masbate, Philippines.

VANIKORO.—PLATE I.

Species 5. (Mus. Brit.)

VANIKORO PETITIANA. *Van. testâ globosâ tenuisculâ, costis numerosis, concentricis versus marginem sub-crenatis et liris tenuibus, acutis, spirâlibus sculptâ; spirâ acuminatâ, anfractibus rotundis, distinctis, ultimo maximo; canali angusto; aperturâ latâ.*

PETIT'S VANIKORO. Shell globose, rather thin, sculptured with numerous concentric ribs becoming obsolete towards the margin and thin, sharp spiral ridges; spire acuminated, whorls rounded, distinct, last very large; canal narrow; aperture broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Philippines.

Species 6. (Mus. Brit.)

VANIKORO LIGATA. *Van. testâ crassisculâ, globosâ, costis elevatis, obliquis, crassis, concentricis, liris tenuibus ligitis sculptâ; spirâ depressâ, canali angustissimo, columellâ arcuatâ.*

THE CONNECTED VANIKORO. Shell rather thick, globose, sculptured with raised, oblique, thick, concentric ribs united by thin spiral ridges; spire depressed, canal very narrow; columella arched.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Seychelles Islands.

Species 7. (Fig. a, b, Mus. Brit.)

VANIKORO CUMINGIANA. *Van. testâ depressâ, crassâ, angulatâ, carinis magnis spirâlibus et striis foveolatis*

concentricis sculptâ; spirâ brevi, anfractibus minutis, angulatis; aperturâ subrotundâ; canali lato.

CUMING'S VANIKORO. Shell depressed, thick, narrow, sculptured with large spiral keels, and pitted concentric striae; spire short, whorls minute. angular; aperture rather rounded; canal broad.

RECLUZ. Proc. Zool. Soc., 1843.

Narica tricarinata, Recluz.

Hab. —?

The *Narica tricarinata* appears to be only a depressed variety.

Species 8. (Fig. a, b, Mus. Brit.)

VANIKORO RUGATA. *Van. testâ elevatâ, crassâ, spirâ acuminatâ anfractibus, superioribus crassi-costatis, interstitiis profundè foveolatis, ultimo anfractu leviter sculpto; aperturâ semilunari; canali lato, columellâ rectisculâ.*

THE WRINKLED VANIKORO. Shell elevated, thick, spire acuminated, upper whorls thick-ribbed, with deeply pitted interstices; last whorl lightly sculptured, aperture semilunar; canal broad, columella rather straight.

A. ADAMS. MS. CUM. Coll.

Hab. —?

The cancellations of the upper whorls are very deeply pitted, but they become almost obsolete towards the back and margin of the last whorl.



10 a



11



10 b



11



12 a



12 b



13



14



15



16

VANIKORO.

PLATE II.

Species 9? (Mus. Brit.)

VANIKORO GAMBROGI. *Fan. testâ parvâ, costis paucis, dilatatibus spiritalibus et liris concentricis profundi. Uteri cancellatis, spirâ elevatâ, acuminatâ; aperturâ subrotundâ, canali angustâ, profundâ.*

GAMBROGI'S VANIKORO. Shell small, deeply and broadly cancellated with few distant spiral ribs and concentric ridges; spire elevated, acuminated; aperture rather rounded; canal narrow, deep.

ADAMS, MS. Camb. Coll.

Familiora Quoyi, Adams, non Recluz.

Hab. —?

Species 10. (Fig. a, b, Mus. Brit.)

VANIKORO CUYFERIANA. *Fan. testâ subpatulâ, depressâ, tenui, tenuiter spiritaliter et concentricè liratâ; spirâ depressâ, acuminatâ, anfractu ultimo superi subdepresso; aperturâ obliquè ovatâ, canali latissimo, columellâ tenui, obliquè subarcuatâ.*

CUYFER'S VANIKORO. Shell rather patulate, depressed, thin, finely spirally and concentrically ribbed; spire depressed, acuminated, last whorl rather depressed above; aperture obliquely ovate, canal very broad, columella thin, a little obliquely arched.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. —?

A more finely sculptured shell than most of the other species.

Species 11. (Mus. Brit.)

VANIKORO SOULEYETIANA. *Fan. testâ globosâ, tenuiter spiritaliter et concentricè sculptâ; spirâ parvâ, acuminatâ, ultimo anfractu costatâ; aperturâ subrotundâ; columellâ brevâ, canali brevi, angustâ.*

SOULEYET'S VANIKORO. Shell globose, finely spirally and concentrically sculptured; spire small,

acuminated, last whorl rounded; aperture rather rounded; columella straight, canal short, narrow.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. —?

Originally described from a specimen in Mr. Cuming's collection—locality unknown.

Species 12. (Fig. a, b, Mus. Brit.)

VANIKORO DESHAYESIANA. *Fan. testâ globosâ, tenui, spirâ acuminatâ; anfractibus superioribus cancellatis, ultimo anfractu tenuiter spiritaliter striato, leviter concentricè costatâ; costis striisque versis marginem fere ecanidis; aperturâ subrotundâ, columellâ leviter arcuatâ; canali latissimo.*

DESHAYES'S VANIKORO. Shell globose, thin, spire acuminated; upper whorls cancellated, last whorl finely spirally striated, lightly concentrically ribbed; ribs and striae almost obsolete towards the margin; aperture rather rounded, columella slightly arched; canal rather broad.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. Isl. Zebu, Philippines.

In some specimens the sculpture almost disappears towards the back of the last whorl.

Species 13. (Fig. a, b, Mus. Brit.)

VANIKORO DISTANS. *Fan. testâ parvâ, clavâ, distantissimè concentricè costatâ, spiritaliter tenuiter striatâ, spirâ elevatâ, acuminatâ; aperturâ semilunari, obliquâ; canali lato, semilunari.*

THE DISTANT VANIKORO. Shell small, elevated, very distantly concentrically ribbed, spirally finely striated; spire elevated, acuminated; aperture semilunar, oblique; canal broad, semilunar.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. Isl. Bohol, Philippines.

May, 1875.

VANKORO.—PLATE II.

Species 14. (Mus. Brit.)

VANKORO CLATHRATA. *Van. testâ rotundo-subdepressâ ; crassâ, subequaliter cancellatâ ; aperturâ obliquâ ; columellâ rectiâsculâ, canali latissimo ; spirâ acuminatâ, profundè foveolatâ.*

THE LATTICED VANKORO. Shell roundly subdepressed, thick, rather equally cancellated; aperture oblique; columella rather straight; canal very broad; spire acuminated, deeply pitted.

RECLUZ. Proc. Zool. Soc., 1843.

Natica striata, D'Orbigny.

Natica margaritacea, Potiez.

Natica sigaritifôrmis, Potiez.

Hab. —?

Species 15. (Mus. Brit.)

VANKORO ROSEA. *Van. testâ parvâ, patulâ, rosâ, striâ spiralibus et costis concentricis obliquis cancellatâ ; aperturâ semilunari, columellâ rectiâsculâ ; canali latissimo.*

THE PINK VANKORO. Shell small, patulous, pink, cancellated with spiral striæ and concentric oblique ribs; aperture semilunar, columella rather straight; canal very broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Moluccs.

The only species showing any genuine colour in the shell itself.

Species 16. (Mus. Brit.)

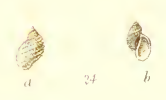
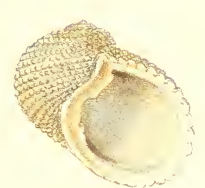
VANKORO GRANULOSA. *Van. testâ globosâ, costis spiralibus moniliformibus sculptâ ; spirâ elevatâ ; aperturâ semilunari ; columellâ tenui ; canali latissimo, complanato.*

THE GRANULATED VANKORO. Shell globose, sculptured with beaded spiral ribs; spire elevated; aperture semilunar; columella thin; canal very broad, flat.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. New Holland.

The spiral sculpture decidedly predominates in this species in the form of beaded ribs.



VANIKORO AND NERITOPSIS.

PLATE III.

Species 17. (Mus. Brit.)

VANIKORO IMBRICATA. *Van. testâ parvâ, tenui, obliquè, tenuiter spirâliter et concentricè striatâ; spirâ elevatâ, acuminatâ; aperturâ angustè oratâ, obliquè productâ, canali mazimo, semitorulo.*

THE IMBRICATED VANIKORO. Shell small, thin, oblique, finely spirally and concentrically striated; spire raised, acuminated; aperture narrowly ovate, obliquely produced, canal very large, half-rounded.

PLATE. MS.

Hab. Islands in the Pacific.

Species 18. (Fig. a, b, Mus. Brit.)

VANIKORO RECLUZIANA. *Van. testâ elati, acuminatâ, spirâ cancellatâ, ultimo anfractu ferè lævigato; aperturâ semicirculari, columellâ rectiusculâ; canali elongate, latiusculo.*

RECLUZ'S VANIKORO. Shell elevated, acuminated, spire cancellated, last whorl almost smooth; aperture semicircular, columella nearly straight; canal elongated, rather broad.

ADAMS AND ANGUS. Proc. Zool. Soc., 1867, p. 212.

Hab. New South Wales.

The early whorls are strongly cancellated, but the body whorl becomes nearly smooth.

Species 19. (Mus. Brit.)

VANIKORO HELICOIDEA. *Van. testâ subrotundâ, elegantè costatâ, interstitiis spirâliter depresso-striatâ; spirâ depressâ; aperturâ magnâ, ovatâ; columellâ tenui, rectiusculâ; canali brevi, semitunari.*

THE SNAIL-SHAPED VANIKORO. Shell rather rounded, elegantly ribbed, interstices spirally depresso-striated; spire depressed; aperture large, ovate;

columella thin, rather straight; canal short, semitunar.

LE GUILLON. Recluz, Proc. Zool. Soc., 1843.

Hab. — ?

Species 20. (Fig. a, b, Mus. Brit.)

VANIKORO SOLIDA. *Van. testâ solidâ, globosâ, spira prominatâ, anfractibus superioribus cancellatis, rotundis, ultimo anfractu tenuiter spirâliter et concentricè striato; aperturâ magnâ, columellâ tortuâ; canali angusto.*

THE SOLID VANIKORO. Shell solid, globose, spire prominent, upper whorls cancellated, rounded, last whorl finely spirally and concentrically striated; aperture large, columella tortuous, canal narrow.

SOWEBBY.

Hab. — ?

Species 21. (Fig. a, b, Mus. Brit.)

VANIKORO ACUTA. *Van. testâ altiusculâ, tenui, semipellucidâ, tenuiter decussatâ; spirâ acuminatâ, anfractibus prominulis; aperturâ subovatâ, columellâ rectâ, canali lato, planulato.*

THE ACUTE VANIKORO. Shell rather elevated, thin, semipellucid, finely decussated; spire acuminated, whorls rather prominent; aperture subovate, columella straight, canal broad, flattened.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. — ?

More finely decussated than most of the species, with sharp spire and thin substance.

Species 22. (Mus. Brit.)

VANIKORO SEMIPLICATA. *Van. testâ globosâ, tenuisculâ, tenuiter decussatâ; ultimo anfractu supra suturam aperturâ elevatâ; anfractibus apicalibus minutis.*

apertura scäratundä; columellä tenui, rectiäsculä; canali elongato, angusto.

THE HALF-PLAITED VANIKORO. Shell globose, rather thin, finely decussated; last whorl raised above the suture of the aperture; apical whorls minute; aperture half-round; columella thin, rather straight; canal long, narrow.

PEASE — ? MS. in Cuming's Collection.

Hab. South Seas

Species 23. (Mus. Brit.)

VANIKORO ELATA. *Van. testä altä, tenui, tenuissimä decussatä; spirä elevatä, acuminatä, anfractibus prominentibus; apertura breviusculä, subpyriformi; columellä brevi, leviter arcuatä, canali brevi, angustissimo.*

THE ELEVATED VANIKORO. Shell elevated, thin, very finely decussated; spire elevated, acuminated, whorls prominent; aperture rather short, rather pyriform; columella short, slightly arched, canal short, very narrow.

SOWERBY.

Hab. China Seas.

Much more elevated than *Vanikoro acuta*, and with a narrow canal.

Species 24. (Fig. a, b, Mus. Brit.)

VANIKORO SEMISOLUTA. *Van. testä altä, angustä, spiräliter costis moniliformibus, et concentricis striis tenuibus sculptä; spirä elevatä, acuminatä; ultimo anfracte suprä suturam perlevato; apertura declivi, angustä auriformä, ad suturam vix connectä, canali elongato, latiusculo.*

THE HALF-UNCOILED VANIKORO. Shell elevated, narrow, sculptured spirally with beaded ribs, and concentrically with thin striae; spire elevated, acuminated; last whorl raised high above the suture; aperture sloped downwards, narrowly auriform, scarcely connected at the suture, canal elongated, rather broad.

SOWERBY.

Hab. East Indies.

Owing to the fall of the aperture and the comparative distinctness of the canal, the outer and inner lips seem scarcely to touch the body-whorl.

NERITOPSIS.

Genus NERITOPSIS, *Gratchape.*

Testis subglobosa, spiräliter granoso-costata; spira brevi, apertura magna; labio interno crasso, planulato, medio quadratum emarginato; labio externo intus incrassato. Operculum crassum, testaceum, non spirale.

Shell subglobose, spirally granulate-ribbed; spire short, aperture large; inner lip thick, flattened, with a square notch in the middle; outer lip thickened within. Operculum thick, shelly, not spiral.

Syn. RADULA, Gray, not Klein.

As yet the *Neritopsis radula* from the Pacific is the only recent species known, although there are many fossil ones. The operculum formerly unknown, and supposed to be thin and horny, has been recently

figured in the Zoological Proceedings and described by Mr. Henry Adams. It is thick and shelly, with a square projection to fit the notch in the columella of the shell.

Species. (Mus. Sowerby.)

NERITOPSIS RADULA. *Ner. testä obliquè ovatä, crassä; costis crassis moniliformibus spiräliter sculpti; interstitiis angustis, foreolatis; apertura obliquä, margine externo levato.*

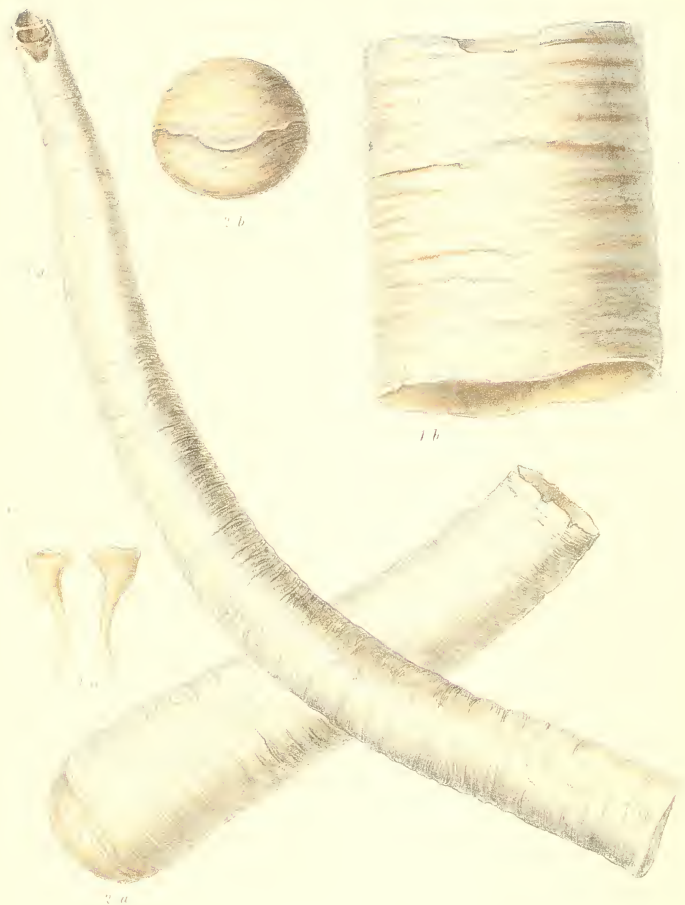
THE BENT NERITOPSIS. Shell obliquely ovate, thick; sculptured with thick beaded, spiral ribs; interstices narrow, pitted; aperture oblique, outer margin fluted.

LINNEUS (*Nerita*). Syst. Nat.

Hab. Ceylon.

MONOGRAPH
OF THE GENUS
K U P H U S.

All worlds, all nature, mood and measure keep
For praise and ceaseless gratulation poured
Into the ear of God their Lord."—*Wordsworth*



KUPHUS.

GENUS KUPHUS, *Guttseri* (Cyprius).

Mollusca gurgulio (gurgulio). Tubi magna alba, rugosae, sub-annulatae, postice attenuatae, intus in tubum denticulatis diecis, laevibus septiformibus transversis concameratae. Valves ignotae. Palmaris compressoribus testaceis, deltoides.

Mollusc, sand-burrowing. Tube large, white, rough, slightly ringed, posteriorly attenuated, divided anteriorly into two tubes, chambered transversely with septiform laminae. Valves unknown; compressor palulets shelly, deltoid.

Syn. Furcella, *Oken*. Septaria, *Lamarck*.

The gigantic tube of this Mollusc in its anterior duplicate opening, its inner transverse septa, and its white, roughened, and irregularly annulated surface, is so exactly like a magnified representation of the tube of a *Teredo* as to leave little doubt as to the nature of the animal and its affinity with the genus *Teredo*. At the same time it can hardly be included in that genus, the valves having never been seen, and it being certain that the animal does not bore like the *Teredines*.

Species 1. (Mus. Brit.)

KUPHUS GIGANTEA. *Kup. testâ maximo, tubâ elongatâ, rugosâ posticè attenuatâ, diecis, anticè latè apertâ; valvulis et palmaris compressoribus ignotis.*

THE GIGANTIC KUPHUS. Shell very large; tube elongated, rugose, posteriorly attenuated, divided, anteriorly broadly open; valves and compressor palulets unknown.

LINNAEUS (*Sagitta*). *Systema Naturæ.*
Septaria gurgulio, *Lamarck*.

Although not yet discovered, there can be little doubt but that valves of some kind exist. It is only barely possible that they may become absorbed. The tube, of which fig. *b* represents the end portion, is about three and a half feet long.

Species 2. (Fig. *a, b, c*, Mus. Brit.)

KUPHUS CLAUSA. *Kup. testâ magno; tubâ tenuissimâ anticè divisa, attenuatâ, concameratâ; posticè marginè costulatum inflexo superlaminato clausâ; valvulis ignotis; palmaris compressoribus testaceis, argutibus, anticè styliformibus, posticè deltoides.*

THE CLOSED KUPHUS. Shell large; tube rather thin, anteriorly divided, attenuated, chambered, posteriorly closed by the roundly-inflexed, superlaminated margin; valves unknown; compressor palulets shelly, equal, anteriorly styliform, posteriorly deltoid.

Sowrey.

Hab. — ?

The end of the tube, which in the British Museum specimen is about fifteen inches long, is closed by the margin being folded inwards so as to meet and overlap across a rounded oval disc. If there were valves they would be enclosed within this termination. I do not know whether they have been sought in the specimen. The specimen in the British Museum is labelled as identical with the well-known *C. arenaria*.

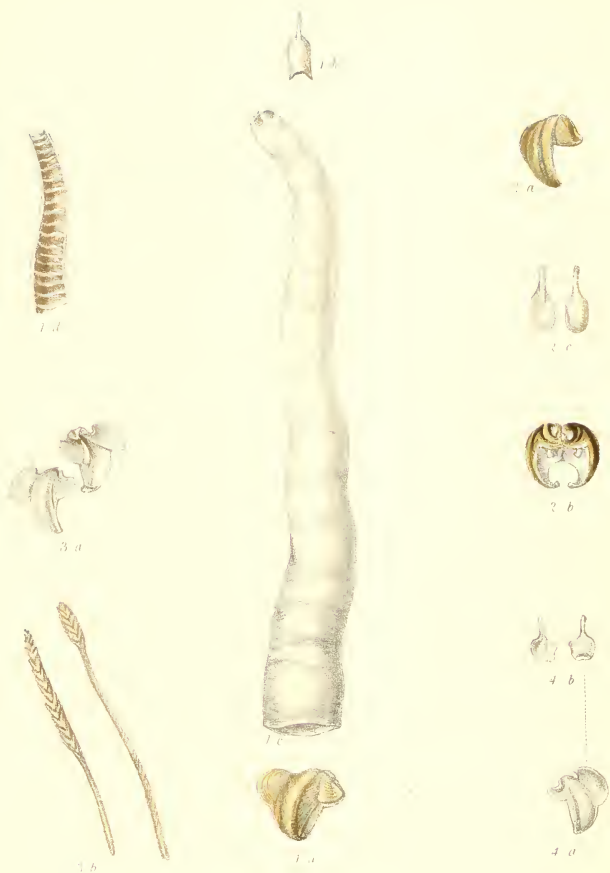
May, 1875.

MONOGRAPH

OF THE GENUS

T E R E D O.

In nature's infinite book of secrecy,
A little I can read."—*Shakspeare.*



TEREDO.

PLATE I.

Genus TEREDO. *Linnaeus*.

Mollusca vermiforme, perforans, tubum testaceum plerumque firmans, siphonibus styliformi concolorum vel palmarum testaceorum jectis armatum. Testa globosa, aspiculata, anticis angulata, postice arcuata hians; cardine calluso, stipulari processu subambonali minuto. Tubi ad terminum siphonalem laticis siphonibus jectis quater divisi.

Mollusc worm-shaped, perforating, generally forming a shelly tube; siphons provided with a pair of horny stylets or shelly pallets. Tube divided at the siphonal end by septiform laminae. Shell globose, equivalve, gaping angularly in front and in a curve behind; hinge callous, provided with a subambonal process in each valve.

The habits of the Teredos are only too well known wherever they are found. The mischief they do in boring ship's timbers, and destroying breakwaters and piles, causes them to be reckoned among the enemies of industrial mankind. They generally bore in the direction of the grain of the wood, sometimes a little crookedly, but seldom intruding into each other's bores. The shelly tube forms the lining to the hole, and the valves are enclosed at the wider extremity. The pallets or styles are attached near the ends of the siphons, and seem to be used for the purpose of compressing and relaxing them, so as to assist the circulation of the water through the lengthened tubes. The pallets in some species are shelly and spade-shape; in others horny and styliform. These divisions are separated generically by some authors as TEREDO and XILOPHAGA.

Species I. (Fig. *a, b*, only Mus. Brit.)

TEREDO NAVALIS. *Ter. testâ obliquâ, solidiusculâ; arcibus anticis tenuissimè striatis; sulco mediano lato, arcâ postice brevitate, auriculâ postice elevata; tubi tenuisculâ, minimè concolorata; palmaribus testaceis, oblongis, terminis convexo-arcuatis; stipulari brevi.*

THE SHIP TEREDO. Shell oblique, rather solid, anterior areas very finely striated; middle sulcus ridged, posterior area smooth, auricle large, round; tube rather thin, not chambered; pallets shelly, oblong, end arched, stem short.

LINNÆUS. *Systema Naturæ.*

Teredo navalis, Scöllius.

Teredo fatalis, Quatrefages?

Hab. British coasts. Piles of Yarmouth Pier, Ramsgate.

Species 2. (Fig. 2, *a, b, c*; for tube, see Fig. 1, *e, d*, Mus. Brit.)

TEREDO NORWEGICA. *Ter. testâ altiusculâ, solidâ, valvis arcuatis; sulco mediano profundo; auriculâ angustâ, sinuataâ; palmaribus testaceis, oblongis, terminis convexo, lateribus declivibus, stipularibus cœcâ; tubi robusti, convexo-arcuati.*

THE NORWEGIAN TEREDO. Shell rather high, solid, much arched; medial groove deep; auricle narrow, half-round; pallets shelly, oblong, with convex end, sloped sides, and rather short stem; tube robust, chambered.

SENGUILLER. *Forbes and Hanley, B. Mol. p. 66.*

Teredo nigra, Blainville.

Teredo Benguicæ, Dolé-Chiappe.

Teredo fatalis et T. Doshaii, Quatrefages.

Teredo arctica, Scöllius.

Hab. British and Northern coasts.

The breadth of the valves, as compared with the height, is less in this species than in the preceding, and the posterior auricle is much narrower.

Species 3. (Fig. *a, b*, Mus. Brit.)

TEREDO BIPENNATA. *Ter. testâ altâ, tenuiter striatâ, ambonibus callosis; auriculâ postice elevata, ad juncturam angustatâ, versus marginem lateralem expansâ, paulo supra ambonem elevata; stylis carneis, inæqualibus, articulatis; unguibus, stipulari elongatâ, altera elongata, stipulari breviusculâ.*

THE BIPENNATE TEREDO. Shell high, finely striated, umboes callous; posterior auricle raised, narrow

TEREDO.—PLATE I.

at the juncture, expanded towards the lateral margin, raised a little above the umbo; styles horny, unequal, jointed; one short, with long stem; the other long, with rather short stem.

TURTON. British Bivalves.

Hab. Ireland, Scarborough, &c.

Species 4. (Fig. a, b. Mus. Hanley.)

TEREDO MEGOTARA. *Ter. testā latā, rotundatā, arcuā anticā breviusculā, margine dorsali reflexo, recurvo, concavo; auriculā posticā latā, elevatim expansā, supra umbones recurvā; palmulis testaceis, bre-*

vibus, subquadratis, stipulā brevi, crassiusculā; tubā articulatā.

THE EXPANDED TEREDO. Shell broad, rounded, anterior area rather short, dorsal margin reflected, recurved, concave; posterior auricle broad, raised, expanded, recurved above the umboes; pallets shelly, short, rather square, stem short, rather thick; tube jointed.

HANLEY. Forbes and Hanley, Brit. Moll.

Teredo dilatata. Stimpson.

Teredo nana? Turton.

Teredo oceanī? Sellius.

Hab. Herne Bay, Devonshire, Swansea.



TEREDO.

PLATE II.

Fig. 1. *d.* Small end of the tube of *Teredo naxos*, showing that it is not chlamyred. To replace the figure in Plate I.

Fig. 2. *d.* Chambered end of *TEREDO NORONHA*.

Species 5. (Fig. *a, b, c*, Mus. Brit.)

TEREDO STURBECKII. *Ter. testâ brevis, rotundâ; arcuâ anticâ parvâ, obtusâ, auriculâ postici parvâ, costatâ; processu subumbonali expanso, valvâ curvâ; stylis cuneis, minutè articulatâ, laterebus tenui, r. spinosis; stipulâ curvâ, tenui.*

STURBECKY'S TEREDO. Shell short, rounded; anterior area small, obtuse; posterior auricle small, rounded; subambonal process expanded, strongly curved; stylets horny, minutely articulated, finely spined at the sides; stem curved, thin.

LEACH. MS. Mus. Brit.

Hab. Sumatra.

Species 6. (Fig. *a, b, c*, Mus. Brit.)

TEREDO CARINATA. *Ter. testâ altissimâ, valvâ arcuatâ; auriculâ anticâ expansâ, levatâ, intus rotatissimâ carinatâ; stylis curvis, elongatis, tenuibus, stipulâ elongatissimâ.*

THE KEELED TEREDO. Shell rather high, much arched; anterior auricle expanded, raised, very strongly keeled, stylets horny, long, narrow, stem very long.

GRAY. MS. in Brit. Mus.

Hab. Drift-wood in British Channel.

The stylets of *Teredo bipinnata* are unequal, one being short, wheat-car-like, with very long stem, and the other a much longer body with shorter stem. The stylets of *Teredo carinata* seem to differ from both. The valves in the latter are perhaps broader, but the difference is not very certain or obvious.

Species 7. (Fig. *a, b, c*, Mus. Brit.)

TEREDO MALLEOLUS. *Ter. testâ parvâ, altâ, obliquâ, angustâ, calidissimè arcuatâ, arcuâ postici brevis, angustâ, versus umbonem recurvâ, levatâ; processu umbonali obliquè curvâ, ad terminum elevatâ; paludis brevissimis, testaceis, latis, stipulâ brevi, incurvâ.*

THE LITTLE HAMMER TEREDO. Shell small, high, ob-

long, narrow, recurved towards the umbon, raised; umbonal process obliquely curved, club-shaped at the end; pallets very short, slender, broad, with short stem, bent forwards.

TEREOS. Forbes and Hanley. Brit. Mus.

Hab. Torquay.

Species 8. (Fig. *a, b*, Mus. Brit.)

TEREDO MEGALHOEA. *Ter. testâ magnâ, solidâ, edentâ, valvâ latissimâ hiatu, valvâ arcuatâ, umbonali rotatâ, auriculâ postici brevis, rotundâ, versus dorsali parvâ elevatâ; arcuâ anticâ brevi, arcuâ medianâ elongatâ, collo terminali magno; processu subumbonali lato.*

THE BIG-CHESTED TEREDO. Shell large, solid, rounded, anteriorly very widely gaping, strongly arched, umbones rounded, posterior auricle short, rounded, dorsal margin a little raised; anterior area short, median areas elongated, with large terminal callus; subambonal process broad.

GOULD — ? MS. Mus. Brit.

Hab. N. America.

Species 9. (Fig. *a, b, c*, Mus. Brit.)

TEREDO CAMPAULATA. *Ter. testâ albâ, latissimâ, arcuâ postico-centrali latâ, sulco mediani lato, levatâ, auriculâ postici ad juncturam angustatâ, versus marginem lateralem latè expansâ, superâ convexo-arcuatim elevatâ, margine laterali declivi; stylis cuneis, elongatis, dimidiatum articulis campanulâ, fornicibus utriusque recurvo-spinosis ornatis.*

THE CAMPAULATED TEREDO. Shell white, rather broad, posterior-central area broad, middle sulcus broad, ridged; posterior auricle narrowed at the juncture, broadly expanded towards the lateral margin, raised in a concave curve above, lateral margin sloped downwards; stylets horny, elongated, ornamented half-way with bell-shaped joints, having recurved spines on each side.

DESHAYES. MS. Mus. Brit.

Hab. — ?

The valves resemble those of *Teredo bipinnata*, but are much shorter and broader in the continuation of the central areas below the auricle. The greater difference is in the ornamentation of the pallets.



TEREDO.

PLATE III.

Species 10. (Fig. a, b, c, Mus. Brit.)

TEREDO SALLII. *Ter. testis subobovata, parva, area anteriori emarginata; auriculae posticae serratae, elongatae, angustae, basi dilatatae, ad junctionem inferiorem rotundatae, spatulatae, ovatae, areae albae infra auriculam posticam, processu subumbonali ad lateralem expansa, tubi, altilineo, compresso, quam clauso, stylii horis, angulato, pinnatis; stipula brevis.*

SALLI'S TEREDO. Shell rather small, small anterior area emarginate; posterior auricle shell conoid, elongated, dorsal margin sloped, moderately angular at the lower juncture; aurical arms rather short below the auricle, subarcs and process expanded at the end; tube rather solid, sometimes closed; stylets horny, angular, pinnated; stem short.

WEDD. MS. Mus. Brit.

Hab. Callas Bay.

Species 11. (Fig. a, b, c, Mus. Jeffreys.)

TEREDO PUPILLATA. *Ter. testis parva, altilineola, areae anteriori brevissimae, auriculae posticae prominenti, rotundae; paludis histaricae, medio quasi orbiculatae, laminae compressoconvexae; stipulae curvatae, longae; tubi tenuis, septis transverse, parvis.*

THE PUPILL TEREDO. Shell small, rather high, anterior area rather short, posterior auricle prominent, rounded; pallets shelly, quasi-articulated in the middle, concavely arched; stem horny, long; tube thin, with few terminal septa.

QUIMBERGEN'S. Ann. Nat. Sci. Ser. 3. t. 11. p. 26.

Hab. Coasts of Great Britain.

The valves resemble those of *Teredo palmulata*, but the kind of horny joint by which the pallets seem to be divided into two portions shows the distinctness of the species.

Species 12. (Fig. a, b, c, Mus. Brit.)

TEREDO BATAVUS. *Ter. testis ovata, rotunda, crassa, auriculae posticae angulatae, margini dorsali declivatae, areae anteriori brevissimae, auriculae albae, compressae, processu subumbonali compresso, orbiculato, tuberculo communi, angulato, paludis dilatatae; stipulae albae, intus, ad lateralem, compressa, et terminali, compressa, stylii elongati.*

THE BATAVAN TEREDO. Shell short, rounded, thick, posterior auricle narrow, dorsal margin sloped, anterior area short, obtuse, induric callous, curved inwards; subumbonal process curved, expanded; terminal tubercle large; pallets shelly, spatulate, broad, convex at the sides, concave at the end; stipula elongated.

SENGLER. — ? Fid. Mus. Brit.

Hab. Batavia.

This species has been assigned to *Teredo australis* by some authors, but the valves, as well as the pallets, are very different in form.

Species 13. (Fig. a, b, c, Mus. Deshayes.)

TEREDO AFINIS. *Ter. testis parva, globosa, latero-striolata; areae anteriori brevissimi, auriculae posticae dilatatae, basi; auriculae posticae dilatatae, elongatae, et intus plicatae; lamina postica parva; processu subumbonali brevissimo, brevi; paludis minimis, angustis, compressis; superioris curvatae, quadripartitae; stipula elongata.*

THE AFFINE TEREDO. Shell small, globose, ridgestriated; anterior area short, narrow; posterior medial area broad; posterior auricle broad, long, plaited in curves; posterior hiatus small; subumbonal process very thin and rather short; pallets very small, narrow, compressed; horny and quadripartite above; stem elongated.

DESHAYES. Conch. Isl. Bourbon. Pl. XXVIII. Fig. 8-12.

Hab. Ile de la Réunion (Bourbon).

TEREDO.—PLATE III.

Species 14. (Fig. a, b, c, Mus. Deshayes.)

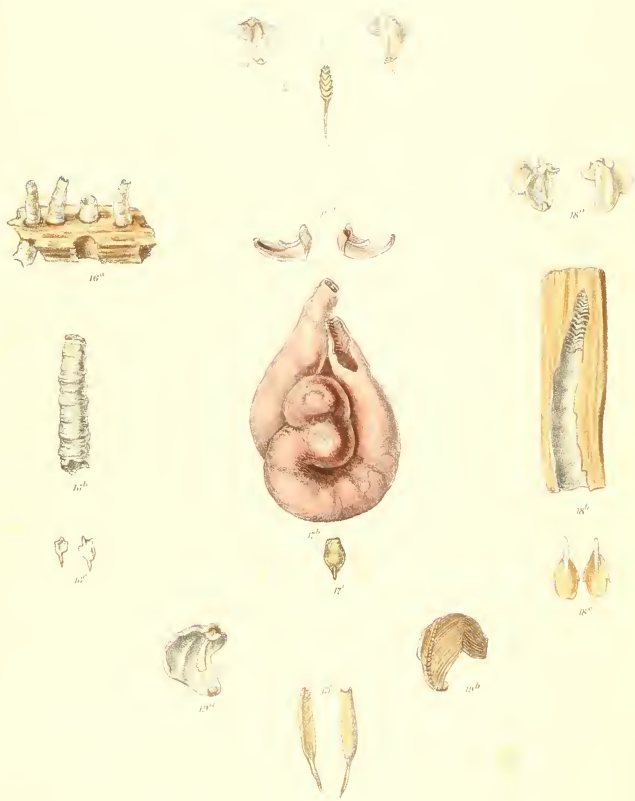
TEREDO BREVIS. *Ter. testâ parvâ, allâ, tenuissimâ, utroque latere valdè aperto, arcibus distinctis, auricâ granulose-striatâ; auriculâ posticâ latâ, elegantè tenui et plicatâ; processu subumbonali brevissimo; palmulis longulis, articulatis, articulis septem vel octo, infundibuliformibus, gradatim decrescentibus, spinâ coriaceâ utroque latere armatis.*

THE SHORT TEREDO. Shell small, high, rather thin,

widely gaping on both sides; arcs distinct, anterior granularly striated; posterior auricle broad, elegantly thin and plaited; subumbonal process very short. Pallets elongated, jointed, joints seven or eight, funnel-shaped, gradually decreasing, armed on each side with a coriaceous spine.

DESHAYES. *Conch. Isl. Bourbon*, Pl. 28, Fig. 4-7.

Hab. Ile de la Réunion (Bourbon).



TEREDO.

PLATE IV.

Species 15. (Fig. 5, 7, Mus. Brit.)

TEREDO SIMULATA. *Ter. testâ parvâ, rotundâ; auriculis posticis et area siphonali productis, rotundis, subaequalibus latè, brevissimis; processu subambonalibus, curvis, expansis. Stylis cornuâs, brevibus, apice mucronatis, stipulâ brevissimâ aequali.*

THE MURKIN TEREDO. Shell small, rounded, posterior auricle and anterior area produced, rounded; central areas broad, rather short; subambonal process curved, expanded. Styles horny, short wheat-ear-shaped, stem of equal length.

LAMARCK. ANIM. SUBS. VERT.

Teredo murina. Blainville.

Teredo stipulata. Deffe Chiaje.

Teredo Philippii. Fisher.

Hab. Ireland, England, &c. In floating wood.

Species 16. (Fig. a, b, c, Mus. Brit.)

TEREDO SENEGALENSIS. *Ter. testâ parvâ; lobis rugosâ, versus terminum siphonalem utraque; palulis breviter spatulatis, setis linearibus; stipulâ brevissimâ.*

THE SENEGAL TEREDO. Shell small; tube rough, attenuated towards the siphonal end; pallets shortly spatulate, bicarinated outside, with very short stem.

BLAINVILLE.

Hab. Senegal coast.

Tubes in wood, and pallets which seem quite distinct in their characters from any other species, are in the British Museum, without any specimens of the valves. The species is referred to *Teredo Noregia* by Jeffreys.

Species 17. (Fig. a, b, c, Mus. Brit. and Sowb.)

TEREDO NUCIFORA. *Ter. testâ altâ, angustissimâ, tenui, utrinque latissimè apertâ; lobis contortâ, crassâ, bulbiformâ.*

THE NUT-EATING TEREDO. Shell high, very narrow, thin, very widely gaping on both sides; tube contorted, thick, bulb-shaped.

SPENGLER. Desh. Traité élém. Pl. 2, Fig. 9, 10.

Genus *Uperolis.* Guettard.

Castanea nucifora. Gray.

Pistalana gregata. Lamarck.

Teredo gregata. Sowerby.

Hab. Isl. of France.

This species pierces its way through the shells of floating cocoa-nuts, and forms its contorted bottle-shaped tubes in the interior. Several tubes are often found twisted together, and a specimen in the British Museum shows a mass of them coiled round each other in the very heart of a nut. The writer has not met with specimens of the pallets, but the valves are narrow and much curved.

Species 18. (Fig. a, b, c, Mus. Brit.)

TEREDO DENTICULATA. *Ter. testâ brevî, rotundâ, solidâ, arce antica brevissimâ; auriculâ posticâ elongatâ, expansâ, superâ angustatâ, versus ambonem incurvâ; arce mediana latè, infra auriculam brevibus; ambonibus callosis, denticulo spatiformi mucronatis; palulis subovatis, ad latera emendenticulatis, supra dentes declivibus, stipulâ brevissimâ.*

THE DENTICULATED TEREDO. Shell short, round, solid; anterior area very short; posterior auricle elongated, expanded, narrow above, curved inwards towards the umbo; middle areas broad, short below the auricles; umboes callous, provided with a spine-shaped denticle; pallets subovate, with a tooth at the sides, sloped above the teeth, stem very short.

Gray. MS. Brit. Mus.

Hab. Britain?

Species 19. (Fig. a, b, c, Mus. Brit.)

TEREDO DUXHOPI. *Ter. testâ brevî, crassâ, globosâ, setis ovaliformibus sculptâ; ambonibus curvis.*

TEREDO.—PLATE IV.

callosis, intus lamellâ accessorâ instructâ; processu subumbonali valdè arcuato, lato; aëdâ anticâ subquadratâ, aëdâ anticâ-centrali latissimo; sulco mediâno angusto, profundo, aëdâ postico-centrali angustissimâ; auriculâ posticâ extis vir distinctâ, intus laminâ notatâ; palmaris semicircularis, oblongis, uno latere convexis, altero planis, ad terminum bifurcatis, stipulatâ brevissimâ.

DUNLOP'S TEREDO. Shell short, thick, globose, sculptured with beaded striæ; umboes curved, callous, fitted inside with an accessory plate; subumbonal process much arched, broad; anterior area subquadrate, anterior-central area very broad; medial sulcus narrow, deep; posterior-central area very narrow; posterior auricle scarcely distinguished on the outside, marked

within by a lamina; pallets half horny, oblong, convex on one side, flat on the other, two-forked at the end, stem rather short.

WEIGHT, Trans. Linn. Soc. 1864.

Nauclora Dunlopi, Wright.

Hab. River Como, Bengal.

The river Como flows from and returns to the river Ganges. Just on the bend Mr. Dunlop resided for some time, and the Teredos of this new species were found to have perforated some wood which had been cut down on the spot and left to float. The water of the river itself and of that part of the Ganges whence it flows is perfectly fresh, and the water, being remarkably soft, is used for drinking and all culinary purposes. We have here, therefore, a fresh-water Tereido.

MONOGRAPH
OF THE GENUS
P E D I C U L A R I A.

“God’s greatest and brightest”

He crowned man’s base with radiant crown of light.

To read His works God thus illumed the heart.

But man’s man’s breast no window to be seen.” - *N. T. Molt.*



PEDICULARIA.

Genus PEDICULARIA, *Sicainson*.

Testa ovata, irregularis, patula, paucispiralis, radiatum costata; spira subcalota, minuta; apertura maxima; columella planulata, rectiuscula, labio externo frequenter lobato.

Shell ovate, irregular, patulate, few-whorled, radiately ribbed; spire nearly hidden, minute; aperture very large, columella flattened, rather straight, outer lip frequently lobed.

The Messrs. Adams state in their work on Genera that the only known species is the one found parasitically attached to Molliterranean corals. But M. Deshayes in describing *Pedicularia elegantissima*, in his shells of Bourbon, speaks as if there were many other species, but does not refer to or describe them. The only species, besides the two above named, with which I am acquainted, is the *Pedicularia Pacifica*, described by Pease.

It is somewhat uncertain to what family the curious little shells composing this genus belong. On one hand they have been thought to have some affinity with the *Cyprædæ*, as there are indications of a mantle reflected over the lips, although not reaching the central region of the back. On the other hand, the shell would be most easily likened to a miniature *Coelach pas* with irregularly extended margins.

Species 1. (Figs. *a, b, c, d, e*, Mus. Sowerby.)

PEDICULARIA SICULA. *Pod. testâ crassâ, valdè irregulari; albâ, fulcâ, vel roseo suffusâ; radiatum et dicaricatum costatâ, costis minutè moniliformibus, labiis plerumque profundè lobatis, columellâ rectiusculâ.*

THE SICILIAN PEDICULARIA. Shell thick, very irregular; white, fulvous, or suffused with pink; radiately and divergently ribbed, ribs very minutely

beaded, lips generally deeply lobed; columella rather straight.

SWAINSON. Conchological Illustrations.

Hab. Found on small corals in the Mediterranean.

Species 2. (Fig. *a, b, c*, Mus. Sowerby.)

PEDICULARIA PACIFICA. *Pod. testâ tenuiusculâ, oblongâ, irregulari, in medio contractâ, radiatum striis elevatis minutissimis ornata, striis concentricis decussatis, apice conspicuo, involute; rubicâ, interdum omnino violaceâ vel cornâ.*

THE PACIFIC PEDICULARIA. Shell rather thin, oblong, irregular, contracted in the middle, ornamented with very fine raised elevated radiating striae; decussated with concentric striae, apex conspicuous, involute; reddish, sometimes violet all over, or horny.

PEASE. Proc. Zool. Soc., 1865, p. 546.

Hab. Pacific Islands.

Species 3 (Fig. *a, b*, Mus. Maillard.)

PEDICULARIA ELEGANTISSIMA. *Pod. testâ ovato-oblongâ, valdè convexâ, purpurâ, radiatum costatâ, costis majoribus moniliformibus, minoribus interstitialibus lævibus; apertura angustâ, utraque extremitate paulò depressâ, spirâ partim calatâ.*

THE ELEGANT PEDICULARIA. Shell ovate-oblong, purple, radiately ribbed; larger ribs beaded, smaller interstitial ones smooth; aperture narrow, a little depressed at each end; spire partly hidden.

DESHAYES. Isle de la Réunion, p. 20, Pl. XXXIII.

Hab. Isl. Bourbon.

May, 1875.

MONOGRAPH

OF THE GENUS

MYTELMERIA.

"But I'd did never to one man allow
Time to discover worlds and conquer too,
Nor can so short a line sufficient be,
To fathom the vast depths of nature's sea." *Caution*



MYTILIMERIA.

PLATE I.

Genus MYTILIMERIA, Conrad.

Testa bivalvis, bimuseulosa, tennis, subaequalis, valde inequaliteralis, epidermide inclata. Umboes spirales, subdistanter. Cardio edentulo; cartilagine partim in foveam instructa, lamina testacea libera oblecto.

Shell bivalve, with two muscles, thin, subequalive, very inequilateral, covered with an epidermis. Umboes spiral, rather distant. Hinge without teeth, with a cartilage placed partly in a hollow, partly covered by a free testaceous plate.

The type of this genus is the rounded oval shell named *M. Nuttalli* by Conrad. The specimens in the British Museum are odd valves, the shelly plates of which are missing. The subsequently discovered large shell from Vancouver's Island, which has been described as *Lyonsia saricola* by Dr. Baird, is fairly well adjudged to belong to this genus, and has the ossicle well developed.

Species 1. (Mus. Brit.)

MYTILIMERIA NUTTALLI. *Myt. testâ rotundè ovatâ, tenui, albâ; umbonibus terminalibus, distantibus, validè spiralibus; latere postico expanso, terminibus truncatis.*

NUTTALL'S MYTILIMERIA. Shell roundly ovate, thin, white; umboes terminal, distant, very spiral; posterior side expanded, ends truncated.

CONRAD. Amer. Journ. Sci.
Hab. California.

The cartilage is placed in a narrow spiral groove running from the umbo, and where it comes to the hinge line it is enlarged.

Species 2. (Mus. Brit.)

MYTILIMERIA DIAPHANA. *Myt. testâ semipellucida, oblongâ, arcuatâ, linguiformi, subcomplanatâ, super aream posticam tenuis fuscis plurimus radiatâ;*

umbonibus elevatis, ferè terminalibus; latere postico ad terminum latè truncato; margine dorsali arcuatim depresso.

THE DIAPHANOUS MYTILIMERIA. Shell semitransparent, oblong, curved, tongue-shaped, rather flattened, rayed on the posterior area with several brown bands; umboes raised, nearly terminal; posterior side broadly truncated; dorsal margin depressed with a curve.

CARPENTER (*Lyonsia*). Proc. Zool. Soc., 1855.
Hab. California.

Species 3. (Mus. Brit.)

MYTILIMERIA Plicata. *Myt. testâ parvâ, levigatâ, cuneatâ; anticè sinuatum plicatâ, posticè expansâ; umbonibus acutis, ferè terminalibus; latere antico brevissimo, acuminato, margine ventrali profundè sinuato; latere postico alato, infra marginem dorsalem depresso, margine ventrali inflato.*

THE Plicated MYTILIMERIA. Shell small, smooth, wedge-shaped, anteriorly sinuously plicated, posteriorly expanded; umboes acute, nearly terminal; anterior side very short, acuminated; ventral margin deeply sinuated; posterior side alated, depressed below the dorsal margin, ventral margin inflated.

GRAY. MS. Brit. Mus.
Hab. — ?

Species 4. (Mus. Brit.)

MYTILIMERIA SAXICOLA. *Myt. testâ magnâ, ventricosâ, oblongâ, epidermide calido, corneo-tarturâ, ad margines ventralem et terminalium hianti; latere antico brevi, angusto; latere postico elongato, ventricoso, ad terminum truncato; valvâ dextrâ planiusculâ valvâ sinistrâ profundè ventricosâ; margine dorsali depresso, arcuato; lamina cardinali magnâ, crassâ, ectis convexâ.*

May, 1875.

MYTILIMERIA.—PLATE I.

THE ROCK-DWELLING MYTILIMERIA. Shell large, ventricose, oblong, covered with a strong, horny epidermis, gaping at the ventral and terminal margins; anterior side short, narrow; posterior side elongated, ventricose, truncated at the end; right valve rather flat; left valve deeply ventricose; dorsal margin depressed, curved; hinge plate large, thick, convex outside.

BAIRD (*Lyonsia*). Boundary Commission Report.
Hab. Vancouver's Island.

It has been found difficult to fix the generic status of this fine shell, which differs greatly in form and habit from the typical *Lyonsia*.

Species 5. (Mus. Brit.)

MYTILIMERIA NAVICULA. *Myt. testâ oblongâ, tenui, pallidâ, inflatâ; umbonibus tumidis, ferè terminalibus; latere antico brevissimo, perpendiculariter truncato; margine ventrali antico sinuato, hianti, posticè inflato; latere postico oblongo, obliquè angulato, ad terminum truncato; margine dorsali depresso, rectiusculo; valvi dextrâ profundâ.*

THE BOAT MYTILIMERIA. Shell oblong, thin, pale, inflated; umboes tumid, almost terminal; anterior side very short, perpendicularly truncated; ventral margin anteriorly sinuated, gaping, posteriorly inflated; posterior side oblong, obliquely angular, truncated at the end; dorsal margin depressed, rather straight; left valve deep.

ADAMS AND REEVE (*Lyonsia*). Proc. Zool. Soc., 1836, p. 70.

Hab. Iquiqui, Peru.

Species 6. (Mus. Brit.)

MYTILIMERIA PICTA. *Myt. testâ subrhomboidè, solidâ, lineis fuscis divaricatis pictâ, ad marginem ventralem latissimè hianti; umbonibus terminalibus; latere antico brevissimo subtruncato; latere postico expanso lato; valvâ sinistrâ ventricosissimâ; lamina cardinali complanatâ.*

THE PAINTED MYTILIMERIA. Shell somewhat rhomboidal, solid, painted with divergent brown lines, very broadly gaping at the ventral margin; umboes terminal; anterior side very short, rather truncated; posterior side expanded, broad; left valve very ventricose; hinge plate flat.

SOWERBY (*Lyonsia*). Proc. Zool. Soc., 1834, p. 88.
Hab. Vancouver's Island.

Species 7. (Mus. Brit.)

MYTILIMERIA CUNEATA. *Myt. testâ tenui, pallidâ, anticè inflatâ, posticè attenuatâ, complanatâ, latere postico brevi, truncato; umbonibus elevatis acuminatis; margine dorsali rectiusculo, ventrali medio anticè inflato.*

THE WEDGE MYTILIMERIA. Shell thin, pale, inflated anteriorly, posteriorly attenuated, flattened; posterior side short, truncated; umboes elevated, acuminate; dorsal margin rather straight, ventral in the middle and anterior side inflated.

GRAY. MS. Brit. Mus.

Hab. —?

MONOGRAPH

OF THE GENUS

SAXICAVA.

For wonderful are all His Works,
Pleasant to know, and worthiest to be all
Had in remembrance always with delight."—*Milton*



11



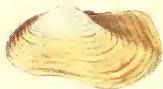
12



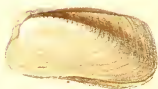
13



14



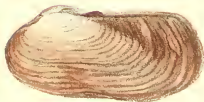
15



16



17



18



19



20

SAXICAVA.

PLATE I.

Genus SAXICAVA, *Fleuriau de Bellevue*.

Testa oblonga, equitrileis, rugosa, ad marginem ventralem hians. Cardo aetate juniori minutè bidentatus, aetate majore edentulus. Impressiones vasculares distantes; impressione pallii posticè latè sinuati.

Shell equivalve, rugose, gaping at the ventral margin. Hinge in a young state bidentate, when full-grown without teeth. Muscular impressions distant; impression of the mantle broadly sinuated posteriorly.

Srs. *Eggsomya*, Cuvier. *Hiatella*, Daudin.

The *Saxicavae* are rock-burrowing mollusca. They are found fixed in small hollows, often in the deserted holes of the *Pholas*. To the inner wall of the hole they attach themselves by a byssus, and often in the after growth of their valves become conformed to its shape. The young shells differ in two respects from the older form. They have small cardinal teeth which disappear when the animal is adult, and they have spines on the posterior angles, which also disappear. In this younger state they represent the genus *Hiatella* of Daudin. The arctic seas, the Mediterranean, and the Cape produce most of the few species known.

Species 1. (Mus. Brit.)

SAXICAVA ARCTICA. *Sax. testâ oblongâ, rugosâ, crassâ, aetate juniori posticè spiniferâ, cardine bidentato, aetate seniori cardine edentato; latere antico angusto, brevi, margine ventrali sinuoso, umbonibus depressis, anticis; latere postico latiori, quadrato, biangulato, latè truncato.*

THE ARCTIC SAXICAVA. Shell oblong, rugose, thick; posteriorly spiniferous when young, with two teeth on the hinge; without teeth on the hinge when adult; anterior side narrow, short; ventral margin sinuous; umboes depressed, anterior; posterior side broader, square, biangular, broadly truncated.

LINNEUS. *Systema Naturæ*.

Hiatella arctica, Lamarek.

Solen minutus, Linneus.

Hiatella minuta, Turton.

Donax rhomboides, Deshayes.

Hab. Arctic regions, British and North American coasts.

Species 2. Mus. —? (copied.)

SAXICAVA PETITII. *Sax. testâ subcuneiformi, subregulariter rugatâ; latere antico brevi, angusto, margine ventrali profundè sinuato, latè hianti; latere postico expanso, rotundatum obliquè angulato, post angulum latè, obliquè truncato; margine dorsali recto.*

PETIT'S SAXICAVA. Shell rather cuneiform, rather regularly wrinkled; anterior side short, narrow; ventral margin deeply sinuous, broadly gaping; posterior side expanded, roundly, obliquely angular, broadly obliquely truncated behind the angle; dorsal margin straight.

DESHAYES. MS. Mus. Cum. in Brit.

Hab. —?

The wrinkles in this species are regular and sharp.

Species 3. (Mus. Brit.)

SAXICAVA RUGOSA. *Sax. testâ tenuiâ-cubi, rhomboidè, levigatâ, posticè viz angulatâ, leviter rugatâ, margine dorsali subarcuato; latere antico brevissimo.*

THE RUGOSE SAXICAVA. Shell rather thin, rhomboidal, smooth, posteriorly scarcely angular, slightly wrinkled; dorsal margin a little arched; anterior side very short.

LINNEUS (*Mytilus*). *Systema Naturæ*.

Saxicava Gallicana, Lamarek.

Mya Byssifera, Fabricius.

May, 1875.

Hab. British Islands.—France.

More smoothly rounded and less sharply angular than *Saxicava arctica*, with more convex ventral and dorsal margins.

Species 4. (Mus. Brit.)

SAXICAVA SULCATA. *Sax. testâ crassâ, subeunatâ, concentricè undis magnis profundiusculis rugatâ; latere antico angusto, producto, subacuminato; umbonibus elevatis, margine ventrali profundè excavato; latere postico lato, rotundatim angulato, margine ventrali convexo, margine dorsali depresso, margine terminali truncato.*

THE GROOVED SAXICAVA. Shell thick, rather cuneate, concentrically wrinkled in large waves; anterior side narrow, produced, rather acuminate; umboes elevated, ventral margin deeply excavated; posterior side broad, roundly angular; ventral margin convex; dorsal margin depressed; terminal margin truncated.

DESHAYES —? MS. Mus. Brit.

Hab. Clyde.

The writer is uncertain respecting the authority for this species, which certainly seems distinct from any known forms of *S. arctica*, or *S. rugosa*. It is represented in the British Museum by an odd valve from the Clyde.

Species 5. (Mus. Brit.)

SAXICAVA PHOLADIS. *Sax. testâ elongatâ, submytiliformi, concentricè validè rugatâ; latere antico brevissimo, angustiusculo; latere postico magis expanso, elongato, obliquè angulato, margine dorsali recto; margine terminali latè truncato; margine ventrali convexo.*

THE PHOLAS-LIKE SAXICAVA. Shell elongated, rather mytilus-shaped, concentrically strongly wrinkled, anterior side very short, rather narrow; posterior

side more expanded, elongated, obliquely angular; dorsal margin straight; terminal margin broadly truncated; ventral margin convex.

LAMARCK. Anim. s. Vertèbres.

Hab. Greenland.

It is quite an open question whether this may not be one of the numerous forms of *Saxicava rugosa*.

Species 6. (Mus. Brit.)

SAXICAVA SOLIDA. *Sax. testâ crassâ, rhomboideâ, inequivalvi; valvâ dextrâ profundâ, ad umbonem multò valvæ sinistram altitudine superanti; latere antico brevissimo, declivi, umbonibus ferè terminatibus; latere postico biangulato, angulis obliquis, moniliformibus, margine terminali perpendiculariter truncato.*

THE SOLID SAXICAVA. Shell thick, rhomboidal, inequivalve; right valve deep, much higher than left at the umbo; anterior side very short, sloped, umboes nearly terminal; posterior side biangular, angles oblique, moniliform; terminal margin perpendicularly truncated.

SOWERBY. Proc. Zool. Soc., 1834.

Hab. —?

A very solid shell with two posterior keeled and partly beaded angles.

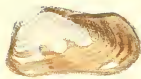
Species 7. (Mus. Brit.)

SAXICAVA FLACCIDA. *Sax. testâ parvâ, subovatâ, tenuisculâ, terminis rotundis, umbonibus magnis, ferè terminalibus; margine ventrali medio subexcavato.*

THE FLACCID SAXICAVA. Shell small, rather oval, rather thin; ends rounded, umboes large, nearly terminal; ventral margin a little excavated in the middle.

GOULD. United States Exploring Expedition?

Hab. North America.



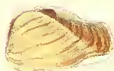
8a



8c



8b



9a



9



10



11



12



12



11

SAXICAVA.

PLATE II.

Species 8. (Figs. a, b, c, d, Mus. Brit.)

SAXICAVA AUSTRALIS. *Sax. testâ oblongâ, valdè rugosâ, plusminusvè distortâ; umbonibus magis, perlevatis, ferè terminalibus; latere postico obliquè producto, angulato, ad angulum obsolete spinoso, margine ventrali ad terminum sursum acclivis, margine terminali obliquè truncato, margine dorsali recti, aevâ complanati.*

THE AUSTRALIAN SAXICAVA. Shell oblong, very rugose, more or less distorted; umboes large, much elevated, nearly terminal; posterior side obliquely produced, angular, obsolete spinose at the angle, ventral margin sloped upwards at the end, terminal margin obliquely truncated, dorsal margin straight with a flattened area.

LAMARCK. Anim. sans Vert., v. p. 153.

Saxicava distorta, Say.

Maetra crassa, Peron.

Hab. Australia—(var.) United States.

More tumid, especially towards the umboes, than *Saxicava arctica*. The younger specimens have spines on the angle, as in that species, but these are worn off as the shell becomes larger, leaving tubercles in their places. The right valve is frequently deeper and higher at the umboes than the left. The American type (fig. d) corresponds with the Australian and not with the British form.

Species 9. (Mus. Brit.)

SAXICAVA TENUIS. *Sax. testâ rhomboidali, elongatâ, tenui, subinflatâ; latere antico brevissimo, declivi; umbonibus elevatis, acutis, ferè terminalibus; latere postico subattenuato, obliquè acutè angulato; angulo subserrato.*

THE THIN SAXICAVA. Shell rhomboidal, elongated, thin, rather inflated; anterior side very short, sloped; umboes raised, sharp, nearly terminal; posterior side rather attenuated, obliquely sharply angular; angle a little serrated.

SOWERBY. Proc. Zool. Soc., 1834, p. 88.

Hab. — ?

Species 10. (Mus. Brit.)

SAXICAVA GUERINII. *Sax. testâ oblongâ, angustâ, rectiusculâ; latere antico brevi, obliquè declivi, infri subangulatâ; latere postico elongatâ, ad terminum obtusè truncato; margine ventrali rectiusculo, medio excavato.*

GUERIN'S SAXICAVA. Shell oblong, narrow, rather straight; anterior side short, obliquely sloped, a little angular below; posterior side elongated, obtusely truncated at the end; ventral margin rather straight, excavated in the middle.

PAYRAUD. Mollusca. Plate I.

Hab. Mediterranean Sea.

Species 11. (Mus. Brit.)

SAXICAVA ANGASII. *Sax. testâ irregulariter rhomboidali, magis, solidâ, altâ, subinæquivalvi, valdè inæquilaterali, flavido-rubescenti, fusco nebulatâ; valvâ dextrâ altiusculâ, profundiorâ; latere antico brevissimo, declivi; latere postico obliquè angulato, oblongo, ad terminum quadrato.*

ANGAS'S SAXICAVA. Shell irregularly rhomboidal, large, solid, elevated, rather inequivalve, very inequilateral, reddish yellow clouded with brown; right valve rather the higher and deeper; anterior side very short, sloped; posterior side obliquely angular, oblong, square at the end.

A. ADAMS. Proc. Zool. Soc., 1865, 643.

Hab. St. Vincent's Gulf, S. Australia.

The only species exhibiting anything like distinct colouring, excepting *Saxicava purpurascens*.

Species 12. (Mus. Brit.)

SAXICAVA SPINIFERA. *Sax. testâ parvâ, levigatâ, superne quadratâ, infri bilobatâ; latere antico brevissimo, umbonibus terminalibus, margine ventrali profundè excavato; latere postico lato, truncato, margine dorsali et angulo obliquo decurrentibus spinis acutis prominentibus ornatâ.*

May, 1875.

THE SPINIFEROUS SAXICAVA. Shell small, smooth, square above, two-lobed below; anterior side very short, umboes terminal, ventral margin deeply excavated; posterior side broad, truncated, dorsal margin and obliquely decurrent angle ornamented with sharp prominent spines.

SOWEBY.

Hab. Savannah Bay.

The young of *Saxicava arctica*, *rugosa*, and *Australis* are spinose on the dorsal margin and posterior angle, but no specimen of either has been found with spines so prominent, or similar to this in other characters.

Species 13. (Mus. Deshayes? copied.)

SAXICAVA SIMILIS. *Sax. testâ cuneiformi, oblongâ, radiatim striatâ, posticè biangulatâ, ad angulos carinis subspiniferis duabus munitâ; valvâ dextrâ majori, ventricosâ, valvâ sinistrâ planiusculâ; latere antico angusto, brevissimo; umbonibus terminalibus; latere postico expanso, ad terminum latè truncato.*

THE SIMILAR SAXICAVA. Shell cuneiform, oblong, radiately striated, posteriorly biangular, strengthened at the angles by two subspiniferous keels; right valve the larger, ventricose, left

valve rather flatter; anterior side narrow, very short; umboes terminal; posterior side expanded, broadly truncated at the end.

DESHAYES. Mollusques de l'Isle de la Réunion.

Hab. Is. Bourbon.

M. Deshayes likens this little species to *Saxicava arctica*, from which it differs in being radiately striated and in the keel-like ridges on the angles.

Species 14. (Mus. Brit.)

SAXICAVA PURPURASCENS. *Sax. testâ elongatâ, angustâ, rectâ, concentricè rugatâ; latere antico brevissimo, umbonibus prominentibus terminalibus; latere postico purpureo suffuso, elongato, obliquè angulato; ad angulum et infrâ marginem dorsalem rugoso, carinato.*

THE PURPLISH SAXICAVA. Shell elongated, narrow, straight, concentrically wrinkled; anterior side very short, umboes prominent, terminal; posterior side suffused with purple, elongated, obliquely angular; with a wrinkled keel on the angle, and below the dorsal margin.

SOWEBY. Proc. Zool. Soc., 1834, p. 88.

Hab. —?

MONOGRAPH
OF THE GENUS
PUPINIDÆ.

"All things that are, though they have several ways,
Yet in their being join with one advice
To honour Thee."—*Trench.*

Papinula.



PUPINIDÆ

PLATE I.

Fam. PUPINIDÆ. (A. ADAMS.)

*Animal terrestre. Testa pupiformis, operculum cornu-
neum, multispinale.*

Genus PUPINA. Vignard. *Testa brevis, nonnunquam
nitens; apertura bivalvulicollata.* Sp. 1—34, 29
omissa.

Genus HARGREAVESIA. Adams. *Testa brevis; aper-
tura ad suturam univalvulicollata.* Sp. 29.

Genus CALLIA. Gray. *Testa brevis, nitens, umbilico
clauso, apertura marginis integra.* Sp. 35—38.

Genus REGISTOMA. Hasselt. *Testa nitens; apertura
marginis infra columellam rimata.* Sp. 39—47.

Genus CATAULUS. Pfeiffer. *Testa pyramidalata, per-
forata, ultimo anfractu inflexo carinato, apertura
marginis externo ad carinam producta.* Sp.
48—65.

Genus ARINIA. Adams. Sp. 66.

Genus POLLICARIA. Adams.	} <i>Umbilico terè clauso, apertura marginis internovalvuligra.</i> Sp. 67—92.
Genus MEGALOMASTOMA. Guild.	

Genus RAPHAULUS. Pfeiffer. *Apertura superiorè lobis
natis.*

Animal terrestrial, shell pupa-shaped, operculum
horny; multispiral. Sp. 1—34.

PUPINA. Shell short, sometimes shining; aperture
with two channels. Sp. 1—34. Omit 39.

HARGREAVESIA. Shell short; aperture with a channel
at the suture. Sp. 39.

CALLIA. Shell short, shining; umbilicus closed; aper-
ture with the margin entire.

REGISTOMA. Shell shining; aperture with the mar-
gin notched under the columella. Sp. 39—47.

CATAULUS. Shell pyramidal, perforated, last whorl
keeled below, aperture with outer edge pro-
duced at the keel. Sp. 48—65.

ARINIA. Sp. 66.

POLLICARIA and MEGALOMASTOMA. Umbilicus nearly
closed, inner margin of the aperture entire.
Sp. 67—92.

RAPHAULUS. Upper part of aperture provided with
a tube.

The *Pupinidæ* do not affect northern climates, but
abound in India, Australia, also in the Pacific and
other islands.

Species 1. (Mus. Sowerby. Pupina.)

PUPINA BILINGUIS. *Pup. testâ altâ, foveâ, pupiformi,
apice obtuso; anfractibus quinque, superioribus*

*brevis, penultimo alto, ultimo castato, subgloboso;
apertura parvâ, circulari, canalibus duobus, ad
suturam non, infra columellam altero, obliquè
oblongis, arcuatis, in tumores linguiformes pro-
ductis.*

THE DOUBLE-TONGUED PUPINA. Shell raised, fulvous,
pupa-shaped, with obtuse apex; whorls five, upper
short, penultimate high, last inflated, rather
globose; aperture small, circular, with two
canals, one at the suture, the other below the
columella, obliquely oblong, curved, produced in
two callous linguiform ridges.

PFEIFFER. Proc. Zool. Soc. Thes. Conch. *Pupinidæ*,
Pupina. Fig. 8, 9, 10.

Hab. East Australia.

The channels on the upper and lower part of the
aperture are prolonged in two curved tongue-shaped
callosities.

Species 2. (Mus. Sowerby.)

PUPINA VENTROSA. *Pup. testâ ventricosâ, semi-
pyramidalâ, breviter subpyramidalâ; ultimo an-
fractu subgloboso; apertura obliquè ovali, antice
productâ, lobis interno arcuato; canalibus duobus
calloso-marginatis, breviter arcuatis productis.*

THE INFLATED PUPINA. Shell ventricose, semi-pel-
lucid, shortly rather pyramidal, last whorl
rather globose; aperture obliquely ovate, an-
teriorly produced, inner lip arched; two callus-
edged canals shortly arched, produced.

DOHER. Adams. Sowb. Thes. *Pupinidæ*. Pupina.
Fig. 12, 13.

Hab. Cape York.

Species 3. (Mus. Sowerby.)

PUPINA ARTATA. *Pup. testâ ovali, albâ vel foveâ,
breviter pupiformi, apice obtuso; anfractibus
quinque, superioribus brevibus, ultimo inflato, sub-
globoso; apertura parvâ, circulari, canalibus
duobus, obliquè elongatis, conspicuè callo-mar-
ginatis, arcuatis.*

THE JOINTED PUPINA. Shell ovate, white or fulvous,
shortly pupa-shaped; apex obtuse; whorls five,
upper short, last inflated, subglobose; aperture
small, circular, canals two, obliquely elongated,
conspicuously callus-edged, curved.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidæ*,
Pupina, Fig. 1, 2.

Hab. Moulmein, India.

Species 4. (Mus. —? Copied.)

PUPINA GRANDIS. *Pup. testā magnā, ventricosā, pupiformi, fuscā, solidā, apice obtusa; anfractibus septem, superioribus brevibus, penultimo inflato, ultimo alto, inflato, aperturā parvā, circulari, margine aurantiō, crassissimo, latissimo, profundē bicanaliculato.*

THE LARGE PUPINA. Shell large, ventricose, pupa-shaped, brown, solid, with obtuse apex; whorls seven, upper short, last but one inflated, last high, inflated; aperture small, circular; margin orange, very thick, very broad, with two deep canals.

FORBES. Adams. Sowb. Thes. *Pupinide*, Pupina, Fig. 20.

Hab. Louisiade Archipelago.

Species 5. (Mus. Hanley.)

PUPINA ARULA. *Pup. testā albā vel fulvā, ovatā, nitente, apice obtuso, anfractibus septem, superioribus brevissimis, ultimomaximo; aperturā anticā obliquē productā, labio externo rotunda, canali postico lato, antico producto, recurvo, columellā brevi, latā, truncatā.*

THE LITTLE PLOUGH PUPINA. Shell white or fulvous, ovate, shining, with obtuse apex, whorls seven, upper very short, last very large; aperture obliquely produced in front, outer lip rounded, posterior canal broad, anterior produced, recurved; columella short, broad, truncated.

BENSON. Ann. Nat. Hist. Ser. 2, vol. 17, p. 230.

Hab. Birmah.

Species 6. (Mus. Hanley.)

PUPINA BLANFORDI. *Pup. testā albidā, nitente, spirā brevi, obtusā, ultimā subglobosā; aperturā anticā obliquē productā; labio externo superne in sinu rotundum productā; columellā brevissimā, truncatā, in canalem curvam terminante.*

BLANFORD'S PUPINA. Shell rather white, shining, spire short, obtuse, the last rather globose; aperture obliquely produced in front; outer lip produced into a rounded sinus, columella very short, truncated, ending in a curved canal.

THEODALD. Journ. As. Soc. Bengal, 1864.

Hab. Pegu.

Species 7. (Mus. Hanley.)

PUPINA IMBRICIFERA. *Pup. testā fuscā, brevi, ovato-subpyramidalā, nitente; anfractibus sex, superioribus brevibus, convexis, ultimo subgloboso; aperturā anticā obliquē productā, labio externo lato, campanato, margine interno in liram semicircu-*

larem elevato, canalibus duobus in tumores linguiformes productis.

THE IMBRICATED PUPINA. Shell brown, short, ovately subpyramidal, shining; whorls six, upper short, convex, last rather globose; aperture obliquely produced in front, outer lip broad, flattened, inner margin raised in semicircular ridge, canals two, produced in linguiform swellings.

BENSON. Ann. Nat. Hist. Ser. 2, vol. 17, p. 230.

Hab. Sylhet, Teria Ghat.

Species 8. (Mus. Sowerby.)

PUPINA MERIDIONALIS. *Pup. testā albā, pupiformi, acuminatā, fulvā, nitente; anfractibus sex, convexissimū; aperturā circulari, margine rotundo; canalibus longissimū, callosis.*

THE SOUTHERN PUPINA. Shell elevated, pupa-shaped, acuminate, fulvous, shining; whorls six, rather convex; aperture circular; margin rounded; canals rather long, callous.

PERIFFER. Proc. Zool. Soc. Sowb. Thes. *Pupinide*, Pupina, Fig. 33.

Hab. South Australia.

Species 9. (Mus. Sowerby.)

PUPA PLANILABRIS. *Pup. testā albā, pupiformi, fulvā, nitente, apice acuminato; anfractibus convexissimū; aperturā circulari; margine planulato; canale antico ad suturam elevato, calloso, columellā tenui, ad terminum obliquē truncato, cuneato, canali brevissimo.*

THE FLAT-LIPPED PUPA. Shell high, pupa-shaped, fulvous, shining, apex acuminate; whorls rather convex; aperture circular; margin flattened; anterior canal raised at the suture, callous, columella thin, obliquely truncated at the end, cuneate, canal very short.

PERIFFER. Proc. Zool. Soc. Adams. Sowb. Thes. Pupina, Fig. 34.

Hab. South Anstralia.

Species 10. (Mus. Brit.)

PUPINA AUREA. *Pup. testā breviter pupiformi, aureo-fulvā, nitente; anfractibus superioribus parvis, penultimo alto, inflato, ultimo subgloboso; aperturā obliquē productā, bicanaliferā; canalibus productis, callosis.*

THE GOLDEN PUPINA. Shell shortly pupiform, golden-fulvous, shining; upper whorls small, penultimate high, inflated, last rather globose; aperture obliquely produced, with two canals; canals produced, callous.

HINDS. Voy. Sulphur.

Hab. New Guinea.

Papina



PUPINIDÆ.

(PUPINA)

PLATE II.

Species 11. (Mus. Brit.)

PUPINA DEANAE ULLATA. *Pap. testis fulvus, subrotundis, crenulatis; ventricosa, obliqua, polita, angustis. Pars interna et parvulus labii, aperturæ oblique; aperturæ obliquæ, columellæ brevis, truncata, collo subrotundis, elongat., labio externo superius angustius depresso, alio, et limbo, utriusque obliquæ productæ.*

TO. PUPINA HANSELLI PUPINA. Shell fulvous, slightly golden, translucent, ventricose, oblique, polished; last two whorls broad, inflated, elevated; aperture oblique, columella short, truncated; sutural callus elongated, outer lip sinuously depressed above, narrow, white, rounded, obliquely produced in front.

SOWEBBY. *Thesaurus*, first Monograph.

Hab. Sibonga, island of Zebu, Philippines.

Species 12. (Mus. Brit.)

PUPINA KERARDINI. *Pap. testis angustis, fulvis, politis, apice obtuse; anfractibus ultimo et parvulus ultimo; aperturæ parvæ, columellæ brevissima, acuta; collo subrotundis, truncato, labio externo angustis, obliquæ productæ.*

KERARDINI'S PUPINA. Shell narrow, fulvous, polished; apex obtuse, last two whorls high; aperture small, columella very short, sharp; sutural callus inconspicuous, outer lip narrow, obliquely produced.

VIXAL. *Proc. Zool. Soc.* 1864, p. 162. Ad. *Thes.* Conch.

Hab. New Ireland.

Species 13. (Mus. Brit.)

PUPINA MOUHOU. *Pap. testis subrotundis, ventricosis, spiræ acuminatis; anfractibus quinque, rapidi crenulatis, ultimo subglobosis; aperturæ obliquæ, collo suturali conspicuo, columellæ margine interno*

reflexo, brevibus truncato, labio externo obliquæ productæ, crassissimo, superius depresso.

MOUHOU'S PUPINA. Shell rather golden, ventricose, spire acuminated; whorls five, rapidly increased, the last subglobose; aperture oblique, sutural callus conspicuous, inner margin of the columella reflected, truncated at the end, outer lip obliquely produced, rather thick, depressed above.

DELFITE. *Proc. Zool. Soc.* 1861, 136.

Hab. Camboja.

Species 14. (Mus. Brit.)

PUPINA ANGUSII. *Pap. testis ventricosa, solidâ, rubescenti, obliqua; anfractibus quinque, suturâ crenulata separatis, parvulus maximo, inflato, ultimo antice obliquæ subangulato; aperturæ rotundis, bicuniculatis, margine lato, crasso, integro, crenulato reflexo.*

ANGUS'S PUPINA. Shell ventricose, solid, reddish, oblique; whorls five, separated by a crenulated suture, penultimate whorl very large, inflated, the last a little narrowed obliquely in front; aperture rounded, with two canals, margin broad, thick, entire, reflected backwards.

ANGUS. *Proc. Zool. Soc.* 1875. Pl. 45.

Hab. South Australia.

Species 15. (Mus. — ? Copied.)

PUPINA MOULSIANA. *Papa testis ventricosa, striata, glaciâ; anfractibus quinque, tribus superioribus brevibus, rotundis, penultimo majori, inflato, ultimo reclinato magno; aperturâ subrotundata, margine crasso, albo, rimâ superiori angustâ, inferiori magno, columellâ brevi, ad terminum angulata, lato, labio externo rotundo, superius obliquæ depresso.*

MOULSI'S PUPINA. Shell ventricose, striated, yellowish; whorls five, three upper short, rounded,

penultimate larger, inflated, last rather straight, large; aperture rather rounded, margin thick, white, upper notch narrow, lower large, columella short, angular at the end, broad, outer lip rounded, obliquely depressed above.

FISCHER et BERNAÏ. Adams, Sowb. Thes. Conch.

No. 25.

Hab. N. Caledonia.

Species 16. (Mus. Brit.)

PUPINA HUMILIS. *Pup. testâ subpyramidalâ, avro-fuscâ; anfractibus quinque, tribus superioribus brevissimis, rotundis, penultimo majori, inflato, ultimo magno, rotundo; aperturâ anticâ circulari, canali antico caudatâ, rimâ posticâ magnâ, labio externo rotundo, posticè obliquè depresso, anticè autè canalem contracto.*

THE HUMBLE PUPINA. Shell rather pyramidal, golden-brown; whorls five, three upper ones very short, rounded, the penultimate larger, inflated, last large, rounded; aperture rounded, anterior canal caudal, posterior notch large, outer lip rounded, posteriorly obliquely depressed, anteriorly contracted in front of the canal.

JACQUENOT. Adams, Sowb. Thes. Conch. No. 25.

Hab. New Guinea.

Species 17. (Mus. Brit.)

PUPINA SUPERBA. *Pup. testâ fuscâ, obliquâ; anfractibus quinque, tribus superioribus brevissimis, rotundis, penultimo declivi, majori, ultimo magno; aperturâ anticâ productâ, margine avreo, rotundo, rimâ posticâ magnâ, obliquâ, anticâ obliquè retrorsâ (declivi).*

THE SUPERB PUPINA. Shell brown, oblique; whorls five, three upper very short, rounded, penultimate sloped, larger, last large; aperture anteriorly produced, margin golden, rounded, posterior notch large, oblique, anterior obliquely turned back (sloped upwards).

PEIFFER. Mon. Heliceorum.

Hab. Sumatra.

Species 18. (Mus. Brit.)

PUPINA VESCOL. *Pup. testâ globoso-pyramidalâ, brevi, politâ, subavreâ; anfractu ultimo inflato, rotundo; aperturâ obliquè ovatâ, anticè productâ; rimâ*

posticâ rotundâ, collo parvo, acuminato, columellâ brevissimâ, labio externo posticè obliquè depresso, ante columellam contracto.

VESCOE'S PUPINA. Shell globose-pyramidal, short, polished, rather golden; last whorl inflated, rounded; aperture rather obliquely ovate, anteriorly produced; posterior notch rounded, callus small, acuminate, columella very short, outer lip posteriorly obliquely depressed, contracted in front of the columella.

MORELET. Adams, Sowb. Thes. Conch. No. 25.

Hab. Paulo Condor.

Species 19. (Mus. Sowerby.)

PUPINA BORNEENSIS. *Pup. testâ avro-fuscâ, politâ, pyramidalâ; anfractibus quinque, convexis, gradatim crescentibus; aperturâ subrotundâ, anticè obliquè productâ, margine crassiusculo, albo, rotundo; rimâ posticâ inconspicuâ, columellâ obliquè truncatâ.*

THE BORNEAN PUPINA. Shell golden-brown, polished, pyramidal; whorls five, convex, gradually increased; aperture rather round, anteriorly obliquely produced, margin rather thick, white, rounded; posterior notch inconspicuous, columella obliquely truncated.

PEIFFER. Proc. Zool. Soc. Adams, Sowb. Thes. No. 25.

Hab. Borneo.

Species 20. (Mus. Brit.)

PUPINA PUPINIFORMIS. *Pup. testâ pyramidalâ, rubro-fuscâ, politâ; anfractibus octo, gradatim crescentibus, rotundatis, apice acuminato; aperturâ rotundâ, obliquè paulo productâ, canali postico parvo, rimâ anticâ angustâ, columellâ brevissimâ, latâ, labio externo planulato, ad rînam sinu recurvo.*

THE PUPINA-SHAPED PUPINA. Shell pyramidal, red-brown, polished; whorls eight, gradually increased, rounded, apex acuminate; aperture rounded, a little produced obliquely, posterior canal small, anterior slit narrow, columella very short, broad, outer lip flattened, with a recurved sinus at the back.

SOWERBY. Thes. Conch. No. 25, *Pupinidæ*, Pl. III. f. 38-9.

Hab. Philippines.



Papua



21



22



23



24



25



26



27



28



29



30

PUPINIDÆ.

PLATE III.

Species 21. (Mus. Brit.)

PUPINA PFEIFFER. *Pap. testâ albi, aequali, tenui, fulvâ, spirâ penultima, obliquâ; anfractibus quinque, spirâ ultimo quatuordecim, rotundâ, ultimo alto, erecto; callo: aperturâ parvâ, obliquâ sub-ovata, penultima; callo penultimo et callo suturali conspicuis, columellâ transmissâ, labio externo tenui, albo, truncato, cœcâ depresso.*

PFEIFFER'S PUPINA. Shell elevated, narrow, thin, fulvous, semi-pellucid, oblique; whorls five, the four upper short, rounded, the last high, rather straight; aperture small, obliquely sub-ovate, produced, posterior canal and sutural callus conspicuous, columella very short, outer lip thin, white, rounded, depressed above.

DOBBS. Adams, Sowb. Thes. No. 24-5.

Species 22. (Mus. Brit.)

PUPINA THOMPSONI. *Pap. testâ solidâ, obliquâ, fulvâ, politâ, medio sub-inflata, apice acuminato; anfractibus quinque, ultimo magno; aperturâ anticâ obliquâ productâ, marginâ albo, callo suturali linguiformi, labio interno callosa, continuo, columellâ latâ, obliquâ, truncatâ.*

THOMPSON'S PUPINA. Shell solid, oblique, fulvous, polished, inflated in the middle, apex acuminated; whorls five, the last large; aperture anteriorly obliquely produced, margin white, sutural callus tongue-shaped, inner lip callous, continuous, columella broad, oblique, truncated.

DOBBS. A. Adams, Mon. Sowb. Thes. *Papinidæ*, Pl. III. f. 18.

Hab. Australia.

Species 23. (Mus. Sowerby.)

PUPINA MITIS. *Pap. testâ brevi, brevi, fulvâ, subinflata, apice obtuso; anfractibus quatuor, penultimo inflata, brevi, ultimo magno; aperturâ obliquâ productâ, labio externo albo, angustâ, callo suturali parvo, columellâ brevissimâ, acuminatâ.*

THE MELLOW PUPINA. Shell short, smooth, fulvous, rather inflated, apex obtuse; whorls four, penultimate inflated, short, last large; aperture obliquely produced, outer lip white, narrow, sutural callus small, columella very short, acuminated.

A. ADAMS —? Sowerby's Thes. Conch. *Papinidæ*, Pl. III. f. 19.

Hab. New Ireland.

Species 24. (Mus. Brit.)

PUPINA STRANGEL. *Pap. testâ subcylindricâ, fulvâ, politâ, medio inflata, apice breviter acuminato; anfractibus quinque, tribus apicalibus brevissimis, parvis, penultimo magno, inflata, ultimo medio; aperturâ parvâ, obliquâ, callo suturali linguiformi, labio interno marginato, columellâ brevissimâ.*

STRANGE'S PUPINA. Shell subcylindrical, fulvous, polished, inflated in the middle, apex shortly acuminated; whorls five, three apical, very short, small, penultimate large, inflated, last middle-sized; aperture small, oblique, sutural callus tongue-shaped, inner lip bordered, columella very short.

PFEIFFER. Mon. Hel. Sowb. Thes. *Papina*, Fig. 24.

Hab. Morcton Bay.

The inflation of the penultimate whorl, and the comparatively cylindrical form, distinguish this species from several of the preceding.

Species 25. (Mus. —? Copied.)

PUPINA OTTONIS. *Pap. testâ ventricosâ, fulvo-erubescens, rectiusculâ, brevi, politâ; spirâ breviter pyramidalitâ; anfractibus quinque, gradatim erectibus, ultimo magno, globoso; aperturâ subrotundâ, margine albo, columellâ latâ, truncatâ, callo suturali subdistanti.*

OTTO'S PUPINA. Shell ventricose, reddish-fawn, rather straight, short, polished; spire shortly pyramidal; whorls five, gradually increased, the last large, globose; aperture rather round, margin white, columella broad, truncated, sutural callus rather distant.

DOHIN. — ? Adams, Sowb. Thes. *Pupinida*, Part 25, Pl. III. f. 25.

Hab. Isl. Luzon, Philippines.

Species 26. (Mus. Brit.)

PUPINA NICOBARICA. *Pup. testâ obliquâ, ventricosâ, fulvo-rubescenti, politâ; anfractibus quatuor, tribus superioribus brevibus, rapidè crescentibus, ultimo alto, inflato; apertura circulari, labio externo albo, anticâ obliquè producta, collo suturali medietati, columellâ brevi truncato.*

THE NICOBAR PUPINA. Shell oblique, ventricose, fulvous-reddish, polished; whorls four, three upper short, rapidly increased, last high, inflated; aperture circular, outer lip white, anteriorly obliquely produced; sutural callus middle-sized, columella short, obliquely truncated.

PFEIFFER. Adams, Sowb. Thes. No. 24-5, *Pupinida*, *Pupa*, f. 27.

Hab. Nicobar.

Species 27. (Mus. Brit.)

PUPINA RUFA. *Pup. testâ rectâ, subpyramidatâ, clatâ, rufo-fuscâ, ad suturam albo-fasciatâ, apice obtuso; anfractibus quinque, æqualiter crescentibus; apertura circulari, margine albidò, labio externo rotundo, labio interno calido, collo suturali conspicuo, columellâ crassâ, ad terminum cuneatâ.*

THE REDDISH PUPINA. Shell straight, rather pyramidal, elevated, reddish-brown, with a whitish band at the suture, apex obtuse; whorls five, equally increased; aperture circular, margin whitish, outer lip round, inner lip strong, sutural callus conspicuous, columella thick, cuneate at the end.

PFEIFFER. Adams, Sowb. Thes. Conch. No. 25, *Pupina*, f. 29.

Hab. Japan.

Species 28. (Fig. a, b. Mus. Brit.)

PUPINA MINDOROENSIS. *Pup. testâ breviusculâ, pyramidalâ, albâ vel fuscâ, politâ, spirâ subacuminatâ; anfractibus quinque, æqualiter crescentibus, superioribus rotundis, ultimo convexiusculo; apertura circulari, labio externo lato, canali postico et rimâ anticâ magnis, columellâ breviusculâ, latâ, truncatâ.*

THE MINDORO PUPINA. Shell rather short, pyramidal, white or brown, polished, spire a little acuminated; whorls five, equally increased, upper ones rounded, the last rather convex; aperture circular, outer lip broad, posterior canal and anterior notch large, columella rather short, rather broad, truncated.

ADAMS & REEVE. Voy. Sam.

Hab. Japan.

HARGRAVESIA. (Adams.)

Canali postico magno, rimâ anticâ nullâ.
Posterior canal large, no anterior notch.

Species 29. (Mus. Sowerby.)

HARGRAVESIA POLITA. *Har. testâ inflatâ, subpyramidalâ, fulvâ, politâ, breviusculâ; anfractibus quinque, tribus superioribus brevibus, rapidè crescentibus, penultimo inflato, ultimo magno; apertura circulari, obliquè productâ, canali postico elongato, collo suturali linguiformi, labio externo cir. incrassato, cum interno anticâ continuo.*

THE POLISHED HARGRAVESIA. Shell inflated, rather pyramidal, fulvous, polished; rather short; whorls five, the three upper ones short, quickly increased, penultimate inflated, last large; aperture circular, obliquely produced, posterior canal elongated, sutural callus linguiform, outer lip scarcely thickened, anteriorly continuous with the inner lip.

A. ADAMS. Proc. Zool. Soc. 1870.

Hab. Solomon Islands.

Pupina



10



11



12



13

Callia



14



15



16



17



18



19

PUPINIDÆ.

PLATE IV.

Species 30. (Mus. —? Copied.)

PUPINA SWINHOEII. *Pap. testâ rectâ, pyramidatâ, subventricosâ, pallidâ; spirâ acuminatâ, anfractibus sex, convexis, fere æqualiter crescentibus; apertura eis circulari, canalibus postico et antico rotundis, latis; columellâ latâ, subjacentatâ, latâ truncatâ, labio externo lato, duplicato.*

SWINHOE'S PUPINA. Shell straight, pyramidal, rather ventricose, polished; spire acuminate; whorls six, convex, almost equally increased; aperture scarcely circular; posterior and anterior canals rounded, broad; columella broad, rather hollowed, broadly truncated; outer lip broad, doubled.

ADAMS (Pupinopsis). Proc. Zool. Soc. 1866, f. 318.

Hab. Isl. Formosa.

Species 31. (Mus. Sowerby.)

PUPINA FINETICOLA. *Pap. testâ parvâ, loricatâ, brevî, fulvâ; anfractibus quatuor, duobus superioribus parvis, penultimo inflato, ultimo magno, infra obliquè subattenuato; apertura anticè productâ, circulari.*

THE FINE-INHABITING PUPINA. Shell small, smooth, short, fulvous; whorls four, two upper small, last but one inflated, last large, obliquely rather attenuated; aperture anteriorly produced, circular.

COX. Proc. Zool. Soc. 1866, p. 375.

Hab. Australia.

Species 32. (Mus. Sowerby.)

PUPINA DIFFICILIS. *Pap. testâ parvâ, subcylindricâ, pallidâ, pallidè aurantiâ-fulvâ; anfractibus quatuor, tribus superioribus brevibus, æqualiter crescentibus, ultimo majuscule; apertura obliquâ, canali*

postico lato, columellâ brevî, acutâ, labio externo obliquè producto, arcuato, crassiusculo.

THE DIFFICILE PUPINA. Shell small, rather cylindrical, polished, pale orange, fulvous; whorls four, three upper short, equally increased, last rather large; aperture oblique, posterior canal broad, columella short, acute, outer lip obliquely produced, orange, rather thick.

SEMPER. Proc. Zool. Soc. 1864, p. 252.

Hab. Pelew Island.

Species 33. (Mus. Brit.)

PUPINA ADAMSI. *Pap. testâ altâ, subpyramidatâ, aurantiâ-fusâ, pallidâ; anfractibus sex, superioribus rotundis, gradatim crescentibus, ultimo majuscule, convexo; apertura rotundâ, labio interno rotundo, canali postico elongato, arcuato, callo suturali rotundo, columellâ latâ, crasso, truncatâ, labio externo superne sinuato, duplicato.*

ADAMS' PUPINA. Shell elevated, somewhat pyramidal, orange-brown, polished; whorls six, upper ones rounded, gradually increasing, last rather large, convex; aperture rounded, inner lip strong, posterior canal elongated, curved, sutural callus strong, columella broad, thick, truncated, outer lip sinuous above, doubled.

SEMPER. *Papinella Swinhoei*, A. Adams. Proc. Zool. Soc. 1866, p. 318.

Hab. Isl. Formosa.

(CALLIA)

Species 34. (Fig. a, b, Mss. Sowerby.)

CALLIA LUBRICA. *Col. testâ ventricosâ, breviter obliquâ, fulvâ vel latvâ, pulcherrimâ; anfractibus quatuor, tribus brevibus, ultimo magno, lateraliter gibboso; apertura rotundâ, margine albo rotundâ.*

THE SHINING CALLIA. Shell ventricose, short, ob-

lique, fulvous, or yellowish, brightly polished; whorls four, three short, last large, gibbous at one side; aperture rounded, margin white, rounded.

SOEWERY (Pupina). *Thesaurus Conchyliorum. Pupina* (first monograph), No. 1.

Hab. Isl. Panay, Philippines.

Species 35. (Fig. a, b, Mus. Sowerby.)

CALLIA SPLENDENS. *Cal. testâ pyramidalâ, subventricosâ, fusâ, politâ; spirâ acuminatâ; anfractibus quatuor, rapide crescentibus; aperturâ rotundâ, margine angusto, rotundo.*

THE RESPLENDENT CALLIA. Shell pyramidal, rather ventricose, brown, polished; spire acuminated, whorls four, rapidly increased; aperture rounded, margin narrow, rounded.

DOHRN. — ? Adams in Sowerby's *Thesaurus Conchyliorum*, No. 25.

Hab. Lizard Island.

More regularly pyramidal than the preceding, with gradually increasing whorls.

Species 36. (Mus. Sowerby.)

CALLIA ACUTA. *Cal. testâ angustiusculâ, albâ, politissimâ, obliquâ; anfractibus quatuor, tribus breviusculis, ultimo majusculo; aperturâ obliquâ productâ, margine rotundo.*

THE EARED CALLIA. Shell rather narrow, whitish very polished, oblique; whorls four, three rather short, last rather large; aperture obliquely produced, margin rounded.

ZEIGLER — ?

Hab. — ?

Believing, from the narrower form of this shell,

that it differs from *Callia rubra*, I have adopted the name which I find attached in manuscript to a number of specimens.

Species 37. (Mus. Sowerby.)

CALLIA AMBIGUA. *Cal. testâ ventricosâ, subpyramidalâ, brevi, politâ, pallidè fulvescenti; anfractibus quinque, ultimo majusculo; aperturâ rotundâ, obliquè productâ, margine aurantio, columellâ ad dorsum perforatâ.*

THE AMBIGUOUS CALLIA. Shell ventricose, rather pyramidal, short, polished, pale fulvous; whorls five, the last rather large; aperture rounded, obliquely produced, margin orange, columella perforated at the back.

SEMPER — ? (Registoma). Adams, in Sowerby's *Thesaurus Pupinide*, Pl. II. *Registoma*, f. 9.

Hab. Isl. Luzon, Philippines.

The minute perforation, visible only at the side or back of the columella, constitute this species a link between the *Registoma*, which have a distinct notch or canal, and the *Callia*, which have the margin of the aperture quite entire. The shell, however, is much more nearly related to the latter than to the former subgenus.

Species 38. (Fig. a, b, Mus. Sowerby.)

CALLIA WALLACEI. *Cal. testâ aureo-fulvâ, politâ, obliquè distortâ; anfractibus quatuor, apicalibus planulatis, ad dorsum retrorsis; aperturâ parvâ, rotundâ, simplici.*

WALLACE'S CALLIA. Shell golden-fulvous, polished, obliquely distorted; whorls four, the apical ones flattened, turned over the back; aperture small, rounded, simple.

PFEIFFER — ? Adams, in Sowerby's *Thesaurus*.

Part 24-5. *Pupinide*, Pl. III. *Callia*, f. 7. 8.

Hab. Ceram.

Rogstemo



PUPINIDÆ.

(REGISTOMA.)

PLATE V.

Species 39. (Mus. Brit.)

REGISTOMA LANGUUM. *Reg. testâ pallidâ, foveâ angustâ, subglochidriâ, pedicâ: aperturâ oblongâ: anfractibus septem, penultimo tumido, ultimo marginis aperturâ subcirculari, obliquè productâ, marginis angustâ, cœcâ rotundâ angustissimâ.*

THE NARROW REGISTOMA. Shell pale fawnous, narrow, rather cylindrical, polished; apex obtuse; whorls four, penultimate tumid, last large; aperture rather round, obliquely produced, margin narrow, anterior slit very narrow.

SOEWERY. *Thes. Conch. Pupinidae*, Pl. II. *Registoma*, f. 8.

Hab. Isl. Luzon, Philippines.

Differing from *Registoma Cumingiana* in form being less elongated, and in the linear notch.

Species 40. (Mus. Brit.)

REGISTOMA VITREUM. *Reg. testâ pyramidalâ, brevî, hyalînâ, fusco-rubescenâ: anfractibus sex, brevibus, ferè æqualiter crescentibus, tumidâ: aperturâ subcirculari, margine incrassatâ, rotundâ, aurantâ, columellâ crassiusculâ, obliquè truncatâ.*

THE GLASSY REGISTOMA. Shell pyramidal, short, hyaline, brownish-red; whorls six, short, almost equally increasing, tumid; aperture rather circular, margin thickened, reflected, orange, columella rather thick, obliquely truncated.

SOEWERY. *Adams. Thes. Conch. Pupinidae*, Pl. II. *Registoma*, f. 7.

Hab. Isl. Luzon, Philippines.

Species 41. (Mus. Sowerby.)

REGISTOMA CUMINGIANA. *Reg. testâ eæquâ, albâ, pallidâ vel albâ, pedicâ, subglobosâ, medio et superè tumidâ: anfractibus quinque, spirâlibus parvis, alleris tumidâ, altis, ultimo altissimo, ob-*

liquè aperturâ rotundâ, obliquè productâ, marginis angustâ, cœcâ rotundâ et cœcâ linearâ.

THE CUMINGIAN REGISTOMA. Shell narrow, raised, pale fawnous, or white, polished, rather solid, tumid in the middle and above, high, the last very high, oblique; aperture round, obliquely produced, margin narrow, rounded, anterior notch linear.

PECIFITE. *Adams. Sowerby's Thesaurus Conchyliorum, Pupinidae*, Pl. II., *Registoma*, f. 12, 13.

Hab. New Caledonia.

Species 42. (Mus. Sowerby.)

REGISTOMA GRANDE. *Reg. testâ obliquè subglobosâ, pedicâ, aurantâ, vel lacteâ, vel purpurascenâ: anfractibus quinque, tribus superioribus brevissimis, duobus inferioribus: penultimo brevi, obliquè, ultimo subgloboso, versus aperturam obliquè gibboso, medio planulato: aperturâ obliquè productâ, labiâ orbis expansâ, columellâ planulatâ, truncatâ: cœcâ cœcâ-linearâ.*

THE LARGE REGISTOMA. Shell obliquely subglobose, polished, orange or milk-white, or purplish; whorls five, three upper very short, turned over the back, last but one short, oblique, last rather globose, obliquely gibbous towards the aperture, flattened in the middle; aperture obliquely produced, outer lip expanded, columella flattened, truncated; notch rounded.

GRAY. *Adams, Sowerby's Thes. Conch. Pupinidae*, Pl. II., *Registoma*, f. 1, 2, 3.

Hab. Philippines.

Species 43. (Mus. Sowerby.)

REGISTOMA FUSCUM. *Reg. testâ altâ, pyramidalâ, fusco-rubescenâ, pedicâ: spirâ acuminatâ: anfractibus 7, brevissimis, lentè crescentibus, con-*

ensis, ultimo subrotundo; apertura subcirculari, margine aurantio, labio externo rotundo, columella rectâ, truncatâ, rimâ rotundâ.

THE BROWN REGISTOMA. Shell high, pyramidal, reddish-brown, polished; spire acuminated; whorls seven, rather short, slowly increased, convex, the last rather round; aperture rather circular, margin orange, outer lip rounded, columella straight, truncated, notch round.

GRAY. Adams, Sowb. Thes. Conch. *Pupinida*, *Registoma*, f. 4, 5.

Hab. Philippines.

Species 44. (Mus. Sowerby.)

REGISTOMA SIMILE. *Reg. testâ altâ, subventricosâ, fulvâ, politâ, subpyramidatâ, spirâ obtusâ; anfractibus septem, superioribus brevissimis, lenti crescentibus, concoloris, penultimo majusculo, ultimo magno; apertura subcirculari, margine albo, labio externo crasso, columellâ crassâ, truncatâ, rimâ anticâ magnâ, rotundâ.*

THE SIMILAR REGISTOMA. Shell high, rather ventricose, fulvous, polished, rather pyramidal, spire obtuse; whorls seven, upper rather short, slowly increasing, convex, penultimate rather large; aperture rather circular, margin white, outer lip thick, columella thick, cornered, anterior notch large, rounded.

GRAY. Adams, Sowb. Thes. Conch. *Pupinida*, Pl. II., *Registoma*, f. 6.

Hab. Isl. Luzon, Philippines.

If there be any tangible character besides the white lip distinguishing this species from the preceding, it will be found in the last two whorls being disproportionately ventricose, and the spire being, in consequence, more nearly pyramidal in form.

Species 45. (Mus. Sowerby.)

REGISTOMA PELLUCIDUM. *Reg. testâ angustâ subglobosa, subpellucidâ, fulvâ, politâ; anfractibus quinque, tribus superioribus brevissimis, dorso retrorsis, penultimo brevi, subretrorso, ultimo obliquè levato, subgloboso, raris apertura obliquè gibbosa, medio parvi planulato; apertura parvâ, margine albo, columellâ angustâ, rimâ lineari.*

THE PELLUCID REGISTOMA. Shell narrowly subglobose, rather pellucid, fulvous, polished; whorls five, three upper very short, turned over the back, last but one short, rather turned backwards, last obliquely raised, somewhat globose, obliquely gibbous towards the aperture, middle a little flattened; aperture small, margin white, columella narrow, notch linear.

OWERBY. Adams in Thes. Conch. *Pupinida*, Pl. II., *Registoma*, f. 10, 11.

Hab. Isl. Zebu, Philippines.

Species 46. (Mus. Sowerby.)

REGISTOMA COMPLANATUM. *Reg. testâ fulvâ, vel fuscâ, angustâ, subcylindricâ, altâ, politâ, spirâ obtusâ; anfractibus quatuor, duobus superioribus brevibus, rotundis, duobus inferioribus altis, cylindricis; apertura simplicî, obliquè productâ, rimâ anticâ lineari.*

THE FLATTENED REGISTOMA. Shell fulvous, or brown, narrow, rather cylindrical, high, polished, spire obtuse; whorls four, upper two short, round, lower two high, cylindrical; aperture simple, obliquely produced, anterior notch linear.

PEASE. Adams, Sowb. Thes. Conch. *Pupinida*, Pl. II., *Registoma*, f. 14, 15.

Hab. Kingsmill Group, Pacific.

A narrower and smaller shell than *Registoma pellucidum*.

Species 47. (Mus. Sowerby.)

REGISTOMA BRAZIERI. *Reg. testâ fulvâ, politâ, altâ, angustâ, medio subventricosâ; apice obtuso; anfractibus quinque tribus, superioribus hecibus, penultimo inflato, ultimo majusculo, obliquè subattenuato; apertura obliquè productâ, parvâ, circulari, rimâ apertâ.*

BRAZIER'S REGISTOMA. Shell fulvous, polished, high, narrow, rather ventricose in the middle; apex obtuse; whorls five, three upper short, penultimate inflated, last rather large, oblique, anteriorly a little attenuated; aperture obliquely produced, small, circular, notch open.

CRASSE. Journ. de Conch. No. XIII.

Hab. Etromanga in the Pacific.

Catulus



17



18



19



20



21



22



23



24



25



26

PUPINIDÆ.

PLATE VI.

Species 48. (Mus. Hanley.)

CATAULUS NITIDUS. *Cat. testâ fusiformi, pallidè fuscâ, vel. fusâ, fuscovireâ, striatâ, spirâ albâ, pyramidalib; anfractibus septem, superioribus levitè convexis, ultimis angulatis et ultimâ majusculâ, parvâ inflatis, umbilico anguliformi lobè carinato; apertura subquadrata, labio externo duplicato, margine externo subulato.*

NITEL'S CATAULUS. Shell fusiform, pale fulvous, or brown, striped with brownish-green, spire raised, pyramidal; whorls seven, upper slowly increasing, penultimate and last rather large, a little inflated, last broadly keeled at the umbilicus; aperture somewhat produced, outer lip duplicate, outer margin slightly winged.

HANLEY. Indian Shells.

Hab. — ? India.

Species 49. (Mus. — ? Copied.)

CATAULUS TORTUOSUS. *Cat. testâ albâ, fusiformi; anfractibus septem, rotundis, inflatis, ultimâ infusâ carinata, ad aperturam levitè; apertura distanti, obliquè productâ, margine interno reflexo.*

THE TORTUOUS CATAULUS. Shell white, fusiform; whorls seven, rounded, lower inflated, last keeled below, beocsed at the aperture; aperture distant, obliquely produced, margin entire, reflected.

GRAY. — ? Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 1.

Hab. Nicolap Island.

Species 50. (Mus. — ? Copied.)

CATAULUS CALCADENSIS. *Cat. testâ fuscâ, albâ, subcylindricâ, obliquè striatâ; anfractibus septem, convexis, suturâ pyramidal; ultimâ angulatâ lobè carinato; apertura disjunctâ, perpendicularitèr subquadrâ, anticâ rotundâ, rimâ anticâ nostrimâ, labio externo duplicato.*

THE CALCADIAN CATAULUS. Shell brown, high, subcylindrical, oblique, striated, whorls seven, convex, suture deep; last whorl with a wide keel, aperture disjoined, perpendicularly rather ovate, anteriorly beaked, anterior notch very large, outer lip double.

BEDDOME. Hanley, Indian Shells.

Hab. Calcutta, India.

Species 51. (Mus. Brit.)

CATAULUS DELICATUS. *Cat. testâ fuscâ, rubescenti, subpyramidalâ, rotundâ, media et infusâ subinflatis; anfractibus octo, superioribus brevibus, attenuatis, ultimis tribus altis, inflatis; umbilico rotundâ, carinâ crassâ; apertura rotundâ, auriculâ.*

THE DUPLICATE CATAULUS. Shell reddish-brown, rather pyramidal, robust, rather inflated in and below the middle; whorls eight, upper short, attenuated, last three high, inflated; umbilicus large, keel thick; aperture round, orange.

PEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 2.

Hab. Ceylon.

Species 52. (Mus. Brit.)

CATAULUS CUMINGII. *Cat. testâ fuscâ, solidâ, subfusiformi, angulatâ rugulâ; spirâ acuminatâ, infra medium inflatâ, umbilico majusculo, carinâ prominente; apertura subquadrâ, margine albo, labio externo lobè, levitè duplicato, rimâ anticâ nostrimâ.*

CUMING'S CATAULUS. Shell brown, solid, rather fusiform, angularly wrinkled; spire acuminated, inflated below the middle, umbilicus rather large, keel prominent; aperture rather round, margin white, outer lip broad, slightly double, anterior notch very large.

PEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 3.

Hab. Ceylon.

Species 53. (Mus. Hanley.)

CATAULUS BLANFORDI. *Cat. testâ fusca-rubescenti, pyramidatâ, altâ, apicem attenuatâ; anfractibus novem, tribus inferioribus subinflatis, conevexis; umbilico angustiusculo, carinâ crassâ; apertura subovatâ, margine auriculâ, lato, convexo, rimâ anticâ maximâ.*

BLANFORD'S CATAULUS. Shell red-brown, pyramidal, high, attenuated above; whorls nine, three lower rather inflated, rather convex; umbilicus rather narrow, keel thick; aperture rather ovate, margin orange, broad, convex, anterior notch very large.

DOEHN. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 8.

Hab. Kandy, Ceylon.

Species 54. (Mus. Sowb.)

CATAULUS THWAITESII. *Cat. testâ fusca-rubescenti, fusiformi, robustâ, breviusculâ; anfractibus septem, mediis inflatis, ultimo infâra ante carinam contracto, umbilico parvo; apertura subovatâ, margine lato, duplicato, albo.*

THWAITES'S CATAULUS. Shell reddish-brown, fusiform, robust, rather short; whorls seven, middle inflated, last below contracted before the keel; umbilicus small; aperture rather oval, margin broad, doubled, white.

PFEIFFER. Adams, Sowb. Thes. *Pupinidæ*, Pl. II., *Catulus*, f. 6.

Hab. Ceylon.

Species 55. (Mus. Sowb.)

CATAULUS RECREVATUS. *Cat. testâ latè pyramidatâ, stramineâ, carinâ, apice acuminatâ, rubicâ; anfractibus septem, rotundis, æqualiter convexis, ultimo ante carinam contracto, umbilico angustâ, carinâ tenui; apertura majusculâ, margine lato, duplicato, infâra ad rimam recurvato, rimâ maximâ.*

THE RECREVED CATAULUS. Shell broadly pyramidal, straw-coloured, ventricose, apex acuminated, red; whorls seven, rounded, equally increased, last contracted before the keel, umbilicus nar-

row, keel thin; aperture rather large, margin broad, doubled, bent backwards below the notch, notch very large.

A. ADAMS. Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 16.

Hab. Ceylon.

The duplicate edge of the aperture, where interrupted by the notch, terminates at each side in a prominent point.

Species 56. (Mus. Hanley.)

CATAULUS EURYTREMA. *Cat. testâ rubri, ventricosâ, pyramidatâ, versus apicem attenuatâ, acuminatâ, medio et infâra inflatâ; anfractibus novem, duobus ultimis latis, inflatis, ultimo ad carinam contracto, umbilico lato, carinâ acutâ; apertura perpendiculariter oblongâ, marginibus externo et antico latissimis, labio externo leviter duplicato, rimâ maximâ.*

THE BROAD-EDGED CATAULUS. Shell red, ventricose, pyramidal, attenuated towards the apex, acuminated, inflated in and below the middle; whorls nine, two last broad, inflated, last contracted at the keel, umbilicus broad, keel sharp; aperture perpendicularly oblong, outer and lower margins very wide; outer lip slightly double, notch very large.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 17.

Hab. Ceylon.

Species 57. (Mus. Sowb.)

CATAULUS LAYARDI. *Cat. testâ breviusculâ, flavidâ, pyramidatâ, spirâ acuminatâ; anfractibus conconvexis, umbilico lato, carinâ acutâ; apertura albâ, margine utrinque duplicato, rimâ parvâ, rotundâ.*

LAYARD'S CATAULUS. Shell rather short, yellow, pyramidal, spire acuminated; whorls convex, umbilicus broad, keel sharp; aperture white, margin doubled on each side, notch small, round.

GRAY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Catulus*, f. 7.

Hab. Ceylon.

Catagelus



59



58



60



56



61



62



62



61



65



55

PUPINIDÆ.

PLATE VII.

(CATALLES)

Species 58. (Fig. a, b. Mus. Brit.)

CATAULUS MARGINATUS. *Cat. testâ angustâ, pyramidatâ, albidâ et fuscâ; anfractibus octo, leatâ crescentibus, umbilicatum cœcis, ultimo infra contracto, acutè carinato, rotas carinâ umbilicâ; aperturâ subrotundâ, rimâ parvâ, labiâ striatâ duplicatâ, infra ad rimam acutè rostratâ.*

THE BORDLED CATAULUS. Shell narrowly pyramidal, white or brown; whorls eight, slowly increased, with wavy wrinkles, the last contracted below, acutely keeled, widely umbilicated within the keel; aperture rather rounded, notch small, outer lip duplicated, sharply beaked below at the notch.

PFEIFFER. Mon. Helicorum.

Hab. Ceylon.

Species 59. (Mus. Sowerby.)

CATAULUS AUSTENIANUS. *Cat. testâ latè pyramidatâ, brevissimè, ventricosâ; fusco-rubescente; anfractibus octo, convexis, ultimo carinâ crassâ et umbilicâ magno levitante; aperturâ magnâ, rotundâ, margine aurantiâ, incrassatâ, lato, convexo; rimâ angustâ, rotundâ.*

AUSTEN'S CATAULUS. Shell broadly pyramidal, rather short, ventricose; reddish brown; whorls eight, convex, last ending with a thick keel and large umbilicus; aperture large, round, margin orange, thickened, convex, broad; notch large, rounded.

BENSON. Ann. Nat. Hist. Ser. 2.

Hab. Ceylon.

Species 60. (Mus. Hanley.)

CATAULUS PYRAMIDATUS. *Cat. testâ latè pyramidatâ, ventricosâ, fusco-rubescente, tenuiter striatâ; anfractibus septem, ultimo convexo, carinâ crassâ et*

umbilicâ brevissimè; aperturâ rotundâ, convexâ, ultimo latè, planissimè, rimâ subparâ, aurantiâ.

THE PYRAMIDAL CATAULUS. Shell broadly pyramidal, ventricose, reddish brown, finely striated; whorls seven, the last convex, ending in a thick keel and broad umbilicus; aperture rounded, margin white, broad, flattened, notch oblique, very large.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Ceylon.

Species 61. (Mus. Hanley.)

CATAULUS HEMASTOMUS. *Cat. testâ latè pyramidatâ, obliquè striatâ, fulvâ; apice acuminatâ; anfractibus octo, convexis, ultimo carinatâ, supra carinam contracto; aperturâ marginâ, rotundâ, margine latissimo, convexo, viridè rubro, ad suturam elevatâ, infra rotundè rostratâ, rimâ magnâ, rotundâ.*

THE RED-MOUTHED CATAULUS. Shell broadly pyramidal, obliquely striated, fulvous; apex acuminate; whorls eight, convex, the last keeled, contracted above the keel; aperture very large, rounded; margin very broad, convex, bright red, raised at the suture, roundly beaked below, notch large, round.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Ceylon.

More elegantly fusiform and acuminate than the two preceding.

Species 62. (Mus. Sowerby.)

CATAULUS TEMPLEMANI. *Cat. testâ subfusiformi, angustâ, fusco-rubescente; anfractibus octo, mediâ subventricosis, ultimo infra contracto, umbilicâ angustissimo; aperturâ subrotundâ, margine viridè aurantiâ, angustâ, infra in rostrum obtusissimum productâ; rimâ parvâ.*

TEMPERMAN'S CATAULUS. Shell rather fusiform, narrow, reddish brown; whorls eight, middle ones rather ventricose, last contracted below, with a rather narrow umbilicus; aperture rather ovate, margin bright red, narrow, produced below in a very obtuse beak; notch small.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidae*, Cataulus, Fig. 62.

Hab. Ceylon.

Species 63. (Mus. Hanley.)

CATAULUS LEUCOCHEILUS. *Cat. testâ pyramidalâ, striatâ, flavidâ; anfractibus octo, medianis subcentricis, apicalibus parvis, attenuatis, ultimo supra carinam validè contracto; carinâ acutâ; umbilico magno; aperturâ subovata, margine expanso, albo, reflexo, recurvo, ad suturam elevato, ad riuam producto; rimâ maziand.*

THE WHITE-EDGED CATAULUS. Shell pyramidal, striated, yellow; whorls eight, middle subventricose, apical small, attenuated, last strongly contracted above the keel; keel sharp; umbilicus large; aperture rather ovate, margin expanded, white, reflected, bent backwards, raised at the suture, produced at the notch; notch very large.

A. ADAMS. Sowb. Thes. Conch. *Pupinidae*, Cataulus, Fig. 62.

Hab. Ceylon.

Species 64. (Mns. Hanley.)

CATAULUS DECORUS. *Cat. testâ subfusiformi, levigatâ, rubro-fuscâ; anfractibus septem, subelevatis, convexis, ultimo supra carinam validissimè coarctato; carinâ magnâ, acutâ; aperturâ parvâ, subovata, margine lato, expanso, ad suturam elevato, subalbo, infra rostrato, rimâ magnâ.*

THE DECOROUS CATAULUS. Shell subfusiform, smooth,

reddish-brown; whorls seven, rather elevated, convex, last very strongly contracted above the keel; keel large, sharp; aperture small, subovate, margin broad, expanded, raised and somewhat winged at the suture, beaked below, notch large.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidae*, Cataulus, Fig. 13.

Hab. Ceylon.

Species 65. (Mus. Hanley.)

CATAULUS AUREUS. *Cat. testâ altâ, subfusiformi, avrantâ, tenuiter striatâ; anfractibus septem, altis, tribus vel quatuor apicalibus roseis, attenuatis, medianis subcentricis, ultimo elevato; aperturâ medio-cri; margine duplicato, extus expanso, infra validè rostrato; rimâ macinatâ.*

THE GOLDEN CATAULUS. Shell raised, subfusiform, orange, finely striated; whorls seven, elevated, three or four apical rosy, attenuated; middle rather ventricose, last raised; aperture middle-sized; margin double, expanded on the outside, strongly beaked below; notch very large.

HANLEY. Indian Shells, Pl. 106, Fig. 9.

Hab. India.

(ARINIA.)

Species 66. (Mus. — ? Copied.)

ARINIA MINOR. *Ar. testâ parvâ, pupaformi, fuscâ; anfractibus quatuor, brevibus, rotundis, superioribus elevato-striatis; aperturâ rotundâ, margine albo, integro.*

THE SMALL ARINIA. Shell small, pupa-shaped, brown; whorls four, short, rounded, upper ridge striated; aperture round, margin white, entire.

SOWERBY (Cyclostoma). Adams. Sowb. Thes. Conch. *Pupinidae*, Arinia, Fig. 1.

Hab. Isl. of Panay, Philippines.



Peltyarso



68



67



69

M. at lomasirena



70



71



72



73



74



75



76

PUPINIDÆ.

PLATE VIII.

(POLLICARIA OR HYBOCISTIS.)

Species 67. (Mus. Sowerby.)

POLLICARIA MOURHOTI. *Pol. testâ solidâ, ventricosâ, brevis, fusca-purpureâ, pupiformi; anfractibus quinque, rapidi cæscatilis, ultimo magno, alto, viz uno latere gibboso; umbilico parvo, obliquo; apertura magnâ, subrotundâ, posticâ subacuminatâ; margine arcuato, rotundo.*

MOURHOT'S POLLICARIA. Shell solid, ventricose, short, brown-purple, pupa-shaped; whorls five, rapidly increased, the last large, elevated, a very little gibbous on one side; umbilicus small, oblique; aperture large, rather round, slightly acuminate posteriorly; margin orange, round.

PERIFFEL. Proc. Zool. Soc. 1862, p. 276.

Hab. Camboja, Lao Mountains.

Species 68. (Mus. Brit.)

POLLICARIA GRAVIDA. *Pol. testâ solidâ, ventricosâ, breviter pupiformi, fulcâ; subrotundâ; apice obtuso, anfractibus quinque, tubus apicalibus brevibus, rapide cæscatilis, penultimo rotundato, uno latere gibboso, ultimo magno, obliquo, uno latere gibboso; infâ angustâ, rimatâ, umbilico; apertura subrotundâ, margine duplicatâ, marginâ interno supra suturam levata, subrotundâ, margine interno antice ultra orbem expanso.*

THE HEAVY POLLICARIA. Shell solid, very ventricose, shortly pupiform, fulvous, a little tortuous; apex obtuse, whorls five, three apical short, rapidly increased, penultimate ventricose, gibbous on one side; last large, oblique, gibbous on one side, narrow below, notched, umbilicated; aperture rather rounded, margin duplicated, outer margin raised above the suture, a little tubular; inner margin anteriorly extended beyond the outer.

BESSON. Adams. Sowb. Thes. Conch. *Pupinidæ*.
Pollicaria. Fig. 5.

Pollicaria pollæ, Gould.

Hab. Moulmein, India.

Species 69. (Mus. Brit.)

POLLICARIA MYERSI. *Pol. testâ magnâ, inflatâ, fulcâ, fusiformi; apice obtuso; anfractibus quinque, apicalibus tribus parvis, penultimo magno, ultimo*

magno; infâ angustâ umbilicatâ; apertura magna, apice subacuminatâ, margine duplicatâ.

MYERS' POLLICARIA. Shell large, inflated, fulvous, fusiform; apex obtuse; whorls five, three apical small, last but one large, last very large; narrowly umbilicated below; aperture large, a little acuminate above, margin doubled.

HAINES. Adams. Sowb. Thes. Conch. *Pupinidæ*.
Pollicaria, Fig. 11.

Hab. Siam.

(MEGALOMASTOMA.)

Species 70. (Mus. Brit.)

MEGALOMASTOMA LOWLI. *Meg. testâ breviter pupiformi, purpureo-fulcâ; apice acuminatâ; anfractibus septem, aperturâ cæscatilis, una cæscatilis; ultimo ad umbilicum carinatâ, aperturâ rotundâ, magno latere gibboso, carinatâ, infâ arcuatâ, subrotundâ, planatâ.*

LOWI'S MEGALOMASTOMA. Shell rather short, pyramidal, purple-brown; apex acuminate; whorls seven, gradually increased, rather convex, last keeled at the umbilicus; aperture round, margin duplicate, expanded, orange within, white without, rather flattened.

ADAMS & SOWERBY. Thes. Conch. *Pupinidæ*,
Megalomastoma.

Hab. Labuan.

Species 71. (Mus. Sowerby.)

MEGALOMASTOMA TOETUM. *Meg. testâ solidâ, ventricosâ, pupiformi; anfractibus sex, rotundis, tubus apicalibus brevibus, rotundis, posticâ fulcâ, ultimo pupiformi, angustato, quinque penultimo angustato; aperturâ; apice ac. margine interno tubo interno angustâ, interno angustâ infra alaba.*

THE TWIFOLD MEGALOMASTOMA. Shell solid, ventricose, pupa shaped; whorls six, rounded, three apical short, rounded, pale fulvous, last blackish-purple, narrower than the penultimate; aperture circular, margin retracted, inner lip narrow, outer winged above and below.

WOOD. Suppl. Pl. 6, p. 23.

Cylostoma auriculatum, D'Orb.

Cylostoma abarcom, Menck.

Cylostoma aperta, Pöcy.

Cyclostoma digitale. Gandlach.
Cyclostoma Traylorianum. Pfeiffer.
Cyclostoma idolum. FERTUSSAC.
Cyclostoma bicolor. GUILDING.
Cyclostoma seminudum. POEY.
 Hab. Cuba.

Species 72. (Mus. Brit.)

MEGALOMASTOMA SIMULACRUM. *Meg. testâ clatâ, pyramidatâ, rubro-fuscâ, tenuiter striatâ; anfractibus decem, convexis; aperturâ circulari, margine duplicato, latere interno angustè elevatâ, externo latè reflexo, expanso, plumbeo, albo; apud anfractum ultimum angustato, sinuatim plicato.*

THE IMAGE MEGALOMASTOMA. Shell elevated, pyramidal, reddish-brown, finely striated; whorls ten, convex; aperture circular, margin duplicate, on the inner side narrowly elevated, on the outer broadly reflected, expanded, flattened, white; narrowed and sinuously plaited against the last whorl.

MORELET. Adams. Sowb. Thes. Megalomastoma, Fig. 3, 4.

Hab. Guatemala.

Species 73. (Mus. Sowerby.)

MEGALOMASTOMA GUATEMALENSE. *Meg. testâ clatâ, pyramidatâ, angustâ, turritâ, fuscâ; anfractibus rotundis, gradatim crescentibus, ultimo angustè umbilicato, carinato; aperturâ subrotundâ, margine reflexo, angustâ, albo.*

THE GUATEMALA MEGALOMASTOMA. Shell elevated, pyramidal, narrow, turreted, brown; whorls round, gradually increased, last narrowly umbilicated, carinated; aperture rather rounded, margin reflected, narrow, white.

PFEIFFER. Adams. Sowb. Thes. Megalomastoma, Fig. 6.

Hab. Guatemala.

Species 74. (Mus. Sowerby.)

MEGALOMASTOMA LEONINUM. *Meg. testâ brevi, levî, pupiformi, fulvâ, solidâ, ventricosâ; anfractibus quinque, ultimo magno, infusè carinato et umbilicato; aperturâ magnâ, subcirculari, margine albo, angustâ, reflexo, rotundâ.*

THE LEONINE MEGALOMASTOMA. Shell short, smooth, pupa-shaped, fulvous, solid, ventricose; whorls

five, last large, keeled and umbilicated below; aperture large, subcircular, margin white, narrow, reflected, rounded.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ* (Megal.) Fig. 7.

Hab. Cuba.

A shorter shell than *M. tortum*, with the margin of the aperture not winged.

Species 75. (Mus. Brit.)

MEGALOMASTOMA FUNICULATUM. *Meg. testâ angustâ, pupiformi, alidâ; anfractibus sex, rotundis, superioribus attenuatis; ultimo alto, rotundis, infra subelevatâ et umbilicatâ; aperturâ fluidâ, subauriformi, margine angustè reflexo, rotundâ, integro.*

THE CHIMNEY-SHAPED MEGALOMASTOMA. Shell narrow, purple-brown, pupa-shaped, high; whorls six, rather straight, upper attenuated; last high, straight-sided, slightly keeled and umbilicated; aperture yellowish, rather auriform, margin narrowly reflected, rounded, entire.

BENSON. Adams. Sowb. Thes. Conch. Megalomastoma, Fig. 8.

Hab. Darjiling, India.

Species 76. (Mus. Brit.)

MEGALOMASTOMA BITUBERCULATUM. *Meg. testâ solidâ, alidâ, ventricosâ, pupiformi; anfractibus sex, convexis, superioribus pallidis, inferioribus purpureis; suturâ profundissimâ; aperturâ circulari, margine latè reflexo; latere externo foliatim duplicato, apud anfractum ultimum rotundè bialato, post aperturam canaliculato.*

THE BITUBERCULATED MEGALOMASTOMA. Shell solid, high, ventricose, pupa-shaped; whorls six, convex, upper pale, lower purple; suture very deep; aperture circular, margin broadly reflected; outer side doubly foliated, roundly two-winged, with a canal behind the aperture.

SOWERBY. Adams. Sowb. Thes. Megalomastoma, Fig. 10.

Cyclostoma sotenatum. Poey.

Hab. Cuba.

A bolder and more cylindrical shell than *Megalomastoma tortum*, with the ala on the margin of the lip at the interrupted part rounded and conspicuous.



Megalomastoma



78



77



79



80



81



82



83



84



85



86

PUPINIDÆ.

PLATE IX.

(MEGALOMASTOMA)

Species 77. (Mus. Sowerby.)

MEGALOMASTOMA D'ORIGNYI. *Meq. testâ oblongo-pyriformi, striatâ, levigatâ, omnino pallide aversâ, vel fuscâ-avertatâ, anfractibus inferioribus fuscâ, fasciâ luteâ pictâ; anfractibus s.c. primis rotundis, brevibus; melioribus convexiusculis, altis; ultimo altissimo, infra prope aperturam carinato, angustè umbilicato; aperturâ anticè subproductâ, circulari, margine integro, rotundo.*

D'ORIGNY'S MEGALOMASTOMA. Shell oblong-subcylindrical, smooth, all over pale orange or brown orange, with the lower whorls painted with a broad brown band; whorls six, the first rounded, short; middle rather convex, high; last very high, keeled below near the aperture, narrowly umbilicated; aperture anteriorly rather produced, circular, margin entire, rounded.

PFEIFFER. Adams. *Thes. Conch. Pupinidæ*, Megalomastoma, Fig. 12, 13.

Hab. Haïti, Pern.

Species 78. (Mus. Sowb.)

MEGALOMASTOMA SUSPENSUM. *Meq. testâ angustè pyramidatâ, obliquè striatâ, fumoso-fuscâ; anfractibus nullo, gradatim crescentibus; ultimo albo, infra umbilicato et carinato; aperturâ descendente, sub-ovata, margine angusto, albo, planulato, ad suturam acuminato.*

THE SUSPENDED MEGALOMASTOMA. Shell narrowly pyramidal, obliquely striated, smoky-brown; whorls nine, gradually increased; last high, umbilicated and keeled below; aperture descending, rather ovate, margin narrow, white, flattened, acuminated at the suture.

GULBING. Adams. *Sowb. Thes. Pupinidæ*, Megalomastoma, Fig. 14.

Cyclostoma Antillarum. Sowerby.

Hab. Isl. St. Thomas, Antilles.

Species 79. (Mus. —? Copied.)

MEGALOMASTOMA VERRUCOSUM. *Meq. testâ brevi, subpyramidatâ, obscure fuscâ, minutè molulosa; anfractibus sex, gradatim crescentibus, ultimo ante*

aperturam angustissimè umbilicatâ; aperturâ subrotundâ, margine albo, crasso.

THE WARTED MEGALOMASTOMA. Shell short, rather pyramidal, dull brown, minutely nodose, whorls six, gradually increased, last very narrowly umbilicated before the aperture; aperture rather round, margin white, convex.

SHUTTLEWORTH. Adams. *Sowb. Thes. Pupinidæ*, Megalomastoma, Fig. 15.

Hab. Porto Rico.

Species 80. (Mus. Brit.)

MEGALOMASTOMA COMPLANATUM. *Meq. testâ subob. pupiformi, ventricosa, fusco-purpurâ, ad suturam albo-lividâ; anfractibus quinque, paulatim maximo, ultimo subcompresso; umbilico angustissimo; aperturâ margini, circulari; margine albo, crasso, apud anfractum ultimum partim interrupto.*

THE FLATTENED MEGALOMASTOMA. Shell solid, pupa-shaped, ventricose, brown-purple, with a white line at the suture; whorls five, penultimate very large; last a little compressed; umbilicus very narrow; aperture large, circular; margin white, thick, partly interrupted against the body-whorl.

PFEIFFER. Adams. *Thes. Conch. Pupinidæ*, Megalomastoma, Fig. 16.

Hab. Cuba.

The last whorl is a little flattened in front.

Species 81. (Mus. Sowerby.)

MEGALOMASTOMA CROCÆUM. *Meq. testâ ovato-acuminatâ, brevi, auriculâ, vel pallidè fuscâ, anfractibus inferioribus fusco-fuscatis; anfractibus septem, superioribus angustioribus, infra angustè umbilicatâ; aperturâ ovatâ, posticè angustiusculâ, margine angusto, duplicato.*

THE YELLOW MEGALOMASTOMA. Shell ovate-acuminated, smooth, orange, or pale fulvous, with brown bands on the lower whorls; whorls seven, rather narrow above; below narrowly umbilicated; aperture ovate, posteriorly rather narrow, margin narrow, doubled.

SOWERBY. *Thes. Conch. Pupinidæ*, Megalomastoma, Fig. 7.

Cyclostoma bifasciatum. Sowerby
Cyclostoma Gouldianum. Petri.
 Hab. Mauritius. (Var. *fasciatum*.) Gaayaquil.

Species 82. (Mus. Sowerby.)

MEGALOMASTOMA MANI. *Meg. testâ subpyramidalâ, aureo-fulvâ, leviter striatâ, apice acuminatâ; anfractibus septem, superioribus quinque brevibus, rotundis, penultimo magno, ultimo magno, infra umbilicatâ; aperturâ rotundâ, margine crasso, rotundâ, suprâ infraque prope anfractuum ultimum paulô expanso.*

MAN'S MEGALOMASTOMA. Shell rather pyramidal, golden-fulvous, finely striated, apex acuminated; whorls seven, upper five short, round, penultimate large, last large, umbilicated below; aperture round, margin thick, rounded, a little expanded above and below near the last whorl.

POEY. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 18.

Megalomastoma procerum (var.). Poey.
 Hab. Cuba.

This species is not so cylindrical as *Megalomastoma tortum*, but tapers towards the apex.

Species 83. (Mus. Hauley.)

MEGALOMASTOMA ANASTOMA. *Meg. testâ breviter pyramidalâ, acuminatâ, purpureo-fuscâ; anfractibus sex, rapidè crescentibus; aperturâ magnâ, circulari; margine albo, expanso, apud anfractuum ultimum interrupto.*

THE WRY-MOUTHED MEGALOMASTOMA. Shell shortly pyramidal, acuminated, purple-brown; whorls six, rapidly increased; aperture large, circular; margin white, expanded, interrupted against the last whorl.

BENSON. Adams. Sowb. Thes. *Pupinidæ*, Megalomastoma, Fig. 20.

Hab. India.

The peritreme is white and more broadly expanded than in *M. Lovel*.

Species 84. (Mus. —? Copied.)

MEGALOMASTOMA GUILDINGIANUM. *Meg. testâ minutâ, brevi, pupiformi, anfractibus superioribus albis,*

apice obtuso; anfractibus quinque, brevibus, rotundis, penultimo inflato; ultimo intense purpureo; vie contracto, umbilicato; aperturâ subcirculari, margine angusto, albo, rotunda.

GUILDING'S MEGALOMASTOMA. Shell minute, short, pupa-shaped, upper whorls white, apex obtuse; whorls five, short, round, last but one inflated; last deep purple, a very little contracted, umbilicated; aperture nearly circular, margin narrow, white, rounded.

PERIEFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 21.

Hab. West Indies.

This minute shell is like a miniature representation of *M. tortum*.

Species 85. (Mus. —? Copied.)

MEGALOMASTOMA FAUPEECULUM. *Meg. testâ minutâ, pupiformi, altissimâ, anfractibus superioribus albis, convexis; spirâ acuminatâ, medio convexâ; anfractibus sex, convexissimâ, penultimo inflato, ultimo subcontracto, umbilicato, intense purpureo; aperturâ circulari, margine albo, duplicato.*

THE POOR LITTLE MEGALOMASTOMA. Shell minute, pupa-shaped, rather high, with the upper whorls white, convex; spire acuminated, middle convex; whorls six, rather convex, last but one inflated, last rather contracted, umbilicated, deep purple; aperture circular, margin white, double.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 22.

Hab. West Indies.

Resembling *M. Guildingianum* in size and general appearance, but more acuminated, and with the rim doubled.

Species 86. (Mus. Sowerby.)

MEGALOMASTOMA ALTUM. *Meg. testâ angustè pyramidalâ, purpureo-fuscâ, levigatâ; anfractibus septem convexis, ultimo alto, umbilicato; aperturâ subcirculari, margine duplicato, albo.*

THE HIGH MEGALOMASTOMA. Shell narrowly pyramidal, purple-brown, smooth; whorls seven, convex, last high, umbilicated; aperture rather circular, margin doubled, white.

SOWERBY. Adams. Thes. Conch. *Pupinidæ*.

Hab. Isl. Negroes.



Megalomastoma



88



87



89



91



90



92

Raphanlus



93



94



95



97



96

PUPINIDÆ

PLATE X.

Species 87. (Mus. Brit.)

MEGALOMASTOMA UNGLIÆ. *Meq. testâ albi, solidâ, pupaformi, anfractibus sex, convexis, subââ profundâ superioribus, ultimâ angustissimâ umbilicato; apertura antice obliquè productâ, bimarginatâ, a argine interiori ultra exteriorem obliquè obliquo.*

THE TALON MEGALOMASTOMA. Shell white, solid, pupa-shaped, whorls six, convex, separated by a deep suture; last very narrowly umbilicated; aperture anteriorly obliquely produced, with a double margin, interior margin extended obliquely beyond the outer.

POEY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 29.
Hab. Cuba.

The month is bordered by a kind of double rim, the inner rim being, as it were, pushed out obliquely in front, so as to overlap what would otherwise be the outer.

Species 88. (Mus. Brit.)

MEGALOMASTOMA SEPTILABRUM. *Meq. testâ pyramidalâ, albi, acuminatâ, pallidissimâ fulcâ; anfractibus octo, levibus, convexis, declivibus; ultimo infra anfractum, tum angustissimè umbilicato; apertura subovata, margine duplicato, parte exteriori ad anfractum ultimum interruptâ, interiori integri.*

THE SLIT-LIPPED MEGALOMASTOMA. Shell pyramidal, raised, acuminate, very pale fulvous; whorls eight, smooth, convex, sloped; last single-handed, very narrowly umbilicated; aperture rather ovate, margin duplicated, the outer part being interrupted at the body whorl, the inner part entire.

GUILDING. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 24.
Hab. Tavoy, Birmanh.

Species 89. (Mus. — ? Copied.)

MEGALOMASTOMA VENTRICOSUM. *Meq. testâ solidâ, ventricosissimâ, brevi, fusco-rubescenti; anfractibus quinque, convexis, latis; penultimo inflato; ultimo purpurascenti, infra subangustato, profundè umbilicato; apertura magna, circulari; margine crasso, aurantiâ, rotundo, apud anfractum ultimum partim interrupto.*

THE VENTRICOSE MEGALOMASTOMA. Shell solid, very ventricose, short, reddish-brown; whorls five, convex, broad; penultimate inflated; last rather purplish, a little narrowed below, deeply umbilicated; aperture large, round; margin thick, orange, round, partly interrupted at the last whorl.

D'ORBIGNY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 25.

Hab. Cuba.

Much more short and ventricose than *Meq. testâ*.

Species 90. (Mus. Brit.)

MEGALOMASTOMA GUNDLACHI. *Meq. testâ brevi, pupaformi, aurantiâ-fuscâ; apice obtuso; anfractibus quinque, tribus superioribus rotundis, penultimo magno, rotiscenti, ultimo altissimo, octo, infra carinato, umbilicato; apertura maxima, circulari, margine crasso, rotundo, apud anfractum ultimum semi-interrupto.*

GUILDING'S MEGALOMASTOMA. Shell short, pupa-shaped, orange-brown; apex obtuse; whorls five, three upper rounded, penultimate large, rather straight, last very high, straight, keeled below, umbilicated; aperture very large, circular, margin thick, rounded, half interrupted against the last whorl.

PFEFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 26.

Hab. Cuba.

Species 91. (Mus. Brit.)

MEGALOMASTOMA CYLINDRACEUM. *Meq. testâ altissimâ, cylindricâ, aurantiâ (omninoque ultimo anfracti infusciato), crasso apice attenuatâ; anfractibus octo, altis, rectis; apertura ovata, margine albo, angustâ.*

THE CYLINDRICAL MEGALOMASTOMA. Shell very high, cylindrical, orange, sometimes with the last whorl single-handed, attenuated towards the apex; whorls eight, high, straight; aperture ovate, margin white, narrow.

CHEMNITZ. Adams, Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 27.

Turbo flaccidus. Wood.

Helix ovata. Gmelin.

Cyclostoma flexida.

Hab. Porto Rico.

More elevated and cylindrical than *M. D'Orbigny*.

Species 92. (Mus. Sowb.)

MEGALOMASTOMA SEPTINA. *Meq. testâ ovali-subpyramidalâ, ventricosâ, levigatâ, subacuminatâ, fulcâ; anfractibus sex, convexis, declivibus, ultimo magno, infra carinato, angustè umbilicato, apertura subovata, antice obliquè productâ, margine crasso, duplicato, parte interiori antice ultra exteriori obliquo.*

THE EVENING MEGALOMASTOMA. Shell ovate-subpyramidal, ventricose, smooth, rather acuminate, fulvous; whorls six, rather convex, last large, keeled below, narrowly umbilicated; aperture rather rounded, anteriorly obliquely produced, margin thick, double, inner part extended in front beyond the outer.

ADAMS. Sowb. Thes. Conch. *Pupinida*, Megalomastoma, Fig. 28.

Hab. Cuba.

(RAPHAULUS)

Species 93. (Mus. — ? Copied.)

RAPHAULUS BOMBAZINÆ. *Rap. testâ breviter pupiformi, fusco-subauréâ, apice acuminatâ; anfractibus septem, quinque superioribus parvis, horibus, pyramidalis, penultimo brevissimo, rotundè prominente, ultimo magno, rectilinculo; apertura magna, rotundâ, margine lato, circulariter canaliculata; tubâ rotundâ brevissima.*

THE BOMBAZINE RAPHAULUS. Shell shortly pupiform, golden-brown; apex acuminate, whorls seven, five upper small, short, pyramidal; penultimate rather short, roundly prominent, last large, rather straight; aperture large, round, margin broad, circularly channelled; tube round, very short.

PEIFFER. Adams, Sowb. Thes. Conch. *Pupinide*, Raphaelus, Fig. 3, 7.

Hab. India.

Species 94. (Mus. — ? Copied.)

RAPHAULUS SIMILIS. *Rap. testâ brevissimâ pupiformi, fusco-subauréâ; apice obtuso; anfractibus quinque, tribus superioribus brevissimis, penultimo brevi, inflato; ultimo ventricoso, albo, obliquo; apertura magna, rotundâ, margine lato, circulariter canaliculata; tubâ rotundâ, brevissima.*

THE SIMILAR RAPHAULUS. Shell very shortly pupa-shaped, golden brown; apex obtuse; whorls five, three upper very short, penultimate short, inflated, last ventricose, high, oblique; aperture large, rounded, margin broad, with a circular canal; tube rounded, very short.

SOWERBY.

Hab. — ?

In the monograph of Pupinidæ by Mr. Arthur Adams, this species is given as a second example of the preceding. It is, however, much shorter and more obtuse in the spire.

Species 95. (Mus. Hanley.)

RAPHAULUS CHRYSALIS. *Rap. testâ breviter pupiformi, solidâ, purpureo-fuscâ; apice obtuso, an-*

fractibus quinque, tribus superioribus brevibus, penultimo albo, rotundè prominente; ultimo alto, obliquo; apertura magna, circulari, margine lato, circulariter canaliculata; tubâ elongatâ, perpendiculariter super anfractum ultimum decumbenti.

THE CHRYSALIS RAPHAULUS. Shell shortly pupa-shaped, solid, purple-brown; apex obtuse, whorls five, three upper short, last but one elevated, roundly prominent; last elevated, oblique; aperture large, circular, margin broad, with a circular channel, tube elongated, perpendicularly decumbent upon the last whorl.

PEIFFER. Proc. Zool. Soc. 1852, p. 158.

Hab. Ava, Moulemein.

The tube rims up the side of the last whorl, nearly reaching the suture.

Species 96. (Mus. Brit.)

RAPHAULUS LORAINI. *Rap. testâ breviter pupiformi, solidâ, purpureo-fuscâ, ultimo anfractu albo supra, ad suturam anfractibus; apice obtuso; anfractibus quinque, brevibus, penultimo rotundè prominente, ultimo rectilinculo; apertura magna, circulari, margine albo, reflexo, rotundato; tubâ brevissima, extra marginem aperturæ.*

LORAINI'S RAPHAULUS. Shell shortly pupa-shaped, solid, purple-brown, last whorl with a single white band above the suture; whorls five, short, last but one roundly prominent; last rather straight; aperture large, circular, margin white, reflected, rounded; tube very short, open beyond the margin.

PEIFFER. Proc. Zool. Soc. 1852.

Hab. Palo Penang.

Resembling *R. benyonicus* and *R. similis*, but with no groove round the margin of the aperture.

Species 97. (Fig. a, b, Mus. Hanley.)

RAPHAULUS BLANFORDI. *Rap. testâ brevissimâ, ventricosâ, fuscâ; apice subpyramidalâ; anfractibus quinque, duobus apicalibus parvis, brevibus, penultimo inflato, ultimo brevi, subinflato; apertura circulari, margine crasso, albo; tubâ retrorsam plicatâ, longè super suturam ad dorsum productâ.*

BLANFORDI'S RAPHAULUS. Shell very short, ventricose, brown; apex rather pyramidal; whorls five; two apical small, short, last but one inflated, last short, rather inflated; aperture circular, margin thick, white; tube bent backwards, produced to some length over the suture at the back.

BENSON. An. Nat. Hist. 1857, p. 201.

Hab. Near Darjiling, in Sikkim, Himalaya.

PUPINIDÆ.

Adamsii. Pa. <i>Sowerby</i>	IV.	33	fuseum. Re. <i>Gray</i>	V.	43
altum. M. <i>Sowerby</i>	IX.	86	grande. Re. <i>Gray</i>	V.	42
albacum. M. Menk.....	VIII.	71	grandis. Pa. <i>Forsk.</i>	I.	1
ambigua. Ca. <i>Sowerby</i>	IV.	37	gravida. Po. <i>Bonson</i>	VIII.	68
anastoma. M. <i>Bonson</i>	IX.	83	Guatemalense. M. <i>Pfeiffer</i>	VIII.	73
Angusii. Pa. <i>Adams</i>	II.	11	Guildingianum. M. <i>Pfeiffer</i>	IX.	84
apertum. M. <i>Poey</i>	VIII.	71	Gundlachi. M. <i>Pfeiffer</i>	X.	90
artata. Pa. <i>Bonson</i>	I.	3	hemastomus. Cat. <i>Pfeiffer</i>	VII.	61
atula. Pa. <i>Bonson</i>	I.	5	humilis. Pa. <i>Adams</i>	II.	16
barva. Pa. <i>Woods</i>	I.	10	ibidua. M. <i>Ferrussac</i>	VIII.	71
barvosa. Cat. <i>Hawley</i>	VII.	65	imbricifera. Pa. <i>Bonson</i>	I.	7
barvulata. M. D'Orbigny.....	VIII.	71	Keraudreni. Pa. <i>Vigout</i>	II.	12
aurita. Ca. <i>Ziegler</i>	IV.	36	Layardi. Cat. <i>Adams</i>	VI.	57
Austenianus. Cat. <i>Bonson</i>	VII.	59	leucocheilus. Cat. <i>Adams</i>	VII.	63
bicamaticulata. Pa. <i>Sowerby</i>	II.	11	leoninum. M. <i>Pfeiffer</i>	VIII.	74
bicolor. M. Guilding.....	VIII.	71	Lorainii. Ra. <i>Pfeiffer</i>	X.	96
bilinguis. Pa. <i>Pfeiffer</i>	I.	1	Lowei. M. Adams.....	VIII.	70
buberculatam. M. <i>Sowerby</i>	VIII.	76	lubrica. Ca. <i>Sowerby</i>	IV.	35
Blanfordi. Cat. <i>Dohrn</i>	VI.	53	Mani. M. <i>Poey</i>	IX.	82
Blanfordi. Pa. <i>Theobald</i>	I.	6	marginata. Cat. <i>Pfeiffer</i>	VII.	58
Blanfordi. Ra. <i>Bonson</i>	X.	97	meridionalis. Pa. <i>Pfeiffer</i>	I.	8
Bombayana. Ra. <i>Pfeiffer</i>	X.	93	Mindoroensis. Pa. <i>Adams</i> and <i>Rees</i>	III.	28
Borneensis. Pa. <i>Pfeiffer</i>	II.	19	minus. Ar. <i>Sowerby</i>	VII.	66
Brazieri. Re. <i>Crosse</i>	V.	47	nitis. Pa. <i>Adams</i>	III.	23
calceidensis. Cat. <i>Beddome</i>	VI.	59	Mouloti. Pa. <i>Pfeiffer</i>	II.	13
chrysalis. Ra. <i>Pfeiffer</i>	X.	95	Mouloti. Pa. <i>Pfeiffer</i>	VIII.	67
complanatum. M. <i>Pfeiffer</i>	IX.	80	Moulinsiana. Pa. <i>Fischer</i>	II.	15
complanatum. Re. <i>Poey</i>	V.	46	Myersii. Pa. <i>Holmes</i>	VIII.	69
crocum. M. <i>Sowerby</i>	IX.	81	nicobarica. Pa. <i>Pfeiffer</i>	III.	26
Cumingiana. Re. <i>Pfeiffer</i>	V.	41	Nicteri. Cat. <i>Hawley</i>	VI.	48
Cumingii. Cat. <i>Pfeiffer</i>	VI.	52	ottonis. Pa. <i>Dohrn</i>	III.	25
cylindraceum. M. <i>Chenault</i>	X.	91	panperculum. M. <i>Pfeiffer</i>	IX.	85
decorus. Cat. <i>Bonson</i>	VII.	64	pellucidum. Re. <i>Gray</i>	V.	45
difficilis. Pa. <i>Sowerby</i>	IV.	32	Pfeifferi. Pa. <i>Dohrn</i>	III.	21
Digitata. M. Gundlach.....	VIII.	71	pinetola. Pa. <i>Coe</i>	IV.	31
D'Orbignyi. M. <i>Pfeiffer</i>	IX.	77	planilabris. Pa. <i>Pfeiffer</i>	I.	9
duplicatus. Cat. <i>Pfeiffer</i>	VI.	51	polta. Har. A. Adams.....	III.	29
enryptrema. Cat. <i>Pfeiffer</i>	VI.	56	poeyi. M. <i>Poey</i>	IX.	82
exiguum. Re. <i>Sowerby</i>	V.	39	pupiniformis. Pa. <i>Pfeiffer</i>	II.	20
funiculam. M. <i>Bonson</i>	VIII.	75	pyramidatus. Cat. <i>Pfeiffer</i>	VII.	60

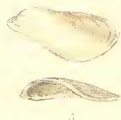
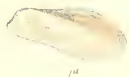
PUPINIDÆ.

	Plate.	Species.	Plate.	Species.
recurvatus. Cat. A. Adams	VI.	55	Tagliavannum. M. Pfeiffer	VIII. 71
rufa. Pa. Pfeiffer ..	III.	27	Templemani. Cat. Pfeiffer	VII. 62
sectilabrum. M. Gudding	X.	88	Thompsoni. Pa. Forbes ..	III. 22
senilioidum. M. Poey ..	VIII.	71	Thwaitesii. Cat. Pfeiffer ..	VI. 54
serotina. M. Adams ..	X.	92	tortum. M. Wood ..	VIII. 71
simile. Re. Gray ..	V.	44	tortuosus. Cat. Gray ..	VI. 49
similis. Ra. Sowerby ..	X.	94	ungula. M. Poey ..	X. 87
simulacrum. M. Morelet	VIII.	72	ventricosum. M. Gudding	X. 89
splendens. Ducha ..	IV.	35	ventricosa. Pa. Bohra ..	I. 2
Strangei. Pa. Pfeiffer ..	III.	24	verrucosulum. M. Shuttleworth	IX. 79
superba. Pa. Pfeiffer ..	II.	17	Vescoi. Pa. Morelet	II. 18
suspensum. M. Gudding	IX.	78	vitreum. Re. Sowerby ..	V. 40
Swinhoei. Pa. A. Adams	IV.	30	Wallacei. Ca. Pfeiffer ..	IV. 38

MONOGRAPH
OF THE GENUS
GASTROCHENA.

— — —
"Contrivance intricate, expressed with ease
Where unassisted sight no beauty sees."—*Compar*





GASTROCHÆNA.

PLATE I.

Genus GASTROCHÆNA. *Leontidei*.

MOUSSEUX, CYPHALOPODES, PERFORANS, DUBIOUM.

Testa bivalvis, inequilateralis, aquiralis, antice et interne centrali in latere hians, suborbiculus centrali in terminalibus; carinae albius plerumque coloratione piceis; Epipneutum celeratum; tuba

MOUSSEUX, CYPHALOPODES, perforating, tube-inhabiting. Shell bivalve, inequilateral, equivalve, widely gaping in front at the ventral margin, umbones almost terminal in front; hinge for the most part with inconspicuous teeth; ligament external; tube sometimes nearly free.

The Gastrochæne for the most part live, like the Pholades, in hollows which they bore in limestone rocks, and which they line with a shelly tube ending in a narrow neck, like a bottle. But some of them, like the *Gastrochæna dubia*, make an almost independent tube, only attached by the neck or by one side to the shell or rock through which they have bored, or to which they are otherwise fixed. There is a specimen in the British Museum of *G. dubia* in which the substance bored through and slenderly lined is crystallized carbonate of lime. The British species is common to France and many other European coasts. The Indias, East and West, the Gallapagos Islands, the Mauritius, South America, the Pacific Islands, produce many species, and a small number were described by the late M. Deshayes, when in London some years since, which had been collected by the late Mr. Cuming in the Philippines.

Species 1. (Fig. a, b, c. Mus. Brit.)

GASTROCHÆNA DUBIA. *Gus. testâ tenui, elongatâ, obliquâ, tenuiter striatâ; hiato centrali mediocri, prope medianâ terminali; carinae tenui, ferè orbiculati.*

THE DOUBTFUL GASTROCHÆNA. Shell thin, elongated, oblique, finely striated; ventral hiatus moderate,

terminating near the middle; hinge thin, almost without teeth.

PENNYANT. British Zoology.

Gastrochæna noduloides. Lamarck.

ROCELLARIA DUBIA. Adams.

Hab. British Mediterranean coasts.

The bottle-shaped tube which covers the valves and siphons of this species is composed, when free, of agglutinated sand and small pebbles; when enclosed, it forms a calcareous lining to the crypt.

Species 2. (Mus. Brit.)

GASTROCHÆNA Plicatilis. *Gus. testâ subcompressâ, epidermide fuscâ indurâ, tortuâ, areâ posticâ elevatâ, contabulatâ, sulcato-angulatâ, ad tenuissimâ truncatâ, areâ dorsali depressâ, reticulatâ, hiato medianâ posticâ in sulcâna obliquâ terminali; hiato elongatâ.*

THE PLATED GASTROCHÆNA. Shell sub-compressed, covered with a brown epidermis, tortuous, with the posterior area elevated, contabulated, wrinkled with sulci, truncated at the end, dorsal area depressed, rather straight, middle area posteriorly terminating in an oblique groove; hiatus elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 329.

Hab. Isl. Zebu, Philippines.

The shell very much resembles *G. nodula*, but the plaits on the posterior area are finer, and less deeply cut, and the dorsal area much less projecting.

Species 3. (Mus. Brit.)

GASTROCHÆNA BREVIS. *Gus. testâ inflatâ, brevi, subulisculâ, brevissculâ, antice gibbosâ, hiato orbiculato, brevi.*

THE SHORT GASTROCHÆNA. Shell inflated, short, rather solid, rather smooth, gibbous anteriorly; hiatus strongly arched, short.

SOWERBY. Proc. Zool. Soc. 1834, 21.

Hab.—?

GASTROCHENA.—PLATE I.

Species 4. (Mus. Brit.)

GASTROCHENA APERTISSIMA. *Gas. testâ elongatâ, subcompressâ; tenuiter striatâ; latere antico emeato; latere postico rectiusculo, ad terminum rotundè subacuminatâ; hiata lato et elongata, ferè ad terminum posticum extensa.*

THE WIDE OPEN GASTROCHENA. Shell elongated, rather compressed, finely striated; anterior side emeated; posterior side rather straight, roundly subacuminated; hiatus broad and elongated, almost extending to the posterior end.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab.—?

Species 5. (Mus. Brit.)

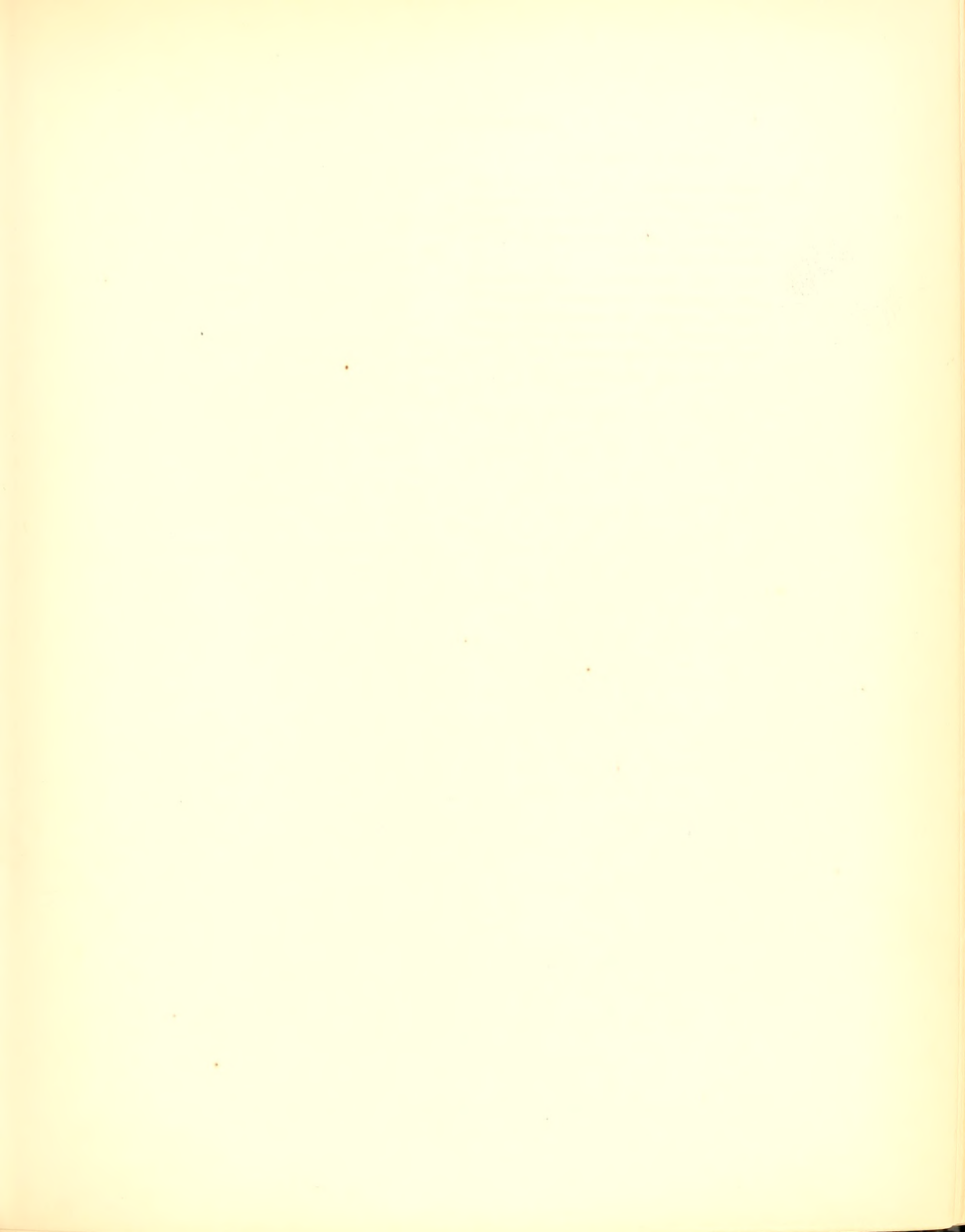
GASTROCHENA DIFFICILIS. *Gas. testâ obliquâ, tenuiter striatâ, compressâ, emeiformi, anticè gibbosâ, angustâ, posticè latâ, ad terminum acuminatâ; hiata lato, parvè post medium extenso.*

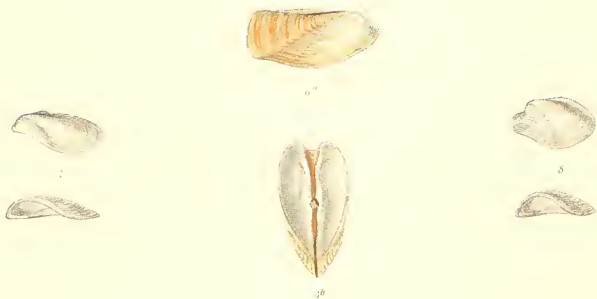
THE DIFFICULT GASTROCHENA. Shell oblique, finely striated, compressed, emeiform, anteriorly gibbous, narrow; posteriorly broad, acuminated at the end; hiatus broad, extended nearly to the end.

DESHAYES. MS. in Cuming's Collection.

Hab. Isl. St. Thomas.

A rather emeiform species, but more depressed than the one so named.





GASTROCHENA.

PLATE II.

Species 6. (Mus. —?)

GASTROCHENA RETZII. *Gas. testâ oblongâ, subconico-pedati, antice attenuatâ, inflatâ, tenui; epidermide flavescenti indatâ; latere postico latè truncato; arca postica trigona, elevata; arca dorsali depressâ, angustâ; hiatus maximo, latissimo, ferè ad terminum posticum extenso.*

RETZIUS'S GASTROCHENA. Shell oblong, rather cruciform, anteriorly attenuated, inflated, thin; covered with a yellowish epidermis; posterior side broadly truncated; posterior arca trigonal, raised; dorsal arca depressed, narrow; hiatus very large, very broad, extended almost to the posterior termination.

DESHAYES. *Coch. ile Réunion*, p. 7.

Hab. Isl. Bourbon.

Species 7. (Mus. Sowerby.)

GASTROCHENA PHILIPPINENSIS. *Gas. testâ angustâ, conico-pedati, tenui, tenuiter et distanter elevato-striatâ; latere antice acuminato, latè hiatus; latere postico subacuminato.*

THE PHILIPPINE GASTROCHENA. Shell narrow, rather straight, thin, with fine, raised, distant striae, anterior side acuminated, broadly gaping; posterior side rather acuminated.

DESHAYES. *Proc. Zool. Soc.* 1854, p. 328.

Hab. Isl. Zebu, Philippines.

Species 8. (Mus. Brit.)

GASTROCHENA DENTICULATA. *Gas. testâ brevi, albâ, inflatâ; medio subdepressa; latere antice ante umbonem paulo producto, obliquè striis elevatis minutissimè denticulatis sculpto; hiatus mediocri.*

THE DENTICULATED GASTROCHENA. Shell short, high, inflated; slightly depressed in the middle; anterior side a little produced in front of the

umbones, sculptured obliquely with raised, very minutely denticulated striae; hiatus moderate.

DESHAYES. *Proc. Zool. Soc.* 1856, p. 328.

Hab. W. Columbia.

The sculpture in the front part of this shell is sufficient to distinguish the species.

Species 9. (Mus. Sowerby.)

GASTROCHENA CUPELLATA. *Gas. testâ subconico, crassâ; latere antice brevissimè angustissimè; latere postico latè expanso, cœcis leucium cancellato; hiatus ovato, mediocri; cardine dentato magno.*

THE HOLOID GASTROCHENA. Shell cruciform, thick; anterior side very short, very narrow; posterior side broadly expanded, hooded towards the end; hiatus ovate, moderate; hinge with large teeth.

DESHAYES. *Proc. Zool. Soc.* 1856, p. 329.

Hab. W. Indies.

A large and remarkable species, with a peculiar hollow convexity in the valves towards the posterior end.

Species 10. (Mus. Brit.)

GASTROCHENA BOSTRAIA. *Gas. testâ subcompressâ, brevissimâ, oblongâ, epidermide fuscâ indatâ; latere antice ante umbones producto, prope terminum rugato; hiatus maximo, ferè ad terminum posticum extenso; latere postico trigono, angulato, ante angulum depresso; arca postica elevatâ, contabulatâ, profundè rugatâ; ad terminum latè truncatâ; arca dorsali latâ, expansâ; ligumench magno, brevi.*

THE BOSTEATED GASTROCHENA. Shell rather compressed, tortuous, oblong, covered with a brown epidermis; anterior side produced in front of the umbones, wrinkled near the end; hiatus very

GASTROCHELÆNA.—PLATE II.

large, almost extending to the end; posterior side trigonal, angular, depressed in front of the angle; posterior area elevated, contabulated, deeply wrinkled, broadly truncated at the end; dorsal area broad, expanded; ligament large, short.

SPENGLER. Guerin, Mag. Hist. Nat.

Hab. Isl. St. Thomas.

Species 11. (Mus. Brit.)

GASTROCHELÆNA RUPELLII. *Gas. testâ crassâ, subovata, inflatâ, latere antico ante umbones subproducto,*

quam posteriorem angustiusculo, tenuiter striato, umbonibus tumidissimis; medio levigato, striato; latere postico valde concentricè striato; hiatus ventrali moderatè arcuato.

RUPELL'S GASTROCHELÆNA. Shell thick, subovate, inflated, anterior side rather produced in front of the umbones, narrower than the posterior, finely striated; umbones very tumid; middle smooth, striated; posterior side strongly concentrically striated; ventral hiatus moderately arched.

DESBAYES. Proc. Zool. Soc. 1854, p. 328.

Hab. Red Sea.





GASTROCHENA.

PLATE III.

Species 12. (Mus. Brit.)

GASTROCHENA MYTILOIDES. *Gus. testis compressa, epidermide flavescenti insulata, oblonga, tortuosa; latera antice ante umbones paululo, acuminata; latera postice ante aream depressa, area postice contabulata, distincte sulcata; area dorsali angusta.*

THE MYTILUS-SHAPED GASTROCHENA. Shell compressed, covered with a yellowish epidermis, oblong, tortuous; anterior side produced in front of the umbones, acuminated; posterior side depressed in front of the area, posterior area contabulated, distinctly grooved; dorsal area narrow.

LAMARCK. ANIM. S. VERT.

Hab. — ?

Resembling *Gastrochena costata*, but with dorsal area very narrow, and posterior flattened area grooved at distant intervals.

Species 13. (Mus. Brit.)

GASTROCHENA RECTILINA. *Gus. testis depressa, obliquè coniformi, elongata, antice angusta, subacuminata, postice concentricè distincte lincata; hiatus moderati.*

THE WINKLED GASTROCHENA. Shell depressed, obliquely coniform, lengthened, narrow in front, rather acuminated, posteriorly concentrically distinctly ridged; gape moderate.

SOEWERY. Proc. Zool. Soc. 1834, p. 22.

Hab. Gallapagos Islands.

Species 14. (Mus. Brit.)

GASTROCHENA LAMELLONA. *Gus. testis compressa, angusta, elongata, antice attenuata, acuminata, postice concentricè laminae subaequalibus lincata; hiatus centrali angusta, elongata.*

THE LAMELLATED GASTROCHENA. Shell compressed, narrow, elongated, anteriorly attenuated, acuminated, posteriorly concentrically ridged with frequent laminae, ventral hiatus narrow, long.

DESHAYES. Proc. Zool. Soc. 1834, p. 328.

Hab. Isl. Zebu, Philippines.

Species 15. (Mus. Brit.)

GASTROCHENA GIGANTEA. *Gus. testis elongata, ovata, utriusque acuminata, leviter densè striata, leviter depressa; hiatus latissimus, fere ad 1/2 callosa posticè callosorum callosa.*

THE GIGANTIC GASTROCHENA. Shell elongated-ovate, acuminated at each end, finely densely striated, slightly depressed in the middle; hiatus very broad, extending nearly to the end of the valves.

DESHAYES. MS. in Cuming's Collection.

Hab. — ?

This large species is named from specimens now in the British Museum. The valves are more regularly ovate, although acuminated at the end and lengthened, than those of *G. coniformis*.

Species 16. (Mus. Brit.)

GASTROCHENA OVATA. *Gus. testis ventricosissima, brevis, ovata, solida, antice et usque ad medianam partem concentricè striata, post medianam levigata, prope marginem dorsalem obliquè tumida et callosa concentricè striata; hiatus centrali subrotundo.*

THE OVATE GASTROCHENA. Shell very ventricose, short, ovate, solid, anteriorly and as far as the middle concentrically striated, past the middle smooth, near the dorsal margin obliquely tumid, and strongly concentrically striated; ventral hiatus rather round.

SOEWERY. Proc. Zool. Soc. 1834, p. 21.

Hab. Panama.

Species 17. (Mus. Brit.)

GASTROCHENA PUPINA. *Gus. testis valvulae apertae lobi brevis, angustè bulbiformis, in sectionibus spinis quasi articulata, per latus ad testem adhaerens.*

THE PUPINA GASTROCHENA. Shell with valves unknown; tube smooth, narrowly bulb-shaped, quasi-articulated in five sections, attached by the side to shells.

GASTROCHÆNA.—PLATE III.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab.—?

This may be only a smooth variety of the *Gastrochæna lagenula*; but I have not seen the valves.

Species 18. (Fig. a, b. Mus. Sowerby.)

GASTROCHÆNA LAGENULA. *Gas. testâ parvâ, arcuatâ, tenui, angustâ; arââ posticâ in tabulas dicsâ, inter tabulas sulcatâ. Tabâ irregularitèr bulbiformi, agglutinanti, quasi articulatiâ dicsâ.*

THE FLASK GASTROCHÆNA. Shell small, arched, thin, narrow; posterior area divided in tablets, with grooves between the tablets. Tube irregularly bulbiform, agglutinating, divided into quasi-articulations.

LAMARCK. Anim. s. Vert.

Hab. Ceylon, Arracan.

In Adams's Genera, this and the preceding species are included in the genus *Guettera*. The valves of *G. lagenula*, however, are those of a true *Gastrochæna*, while those of *Guettera* have the characteristics of true *Teredines*.

Species 19. (Mus. Brit.)

GASTROCHÆNA TRUNCATA. *Gas. testâ rugosâ, solidiusculâ, epidermidè fuscâ indutâ; latere antico subul-*

terabo, umbonibus gibbosis; latere postico angulato, latè truncato; arââ dorsali depressâ; hiatu lato, elongato; deute cardinali magno.

THE TRUNCATED GASTROCHÆNA. Shell rugose, rather solid, covered with a brown epidermis; anterior side rather attenuated, umbones gibbons; posterior side angular, broadly truncated; dorsal area depressed; hiatus broad, elongated; cardinal tooth large.

SOWERBY. Proc. Zool. Soc. 1834, p. 21.

Hab. Bay of Panama.

Species 20. (Fig. a. Mus. Brit. Fig. b, Plate IV. Mus. Sowerby.)

GASTROCHÆNA CUNEIFORMIS. *Gas. testâ cuneiformi, tenuisculâ, anticè attenuatâ, ante umbones subproductâ, acuminatâ; latere postico lato, versus terminem obliquè subacuminato; hiatu moderatè elongato.*

THE WEDGE-SHAPED GASTROCHÆNA. Shell wedge-shaped, rather thin, anteriorly attenuated, a little produced in front of the umbones, acuminated; posterior side broad, obliquely rather acuminated, towards the end. Hiatus moderately long.

SPENGLER. Gnerin, Mag. Nat. Hist.

Hab. Isl. Zebu, Philippines.





GASTROCHENA.

PLATE IV.

Species 20. (Figs. See Plate III.)

Species 21. (Mus. Brit.)

GASTROCHENA HYALINA. *Gus. testis tenuissimâ, semi-pellucidâ, obliquè attenuatâ, antice brevissimâ, angustissimâ, postice latiusculâ, nervinatâ; hiatus brevissimus.*

THE HYALINE GASTROCHENA. Shell very thin, semi-pellucid, obliquely attenuated, anteriorly very short, posteriorly rather broader, acuminate; hiatus rather short.

DESHAYES. Proc. Zool. Soc. 1854, p. 22.

Hab. — ?

Species 22. (Mus. Brit.)

GASTROCHENA SPATHULATA. *Gus. testis brevissimâ, compressâ, coniformi, postice rugulâ, truncatâ; orbiculus brevissimus; hiatus angustissimus, elongatâ.*

THE SPATHULATE GASTROCHENA. Shell very thin, compressed, wedge-shaped, posteriorly wrinkled, truncated; umbones terminal; hiatus rather narrow, elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 229.

Hab. Isl. Bohol, Philippines.

Species 23. (Mus. Brit.)

GASTROCHENA IMPRESSA. *Gus. testis subrotundâ, tenui, leviter striatâ, utrinque nervinatâ, postice obliquè sulco depressâ; hiatus lato, elongatâ, fere ad venturam calceâ extenso.*

THE IMPRESSED GASTROCHENA. Shell rather oval, thin, finely striated, acuminate at each end; posteriorly obliquely depressed with a groove; hiatus broad, elongated, nearly extended to the end of the valve.

DESHAYES. Proc. Zool. Soc. 1854, p. 322.

Hab. — ?

Species 24. (Mus. Brit.)

GASTROCHENA LEVIGATA. *Gus. testis ventricosâ, laevi, obliquè coniformi, levigatâ, concentricâ; latera postice subacuminatâ; hiatus brevis, angustissimus.*

THE SMOOTH GASTROCHENA. Shell ventricose, short, obliquely coniform, smooth, bluish white, posterior side rather acuminate; hiatus short, rather narrow.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. — ?

Species 25. (Mus. Brit.)

GASTROCHENA HUMILIS. *Gus. testis ventricosâ, brevis, obliquè coniformi, leviter constrictâ striatâ; latera postice subacuminatâ; hiatus brevis, angustissimus.*

THE HUMBLE GASTROCHENA. Shell ventricose, short, obliquely coniform, finely concentrically striated; posterior side rather acuminate; hiatus short, rather narrow.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. St. Vincent.

Species 26. (Mus. Brit.)

GASTROCHENA INTERSECTA. *Gus. testis brevis, latus, subcompressâ, lamellis concentricis numerosis subdistansibus et alteris intercellis minoribus leviter sculptis; latera antice angustissimâ, brevis; latera postice lato, margine dorsali leviter, margine terminali subrotundata.*

THE INTERSECTED GASTROCHENA. Shell short, broad, rather compressed, sculptured with numerous rather distant and other intermediate smaller concentric laminae; anterior side very narrow, short; posterior side broad, dorsal margin raised, terminal margin rather rounded.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. — ?

GASTROCHLENA.—PLATE IV.

The larger concentric ridges are a little distant, and the intervals are filled up with smaller raised striae.

Species 27. (Mus. Brit.)

GASTROCHLENA TENERA. *Gas. testâ tenuissimâ, elongatâ, angustâ, compressâ, tenuissimè striatâ, modioliformi, post mediani obliquè vix conspicuè sulcatâ; hiatus angustissimo, elongato.*

THE THIN GASTROCHLENA. Shell very thin, elongated, narrow, compressed, very finely striated, shaped like a modiola, with scarcely conspicuous oblique sulcus; hiatus very narrow, elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. Philippine Islands.

Species 28. (Mus. Brit.)

GASTROCHLENA INTERREPTA. *Gas. testâ angustâ, revivisculâ, elongatâ, subdepressâ, tenuissimâ, brevîgatâ; arâ posticâ elevatâ, sulcis concentricis tribus vel quatuor divisi; hiatus elongato-ovalis, posticè abruptè terminanti.*

THE INTERRUPTED GASTROCHLENA. Shell narrow, rather straight, elongated, rather depressed, very thin, smooth; posterior area raised; divided by

three or four grooves; hiatus elongate-oval, posteriorly abruptly terminating.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. Philippine Islands.

The valves of this species resemble those of *Gastrochlema lagenula*, but are very much more arched. The grooves, by which the posterior area is divided into a series of tablets, have probably, in the latter species, some connection with the exterior partitions of the tube. We have not the tube of the present species, but believe it will prove to belong to the same group.

Species 29. (Mus. Brit.)

GASTROCHLENA MACROCHISMA. *Gas. testâ brevissimâ, inflatâ, edundato-cuneiformi, tenuiter striatâ; latere antico aute umbones producto, subcuneiformi; latere postico latissimo, ad terminum subrotundo, margine dorsali declivi; hiatus latissimo, brevissimo.*

THE WIDE-GAPING GASTROCHLENA. Shell very short, inflated, roundly cuneiform, finely striated; anterior side produced in front of the umbones, rather acuminate; posterior side very broad, rather rounded at the end, dorsal margin sloped; hiatus very wide, rather short.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. Philippine Islands.

GASTROCHLENA.

	Plate.	Species.		Plate.	Species.
apertissima, <i>Deshayes</i>	I.	4	lamellosa, <i>Deshayes</i>	III.	14
brevis, <i>Sowerby</i>	I.	3	macrochisma, <i>Deshayes</i>	IV	29
cucullata, <i>Deshayes</i>	II	9	oostriolenta, <i>Lamarck</i>	I.	1
cuneiformis, <i>Spengler</i>	III. IV	20	mytiloides, <i>Lamarck</i>	III.	12
denticulata, <i>Deshayes</i>	II.	8	ovata, <i>Sowerby</i>	III.	16
difficilis, <i>Deshayes</i>	I.	5	Philippinensis, <i>Deshayes</i>	II.	7
dubia, <i>Fenaut</i>	I.	1	plicatilis, <i>Deshayes</i>	I.	2
gigantea, <i>Deshayes</i>	III.	15	papina, <i>Deshayes</i>	III.	17
hyalina, <i>Sowerby</i>	IV.	21	Retzii, <i>Deshayes</i>	II.	6
humilis, <i>Deshayes</i>	IV.	25	rostrata, <i>Deshayes</i>	II.	10
impressa, <i>Deshayes</i>	IV.	23	rugulosa, <i>Sowerby</i>	III.	15
interrupta, <i>Deshayes</i>	IV.	28	Rupellii, <i>Deshayes</i>	II.	11
intersecta, <i>Deshayes</i>	IV.	26	spathulata, <i>Deshayes</i>	IV.	22
levigata, <i>Deshayes</i>	IV.	24	tenera, <i>Deshayes</i>	IV.	27
lagenula, <i>Lamarck</i>	III	18	truncata, <i>Sowerby</i>	III.	19

MONOGRAPH

OF THE GENUS

XYLOPHAGA, NAVEA.

"One Name above all glorious names
With its ten thousand tongues
The everlasting sea proclaims,
Echoing angelic songs." *Keble.*



1c



1b



1d



2a



2b

Navca



3

XYLOPHAGA.

Genus XYLOPHAGA. *Tæton*.

MOLLESCIM TERRESTRIANS, *verruiformis*, siphonibus ad *testamuram* divisis. *Testa* bivalvis globosa, antice *hinc* *marginata* apertè, postice *ferè* clausa, *marginibus* callosis; *divisio*, *cartilago* *obtusis*, *callosis*, *Tab. ant. 1.*

BORING WORM-SHAPED MOLLUSC, with siphons divided at the end. Shell bivalve, globose, anteriorly very widely angularly open, posteriorly nearly closed, divided in the middle with a wide groove; hinge with no teeth, callous. No tube.

Xylophage are found in floating wood, generally boring *across* the grain and not with it, as in the case of *Teredo*. Only two species are known; one British and Boreal, the other collected by Mr. Cuming at Valparaiso.

Species 1. (Mus. Sowerby.)

XYLOPHAGA BOREALIS. *Xyl. testis* globosa, epidermide tenui arenoso-reticuli testacea, medio subaequali platum costis areolis marginatis divisa; latera antice hinc, reticulata angulata; latera postice hinc areolis, marginibus dorsalibus elevatis; laminae accessorius triangulis, latitudine longitudinalium superante.

THE BOREAL XYLOPHAGA. Shell globose, covered with an orange-green epidermis, divided in the middle by a flat groove bordered by two ribs; anterior side short, very strongly angular; posterior side rather short, with dorsal margin raised, accessory plates trigonal, broader than long.

TERED. British Bivalves, II. Fig. 45.

Species 2. (Fig. a, b, Mus. Brit.)

XYLOPHAGA GLOBOSA. *Xyl. testis* bivalvis, latera antice moderate angulata; latera postice producta, marginibus dorsali declivi; laminae accessorius longitatis, longitudine latitudinem superantibus.

THE GLOBOSE XYLOPHAGA. Shell rather broad, anterior side moderately angular; posterior side produced, dorsal margin sloped, accessory plates claw-shaped, longer than broad.

SOVERBY. Proc. Zool. Soc. 1834. Trans. Conch. No. 10, p. 503.

Hab. Valparaiso.

The shell is wider and the posterior dorsal margin more sloped than in *X. borealis*. The proportions of the accessory plates are reversed.

NAVEA.

Genus NAVEA. *Gmel.*

Species. (Fig. 3, Mus. Brit.)

Testa ovata, antice latè apertim hinc, postice clausa, margine superiori hinc areolis lineis reflexis marginatis.

NAVEA SUBGLOBOSA. *Navea* testis medio subaequali latera postice hinc, reticulata; latera antice, hinc marginibus, superioribus alioquin emarginatis et reflexis.

Shell ovate, anteriorly broadly gaping in an arch, posteriorly closed, upper margin of the anterior hiatus bordered by a reflected lamina.

THE SUBGLOBOSE NAVEA. Shell divided by a groove in the middle; posterior side short, rounded anterior side with a very large hiatus, reflected and emarginate at the margin above.

GRAY. MS. in Brit. Mus.

Hab. — ?

I have not seen any species of this genus but the following one, which seems to perforate the sponges in which it is found embedded.

MONOGRAPH

OF THE GENUS

FISTULANA.

"Man is permitted much
To scan and learn
In Nature's frame"—*J. H. Newman*

Fistulana



1a



FISTULANA.

GENUS FISTULANA. *Lamarck*

MOLLUSCUM VERMIFORMI, ARENOLICUM, TUBIFICUM.

Valvula libera, elongata, latè et angulatè hiantes; cardine lineari, ciliolato. Tuba erecta, crenularis, antice attenuata, versus terminum posteriorum crescens, termino per discum convexo perforatum obtusa.

Syn. Gastrochaena. Spengler (Adams).

MOLLUSK VERMIFORM, INHABITING SAND, TUBE-FORMING.

Valves free, elongated, broadly and angularly gaping; hinge linear, toothless. Tube straight, circular, anteriorly attenuated, increasing towards the posterior end; end closed by a convex perforated disc.

Adopting the nomenclature by which this genus is generally known, we should say that the *Fistulana* resemble the *Gastrochaena* in the most essential characters. Both have free gaping valves enclosed in a tube closed at the anterior end. The main difference is that the former bury their tubes in the sand, only the small siphonal end being visible, but are unattached, while the latter are boring mollusca, and attach their tubes to the various substances in which they make their crypts.

The two or three species hitherto known are found at low water in Singapore, Philippines, and other islands of the Eastern seas.

Species 1. (Fig. a, b, Mus. Brit.)

FISTULANA CLAVA. *Fis. testâ oblongâ, rectiusculâ, latè angulatim hiantè, ad terminum posteriorem latè truncatâ, margine dorsali recto; umbonibus fere terminalibus; latere antico brevi, subquadrato, acutè angulato, margine denticulato. Tubâ elongatâ, levigatâ, concentricè tenuiter striatâ.*

THE CLUB FISTULANA. Shell oblong, rather straight, broadly angularly gaping, broadly truncated at the posterior end, dorsal margin straight; umbones nearly terminal; anterior side short, rather square, sharply angular, margin denticulated. Tube elongated, smooth, concentrically finely striated.

LAMARCK. Anim. sans Vert.

Gastrochaena clavata. Spengler.

Hab. Singapore.

Species 2. (Fig. a, b, c, Mus. Brit.)

FISTULANA AGGLUTINANS. *Fis. testâ angustissimâ, tortâ; hiata angulatissimâ. Tubâ lapillos arcuatoque gaura agglutinante.*

THE AGGLUTINATING FISTULANA. Shell very narrow, tortuous; hiatus very angular. Tube agglutinating small stones and grains of sand.

DESHAYES. Proc. Zool. Soc.

Hab. Philippines, &c.

Species 3. (Fig. a, b, c, Mus. Brit.)

FISTULANA GRANDIS. *Fis. testâ calentis magnis, latè, posticè rotundè inflatis; hiata vicè angulato, latere antico brevissimo, arcuato. Tubâ concentricè rugis annulatâ.*

THE LARGE FISTULANA. Shell with large broad valves, roundly inflated posteriorly; hiatus scarcely angular, anterior side very short, arched.

Tube concentrically annulated with wrinkles.

DESHAYES. Proc. Zool. Soc.

Hab. Philippines, &c.

MONOGRAPH

OF THE GENUS

R I S S O A.

Lead open our hearts that we may feel,
Unbind our eyes that we may see
The wondrous love Thy works reveal — *Carle Meade*



RISSOA.

PLATE I.

Genus RISSOA *F. cancellata*

Testa massiva, spiralis, plerumque turrata, brevis vel costata; spirâ acuminatâ, aperturâ spiratâ subpyriformi, subcancellatâ vel integâ; labio externo plerumque incrassato. Operculum cornu, subspirale.

Shell marine, spiral, generally turreted, smooth or ribbed; spire acuminated; aperture half-round or pyriform, slightly channelled or entire; outer lip for the most part thickened. Operculum horny, subspiral.

The above description and the following monograph are intended to include the genera RISSOA, *Mitula*, *Rissoina*, *Hylarobia*, and other genera, which have been separated but not very well defined, and which at least require more careful revision than has yet been accorded to them, and which it is not within the scope of this work to give. The *Rissoæ* or *Rissoïdeæ* are found in all parts of the world, generally in shallow water among seaweeds.

Species 1. (Mus. Sowerby.)

RISSOA (-oïna) SCALAROIDES. *Ris. testâ albâ, altissimâ, anfractibus senis, productis, medio angulatis, ad angulum plicatis; aperturâ ferè rotundâ, margine crasso, rotundo, labio externo distincto, angustâ.*

THE SCALARIA-SHAPED RISSOA. Shell white, very high; whorls six, produced, angular in the middle, plaited at the angle, aperture almost round; margin thick, round; inner lip distinct, narrow.

C. B. ADAMS. Shells of Jamaica.

Hab. Philippines.

Species 2. (Mus. Marratt.)

RISSOA EUROPEA. *Ris. testâ subpyramidatâ, costis numerosis longitudinalibus et stâis spiratilibus sculptâ, fulvâ, lab' fuscâ-fuscintâ; spirâ pyramidatâ, anfractibus convexiusculis; aperturâ breviusculâ, margine externo albo, crenulatâ.*

THE EUROPEAN RISSOA. Shell rather pyramidal, sculptured with numerous longitudinal ribs and

spiral striae, fulvous, with broad brown bands. Spire pyramidal, whorls rather convex, aperture rather short, outer lip white, crenulated.

RISSO. *Eur. Mer. Pl. IX. f. 156.*

Turbo ciner. Linnaeus.

Rissoa Fémiovillosa, Risso.

Rissoa granulata, Philippi.

Rissoa mammillata, Risso.

Hab. Britain. Mediterranean.

Species 3. (Mus. Marratt.)

RISSOA MONTAGUI. *Ris. testâ fuscâ, breviusculâ, costis paucis rotis crenulatis sculptâ; spirâ productâ, pyramidatâ; anfractibus senis, convexiusculis; aperturâ subrotundâ, margine crenulatâ.*

MONTAGU'S RISSOA. Shell brown, rather short, sculptured with few, coarsely crenulated ribs; spire produced, pyramidal; whorls six, rather convex; aperture rather rounded, margin crenulated.

PAYRAT-DEAU. *Cat. Moll. Corse. Pl. V. f. 13 14.*

Hab. Mediterranean.

The sculpture resembles that of *Rissoa Europea*, but the ribs are fewer, and more distantly crenulated.

Species 4. (Mus. Brit.)

RISSOA CUMINGII. *Ris. testâ turratâ, albâ, pyramidatâ, acute cancellatâ; anfractibus septenis, altis, rotundis; ultimo inflato; aperturâ subtrigoniâ, infra subannulicatâ, margine crasso, crenatâ.*

CUMING'S RISSOA. Shell turreted, white, pyramidal, sharply cancellated; whorls seven, high, rounded, last swelled; aperture rather trigonal, with a slight canal below, margin thick, crenated.

REEVE. *Proc. Zool. Soc.*

Hab. Philippines.

Species 5. (Mus. Brit.)

RISSOA BRUGIERI. *Ris. (-oïna) testâ pyramidatâ, altâ, albâ, solidâ, costis subcarcis et sulcis distinctis sculptis, spirâ productâ, pyramidatâ, an-*

RISSOA.—PLATE I.

fractibus senis, convexis, ascatis; aperturâ pyriformi, infra canaliculatâ, labio externo reflexo, lato, marginæ interno producto, tenui.

BRUGUIÈRE'S RISSOA. Shell pyramidal, high, white, solid, sculptured with slightly curved ribs and distant grooves; spire produced, pyramidal, whorls six, rather convex; aperture pyriform, channelled below; outer lip reflected, broad, inner margin produced, thin.

PAYRAUDEAU. Cat. Moll. Corse. Pl. V. f. 17-18.

Hab. Mediterranean.

Species 6. (Mus. Sowerby.)

RISSOA SCALARIANA. *Riss. (-oïna) testâ pyriformi, albâ, parvâ, longitudinaliter costatâ, spirâliter tenuissimè striatâ, spirâ altâ, acuminatâ; anfractibus convexis, ultimo ventricoso; aperturâ semirotundâ.*

THE SCALARIA RISSOA. Shell pyriform, whitish, small, longitudinally ribbed; spirally very finely striated; spire raised, acuminated; whorls convex, last ventricose; aperture half-round.

A. ADAMS. — ?

Hab. St. Vincent.

Species 7. (Mus. Sowerby.)

RISSOA D'ORBIGNYANA. *Riss. (-oïna) testâ turrîtâ, tenui, fulvo-albâ; spirâ elongatâ, anfractibus varicosis, irregulariter varicosis, irregulariter convexis; aperturâ subtrigonâ, supra infraque canaliculatâ; labio externo antice angulatum producto.*

D'ORBIGNY'S RISSOA. Shell turreted, thin, whitish fawn; spire elongated, whorls nine, irregularly varicose, unequally rather convex; aperture rather trigonal, channelled above and below; outer lip angularly produced in front.

A. ADAMS. Proc. Zool. Soc. 1865. p. 64.

Hab. Australia.

Species 8. (Mus. Marratt.)

RISSOA BRYEREA. *Riss. (-oïna) testâ albâ, obliquè costatâ; spirâ turrîtâ, elevatâ; anfractibus septenis, convexis; aperturâ brevi, pyriformi, supra infraque canaliculatâ.*

BRYER'S RISSOA. Shell white, obliquely ribbed; spire turreted, raised; whorls seven, rather convex; aperture short, pyriform, channelled above and below.

MONTAGU. Test. Brit. Pl. XV. f. 8.

Hab. West Indies.

Species 9. (Mus. Sowerby.)

RISSOA CONCINSA. *Riss. (-oïna) testâ albâ, turrîtâ, albâsculâ; anfractibus senis, convexis; tenuiter costatis, tenuissimè spirâliter striatis; aperturâ majusculâ, infra profundè canaliculatâ.*

THE SEAT RISSOA. Shell whitish, turreted, rather high; whorls six, rather convex; finely ribbed, very finely spirally striated; aperture rather large, deeply channelled below.

A. ADAMS.

Hab. Japan.

Species 10. (Mus. Marratt.)

RISSOA CALATHISCA. *Riss. (Alvania) testâ brevi, subpyramidatâ, fuscâ, longitudinaliter costatâ; spirâliter sulcatâ; costis rotundis, crenulatis; anfractibus ad suturam angulatis, aperturâ subovatâ, marginè crasso, crenulato, albâ.*

THE LITTLE BASKET RISSOA. Shell short, rather pyramidal, brown, longitudinally ribbed; spirally grooved; ribs round, crenulated; whorls angular at the suture; aperture rather oval, margin thick, crenulated, white.

MONTAGU. Test. Brit.

Hab. Britain.

Another variety is figured on Plate X.



R I S S O A.

PLATE II.

Species 11. (Mus. Sowerby.)

RISSOA AURIS-ALPUM. *Ris.* (Aure) *testâ albâ, ad aperturam apicemque purpurascenti, semipellucidâ, altissimâ, medio paulo inflato; apice acuminato; anfractibus septem ad novem, superioribus frequenter longitudinaliter costatis, ultimo elongato; apertura angustâ, ovali, labio expanso.*

THE EAR-PICK RISSOA. Shell white, purplish at the aperture and apex, semipellucid, very elevated, a little inflated in the middle, apex acuminated; whorls seven, often longitudinally ribbed, last elongated; aperture large, oval, lip expanded.

LINNEUS, *Systema Naturæ.*

Rissoa auricula, Risso.

Rissoa marginatus, Montagu.

R. acuta, Desmarest.

Hab. Mediterranean.

These long-spined *Rissoas* do not seem to differ generically from the more typical forms.

Species 12. (Mus. Sowerby.)

RISSOA LABIOSA. *Ris. testâ ovato-acuminatâ, tenui, semipellucidâ, albo-purpurascenti, leviter costatâ; apice acuminato; anfractibus ultimo subinflato, costis infra medium discontinuis; apertura angustâ, elongatâ, auriformi, labio expanso.*

THE MEMBRANOUS RISSOA. Shell ovate, acuminated, thin, semipellucid, purplish white, slightly ribbed; apex acuminated; last whorl rather inflated, ribs discontinued below the middle; aperture large, long, ear-shaped, outer lip expanded.

MONTAGU, *Test. Brit. Vol. II. p. 400.*

Hab. Great Britain, Mediterranean.

Species 13. (Mus. Sowerby.)

RISSOA VENUSTA. *Ris. testâ subpyramidatâ, subviridi, tenui, apice acuminato, anfractibus tenuiter costatis, ultimo subventricosus, infra medium heri-*

gatis; apertura auriformi, labio expanso, sub marginato acuto, costis variosis.

THE BROAD-LIPPED RISSOA. Shell rather pyramidal, greenish, thin; apex acuminated; whorls finely ribbed, last rather ventricose, smooth below the middle; aperture ear-shaped, lip expanded, inside having a sharp edge, outside varicose.

PHILIPPI, *Ann. Moll. Sic. Vol. I. p. 124, Pl. XXIII f. 4.*

Hab. Mediterranean.

This does not appear to belong to any of the numerous varieties of *Rissoa labiata*. A certain closeness of the outer lip and the distinct cessation of the regular ribs at the middle of the last whorl serve to distinguish it.

Species 14. (Mus. Sowerby.)

RISSOA CULATA. *Ris. (Rissoina) testâ pyramidatâ, solidâ, albâ, costis nobis spiritaliter cinctâ, longitudinaliter inter costas striatâ; anfractibus octo, ad latera declivibus, superioribus longitudinaliter costatis, costis angulatis et nobis; apertura sub-trigoni, labio exterioro crasso, crenulato.*

THE IMBOSSED RISSOINA. Shell pyramidal, solid, white, spirally girt with nodose ribs, longitudinally striated between the ribs; whorls eight, sloped at the sides, upper longitudinally ribbed, ribs angular and nodose; aperture subtrigonal, outer lip thick, crenulated.

A. ADAMS, *Proc. Zool. Soc. 1851, 267.*

Rissoina striata, Quoy.

Hab. Signujor.

Species 15. (Mus. Marrat.)

RISSOA CINGILLUS. *Ris. testâ pyramidatâ, levigatâ, vel leviter spiritaliter striatâ, fulcâ, castaneo-fasciatâ; anfractibus quinque, subquadris; apertura parva, columellâ calidâ, labio exterioro obtuse marginato.*

THE GIRDLE RISSOA. Shell pyramidal, smooth, or slightly spirally striated, fulvous, three-banded with chestnut; whorls five, a little rounded; aperture small, columella strong, outer lip blunt-edged.

MONTAGU. Testacea Britannica, Vol. II. p. 35-7.

Rissoa vittata, Donovan.

Rissoa rupestris, Forbes.

Hab. British coasts.

Species 16. (Mus. Sowerby.)

RISSOA STRIATULA. *Ris. testâ albâ, brevis, spirâliter, prominenter, distanterque costatâ, inter costas longitudinaliter striatâ; anfractibus quatuor, ultimomagno, ad medium tenuiter costato, superne prope suturam angulatim planulatâ; aperturâ brevi, labio crenulato.*

THE LITTLE STRIATED RISSOA. Shell white, short, spirally, prominently, and distantly ribbed, longitudinally striated between the ribs; whorls four, last large, finely ribbed at the middle, angularly flattened above near the suture; aperture short, lip crenulated.

MONTAGU. Testacea Britannica. Vol. II. p. 306, Pl. X. f. 5.

Turbo carinatus, Da Costa.

Turbo mollis, Fleming.

Hab. British coasts.

Beautifully sculptured with thread-like striae crossing prominent keel-like spiral ribs.

Species 17. (Mus. Sowerby.)

RISSOA SPIRATA. *Ris. (Rissoina) testâ albâ, turrellâ, spirâliter tenuiter striatâ; anfractibus novem, superioribus hecibus abrupte versus apicem acuminatum acutibus, longitudinaliter costatis, tribus inferioribus elevatis, hecibusculis anheylindraeosis; suturâ profundè incisâ; aperturâ subpyriformi, labio externo expanso crassiusculo.*

THE SPIRED RISSOA. Shell white, turreted, spirally finely striated; whorls nine, six upper short.

abruptly sloped towards an acuminate apex, longitudinally ribbed, three lower raised, rather smooth, subcylindrical; suture deeply incised; aperture rather pyriform, outer lip expanded, rather thick.

SOWERBY. Genera of Recent and Fossil Shells.

Hab. Philippines.

Species 18. (Mus. Sowerby.)

RISSOA PROXIMA. *Ris. testâ albâ, minutâ, tenui, ovato-oblongâ, spirâliter densè striatâ; anfractibus quinque, inflatis, gradatim crescentibus; aperturâ ovali, marginè acuto, simplici.*

THE APPROXIMATE RISSOA. Shell white, minute, thin, ovate-oblong, spirally closely striated; whorls five, inflated, gradually increased; aperture ovate, margin simple.

ALDEI MS. Thomson, Ann. Nat. Hist. Vol. XX. p. 174.

Rissoa virginea, Brown.

Hab. Ireland, very rare.

Differing from *Rissoa vitrea* in being striated spirally and in the proportionate equality of increase in the whorls.

Species 19. (Mus. — ? Copied.)

RISSOA VITREA. *Ris. testâ parvâ, albâ, tenui, semipellucidâ, ovato-oblongâ, lævigatâ; anfractibus quinque, inflatis, penultimo magno elevato; aperturâ ovali, marginè acuto, simplici.*

THE GLASSY RISSOA. Shell small, white, thin, semipellucid, ovate-oblong, smooth; whorls five, inflated, the last large, elevated; aperture ovate, margin sharp, simple.

MONTAGU. Testacea Britannica. Vol. II. p. 351.

Rissoa glabrata, Megherle.

Rissoa crystallina, Brown.

Hab. Exmouth, Oban, &c.

The penultimate whorl is very large in proportion to the others.



R I S S O A.

PLATE III.

Species 20. (Mus. Sowerby.)

RISSEA COSTATA. *Ris. testâ subpyramidalâ, subrotundâ, fulvâ; anfractibus sex, prope suturam angulatis, obliquè costatis, spirâliter striatis; ultimo anfracti subarcuato; apertura subquadrata, columellâ rectiusculâ.*

THE RIBBED RISSOA. Shell rather pyramidal, rather ventricose, fulvous; whorls six, angular near the suture, obliquely ribbed; spirally striated, last slightly keeled beneath; aperture rather square, columella rather straight.

ADAMS. Trans. Lin. Soc. Vol. VIII. Pl. XIII. f. 13, 14.
Turbo costatus, Montagu.
Turbo plicatus, Mühlfeld.
Rissoa plicata, Michaud.
Hab. Britain.

Species 21. (Mus.—? Copied.)

RISSEA VENTRICOZA. *Ris. (Hydrobia) testâ subpyramidalâ, levigatâ, pallidè fulvâ; anfractibus quinque, rotundis; ultimo crassiusculo, leviter umbilicato; apertura ovato, columellâ rectiusculâ, labio externo tenui.*

THE VENTRILOSE RISSOA. Shell subpyramidal, smooth, pale fulvous; whorls five, rounded; last ventricose, slightly umbilicated; aperture large, columella rather straight, outer lip thin.

DE MOULINS. Bulletin de la Société Philosophique de Paris, p. 8. Pl. I. f. 2.
Hab. Mediterranean.

Species 22. (Mus. Sowerby.)

RISSEA LACTEA. *Ris. (Mearns) testâ albâ, ovatâ, costellis annuosis, rotundis, crenulatis, spirâlibus, superâ costis longitudinalibus sculptâ; spirâ parvâ; ultimo anfractu et apertura ovatis, subarcatis.*

THE MILK-WHITE RISSOA. Shell white, oval, sculptured with numerous rounded, crenulated, spiral riblets, and above with longitudinal ribs; spire small; last whorl and aperture large, ovate.

MICHAUD. Espèces de Rissoa, p. 9, f. 11, 12.

Rissoa cancellata, Recluz.

Species 23. (Mus.—? Copied.)

RISSEA ABYSSINOLA. *Ris. (Mearns) testâ subrotundâ, albâ, superâ costatâ, inter costas profundè striatâ, in partem inferiorem ultimâ anfractis spirâ costatâ, spirâ subpyramidalâ, ultimo anfractu ovato; apertura latâ, labio crasso, rotund.*

THE DEEP-SEA RISSOA. Shell rather ovate, white, ribbed above, deeply striated between the ribs, spirally ribbed at the lower part of the last whorl, spire somewhat pyramidal, last whorl large; aperture broad, lip thick, round.

FOERES. Beit. Moll. p. 86, Pl. LXXVIII. f. 1.
Hab. North Scotland.

Species 24. (Mus. Sowerby.)

RISSEA CORIUEA. *Ris. (Rissoa) testâ albâ, rotundâ, pyramidalâ, costis nodosis spirâlibus et longitudinalibus cancellatâ, inter costas foveâ latâ; spirâ elongatâ, subrotundâ, apice obtuso, anfractibus quinque, penultimo tumido; apertura ovatâ, i gifu ex obliquo, labio crasso, crenulatâ.*

THE CORIUEAN RISSOA. Shell white, solid, pyramidal, cancellated with nodose spiral and longitudinal ribs, pitted between the ribs; spire elongated, rather tortuous, apex blunt; whorls five, last but one tumid; aperture ovate, with a channel below, lip thick, crenulated.

D'ORBIGNY. Mollusques de l'île de Cuba.
Hab. Coast of Cuba.

Species 25. (Mus. Sowerby.)

RISSEA CIMICOIDES. *Ris. (Mearns) testâ albâ, subjugiformi; spirâliter penimè costatâ (interstitiis profundis), superâ nodis longitudinaliter callosissimè crenulatis costatâ; spirâ acuminatâ; anfractibus supra suturam emarginatis, ultimo*

tumida; *aper'turâ subrotundâ, superiô propè suturam angulatâ.*

THE BUG-SHAPED RISSEO. Shell white, subfusiform, spirally prominently ribbed, interstices deep; above the middle, longitudinally very strongly crenulately ribbed; spire acuminate; whorls channelled above the suture, last tumid in the middle, aperture rather rounded, angular near the suture above.

FORBES. Brit. Moll.

Hab. Britain.

Species 26.

RISSEO ZETLANDICA. *Ris. (Alvania) testâ ovato-suboblongâ, pallidè fulvâ, spirâ turratâ, anfractibus subquadratis, calidè nodoso-costatis, cancellatis; ultimo inf'râ carinato; aper'turâ brevi, subrotundâ, columellâ superiô tumidâ, labio exteri crasso, crenulato.*

THE ZETLAND RISSEO. Shell ovate, rather elongated, pale fulvous, spire turreted, whorls rather square, cancellated with strong nodose ribs, the last keeled below; aperture short, rather rounded; columella tumid above, outer lip thick, crenulated.

MONTAGU. Testacea Britannica. Mont. Trans. Linn.

Soc. Vol. XI. p. 194, Pl. XIII. f. 5.

Rissoa cyclostomata, Recluz.

Hab. Great Britain.

Species 27. (Fig. a, b, c, Mus. Sowerby.)

RISSEO ULVE. *Ris. (Hydrobia) testâ fulvâ, trochiformi, solidâ, lavi, spirâ acuminatâ, elevatâ, anfractibus planulatis, suturâ incisâ separatis, ultimo leviter angulato; aper'turâ ovatâ, labio interno integro.*

THE SEA-WEED RISSEO. Shell fulvous, trochus-shaped, solid, smooth; spire acuminate, raised; whorls

flattened, separated by an incised suture, last slightly angular; aperture ovate.

PENNANT. Brit. Zool. Ed. 4, Vol. IV. p. 132.

Rissoa subumbilicata, Berkeley.

Rissoa Barcei, Jeffreys.

Hab. British coasts.

Species 28. (Mus. Sowerby.)

RISSEO SEMISTRIATA. *Ris. (Cingula) parvâ, fulvâ, maculis in seriebus, tribus costancis, subquadratis cinctâ; spirâliter striatâ; anfractibus quinque, planiusculis; ultimo magno, superioribus levibus; aper'turâ subtrigunâ.*

THE HALF-STRIATED RISSEO. Shell small, fulvous, banded with rather square chestnut spots in three rows; spirally striated; whorls five, rather flat, last large; upper smooth; aperture nearly trigonal.

MONTAGU. Testacea Britannica, Supp. p. 136.

Rissoa pulchra, Johnson.

Rissoa trisetata, Thompson.

Rissoa subulcata, Philippi.

Hab. Britain.

Species 29. (Mus. Marrat.)

RISSEO COSTULATA. *Ris. testâ fulvâ, subconicâ, costis magis, distantibus, angulatis armatâ, spirâliter striatâ; spirâ acuminatâ, anfractibus sex, elevatis, angulatis; aper'turâ subrotundâ, margine crasso.*

THE RIBBED RISSEO. Shell fulvous, rather conical, armed with large, distant, angular ribs; spirally striated, spire acuminate; whorls six, elevated, angular; aperture rather rounded, margin thick.

ALDER. As of Risso, Ann. Nat. Hist.

Rissoa similis, Seacchi Cat. p. 14, 2.

Rissoa Guerinii, Rev. Zool. Cuv. 1843, p. 7.

Hab. Britain, France.



RISSOA.

PLATE IV.

Species 30. (Mus. Sowerby.)

RISSOA FORTIS.—*Ris.* (*Rissoina*) *testâ* albâ, *crassi*, *angustâ*, *elevatâ*, *mediâ* *tunidiâ* *sculâ*, *costis* *rectis*, *robribus*, *lævibus*, *sculptâ*; *anfractibus* *septem*, *altis*, *planulatis*; *apice* *acuto*; *aperturâ* *parvâ*, *obliquâ*, *angustâ*, *infrâ* *canaliculâ*; *labio* *interno* *crasso*, *erzano*.

THE STRONG RISSOA. Shell whitish, thick, narrow, raised, rather tumid in the middle, sculptured, with straight, close, smooth ribs; whorls seven, high, flattened; apex sharp; aperture small, oblique, narrow, channelled below; outer lip thick, spread.

C. B. ADAMS.
Hab. Jamaica.

Species 31. (Mus. —?)

RISSOA MACULATA. *Ris.* *testâ* *minutâ*, *subtrochiformi*, *laevigatâ*, *fulvâ*; *anfractibus* *sex*, *columnis*, *ultimo* *maculis* *subarcuatis* *versus* *suturam*, *subquadatis* *infra*, *et* *fasciâ* *spirali* *castaneis* *pectâ*; *aperturâ* *majusculâ*, *labio* *interno* *reflexo*.

THE SPOTTED RISSOA. Shell minute, subtrochiform, smooth, brown; whorls six, rounded, the last painted near the suture with spots slightly curved, below rather square, and a spiral band of chestnut; aperture rather large, inner lip reflected.

SOWERBY. Index of British Shells, as of an unnamed authority.

Rissoa inconspicua, var. *auctororum*.
Hab. Britain.

The pattern of colouring is so distinct that it may justify specific designation.

Species 32. (Mus. Marrat.)

RISSOA CRENULATA. *Ris.* *testâ* *altâ*, *brevi*, *turcitâ*, *quadrata* *cancellatâ*; *anfractibus* *superioribus* *prop-* *suturam* *angulatis*, *penultimo* *ventricosos*, *ultimo* *magna*; *aperturâ* *arata*, *marginem* *externum* *crenulata*.

THE CRENULATED RISSOA. Shell white, short, tur-

reted, cancellated in squares; whorls angular above near the suture, penultimate ventricose, last large; aperture ovate, outer margin crenulated.

MICHAUD. Nouvelles Espèces de Rissoa, p. 15, f. 1, 2.
Turbo cancellatus, Da Costa.
Turbo cimeter, Donovan, &c., non Linnaeus.
Hab. Britain and Channel Islands.

Cancellations broad, but not so much so as those of *Zetlandica*.

Species 33. (Mus. Marrat.)

RISSOA HYFILABRIS. *Ris.* (*Alvania*) *testâ* *trochiformi*, *fulvâ*, *ad* *suturam* *reflexatâ*; *anfractibus* *angulatis*, *supra* *angulum* *distanter*, *leviter* *costatis*; *apice* *acuminato*; *aperturâ* *subtriangulâ*, *marginem* *rubro* *vel* *violaceo*.

THE RED-LIPPED RISSOA. Shell trochiform, fulvous, with a red line at the suture; whorls angular, distantly, slightly ribbed above the angle; apex acuminate; aperture rather trigonal, margin red or violet.

LEACH. (Alvania) Alder. Ann. Nat. Hist. Vol. XIII. p. 325.

Rissoa hyalina, Desmoulins.
Rissoa lilarina, Recluz.
Hab. Europe.

Species 34. (Mus. Hanley.)

RISSOA INCONSPICUA. *Ris.* (*Uingula*) *testâ* *conici*, *elevatâ*, *albâ*, *longitudinaliter* *costatâ*, *inter* *costas* *transverse striatâ*; *anfractibus* *sex*, *late* *caliter* *sub-* *compressis*; *apice* *obtusos*; *ultimo* *anfractu* *infra* *laevigatâ*; *aperturâ* *magna*; *columnellâ* *rectiusculâ*.

THE INCONSPICUOUS RISSOA. Shell conical, raised, whitish, longitudinally ribbed, very finely striated between the ribs; whorls six, rather compressed at the sides; apex obtuse; last whorl smooth below; aperture large; columella rather straight.

ALDER. Ann. and Mag. of Nat. Hist. Vol. XIII. p. 323, Pl. VIII. f. 6, 7.

Hab. Britain.

Species 35. (Mus. Marrat.)

RISSOA PUNCTURA. *Ris. (Uingula) testâ ventricosâ, fulvâ, subconicâ, spiritaliter puncturata-striatâ; anfractibus quinque, rotundis, suprâ infrâque maculis linearibus castaneis pictis; aperturâ subrotundâ.*

THE PUNCTURED RISSOA. Shell ventricose, fulvous, rather conical, spirally striated in punctures; whorls five, rounded, painted above and beneath with linear chestnut spots; aperture rather rounded.

MONTAGU. Testacea Britannica, Vol. II. p. 320, Pl. XII. f. 5.

Rissoa puncturata, Macgillivray.

Rissoa approximata, Brown.

Hab. British coasts.

Species 36. (Fig. a, b, Mus. Marrat.)

RISSOA PARVA. *Ris. testâ conicâ, lævi, fulvâ, acuminatâ, altâ; anfractibus rotundis, brevibus, lineis maculisque castaneis, frequenter curvis plerumque pictis; aperturâ subquadratâ, columellâ rectiusculâ.*

THE SMALL RISSOA. Shell conical, smooth, fulvous, acuminate, raised; whorls rounded, short, generally painted with chestnut lines and spots, frequently curved; aperture subquadrate, columella rather straight.

MAISON and RACKET. Act. Linn. Soc. VIII. p. 171.

Rissoa sublatea, Adams.

Rissoa interrupta, Johnson.

Rissoa lactea, Donovan.

Hab. British coasts and Channel.

Species 37. (Mus. Hanley.)

RISSOA BEANII. *Ris. (Alvania) testâ subconicâ, fuscâ, supernè leviter costatâ, omnino spiritaliter striatâ, striis ad costas crenulatis; spirâ acuminatâ; anfractibus sex, convexiusculis, ultimo breviusculo, aperturâ subovatâ, margine distincto, albo; labio externo albo.*

BEAN'S RISSOA. Shell rather conical, brown, slightly ribbed above, spirally striated all over, striated at the ribs; spire acuminate; whorls six, rather convex, last rather short; aperture rather oval, margin distinct, white; outer lip white.

HANLEY. Forbes and Hanley, British Mollusca, III. Pl. LXXXVIII. f. 1.

Hab. Great Britain and Ireland.

Species 38. (Mus. — ? Copied.)

RISSOA SUPRACOSTATA. *Ris. testâ brevi, pallidâ, ventricosâ; anfractibus quinque, rotundis, superioribus acutè costatis, inter costas striatis; ultimo magno, hincgato; spirâ acutâ, subrosâ; aperturâ magnâ, subovatâ.*

THE UPPER-RIBBED RISSOA. Shell short, pale, ventricose; whorls five, rounded, upper sharply ribbed, striated between the ribs, last large, smooth; spire sharp, rather rose-coloured; aperture large, subovate.

?

Hab. Britain.

This shell is evidently a somewhat abnormal form, but not of *R. parva*. Some author, however, having named it, it is here admitted, as it cannot be identified with any known species.



RISSOA.

PLATE V.

Fig. 10 b.

RISSOA CALATHISCUS, var. (See Pl. I.)

Species 39. (Mus. Sowb.)

RISSOA CALATHISCUS. *Ris. (Alania) testâ subconoidâ, pallidâ, semipellucidâ, costis longitudinalibus, subdistansibus, subdepressis, et liris spiralibus magis approximatis, interstitiis profundè foveolatis, cancellatâ; anfractibus quinque convexisculis; aperturâ subovatâ; labio externo crasso, intus osculo.*

THE BASKET RISSOA. Shell rather conical, pale, semi-pellucid, cancellated with rather distant, rather depressed longitudinal ribs and rather nearer spiral ridges, with deeply-pitted interstices; whorls five, rather convex; aperture rather ovate, outer lip thick, crenated within.

FORBES and HANLEY, British Mollusca, Vol. III. p. 80.

Hab. British coasts and Europe generally.

Species 40. (Mus. Sowerby.)

RISSOA STRIATA. *Ris. (Anoba) testâ albidâ, elongatâ, tenuiter spiraliter striatâ; anfractibus sex, convexis, elevatis, superiè ad suturam crenulatis, ultimo brevi; aperturâ parvâ, labio externo extis varioso, margine incrassato, subcrenulato.*

THE STRIATED RISSOA. Shell whitish, elongated, finely striated spirally; whorls six, convex, raised, crenulated above at the suture, last short; aperture small, outer lip varicose without, margin thickened and slightly crenulated.

MONTAGU. (Turbo) Test. Brit. Vol. II. p. 326, Pl. XIII. f. 25, 26.

Rissoa minutissima, Michand.

Rissoa communis, Forbes.

Rissoa gracilis, Macgillivray.

Hab. Britain.

Species 41. (Mus. Marrat.)

RISSOA VENTROSA. *Ris. testâ subiridi, fulvescenti, pyramidatâ, spirâ elevatâ; anfractibus quinque, lateraliter compressis, ultimo rotundo, fere umbilicato, aperturâ subovatâ, margine acuto.*

THE INFLATED RISSOA. Shell rather greenish-buff, pyramidal, spire elevated; whorls five, laterally compressed, last round, nearly umbilicated; aperture rather oval, margin acute.

MONTAGU. (Turbo) Test. Brit. II. p. 317, Pl. XII. f. 13.

Rissoa acuta, Draparnaud.

Turbo ventricosus, Dillwyn.

Hab. Great Britain, France.

Species 42. (Mus. late Deshayes.)

RISSOA ROSEA. *Ris. testâ solidâ, rosâ, spirâ elevatâ, anfractibus septem, moderatè convexis, longitudinaliter costatis, costis regularibus, solidis, levibus, convexisculis, interstitiis orquantibus; aperturâ auriformi, columellâ leviter uniplicatâ, labio externo crasso, rotundo.*

THE PINK RISSOA. Shell solid, pink, spire elevated; whorls seven, moderately convex, longitudinally ribbed, ribs regular, solid, smooth, rather straight, equalling the interstices; aperture auriform, columella slightly single-plaited, outer lip thick, rounded.

DESHAYES. Conch. Ile de la Réunion, p. 61, Pl. VII.
f. 29.

Hab. Isle of Bourbon.

Species 43. (Mus. *late* Deshayes.)

RISSOA INSOLITA. *Ris.* (*Alvania* ?) *testá minímá, candidá, elongato-turrítá, apíce obtusásculá; anfractibus septenis, costis duabus inaequalibus prominentibus cinctis, majore prope suturam positá, eleganter graucoso-crenulatá; ultimo anfractu brevissimulo, transversim quadricostato; aperturá minímá, ovatá, angustá.*

THE EXTRAORDINARY RISSOA. Shell very small, white, elongate-turreted, apex rather obtuse; whorls seven, girt with two unequal prominent ribs, the larger placed near the suture, elegantly granularly crenulated, last whorl rather short, transversely four-ribbed; aperture very small, oval, narrow.

DESHAYES. Conch. Ile de la Réunion, p. 63, Pl. XIII.
f. 15, 16.

Hab. Isl. Bourbon.

Species 44. (*f, a, b*, Mus. Crosse ?)

RISSOA GENTILISSIANA. *Ris.* (*Hydrobia*) *testá parvâ, pallidâ fuscâ, levi, ovatâ, apíce obtuso; anfractibus quatuor, convexisculis, ultimo elongato, inflato, subsolato; aperturâ disjunctâ, obliquè ovatâ, operculo fusco.*

THE FAMILY-RELATION RISSOA. Shell small, pale fulvous, smooth, with obtuse apex; whorls four, rather convex, last elongated, inflated, a little uncoiled; aperture disjoined, obliquely ovate.

CROSSE. Journ. de Conch. Vol. XXII. p. 112, 1874.
Hab. New Caledonia.

Mr. Crosse remarks that this is the second of the same genus found in the locality.

Species 45. (Mus. Souverbie ?)

RISSOA FIMBRIATA. *Ris.* (*Rissoina*) *testá albidd, turrítá, altissimâ, levi, apíce obtuso; anfractibus octo,*

lateraliter compressis, distanter longitudinaliter costatis, prope suturam subangulatis; aperturâ obliquè ovatâ, columellâ duplicatâ, labio externo duplicato, fimbriato.

THE FRINGED RISSOA. Shell whitish, turreted, very high, smooth, with blunt apex; whorls eight, laterally compressed, distantly longitudinally ribbed, with a slight angle near the suture; aperture obliquely ovate, columella doubled, outer lip doubled, fringed.

SOUVERBIE. Journ. de Conch. p. 52, 1872.

Hab. New Caledonia.

Species 46. (Mus. Souverbie ?)

RISSOA INCERTA. *Ris.* (*Rissoina*) *testá fuscâ, solidâ, altâ, turrítâ, spirâ elevatâ, apíce obtuso; anfractibus octo, ad suturam angulatis, costatis, costis ad spiram continuis, distantibus, rotundis, ad medium ultimi anfractis discontinuis; aperturâ obliquè ovatâ, columellâ ornatâ.*

THE UNCERTAIN RISSOA. Shell brown, solid, elevated, turreted, spire raised, with obtuse apex; whorls eight, angular at the suture, ribbed, ribs continued at the spire, distant, rounded, discontinued at the middle of the last whorl; aperture obliquely ovate.

SOUVERBIE. Journ. de Conch. 1872, p. 33, Pl. I. f. 4.

Hab. Ins. Arl. New Caledonia.

Species 47. (Mus. Marrat.)

RISSOA PULCHERRIMA. *Ris.* (*setia*) *testá minútâ, brevi, globosâ, levi, subumbilicatâ, in scriebus tribus maculis rubro-fuscis quadratis ornatâ; anfractibus quatuor, rotundis, ultimo magna, ventricoso; aperturâ rotundâ, marginè simplicî.*

THE VERY PRETTY RISSOA. Shell minnte, short, globose, smooth, slightly umbilicated, ornamented with red-brown square spots in three rows; whorls four, rounded, last large, ventricose; aperture round, margin simple.

JEFFERYS. Ann. Nat. Hist. Vol. II. p. 351.

Hab. Channel Islands.



RISSOA.

PLATE VI.

Fig. 1 b, *Rissoa denticulata*. See Plate I.

Species 48. (Mus. Sowerby.)

RISSOA SOLUTA. *Ris. (Sotia) testâ minimâ, ovatâ, albâ, spirâliter striatâ; anfractibus tribus, brevibus, rotundis, ultimo ventricoso, subsulcato, umbilicato; apertura rotundâ, labio externo rectiusculo.*

THE LOOSE-COILED RISSOA. Shell very small, oval, white, spirally striated; whorls three, short, round, last ventricose, a little uncoiled, umbilicated; aperture round, outer lip rather straight.

PHILIPPI. Moll. Sic. Vol. II. p. 130, Pl. XXIII. f. 18.
Hab. Britain.

Species 49. (Mus. Jeffreys.)

RISSOA ALDERI. *Ris. (Sotia) testâ minutâ, pallidâ, fulcâ, levî, subovatâ; anfractibus quinque, rotundis, elevatis, ultimo ventricoso, subumbilicato; apertura subrotatâ, labio externo tenui, columellâ rectiusculâ.*

ALDER'S RISSOA. Shell minute, pale, fulvous, smooth, rather oval; whorls five, rounded, elevated, last ventricose, slightly umbilicated; aperture rather oval, outer lip thin, columella rather straight.

JEFFREYS. Ann. and Mag. of Nat. Hist. August, 1858.
Hab. North Britain.

Species 50. (Mus. Sowerby.)

RISSOA FULGIDA. *Ris. (Sotia) testâ minutâ, fulcâ, levî, nitentî, castaneo spirâliter bifasciatâ, spirâ brevî, obtusâ; anfractibus tribus, rotundis; apertura rotundâ, margine tenui.*

THE BRIGHT RISSOA. Shell minute, fulvous, smooth, shining, with two chestnut spiral bands, spire short, obtuse; whorls three, rounded; aperture rounded, margin thin.

ADAMS. Trans. Linn. Soc. Vol. III. p. 254.
Hab. Britain and Ireland.

Species 51. (Mus. Brit.)

RISSOA ANATINA. *Ris. (Hydrobia) testâ minutâ, subcristâ, tenui, ovato-subglobosâ, spirâ brevî, apice acuto, anfractibus quinque, rapidè crescentibus, distinctis, propè suturam angulatis, ultimo subgloboso, suturâ canaliculatâ; apertura subrotatâ, margine tenui.*

THE DEVK'S RISSOA. Shell small, rather green, thin, ovato-subglobose, spire short, apex acute; whorls five, rapidly increased, distinct, angular near the suture, last subglobose, suture channelled; aperture rather round, margin thin.

DRAPARNAUD. Moll. Terr. et Fluv. de France, p. 37.
Pl. I. f. 24, 25.

Hab. France, England.

Species 52. (Mus. Jeffreys.)

RISSOA EXIMIA. *Ris. testâ albidâ, minutissimâ, subovatâ, longitudinaliter costatis, costis distantibus, incisîs, in medio anfractuum costis spirâliter tribus decussatis, interstitiis excavatis; anfractibus quatuor, infra biangulatis, suturâ profundâ; apertura subrotundâ, margine acuto.*

THE NOTABLE RISSOA. Shell whitish, very small, somewhat ovate, longitudinally ribbed, ribs distant, incised, decussated by three spiral ribs in the middle of each whorl; interstices excavated; whorls four, biangular below, suture deep; aperture rather round, margin sharp.

JEFFREYS. Sowerby's Illustrated Index of Brit. Sp.
Chemnitzia Barlewi, Clark.

Hab. Britain.

Species 53. (Mus. Sowerby.)

RISSOA NITIDA. *Ris. (Rissoina) testâ albâ, solidâ, elatâ, spirâ elongatâ, medio subinflata, apice acuminatâ; anfractibus octo, convexis, spirâliter et longitudinaliter costatis, costis ad angulos nodosis; apertura;*

parvâ, anticâ canaliculatâ, columellâ brevi, crassâ, labio externo crasso, anticâ producto.

THE NEAR RISSOA. Shell white, solid, raised, spire elongated, rather swelled in the middle, apex acuminate; whorls eight, convex, spirally and longitudinally ribbed, ribs nodose at the angles; aperture small, anteriorly channelled, columella short, thick, outer lip thick, anteriorly produced.

A. ADAMS. Proc. Zool. Soc. 1851, p. 266.

Hab. Philippines.

Species 54. (Mus. Sowerby.)

RISSOA RUBEA. *Ris. (Barleia) testâ conicâ, fusâ, solutâ, politâ; anfractibus quatuor, convexisculis, ultimo infra medium subangulato; aperturâ subtrigona, magnâ, columellâ rectisculâ.*

THE RED RISSOA. Shell conical, brown, solid, polished; whorls four, rather convex, last rather angular below the middle; aperture subtrigonal, large, columella rather straight.

ADAMS. Trans. Linn. Soc. Vol. III. Pl. XIII. f. 15.

Rissoa unifasciata, Montagn.

Hab. Britain, Mediterranean.

Species 55. (Mus. Marrat.)

RISSOA FULVA. *Ris. (Barleia ?) testâ conicâ, elevatâ, solutâ, fusâ, latè fasciatâ, politâ; anfractibus*

quinque, lateraliter compressis, ultimo angulato; aperturâ subtrigona.

THE FULVOUS RISSOA. Shell conical, raised, solid, brown, broadly banded, polished; whorls five, laterally compressed, last angular; aperture subtrigonal.

MICHAUD. Nouv. Esp. de Rissoa, p. 15, f. 17, 18.

Hab. Adriatic.

Species 56. (Mus. Marrat.)

RISSOA CREBRISULCATA. *Ris. (Rissoina) testâ elongato-ovalâ, scabrâ, costis longitudinalibus subobliquis, validis, nodosis, et liris tenuibus spirâlibus cancellatâ; anfractibus octo, convexisculis; aperturâ infra canaliculatâ; aperturâ parvâ, ovalâ columellâ crassâ, brevi, labio externo crasso, extis crenato.*

THE CLOSE-GROOVED RISSOA. Shell elongated-ovate, scabrous, cancellated with rather oblique, strong, nodulous, longitudinal ribs; whorls eight, rather convex; aperture channelled below, aperture small, ovate; columella thick, short, outer lip thick, crenulated outside.

SOWERBY.

Hab. — ?

This beautifully sculptured little shell when received was labelled '*R. canaliculata Ad.*,' but being afterwards found not to agree with the specimen in the British Museum, we have had to give another name to it.



58



57



59



64



60



62



63



65



66



67

68

RISSOA.

PLATE VII.

Species 57. (Mus. Paris.)

RISSOA MOHRNSTERNI. *Ris. (Rissoina) testâ ovicini, albâ, ovato-pyramidalâ, apice acuto; anfractibus septem, concentricis, longitudinaliter costellatis, striis spirâlibus decussatis; ultimo anfractu magno, ventricoso, subovato; apertura semilunari, labio externo crasso, antio producto.*

MOHRNSTERN'S RISSOA. Shell very small, white, ovately pyramidal, with acute apex; whorls seven, rather convex, longitudinally ribbed, decussated with spiral striae; last whorl large, ventricose, subovate; aperture semilunar, outer lip thick, anteriorly produced.

DESHAYES. Conchyliologie de l'île de la Réunion, p. 62.

Hab. Ile Bourbon.

Species 58. (Mus. Brit.)

RISSOA SEMI-LABRATA. *Ris. (Rissoina) testâ pyriformi, solidâ, acuminatâ, anfractibus septem, concentricis, superioribus curvicostratis, penultimo et antepenultimo costellis indistinctis spirâlibus et striis minutissimis longitudinalibus decussatis, ultimo subgloboso, pulito, apertura pyriformi, labio externo crasso, dentibus transversis tribus vel quatuor minuto.*

THE HALF-POLISHED RISSOA. Shell pyriform, solid, acuminated, whorls seven, rather convex, the upper with curved ribs, two before the last decussated with indistinct spiral ribs and very minute longitudinal striae, last rather globose, polished, aperture pyriform, outer lip thick, provided with three or four teeth.

A. ADAMS. Proc. Zool. Soc. 1851, p. 279.

Hab. Isl. Zebu, Philippines.

Species 59. (Mus. Brit.)

RISSOA CRASSILABRUM. *Ris. (Rissoina) testâ brevi, conicâ, lacteâ, politâ, solidâ, anfractibus sex, planulatis, apice acuminato; apertura pyriformi,*

angustâ, labio externo crasso, planulato, ovato tridentato, columellâ latâ.

THE THICK-LIPPED RISSOA. Shell short, conical, milk-white, polished, solid, whorls six, flattened, apex acuminated; aperture pyriform, narrow, outer lip thick, flattened, anteriorly tridentate, columella broad.

PEASE. Proc. Zool. Soc.

Hab. California.

A curious little shell with three strong teeth across its broad, thick, outer lip.

Species 60. (Mus. Brit.)

RISSOA CANALICULATA. *Ris. (Rissoina) testâ solidâ, pyriformi, pallidissimâ fuleâ, anfractibus septem, concentricis, costatis; costis distinctibus, levibus, medio flexuosis, ad costam spiralem basalem terminantibus; ultimo anfractu infri bisostato; apertura pyriformi, labio externo crasso.*

THE CHANNELLED RISSOA. Shell solid, pyramidal, very pale fulvous; whorls seven, rather convex, ribbed; ribs distant, smooth, flexuous in the middle, ending at the base, last whorl double ribbed beneath; aperture pyriform, outer lip thick.

SCHWARZ. Monograph of Rissoinae.

Hab. Philippines.

Species 61. (Mus. Brit.)

RISSOA INSIGNIS. *Ris. (Rissoina) testâ brevi, solidâ, superâ albâ, infri subnervâ; anfractibus quinque superioribus latis, quadratis, prope suturam et 4. angulatis, costatis, subconvexis, ultimo edentulo, subgloboso; apertura subovata, labio externo crasso, rotundo, denticulato, columellâ crassi.*

THE WONDERFUL RISSOA. Shell short, solid, white above, rather golden below; whorls five, upper broad, square, rectangular near the suture, ribbed, slightly decussated, last round, subglobose; aperture subovate; outer lip thick, round, denticulated, columella thick.

ADAMS and REEVE. Voy. Samarang.

Hab. — ?

RISSOA.—PLATE VII.

Species 62. (Mus. Brit.)

RISSOA DESHAYESIANA. *Ris.* (*Rissoina*) *testā albā, pyramidalī, costis longitudinalibus nodosis et striis spiralibus tenuiter reticulatā; anfractibus septem, convexiusculis; aperturā semiovatā, columellā brevī, crassā, labio externo crasso, crenulato.*

DESHAYES'S RISSOA. Shell white, pyramidal, finely reticulated with longitudinal nodose ribs and spiral striae; whorls seven, rather convex; aperture semiovate, columella short, thick, outer lip thick, crenulated.

RECLUS. *Revue Zoologique.*

Hab. ——— ?

Species 63. (Mus. Brit.)

RISSOA DEFORMIS. *Ris.* (*Rissoina*) *testā albā, elongatā, solidiusculā, altissimā; anfractibus novem, irregulariter convolutis, inaequaliter convexis, superioribus sculptis, inferioribus levigatis, aperturā subtrigonā, productā; labio externo crasso.*

THE DEFORMED RISSOA. Shell white, long, rather solid, much elevated; whorls nine, irregularly wound, unequally curved, upper sculptured, lower smooth, aperture subtrigonal, produced; outer lip thick.

SOWERBY. *Genera of Shells.*

Hab. Philippines.

Species 64. (Fig. a, b, c, d, Mus. Brit.)

RISSOA VARIEGATA. *Ris.* (*Rissoina*) *testā subcylindricā, albā, vel maculis vel fasciis variè pictā; anfractibus rectiusculis, superiè ad suturam crenulatis, ultimo majusculo, apice acuminato, aperturā semiovatā, columellā brevī, acuminatā.*

THE VARIEGATED RISSOA. Shell rather cylindrical, white, or variously painted with spots or bands; whorls rather straight, crenulated above at the suture, last rather large; apex acuminated, aperture semiovate, columella short, acuminated.

ANGUS. *Proc. Zool. Soc.* 1867, p. 113.

Hab. Port Jackson.

Species 65. (Mus. Brit.)

RISSOA STRIOLATA. *Ris.* (*Rissoina*) *testā elevatā, tenui, tenuiter striatā, albā, apice acuminato; anfractibus novem, rectiusculis, medianis latis, superioribus attenuatis; ultimo subangustato; aperturā auriformi, columellā infri acuminatā; labio externo subincrassato.*

THE FINE-STRIATED RISSOA. Shell raised, thin, finely striated, white, apex acuminated; whorls nine, rather straight, middle broad, upper attenuated, last rather narrow; aperture ear-shaped, columella acuminated below; outer lip rather thickened.

A. ADAMS. *Proc. Zool. Soc.* 1851, p. 206.

Hab. Baclayon, Isl. Bohol, Philippines.

In some degree resembling *Rissoina spirata*, but the whorls not angular.



65



66



68



69



70



71



72



73



74



75

RISSOA.

PLATE VIII.

Species 66. (Mus. Brit.)

RISSOA PYRAMIDALIS. *Ris. (Rissoina) testâ subpapiriformi, pallidè fulvâ, subventricosa, obtusiusculâ; anfractibus sex, breviusculis, costis eleganter flexuosis, longitudinalibus brevibus liratis; aperturâ subauriformi, labio externo crasso, columellâ subplicatâ.*

THE PYRAMIDAL RISSOA. Shell somewhat pupa-shaped, pale fulvous, rather ventricose, rather obtuse; whorls six, rather short, ridged with elegantly flexuous longitudinal ribs; aperture somewhat ear-shaped, outer lip thick, columella with a very slight plait.

A. ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Baclayon, Isl. Bohol, Philippines.

Species 67. (Mus. Brit.)

RISSOA MEMBRANACEA. *Ris. testâ tenui, convexâ, altissimâ; anfractibus septem, lateraliter subcompressis, apicalibus attenuatis, ultimo brevi; aperturâ auriformi, anticè expansâ, subretroscâ, columellâ subflexuosa, brevi, labio externo expanso.*

THE MEMBRANOUS RISSOA. Shell thin, horny, very elevated; whorls seven, laterally subcompressed, apical attenuated, last short; aperture ear-shaped, anteriorly expanded, rather inclined backwards, columella rather flexuous, short, outer lip expanded.

LÖVÉN — ?

Rissoa labiosa var. Auct.

Hab. Black Sea and Mediterranean.

The more elevated varieties of *Rissoa labiosa* do not seem to approach the slender form and light texture of this species.

Species 68. (Mus. Brit.)

RISSOA SMITHII. *Ris. (Rissoina) testâ albâ, parvâ, solidâ, pyramidatâ; anfractibus septem, concavis,*

costatis, costis longitudinalibus, leviter arcuatis, interstitiis spiritaliter striatis, ultimo anfractu infâ spiritaliter costatâ; aperturâ subtrigona, labio externo crasso, columellâ crassâ, obtusè uniplicatâ.

SMITH'S RISSOA. Shell white, small, solid, pyramidal; whorls seven, convex, ribbed, longitudinal ribs, slightly curved, interstices spirally striated, last whorl spirally ribbed below; aperture somewhat trigonal, outer lip thick, columella thick, with a blunt plait.

ANGUS. Proc. Zool. Soc. 1867, p. 114.

Hab. Port Jackson, Australia.

Species 69. (Mus. Brit.)

RISSOA TURRICULA. *Ris. (Rissoina) testâ rubrofuscâ, parvâ, solidâ, pyramidatâ, acuminatâ; anfractibus octo, prominentibus, supra medium subangulatis, costatis, costis paucis medio subangulatis, interstitiis tenuissimè striatis; aperturâ semilunari, labio externo crasso, columellâ crassâ, brevi.*

THE LITTLE TURRET RISSOA. Shell red-brown, small, solid, pyramidal, acuminated; whorls eight, prominent, rather angular above the middle, with interstices very finely striated; aperture semilunar, outer lip thick, columella very thick, short.

ANGUS. Proc. Zool. Soc.

Hab. New South Wales.

The whorls are more prominent than those of *Rissoa Smithii*, and, with the ribs, more angular.

Species 70. (Mus. Brit.)

RISSOA CRASSA. *Ris. (Rissoina) testâ solidâ, rubrofulvâ, brevi, obtusâ; anfractibus septem, brevibus, lateraliter subcompressis, longitudinaliter costatis, costis leviter arcuatis, ultimo anfractu infâ levigato; aperturâ rectiusculâ, columellâ crassâ, brevi.*

THE THICK RISSOA. Shell solid, red fulvous, short, obtuse; whorls seven, short, laterally rather

compressed, longitudinally ribbed, ribs slightly arched, last whorl smooth below; aperture rather straight, columella thick, short.

ANGUS. MS. Brit. Mus.

Hab. Port Jackson.

Species 71. (Mus. Brit.)

RISSOA CINCTA. *Ris. (Rissoina) testâ parvâ, albâ, altâ, tenuiter interruptim castauro fuscâ; anfractibus septem, convexiusculis, costatis, costis eleganter flexuosis, interstitiis striatis, ultimo anfractu brevî, rotundo, subreticulato.*

THE BELTED RISSOA. Shell small, white, high, finely interruptedly banded with chestnut; whorls seven, rather convex, ribbed, ribs elegantly flexuous, interstices striated, last whorl short, rounded, rather reticulated.

ANGUS. Proc. Zool. Soc. 1867, p. 114.

Hab. Port Jackson.

Species 72. (Mus. Brit.)

RISSOA NODICINCTA. *Ris. (Rissoina) testâ albâ, solidâ, pyramidatâ, acuminatâ; anfractibus octo, costellis spirâlibus et longitudinalibus regulariter ad angulo nodosis ornatis; aperturâ semi-ovata, labio externo crasso, intus crenulato.*

THE HEAD-BELTED RISSOA. Shell white, solid, pyramidal, acuminate; whorls eight, ornamented with spiral and longitudinal ribs, regularly nodose at the angles; aperture semi-ovate, outer lip thick, crenulated within.

A. ADAMS. Proc. Zool. Soc. 1851, p. 266.

Hab. Isl. Capul, Philippines.

Species 73. (Mus. Brit.)

RISSOA MONODONTA. *Ris. (Rissoina) testâ brevî, crassâ, lilaciâ et albâ, subpyriformi; anfractibus*

quinque, brevibus, ultimo subovato; aperturâ ovatâ, labio externo crasso, subplanulato, columellâ brevî, audentâ.

THE SINGLE-TOOTHED RISSOA. Shell short, thick, lilac and white, rather pyriform; whorls five, short, last rather oval; aperture ovate, outer lip thick, rather flattened, columella short, with a single tooth.

BIVON. MS. Mus. Brit.

Hab. —? —?

Species 74. (Mus. Sowerby.)

RISSOA VIOLACEA. *Ris. testâ parvâ, crassâ, breviter pyramidatâ, infrâ aureo-fusâ, mediâ violacâ; anfractibus quinque, superiôr albis, infrâ castauro latè fuscâ; aperturâ subtrigonâ; margine crasso.*

THE VIOLET RISSOA. Shell small, thick, shortly pyramidal, golden brown below, violet in the middle; whorls five, white above, broadly banded with chestnut below; aperture subtrigonal, margin thick.

DESMAREST. —? —?

Hab. Nice.

Species 75. (Mus. Sowerby.)

RISSOA RETICULATA. *Ris. (Rissoina) testâ albâ, pyramidato, tenui, acuminatâ; anfractibus novem, costis tenuissimis, eleganter flexuosis, longitudinalibus et striis spirâlibus reticulatis; aperturâ subpyriformi, labio externo crasso, anticè producto, columellâ brevî, infrâ acuminatâ.*

THE RETICULATED RISSOA. Shell white, pyramidal, thin, acuminate; whorls nine, reticulated with elegantly flexuous longitudinal ribs and spiral striae; aperture subpyriform, outer lip thick, anteriorly produced, columella short, acuminate below.

SOWERBY. Genera of Shells.

Hab. Isl. St. Thomas, West Indies.



RISSOA.

PLATE IX.

Species 76. (Mus. Sowerby.)

RISSOA LATHRATA. *Ris. (Rissoina) testâ albidâ, solidâ, solidâ, costis spirâlibus supra suturam quæque et longitudinalibus parvis magis numerosis ad angulos molis clothatis; interstitiis profundè foveolatis; anfractibus altis, convexisculis, ultimo unisulcato et carinato; apertura pyriformi, labio exteriori antici producto; columella brevi, crassâ.*

THE LATHRED RISSOA. Shell whitish, elevated, solid, latticed with five spiral ribs above the suture, and rather more numerous longitudinal ones, nodose at the angles; interstices deeply pitted; whorls elevated, rather convex, the last with a groove and spiral varices behind the columella; aperture pyriform, outer lip anteriorly produced, columella short, thick.

A. ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Isl. Bohol, Philippines.

A beautiful broadly-sculptured species.

Species 77. (Fig. a, b, c, d, Mus. Brit.)

RISSOA VARIABILIS. *Ris. testâ subfusiformi, acuminatâ, leviter spirâliter fusca, punctato-lineatâ, et striatâ; anfractibus sex, decurvis, tribus apicalibus levibus, alteris medio angulatis, costatis, costis medio prominentibus; apertura declivi, suborata, margine expanso, liliario, costis intusque incrassata.*

THE VARIABLE RISSOA. Shell rather fusiform, acuminated, finely spirally brown spot-lined and striated; whorls eight, elevated, three apical smooth, the others angular in the middle; aperture sloped, rather oval, margin expanded, lilac, thickened within and without.

MUHLFELDT — ?

Hab. — ?

Species 78. (Mus. Sowerby.)

RISSOA DECUSSATA. *Ris. (Rissoina) testâ albâ, solidâ, altâ, tenuissimè costatis obliquis longitudinalibus et spirâlibus minoribus decussatâ, apice obtuso; anfractibus sex, infra medium convexisculis; aper-*

turâ subpyriformi; columella brevi, attenuatâ, labio exteriori pyriformi, crasso.

THE DECUSSATED RISSOA. Shell white, solid, high, very finely decussated with oblique longitudinal ribs and spiral striae, apex obtuse; whorls six, rather convex below the middle; aperture rather pyriform, columella short, attenuated, outer lip prominent, thick.

MONTAGU. Test. Brit. Vol. II, p. 399.

Hab. West Indies.

A West Indian shell described as British by Montagu. It has a smooth, and even a polished appearance until examined with the lens, when the oblique longitudinal ribs and fine spiral striae are seen.

Species 79. (Mus. Sowerby.)

RISSOA SPLENDIDA. *Ris. testâ breviter subfusiformi, fulvâ, spirâliter lineis rubris punctatis pictâ; spirâ acuminatâ; anfractibus sex, brevibus, angularim costatis, later et infra costas fusca fasciatis; apertura brevi, labio exteriori intus etâque crasso ciliaturo marginato.*

THE SPLENDID RISSOA. Shell shortly subfusiform, fulvous, spirally painted with red punctured lines, spire acuminated; whorls six, short, angularly ribbed, banded with brown between and under the ribs; aperture short, outer lip thickened within and without, edged with violet.

ENCHID — ?

Hab. Black Sea.

Shorter and more finely ribbed than *Rissoina cetrinabilis*.

Species 80. (Mus. Sowerby.)

RISSOA SAGEIANA. *Ris. (Rissoina) testâ albâ, solidâ, altâ, pyramidalitâ; anfractibus septem, costis crenatis, obliquis, transversè lineatis, sculptis; apertura pyriformi, labio exteriori crassissimo, antici producto.*

THE SAGEA RISSOA. Shell white, solid, high, pyramidal; whorls seven, sculptured with oblique crenated ribs ridged across; aperture pyriform, outer lip very thick, anteriorly produced.

D'ORBIGNY. Mollusques de Cuba.

Hab. Cuba.

Species 81. (Mus. Marrat.)

RISSOA LIGNEA. *Ris.* (*Almonia*) *testâ brevi, ventricosâ, solidâ, fuscâ, acuminatâ, rubro-lineatâ; anfractibus brevibus costatis, costis rotundis, crassis, crenatis; iris spirâlibus tenuibus; apertura brevi, subrotundâ, columellâ crassâ, albâ; labio externo intus incrassato; costis crassis.*

THE WOODY RISSOA. Shell short, ventricose, solid, brown, acuminate, red-lined; whorls short, ribbed, ribs rounded, thick, crenate; spiral ridges thin; aperture short, rather round, columella thick, white; outer lip thickened within, varicose without.

THORPE. Brit. Mar. Conch.

Hab. Nice.

Species 82. (Hab. Marrat.)

RISSOA CANARIENSIS. *Ris.* (*Almonia*) *testâ rotundâ, pallidâ, fulcâ, brevi, crassâ, longitudinaliter crebricostatâ, spirâliter densè lineatâ; costis crassis, crenatis; anfractibus paucis, brevibus, uncinatis vel spirâliter lineatis, medio subangulatis, ultimo ventricoso; ap. claus. parvâ, rotundâ, labio externo incrassato.*

THE CANARY ISLAND RISSOA. Shell minute, pale, fulvous, short, thick, numerous longitudinally ribbed, spirally closely ridged, ribs thick, crenulate; whorls few, short, spotted or spirally lineated, rather angular in the middle, last ventricose; aperture small, rounded, outer lip thickened.

D'ORBIGNY. Watson, Proc. Zool. Soc. 1873, p. 376.

Hab. Canary Islands, Madeira.

Finer in sculpture than the other species, with crenulate ribs.

Species 83. (Mus. Marrat.)

RISSOA DEPICTA. *Ris.* *testâ parvâ, ventricosâ, fulcâ, tenuiter spirâliter striatâ, semipellucidâ, obscure scintillâ uncinatâ; anfractibus quinque, superioribus brevissimis, ultimo rotundâ, subulnosa, apertura rotundâ, labio externo crasso.*

THE FADED RISSOA. Shell small, ventricose, fulvous, finely spirally striated, semipellucid, obscurely spotted in rows; whorls five, upper ones very short, last rounded, rather globose; aperture rounded, outer lip thick.

MANZONI. (Watson) Proc. Zool. Soc. 1873, p. 383.

Hab. Madeira.

It seems more globose and less conical than *Rissoa semistriata* of Montagu.

Species 84. (Mus. Montrouzier.)

RISSOA ARTENSIS. *Ris.* (*Rissoina*) *testâ elongatâ, subcylindricâ, subauriculâ, tenui; anfractibus novem, apicalibus septem leviter plicatis, attenuatis, prope apicem subabruptè angustatis, penultimo subcylindrico, planato, alto; ultimo cylindrico elongato; apertura subtriangulâ, subovaliculatâ; labio interno tenui, columellâ brevi, labio externo producto, incrassato.*

THE ISL. OF AET RISSOA. Shell elongated, subcylindrical, rather orange, thin; whorls nine, seven apical, slightly plaited, attenuated near the apex, rather abruptly narrowed, last but one rather cylindrical, flattened, high, last cylindrical, elongated; aperture subtriangular, with a slight canal, inner lip thin, columella short, outer lip produced, thickened.

MONTROUZIER. Journ. Conchyl. Vol. XX. p. 364, 1872.

Hab. Ile Art. New Caledonia.

Species 85. (Mus. Souverbie.)

RISSOA SUBCONCINXA. *Ris.* (*Rissoina*) *testâ albâ, rotundâ, subpyramidatâ, altâ, longitudinaliter costatâ, costis tenuibus leviter arenatis, distantibus, interstitiis levibus; anfractibus octo, levitè crescentibus, inferioribus subventricosis; apertura subtriangulâ, labio interno tenui, expanso, columellâ multiplicatâ, brevi, labio externo producto, expanso, infra columellam emarginato.*

THE RATHER NEAT RISSOA. Shell white, ovately subpyramidal, high, longitudinally ribbed, ribs thin, slightly arched, distant, interstices smooth; whorls eight, slowly increased, lower rather ventricose; aperture subtriangular, inner lip thin, expanded, columella single plaited, short, outer lip produced, expanded, emarginated under the columella.

SOVERBIE. Journ. Conchyl. Vol. XX. p. 364, 1872.

Hab. Ile Art, New Caledonia.

This shell is named as above from its resemblance to *Rissoina concinna* of A. Adams, from which it differs materially in having no cross striae.



87



88



89



90



91



92



93



94



95



96

RISSOA.

PLATE X.

Species 86. (Mus. Crosse.)

RISSOA (HEMISOMIA) CALEDONICA. *Ris. testâ albâ, laevigatâ, oblongo-ovata, tenui, apice obtusa; anfractibus quinque, ultimo oblongo, aperturâ obliquâ semilunari, labio externo expanso; columellâ obliquâ, infra acuminatâ.*

THE CALEDONIAN RISSOA. Shell whitish, smooth, oblong-ovate, thin, with obtuse apex; whorls five, the last oblong, aperture obliquely semilunar, outer lip expanded; columella oblique, acuminated below.

CROSSE. Journ. Conch. Vol. XII. p. 72, 1872.
Hab. Noumea, New Caledonia.

This shell bears so strongly the aspect of a true typical *Rissoa* that, in the absence of an operculum, it seems difficult to understand why a new genus should be created for it.

Species 87. (Mus. Brit.)

RISSOA (OINA) STRICTA. *Ris. testâ solidâ, pupiformi, pallidè fulvâ, albâ, rectâ; anfractibus octo; apiculis attenuatis, acuminatis; medianis subinfatis, retilateralibus superius perpendiculariter costatis, ultimo infra laevigato; aperturâ parvâ, semilunari, columellâ brevi, obliquâ, infra truncatâ, labio externo expanso, acuto.*

THE STRAIGHTENED RISSOA. Shell solid, pupa-shaped, pale fulvous, raised, straight; whorls eight; apical attenuated, acuminated, middle somewhat inflated, straight-sided, perpendicularly ribbed on the upper side, the last smooth below; aperture small, semilunar, columella short, oblique, truncated below, outer lip expanded, sharp.

MESKE. Zeitschrift für Malak. 1850.
Hab. Cape St. Lucas.

Rissoa fortis is a more broadly-ribbed, darkly-coloured shell.

Species 88. (Mus. Brit.)

RISSOA (OINA) STRIATICOSTATA. *Ris. testâ, pyramidalâ, albâ, tenui, arcuatâ, transverse costatâ, spiritaliter striatâ, anfractibus ultimo et penultimo subinflatis,*

superioribus perpendicularibus, apice acuminato, aperturâ subtrigoniâ, labio externo prolixo, costâ sinuata, columellâ superius truncatâ, infâs subtruncatâ.

THE RIB-STRIATED RISSOA. Shell pyramidal, white, thin, arched, finely ribbed, spirally striated, last and previous whorls a little inflated, upper small, attenuated, apex acuminated; aperture subtrigonal, outer lip produced, rather thick; columella thickened above, slightly truncate below.

D'ORANGEY. Voy. Amér. Méridionale, p. 395.
Hab. St. Vincent's, West Indies.

Species 89. (Mus. Brit.)

RISSOA (OINA) CHESNELLEI. *Ris. testâ albâ, subpyramidalâ, solidâ, costis solidis obliquè flexuosis et striis spiralibus, elevatis, crenellatâ; spicè acuminatâ, anfractibus apicalibus attenuatis, ultimo anfractu inflato; aperturâ parvâ, supra inflexivè subcanaliculatâ, labio externo crasso, crenulatâ.*

CHESNELLE'S RISSOA. Shell white, rather pyramidal, solid, cancellated with obliquely flexuous solid ribs and spiral striae; spire acuminated, apical whorls attenuated, last whorl inflated; aperture small, slightly channelled above and below; outer lip thick, crenulated.

MICHAUD. Cat. Ris. p. 17, f. 23-24.
Hab. India.

Species 90. (Mus. Brit.)

RISSOA (OINA) BUREANA. *Ris. testâ pallidâ, solidâ, obtusè pyramidalâ, brevitatâ, tenuissimè cuneocostatâ; aperturâ parvâ, subtrigoniâ, columellâ crassi, brevi, subortâ, subtruncatâ, labio externo crasso.*

THE BUREAN RISSOA. Shell pale, solid, obtusely pyramidal, smooth, very slightly bent-ribbed; aperture small, subtrigonal, columella thick, short, rather tortuous, almost truncated, outer lip thick.

SOWERBY.
R. concinna. Adams.
Hab. Isl. Burea, Philippines.

Species 91. (Mus. Brit.)

RISSOA (OINA) NIVEA. *Ris. testâ subpyramidatâ, costis obliquè flexuosis ornatâ; spirâ elevatâ, apice acuminato; ultimo anfractu infrâ spirâ spirâliter costato, aperturâ infrâ subquadratâ; columellâ parvâ, brevissimâ; labio externo incrassato.*

THE SNOWY RISSOA. Shell subpyramidal, ornamented with obliquely flexuous ribs; spire elevated, apex acuminate, last whorl spirally ribbed below; aperture rather square below; columella small, rather short; outer lip thickened.

AUTHUR ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Australia.

Species 92. (Mus. Brit.)

RISSOA (OINA) ALBEIDA. *Ris. testâ pyramidatâ, acuminatâ, albâ, vel fulvâ, semipellucidâ, tenui; ultimo anfractu subinflato, levigato, alteris costatis, versus apicem attenuatis; aperturâ subtrigoniâ, columellâ brevi, truncatâ, labio externo crasso.*

THE WHITISH RISSOA. Shell pyramidal, acuminate, white or buff, half-transparent, thin; last whorl a little inflated, smooth, the others ribbed, attenuated towards the apex; aperture rather trigonal, columella short, truncate, outer lip thick.

C. B. ADAMS. Shells of Jamaica.

Hab. West Indies.

Species 93. (Mus. Brit.)

RISSOA (OINA) LEVISSIMA. *Ris. testâ solidâ, breviter pyramidatâ, pallidâ fulvâ, pulvâ; spirâ acuminatâ, anfractibus rectilateralibus; aperturâ subtrigoniâ, parvâ, columellâ crassâ, brevi, truncatâ.*

THE VERY SMOOTH RISSOA. Shell solid, shortly pyramidal, pale fulvous, polished; spire acuminate, whorls straightened; aperture rather trigonal, small, columella thick, short, truncate.

C. B. ADAMS. Shells of Jamaica.

Hab. West Indies.

Species 94. (Mus. Brit.)

RISSOA (OINA) CATESBYANA. *Ris. testâ parvâ, pyramidatâ, fuscâ, brevissimâ, costis obliquè flexuosis, validis ornatâ; spirâ brevi, anfractibus convexis; aperturâ semilunari, labio interno superne incrassato; columellâ brevi, acuatâ, labio externo producto, incrassato.*

CATESBY'S RISSOA. Shell small, pyramidal, brown, rather short, ornamented with obliquely flexuous strong ribs; spire short, whorls convex; aperture semilunar, inner lip thickened above; columella short, arched; outer lip produced, thickened.

D'ORBIGNY. Shells of Cuba.

Rissoa scalarella. C. B. Adams.

Hab. Jamaica, Cuba.

Species 95. (Mus. Brit.)

RISSOA (OINA) PRINCEPS. *Ris. pyramidatâ, attenuatâ, altâ, albâ, acuminatâ; anfractibus tenuissimè costatis et striatis; ultimo elongato, infrâ levigato; aperturâ subtrigoniâ, labio externo tenui.*

THE PRINCE RISSOA. Shell pyramidal, attenuated, elevated, white, acuminate; whorls finely ribbed and striated, last elongated, smooth below; aperture subtrigonal, outer lip thin.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica, West Indies.



152



153



154



155



156



157



158



159



160



161

RISSOA.

PLATE XI.

Species 96. (Mus. Brit.)

RISSOA (OINA) S. (OEFERA. *Ris. testâ crassa, pallidi, pyriformi*; anfractibus sevis, spirâlibus costatis, costis cæcis, angulatis, supra subvorticibus, interstitiis cæcis, fasciatis; ultimo anfractu subcæcis) aperturâ pyriformi, labio externo crasso, columellâ crassa, subplandata.

THE GROOVED RISSOA. Shell thick, pale, pyramidal; whorls six, spirally ribbed, ribs thick, angular, three above the suture, interstices serrated in pits; last whorl subventricose; aperture pyriform, outer lip thick, columella thick, somewhat flattened.

TRISCHÉL. — ? MS. Brit. Mus.

Hab. Coast of Belgium.

Of a pale colour, more broadly pyramidal than *Rissoia Trachelis*.

Species 97. (Mus. Brit.)

RISSOA (OINA) FLEXUOSA. *Ris. testâ pyramidata, acuminata, medio spire subconcaâ; costis longitudinalibus, supra medianam angulatis spirâliter subnodosis minutis; aperturâ brevi, subovata; labio interno superiori subalboso, columellâ acutâ; labio externo intus laevi.*

THE FLEXUOUS RISSOA. Shell pyramidal, acuminate, rather concave in the middle of the spire; provided with few longitudinal ribs, angular above the middle, slightly notched; aperture short, subovate, inner lip callous above; columella acute; outer lip tumid within.

GOULD. — ? MS. Brit. Mus.

Hab. North America.

Species 98. (Mus. Brit.)

RISSOA (OINA) VILICA. *Ris. testâ pyramidata, acuminata, albida; anfractibus novem, prope suturam angulatis, costis numerosis angulatis longitudinalibus minutis; ultimo infra medianam spirâliter costata, costis longitudinalibus desinuntibus; aperturâ parvâ, subpyriformi; columellâ infra rectâ.*

THE STEWARDNESS RISSOA. Shell pyramidal, acuminate, whitish; whorls nine, angular near the suture, provided with numerous angular longi-

tudinal ribs, the last spirally ribbed in the middle the longitudinal ribs ending; aperture small, somewhat pyriform; columella straight below.

GOULD. Smithsonian Catalogue.

Hab. Loochoo.

In the middle of the last whorl the longitudinal ribs cease, and the lower part is only ribbed spirally.

Species 99. (Mus. Brit.)

RISSOA (OINA) EULIMOIDES. *Ris. testâ breviusculâ, albâ, politâ, lateraliter arcuatâ, acuminatâ; anfractibus sevis, ultimo rotundo; aperturâ obliquâ productâ, labio externo intus incrassato; columellâ latâ, crassâ, brevi.*

THE LIMB-SHAPED RISSOA. Shell rather short, white, polished, laterally arched, acuminate; whorls six, last rounded; aperture obliquely produced, outer lip thickened within; columella broad, thick, short.

A. ABAME. Proc. Zool. Soc. 1851, p. 279.

Hab. Isl. Capul, Philippines.

Species 100. (Mus. Brit.)

RISSOA (OINA) SEMPLICATA. *Ris. testâ parvâ, politâ, rectâ pyramidata, levi, semipellucidâ, tenuissimâ longitudinaliter plicatâ; aperturâ parvâ, subpyriformi, labio externo crasso, rotundo; columellâ parvâ, acuminatâ.*

THE HALF-PLATED RISSOA. Shell small, polished, smoothly pyramidal, thin, semipellucid, very finely longitudinally plicated; aperture small, rather pyriform, outer lip thick, rounded; columella small, acuminate.

PEASE. Proc. Zool. Soc. 1862.

Hab. Pacific.

Thinner, narrower, and more transparent than *S. latissima*.

Species 101. (Mus. Brit.)

RISSOA (OINA) BROWNIANA. *Ris. testâ parvâ, pyramidata, acuminatâ, fulvâ, brevi; anfractibus sevis, altissimis, ultimo subrotundo; aperturâ pyriformi, labio externo obliquâ productâ.*

BROWN'S RISSOA. Shell small, pyramidal, acuminate, fulvous, smooth; whorls six, rather elevated, the last somewhat round; aperture pyriform, outer lip obliquely produced.

D'ORBIGNY. Voyage dans l'Amérique Méridionale.
Hab. St. Vincent's.

Species 102. (Mus. Brit.)

RISSOA (OINA) TRITICEA. *Ris. testâ brevi, crassâ, albâ, pupiformi; anfractibus brevibus, costatis; costis arcuatis, levibus, rotundis, infra medium anfractus ultimi decurrentibus; ultimo anfractu brevi; apertura parvâ, subviformi, anticè rotundatâ; labio crasso, rotundo; columellâ brevi, continuo.*

THE WHEAT RISSOA. Shell short, thick, white, pupa-shaped; whorls short, ribbed, ribs curved, smooth, round, ending below the middle of the last whorl, last whorl short; aperture small, rather auriform, anteriorly rounded, lip thick, rounded, columella short, continuous.

PEASE. Proc. Zool. Soc. 1869, p. 438.
Hab. Pacific Ocean.

Species 103. (Mus. Brit.)

RISSOA (OINA) PHILIPPANI. *Ris. testâ turrîtâ, pallidè fulvâ, longitudinâlîter crebrè costatâ, interstîtiis cancellatis; anfractibus senis, rectis ad suturam angulatis; ultimo anfractu infrà spirâlîter costatâ, apertura parvâ, subovatâ, columellâ latâ, subarcuatâ.*

PHILIPP RISSOA. Shell turreted, pale fulvous, longitudinally closely ribbed, interstices cancelled; whorls six, straight, with an angle at the suture, last whorl spirally grooved on the under side; aperture small, subovate; columella broad, a little curved.

PFIEFFER. —? M.S. Brit. Mus.

Rissoa cancellata. Philippi.
Hab. Cuba, Jamaica.

Species 104. (Mus. Brit.)

RISSOA (OINA) WOODWARDI. *Ris. testâ minutâ, breviter pyramidatâ, pallidissimè fulvâ; anfractibus senis, brevibus, longitudinâlîter costatis; costis obliquè arcuatis, levibus, rotundis; ultimo anfractu infrà unicosatâ; apertura parvâ, pyriformi; labio externo crasso, anfractu apicali rotundo.*

WOODWARD'S RISSOA. Shell minute, shortly pyramidal, very pale fulvous; whorls six, short, longitudinally ribbed, ribs obliquely arched. Smooth, rounded, last whorl single-ribbed below; aperture small, pyriform; outer lip thick, apical whorl rounded.

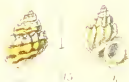
CARPENTER. Shells of Mazatlan, p. 357.
Rissoa clandestina. C. B. Adams.
Rissoa firmata. C. B. Adams.
Hab. Mazatlan.

Species 105. (Mus. Brit.)

RISSOA (OINA) TROCHLEARIS. *Ris. testâ breviusculâ, crassâ, rubro fuscâ, spirâlîter costis angulatis cinctâ; anfractibus senis, brevibus, medianis parvè inflatis; apertura albâ, subovatâ; columellâ crassâ, brevi; canali conspicuo, labio externo intus incrassato, extus crenato.*

THE COIL RISSOA. Shell rather short, thick, red-brown, spirally belted with angular ribs; whorls six, short, middle ones a little inflated; aperture white, subovate; columella thick, short; canal conspicuous, outer lip thickened within, crenated without.

CARPENTER. M.S. Smithsonian Inst. and B. M.
Rissoa sulvijera var. Gould.
Rissoa ligata. Gould.
Rissoa annulata. Dunbar.
Hab. —?



RISSOA.

PLATE XII.

Species 106. (Mus. Watson.)

RISSOA AULANTIACA. *Ris. testâ pallidi aurantii, albâ, spirâ subquadratâ; anfractibus quinque, convexiusculis, albis, spirâditer tenuiter costatis, superâ costis obliquis, subdistansibus, longitudinalibus, sculptis, ultimo anfractu infre spirâditer conspicuè bicostato; aperturâ ovatâ, labio lato, margine interno anticè acutè producto.*

THE ORANGE RISSOA. Shell pale orange, raised, spire a little in steps; whorls five, rather convex, spirally finely ribbed, sculptured above with oblique, rather distant longitudinal ribs, last whorl with two spiral ribs below; aperture ovate, lip broad, inner margin anteriorly sharply produced.

WATSON. Proc. Zool. Soc. 1873, p. 367, Pl. XXXIV. f. 3.

Hab. Madeira.

Species 107. (Mus. Watson.)

RISSOA CRISPA. *Ris. testâ parvâ, albâ, undulatim spirâditer costatâ, gradatâ, costis crassis longitudinalibus flexuosis ornatâ; apicè obtuso; anfractibus quaternis, supra medium angulatis, ultimo infre spirâditer bicostato, unibilicato; aperturâ subtriangulâ, labio crasso, costis crenato, suprâ infreque angulatâ.*

THE CRISP RISSOA. Shell small, whitish, spirally ribbed in waves, ornamented with thick longitudinal flexuous ribs; apex obtuse; whorls four, angular above the middle, last with two spiral ribs below, unibilicated; aperture subtriangular, lip thick, crenated outside, angular above and below.

WATSON. Proc. Zool. Soc. 1873, p. 369, Pl. XXXIV. f. 6.

Hab. Madeira.

Species 108. (Mus. Marrat.)

RISSOA MACANDREWII. *Ris. testâ parvâ, brevî, rubrofusâ; anfractibus quinque, gradatis, angulatis, spirâditer crebrè costatis, costis perpendicularibus, crassis, supra medium angulatis minutis, ultimo*

infre spirâditer uncostato; aperturâ obliquè subovata; costâ labiali crassi, rotundi, spirâditer livata.

MACANDREW'S RISSOA. Shell small, short, reddish-brown; whorls five, in steps, angular, spirally closely ribbed, strengthened with perpendicular thick ribs, with an angle above the middle, last with a single spiral rib below; aperture obliquely subovate, labial rib thick, rounded, spirally ridged.

WATSON. Proc. Zool. Soc. 1873, p. 372, Pl. XXXIV. f. 8.

Hab. Gorgulho, Madeira.

Species 109. (Mus. Watson.)

RISSOA MONIZIANA. *Ris. testâ hercynicula, ferè albâ, spirâditer livatâ, liris rotundis, approximatis; apicè acutè; anfractibus quaternis, brevibus, supra medium angulatis; aperturâ magnâ, rotundâ, costâ labiali subexpansâ, crassâ.*

MONIZ'S RISSOA. Shell rather short, almost white, spirally ridged, ridges rounded, close; apex acute; whorls four, short, angular above the middle; aperture large, rounded, labial rib rather expanded, thick.

WATSON. Proc. Zool. Soc. 1873, p. 369, Pl. XXXIV. f. 6.

Hab. Madeira.

Species 110. (Mus. Watson.)

RISSOA DICTA. *Ris. testâ parvâ, trochiformi, distanter spirâditer striatâ, maculis fuscis quadratis in series tres dispositis ornatâ; anfractibus quinque, convexis, ultimo magno; aperturâ subtriangulâ, labio crasso; columellâ crassâ, arcuatâ.*

THE PAINTED RISSOA. Shell small, top-shaped, distantly spirally striated, ornamented with brown square spots arranged in three rows; whorls five, convex, last large; aperture subtriangular, lip thick; columella thick, arched.

JEFFREYS. Brit. Moll.

Hab. Madeira.

A narrower shell than *Rissoa depicta*, the whorls being more elongated and distinct.

Species 111. (Mus. Watson.)

RISSOA NOVARENSIS. *Ris. testâ parvâ, breviter ovato-conicâ, crassâ, pallidissimè fulvâ, costis longitudinalibus frequentibus liris parvis arcuatis, infra medianâ desinentibus, et liris spirâlibus tenuibus sculptâ, inter costas biserialim fusco-maculatis, infra maculas spirâliter tricostatis; anfractibus quaternis, brevibus, apicali rotundo, ultimo magno; aperturâ subrotundâ, labio crasso, rotundo.*

THE NOVARA RISSOA. Shell small, shortly ovate-conical, thick, very pale fulvous, sculptured with numerous ridged ribs a little curved, ending below the middle and slender spiral ridges, spotted with brown in two rows, three spiral ribs below the spots; whorls four, short, apical rounded, last large; aperture rather round, lip thick, rounded.

WATSON. Proc. Zool. Soc. 1873, p. 377, Pl. XXXV. f. 13.

Hab. Madeira.

Named after a frigate with which the shell had nothing to do.

Species 112. (Mus. Watson.)

RISSOA WATSONI. *Ris. testâ parvâ, tenuisculâ, trochiformi, liris spirâlibus prominentibus rotundis cinctâ; anfractibus quaternis, apicali semitrotundo, duobus medianis angulatis rugoso-costatis, inter costas castaneo maculatis, ultimo magno, angulato, supra angulum planulato, longitudinaliter costato, inter costas rubro-maculato, medio et infri spirâliter solim costato, costâ labiali haud marginem attingenti.*

WATSON'S RISSOA. Shell small, rather thin, trochus-shaped, girt with spiral prominent ridges; whorls four, apical semitrotund, two middle angular, roughly ribbed, last large, angular, flattened, and longitudinally ribbed and spotted with red between the ribs above the angle, only spirally ribbed in the middle and below; labial rib not reaching the margin.

SCHWARTZ. Proc. Zool. Soc. 1873, Pl. XXXV. f. 11.

Hab. Madeira.

Species 113. (Mus. Watson.)

RISSOA PERMINIMA. *Ris. testâ parvâ, oblongâ, albâ, opacâ, levigatâ; anfractibus quaternis, subelevatis, lateraliter rotundatis, ultimo magno, angustè umbilicatis; aperturâ subovatâ, margine ferè integro, tenuisculo.*

THE VERY SMALL RISSOA. Shell small, oblong, white, opaque, smooth; whorls four, rather raised, laterally rounded, last large, narrowly umbilicated; aperture rather oval, margin nearly entire, rather thin.

MANZONI. Proc. Zool. Soc. 1873, p. 385.

Rissoa abjecta. Watson.

Hab. Madeira.

Species 114. (Mus. Watson.)

RISSOA ALBIGO. *Ris. testâ parvâ, tenui, semipellucidâ, subovato-trochiformi, fasciis lineisque punctorum rubrorum pictâ; anfractibus quinis, brevibus, convexis; aperturâ magno, anticè rotundâ, posticè acuminatâ, columellâ altâ, subarcuatâ.*

THE PEARLY FILM RISSOA. Shell small, thin, semipellucid, subovate-trochiform, painted with bands and lines of red spots; whorls five, short, convex; aperture large, anteriorly rounded, posteriorly acuminated, columella high, rather arched.

WATSON. Proc. Zool. Soc. 1873, p. 379.

Hab. Madeira.

The colouring consists in spiral and perpendicular rows of minute red spots.

Species 115. (Mus. Watson.)

RISSOA GIBBERULA. *Ris. testâ brevi, quadrangulâ, solidâ, albâ, vel pallidè fulvâ, spirâliter angustè trifasciatâ, costis magnis obliquè flexuosis, distantibus, ad suturam acuminatis mucilâ, spirâ gradatâ, suturâ concavâ; anfractibus brevissimis, ultimo infri costâ spirâli validè desinenti, latè umbilicatis; aperturâ parvâ, perpendiculariter ovatâ, margine tenui, anticè prominenti, costâ labiali latissimâ, crassâ.*

THE LITTLE HUMPED RISSOA. Shell short, quadrangular, solid, white or pale fulvous, with three spiral narrow bands, strengthened with large obliquely flexuous distant ribs, pointed at the suture, spire graded, suture concave; whorls very short, the last ending below in a solid spiral rib, broadly umbilicated; aperture small, perpendicularly oval, margin thin, prominent in front, labial rib very broad, thick.

WATSON. Proc. Zool. Soc. 1876, p. 371, Pl. XXXIV. f. 7.

Hab. Madeira.

This beautiful little shell has the general appearance of a *Cancellaria*, but is a true *Rissoa*.

RISSOA.

PLATE XIII.

Species 116. (Mus. Watson.)

RISSOA (OINA) TESTA. *Ris. testâ parvâ, albâ, tenui, viris longi-*
rodiculis leantibus numerosis, elegantibus flexuosis,
et strâ tenuissimis spirâlibus sculptâ; anfractibus
quibus, apicali semicirculari, mollioribus concavis,
ultimo emarginato; apertura subovata, rotundâ
exteriori, posticâ acuminatâ, labio integro, tenui.

THE CORAL-ROCK RISSOA. Shell small, white, thin,
sculptured with longitudinal, thin, numerous
ridges, elegantly flexuous and very fine spiral
striae; whorls five, apical half-round, middle
convex, last large, subovate; aperture subovate,
rounded anteriorly, acuminated posteriorly, lip
entire, thin.

MAXWELL. Proc. Zool. Soc. 1873, p. 389, Pl. XXXVI.
f. 27.

Hab. Santa Cruz, Madeira.

A light inflated white shell, beautifully sculptured.

Species 117. (Mus. —?)

RISSOA (JEFFREYSIA) OPALINA. *Ris. testâ subglobosâ,*
fusco-cornuâ, diaphanâ, nitentâ; anfractibus qua-
terteis, apicali semicirculari, duobus mollioribus brevi-
bus, concavissimis, ultimo magno, inflato; apertura
subcirculari, margine integro.

THE OPALINE RISSOA. Shell subglobose, horny-brown,
diaphanous, shining; whorls four, apical half-
round, two middle short, very convex, last large,
inflated; aperture rather rounded, margin entire.

JEFFREYS. Brit. Moll.

Hab. Channel Islands (littoral.)

Species 118. (Mus. Brit.)

RISSOA (JEFFREYSIA) DIAPHANA. *Ris. testâ parvâ,*
nitentâ, fusco-cornuâ, diaphanâ, subconicâ; spirâ
elevatâ, conicâ, obtusâ; anfractibus quinis, gra-
datim crescentibus, concavis, ultimo subinflato;
apertura subcirculari, margine ferè continuo.

THE TRANSPARENT RISSOA. Shell small, shining,
horny-brown, transparent, rather conical; spire
elevated, conical, obtuse; whorls five, gradually

increased, convex, last rather inflated; aperture
rather round, margin nearly continuous.

ALPER. —? Forbes and Hanley, Brit. Moll.

Hab. Great Britain. Rare, littoral.

Species 119. (Mus. Brit.)

RISSOA (OINA) FASCIATA. *Ris. testâ albâ, acuminatâ,*
pallidè fulvâ, castaneo-fasciatâ, flexuosis et her-
costatâ; anfractibus septem, declivibus; apertura
subtrigoniâ, conuli conspicuâ, labio exteriori crasso,
rotundo; columellâ brevi, crassâ.

THE BANDED RISSOA. Shell raised, acuminated, pale
fulvous, with two chestnut bands, with numerous
flexuous ribs; whorls seven, sloped; aperture
subtrigonal, canal conspicuous, outer lip thick,
rounded; columella short, thick.

ANGAS. Proc. Zool. Soc. 1851, p. 264.

Hab. New Zealand.

Species 120. (Mus. —?)

RISSOA CASTANEA. *Ris. testâ elevatâ, levigatâ, fuscâ,*
apice obtuso; anfractibus quinis, convexissimis,
gradatim crescentibus, elevatis, ultimo majuscule;
apertura subpyriformi, margine crassiusculo.

THE CHESTNUT RISSOA. Shell raised, smooth, brown;
apex obtuse; whorls five, rather convex, gradu-
ally increasing, raised, last rather large; aperture
rather pyriform, margin rather thick.

JEFFREYS. —? Brit. Moll.

Hab. British Islands.

Species 121. (Mus. Brit.)

RISSOA (OINA) COSTULATA. *Ris. testâ parvâ, pupiformi,*
subbâ, longitudinaliter costatâ, albâ, supra mollioribus
afractum castaneo interruptim fasciatâ; anfract-
ibus octavis, apicalibus attenuatis, mollioribus sub-
inflatis; apertura parvâ, margine tenui.

THE SMALL RIBBED RISSOA. Shell small, pupa-shaped,
solid, longitudinally ribbed, white, interruptedly
chestnut-banded above the middle of the whorls

whorls eight; apical attenuated, middle a little swelled; aperture small, margin thin.

PEASE. — ? MS. Brit. Mus.

Hab. Sandwich Islands.

Species 122. (Mus. — ? Copied.)

RISSOA (JEFFREYSIA) GULSONE. *Ris. testâ parvâ, fulvescenti, lævigatâ, elevatâ, spirâ obtusâ; anfractibus quinis, convexis, gradatim crescentibus, ultimo angustibsenulo, angustissimè umbilicato; aperturâ subrotundâ, anticè productâ.*

WILSON'S RISSOA. Shell small, slightly fulvous, smooth, raised, spire obtuse; whorls five, convex, gradually increasing, last rather narrow, very narrowly umbilicated; aperture rather rounded, anteriorly produced.

CHALK. — ? British Mollusc.

Hab. Sandwith, Weymouth, Guernsey.

Species 123. (Mus. Brit.)

RISSOA (OINA) AUSTRALIS. *Ris. testâ minutâ, albâ, costis nodosis, distantibus, longitudinalibus et tris punicis spiralibus profundè cancellatâ; anfractibus quinis, biangularis; aperturâ subtrigoniâ, canali conspicuo; columellâ crassâ, labiâ externo crasso, margine interno crenulatâ.*

THE AUSTRALIAN RISSOA. Shell very small, white, cancellated deeply with nodulous, distant, longitudinal ribs and few spiral ridges; whorls five, biangular; aperture subtrigonal, canal conspicuous; columella thick, outer lip thick, inner margin crenulated.

SOWERBY.

Hab. Australia.

A deeply cancellated little species, not exactly resembling any yet described.

(ASSIMINEA)

Species 1. (Mus. Sowerby.)

ASSIMINEA GRAYANA. *Ass. testâ conicâ, lævigatâ, epidermidè subviridè indutâ; spirâ acuminatâ; anfractibus quinis, declivibus, rectilateralibus. aperturâ magnâ, subtrigoniâ, intus castaneâ, margine continuo.*

GRAY'S ASSIMINEA. Shell conical, smooth, covered with greenish epidermis; spire acuminated; whorls five, sloped, straight-sided; aperture large, rather trigonal, chestnut within, margin continuous.

JEFFREYS. Trans. Linn. Soc.

Hab. Marshes of Kent.

Species 2. (Mus. Sowerby.)

ASSIMINEA LITTOREA. *Ass. testâ globosâ, subdiaphanâ, lævigatâ, fulvâ; anfractibus tribus, superioribus brevissimis, ultimo magno, inflato, angustè umbilicato; aperturâ latâ, margine tenui.*

THE SHORE ASSIMINEA. Shell globose, a little transparent, smooth, fulvous; whorls three, upper very short, last large, inflated, narrowly umbilicated; aperture broad, margin thin.

DELLE CHAULE. — ?

Hab. Shores at Weymouth. &c.

RISSO.

	Plate.	Species		Plate.	Species
<i>abyecta</i> , Watson	XII.	113	<i>Corilea</i> , D'Orbigny	III.	24
<i>abyssicola</i> , Forbes	III.	23	<i>costata</i> , Adams	III.	20
<i>acicula</i> , Risso	II.	11	<i>costulata</i> , Alder	III.	29
<i>acuta</i> , Desmarest	II.	11	<i>costulata</i> (Rissoina), Pease	XIII.	121
<i>acuta</i> , Draparnaud	V.	41	<i>crassa</i> , Augas	VIII.	70
<i>albida</i> C. B. Adams	X.	92	<i>crassilabrum</i> , Pease	VII.	59
<i>albigo</i> , Watson	XII.	114	<i>crebrilobata</i> , Sowerby	VI.	56
<i>Alderi</i> , Jeffreys	VI.	49	<i>crenulata</i> , Michaud	IV.	32
<i>anatina</i> , Draparnaud	VI.	51	<i>crispa</i> , Watson	XII.	107
<i>annulata</i> , Dunker	XI.	105	<i>crystallina</i> , Brown	II.	19
<i>approximata</i> , Brown	IV.	35	<i>Cumingii</i> , Reeve	I.	4
<i>Artensis</i> , Montrosier	IX.	84	<i>cyclotoma</i> , Recluz	III.	26
<i>aurantiaca</i> , Watson	XII.	106	<i>decussata</i> , Montagu	IX.	78
<i>auriscalpium</i> , Linnaeus	II.	11	<i>deformis</i> , Sowerby	VII.	63
<i>australis</i> , Sowerby	XIII.	123	<i>denticulata</i> , Risso	IV.	1*
<i>Barleii</i> (Odost.), Clarke	VI.	52	<i>depicta</i> , Montagu	IX.	83
<i>Barleii</i> , Jeffreys	III.	27	<i>Deshayesi</i> ana, Recluz	VII.	62
<i>Beauii</i> , Hanley	IV.	37	<i>diaphana</i> , Alder	XIII.	118
<i>Browniana</i> , D'Orbigny	XI.	101	<i>D'Orbignyana</i> , A. Adams	I.	7
<i>Bruguieri</i> , Payraudou	I.	5	<i>Eulimoides</i>	XI.	99
<i>Bryerea</i> , Montagu	I.	8	<i>Europaea</i> , Risso	I.	2
<i>Burana</i> , Sowerby	X.	90	<i>exigua</i> , Michaud	III.	29
<i>caelata</i> , A. Adams	II.	14	<i>eximia</i> , Jeffreys	VI.	52
<i>calathisca</i> , Montagu	I-V.	19	<i>fasciata</i> , Augas	XIII.	119
<i>calathus</i> , Forbes, Hanley	V.	39	<i>fimbriata</i> , Sowerby	V.	45
<i>Caledonica</i> , Crosse	X.	86	<i>firmata</i> , C. B. Adams	XI.	104
<i>canaliculata</i> , Schwartz	VII.	59	<i>flexuosa</i> , Gould	XI.	97
<i>Canariensis</i> , D'Orbigny	IX.	82	<i>fortis</i> , C. B. Adams	IV.	30
<i>cancellata</i> , Recluz	III.	22	<i>Fremantilla</i> , Risso	I.	2
<i>cancellata</i> , Costa	IV.	32	<i>fulgida</i> , Adams	VI.	50
<i>carinata</i> , Costa	II.	16	<i>fulva</i> , Michaud	VI.	55
<i>castanea</i> , Jeffreys	XIII.	120	<i>gentilissiana</i> , Crosse	V.	44
<i>Catesbyana</i> , D'Orbigny	X.	94	<i>gibberula</i> , Watson	XII.	115
<i>Chesnellii</i> , Michaud	X.	89	<i>glabrata</i> , Megherle	II.	19
<i>cinez</i> , Donovan	IV.	32	<i>gracilis</i> , Macgillivray	V.	40
<i>cinez</i> , Linnaeus	I.	2	<i>grandata</i> , Philippi	I.	2
<i>cimicoides</i> , Forbes	III.	25	<i>Grayana</i> , Jeffreys (Assina)	XIII.	1
<i>cineta</i> , A. Adams	VIII.	71	<i>Gulsonae</i> , Clarke	XIII.	122
<i>cingillus</i> , Montagu	II.	15	<i>Guerinii</i> (—?)	III.	29
<i>claudestina</i> , C. B. Adams	XI.	104	<i>hyalina</i> , Desmoulins	IV.	33
<i>clathrata</i> , A. Adams	IX.	76	<i>incerta</i> , Sowerby	V.	45
<i>conanitis</i> , Forbes	V.	40	<i>inconspicua</i> , Alder	IV.	34
<i>concinna</i> , A. Adams	I.	9	<i>insignis</i> , Ad. & Reeve	VII.	61
<i>coreacea</i> , Manzoni	XIII.	116	<i>insuliva</i> , Deshayes	V.	43

* Erroneously referred to Plate I. fig. 1.

RISSEO

	Plate.	Species.		Plate.	Species.
<i>intercepta</i> , Johnson.....	IV.	36	<i>scalariana</i> , A. Adams.....	I.	6
<i>labiosa</i> , Montagu.....	II.	12	<i>scalaroides</i> , Adams.....	I.	1
<i>lactea</i> , Desmoulins.....	III.	22	<i>semiglabrata</i> , A. Adams.....	VII.	58
<i>ligata</i> , Gould.....	XI.	105	<i>semistriata</i> , Montagu.....	III.	28
<i>lignea</i> , Thorpe.....	IX.	81	<i>semiplicata</i> , Pease.....	XI.	100
<i>lilacina</i> , Recluz.....	IV.	33	<i>similis</i> , Scacchi.....	III.	29
<i>litorea</i> , Delle Chiaje (Assim).....	XIII.	2	<i>Smitlii</i> , Angus.....	VIII.	58
<i>levissima</i>	X.	93	<i>soluta</i> , Philippi.....	VI.	48
<i>levissima</i> , C. B. Adams.....	X.	93	<i>spirata</i> , Sowerby.....	II.	17
<i>Macandrewi</i> , Watson.....	XII.	108	<i>splendida</i> , Eichlin.....	IX.	79
<i>maculata</i> , Sowerby.....	IV.	31	<i>striata</i> , Quoy.....	II.	14
<i>mammillata</i> , Risso.....	I.	2	<i>striata</i> , Montagu.....	V.	40
<i>marginatus</i> , Montagu.....	II.	11	<i>striaticostata</i> , D'Orbigny.....	X.	88
<i>membranacea</i> , Leach.....	VIII.	67	<i>striatula</i> , Montagu.....	II.	16
<i>minutissima</i> , Michand.....	V.	40	<i>stricta</i> , Menke.....	X.	87
<i>Mohrenstrerni</i> , Deshayes.....	VII.	57	<i>striolata</i> , A. Adams.....	VII.	65
<i>Moniziana</i> , Watson.....	XII.	109	<i>subeocinna</i> , Sowerbie.....	IX.	85
<i>monilis</i> , Fleming.....	II.	16	<i>subulata</i> , Adams.....	IV.	36
<i>monodonta</i> , Bosc.....	VIII.	73	<i>subulcata</i> , Philippi.....	III.	28
<i>Montagu</i> , Payson.....	I.	3	<i>sabambilitata</i> , Berkely.....	III.	27
<i>nitida</i> , A. Adams.....	VI.	53	<i>sulcifera</i> , Tröschel.....	XI.	96
<i>nivea</i> , A. Adams.....	X.	91	<i>supracostata</i> — ?.....	IV.	38
<i>nodicincta</i> , A. Adams.....	VIII.	72	<i>tristriata</i> , Thomson.....	III.	28
<i>Novarensis</i> , Watson.....	XII.	111	<i>triticea</i> , Pease.....	XI.	102
<i>opalina</i> , Jeffreys.....	XIII.	117	<i>trochlearis</i> , Carpenter.....	XI.	105
<i>parva</i> , Costa.....	IV.	36	<i>turricula</i> , Angus.....	VIII.	69
<i>perminuta</i> , Manzoni.....	XII.	113	<i>ulvae</i> , Pennant.....	III.	27
<i>Philippiana</i> , Lyffeffer.....	XI.	103	<i>unifasciata</i> , Montagu.....	VI.	54
<i>picta</i> , Jeffreys.....	XII.	110	<i>variabilis</i> , Mühlfeldt.....	IX.	77
<i>plicata</i> , Mühlfeldt.....	III.	20	<i>variegata</i> , Angus.....	VII.	64
<i>princeps</i> , C. B. Adams.....	X.	95	<i>ventricosa</i> , Desmoulins.....	III.	21
<i>proxima</i> , Alder.....	II.	18	<i>ventricosus</i> , Dillwyn.....	V.	41
<i>pulcherrima</i> , Jeffreys.....	V.	47	<i>ventrosa</i> , Montagu.....	V.	41
<i>pulchra</i> , Johnson.....	III.	28	<i>venusta</i> , Philippi.....	II.	13
<i>punctata</i> , Montagu.....	IV.	35	<i>villiea</i> , Gould.....	XI.	98
<i>puncturata</i> , Macgillivray.....	IV.	35	<i>violacea</i> , Desmarest.....	VIII.	74
<i>pyramidalis</i> , A. Adams.....	VIII.	66	<i>virginea</i> , Brown.....	II.	18
<i>reticulata</i> , Sowerby.....	VIII.	75	<i>vitrea</i> , Montagu.....	II.	19
<i>rosea</i> , Deshayes.....	V.	42	<i>vittata</i> , Donovan.....	II.	15
<i>rubra</i> , Adams.....	VI.	54	<i>Watsoni</i> , Schwarz.....	XII.	112
<i>ruflabris</i>	IV.	33	<i>Woodwardi</i> , Carpenter.....	XI.	104
<i>rupestris</i> , Forbes.....	II.	15	<i>Zetlandica</i> , Montagu.....	III.	26
<i>Sagraiana</i> , D'Orbigny.....	IX.	80			

MONOGRAPH

OF THE GENUS

SILIQUARIA.

"Holy, holy, holy! Lord God Almighty!

All Thy works shall praise Thy Name, in earth, and sky, and sea."—*Bishop Heber.*



SILIQUARIA.

PLATE I.

Genus SILIQUARIA Brugière

Testa marina, tubuliformis, spiralter incisofissurata, cœvus apicem plerumque lateri spiralis, doctè irregulariter costata; operculum corneum, cylindricum, multilaminatum.

Shell marine, tubuliform, with a spirally-incised fissure, generally loosely spiral towards the apex, afterwards irregularly twisted; operculum horny, cylindrical, consisting of numerous laminae.

Synonym. *ULAGONES*. Guettard.

It is not within the scope of this work to enter critically into questions of generic nomenclature. If it were, we should still be disinclined to change the generally adopted and almost universally recognised name given above. The animal was formerly supposed to be an annelid, but is now ascertained to be a mollusk, with a remarkably complicated operculum, not unlike that of a solarium. The examination we have made gives us nearly a dozen fairly distinct species, with one or two of more doubtful character. The siliquariae are widely spread, the typical species being found frequently in groups embedded in sponges and entangled in the closely-twined roots of fuca. The Australian one or two species are like ponderons and coarse imitations of the Mediterranean *S. anguina*, excepting in the character of the slit. There do not appear to be any northern species of this interesting genus. M. Otto Mörch, in his revision of the *Tenagoli* in the Zoological Proceedings, arranges the species into subgenera, and even into genera, by the characters of the slit. This, however, is so subject to variation in the same species, and even in the same individuals, that it is scarcely reliable even for specific, much less for generic, distinction.

Species 1. (Fig. a, b, c, d, Mus. Brit. Sowb.)

SILIQUARIA OBUSA. *Sil. testâ elongatâ, anfractibus magnis, utriusque spiralter subæquo lœvis, intus læviœscalis, extus incrassatâ, concentricè fissuratâ,*

aperturâ rotundâ, âvari spiratè simplicè, cœvus apicem frequenter obtusâ.

THE OBTUSE SILIQUARIA. Shell elongated, whorls large, spirally, rather finely lirated, rather smoother within, thickened on the outside, concentrically fissured; spiral fissure simple, frequently closed towards the apex.

SCHUMACHER.

Hab. Mediterranean.

Scrupula anguina, as of Linn. Lam. Phil. &c.

Scrupula annularis, Dillwyn.

Scrupula angustas, Montfort.

Helix incisus, Linn. test. jun.

This species being generally known by the name *Siliquaria anguina*, I should much have preferred retaining that name for it. But it appears perfectly clear that Born was wrong in taking what Linnæus erroneously introduced as a variety for the type of his species, which is the true *Scrupula anguina* Linnæus, *S. varicata* Born. The name *S. obtusa* is founded upon what is a common variation in several species, namely, that of almost commencing with several broad, closely coiled whorls, so as to form a cylinder. *S. anguina* of Linnæus is carefully described as having the slit subarticulated, whereas that of the present species is quite simple.

Species 2. (Fig. a, b, Mus. Brit.)

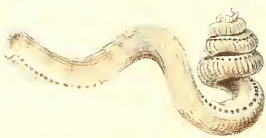
SILIQUARIA CUMINGII. *Sil. testâ elongatâ, albâ, angustè convolutâ, tenuissimè spiralter striatâ, extus infra brachiter concentricè incisâ; fissurâ spiratè articulatâ.*

CUMING'S SILIQUARIA. Shell elongated, white, narrowly convolute, very finely spirally striated, finely concentrically incised on the lower part outside; spiral fissure articulated.

MÖRCH. Proc. Zool. Soc. 1860.

Hab. Isl. Ticao, Philippines; var. b. Japan.

Fig. b is a somewhat broader variety of this finely sculptured shell. The slit is articulated so as to present a chain-like appearance.



SILIQVARIA.

PLATE II.

Species 3. (Mus. Brit.)

SILIQVARIA TONDEROSA. *Sil. testâ griseo-fuscescensâ crassissimâ, magno; anfractibus magnis, prope apicem et infus latè convolutis et approximatis, supra fissuram undulato-dentatis, intus breviusculis, extus incrassatis, radii concentricè fissuratis, ultimo latrato; fissurâ spirali in anfractibus superioribus clausâ, limâ denticulatâ vel articulatâ, deindè simplici.*

THE TONDEROUS SILIQVARIA. Shell brownish grey, very thick, large; whorls large, broadly convoluted and approximate near the apex and below; wavyly dentated above the fissure, rather smooth inside, thickened outside, roughly concentrically fissured; last loose; spiral fissure closed in the upper whorls, then denticulated or articulated, afterwards simple.

MÖBCH. (Tenagodus) Proc. Zool. Soc. 1860.

Hab. Port Essington.

We admit this species on account of the apparent distinctness of form, which may nevertheless be only analogous to the turbinated variety of *Siliquaria anguina*.

Species 4. (Mus. Brit.)

SILIQVARIA TROCHLEARIS. *Sil. testâ albidâ, rugosâ, prope apicem et versus medium densè convolutâ; tubâ magnitudinè mediocrî; anfractibus subrugatis, concentricè radii fissuratis; fissurâ spirali rotundè et conspicuè articulatâ.*

THE FULLY SILIQVARIA. Shell whitish, rugose, closely convoluted near the apex and towards the middle; tube moderate in size; whorls rather rough, concentrically rudely fissured; spiral fissure roundly and conspicuously articulated.

MÖBCH. (Tenagoda) Proc. Zool. Soc. 1860, p. 498.

Hab. Philippines.

The coiled portion of this species is close and compact, and the regular rounded articulations give a chain-like appearance to the fissure.

Species 5. (Fig. a, b, Mus. Brit.)

SILIQVARIA LACTEA. *Sil. testâ parvâ, camlidâ, vel immâ et violaceâ, plerumque irregulariter contortâ; tubâ parvâ, subrugosâ, rarè striatâ; anfractibus apicalibus spiritaliter pyramidalis; alteris subæqualibus. fissurâ articulatâ, prope apicem per lamina partim clausâ.*

THE MILKY SILIQVARIA. Shell small, white, or brown and violet, generally irregularly contorted; tube small, rather rough, rarely striated; apical whorls spirally pyramidal; others nearly equal; fissure articulated, partly closed near the apex by a lamina.

LAMARCK. Hist. Nat. Anim. s. Vert. V. p. 338.

Hab. Port Essington.

This little siliquaria is very gregarious, forming conglomerated masses. Fig. b represents a small portion of one of these masses.

Species 6. (Mus. Brit.)

SILIQVARIA AUSTRALIS. *Sil. testâ magnâ, crassâ, versus apicem pyramidalâ, deindè lævâ; tubâ magnâ, regulariter crescenti, intus tenuissimè striatâ, extus crassâ, rugosâ, concentricè fissurâtâ; fissurâ spirali rotundè articulatâ, propè aperturam hiantî; marginibus crassis.*

THE AUSTRALIAN SILIQVARIA. Shell large, thick, pyramidal towards the apex, then loosened; tube large, regularly increased, very finely striated on the inner side, thick, rugose on the outer, concentrically fissured; spiral fissure roundly articulated, gaping near the aperture; margin thick.

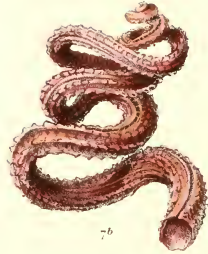
QUOY et GAIMARD. Voyage de l'Astrolabe.

Hab. Australia.

Although thicker and coarser in texture than the typical species, this species resembles it so much that it would be difficult to distinguish the two were it not for the round chain-like articulations of the spiral fissure. That of *S. obtusa* is quite simple.



7a



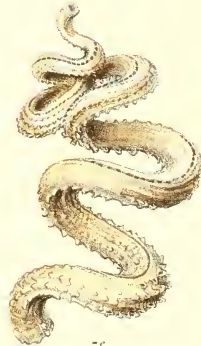
7b



7c



7d



7e

SILIQVARIA.

PLATE III.

Species 7. (Fig. *a, b, c, d, e*, Mus. Brit. Sowb.)

SILIQVARIA ANGVINA. *Sil. testâ plerumque crassâ, latè irregulariter contortâ, distanter spirâliter liratâ, viris acutè squamatis vel echinatis; tubâ plerumq. latè crescenti; fissurâ spirâli angustissimâ in setibus oblongo-articulatâ.*

THE SNAKE SILIQVARIA. Shell generally thick, broadly and irregularly twisted, distantly spirally ridged; ridges sharply squamose or spined; tube generally very slowly increasing; spiral fissure very narrow, with oblong articulations in parts.

LINNEUS, Syst. Nat. p. 1267.

Serpula muricata, Born.

Trochoda anguina, Moreh.

Siliquaria polyzona, Blainville.

Siliquaria ruber, Schumacher.

Siliquaria papillosa (?) Rees.

Siliquaria laevigata, Lamarek.

Siliquaria sulcata, Gray.

Serpula echinata, Gmel.

Hob. Moluccas, Ceylon.

It is not without hesitation that the varieties in form and colouring represented in the plate are united under one specific name. M. Moreh applies the name *T. muricata* to the pale yellow variety (fig. *d*), and that of *T. ruber* to the Ceylon purple, thick-shelled, flat-whorled variety. We thought at first that the specimen fig. *e* might represent a distinct species, the tube and whorls being rounder and more regularly increasing, and the ridges not being so strongly developed. But having the young specimen (fig. *c*) before us, with the apical whorls purple and smooth, and the lower pale and spinous, while in some parts of the most rounded whorls the ridges could easily be traced, we concluded that the union could be better maintained than the separation. It is not difficult, even with comparatively few specimens, to trace the species through all its forms. The rounded and angular, smooth and spinous, thick and slender, scales without ridges and ridges without scales, the dark purple, yellow, and white colours, the articulated, closed, and simple slit are to be found within a few specimens, and sometimes in a single one.



8.



9.



10.



11.



12.



13.

SILQUARIA.

PLATE IV.

Species 8. (Mus. Brit.)

SILQUARIA SENEGALENSIS. *Sil. testâ parvâ, rugosâ, rosâ et pallidè fulvâ; tubi longitudine mediovi, vie crescenti; anfractibus regularibus parvis, intus subultrigatis, costis concentricè rugatis; fissurâ spirali articulatâ, tùm versus aperturam simplici.*

THE SENEGAL SILQUARIA. Shell small, rugose, pink or pale fulvous; tube of middle size, scarcely increasing; regular whorls few, rather smooth on the inner side, concentrically wrinkled on the outer; spiral fissure articulated, then simple towards the aperture.

REPLIS. Revue Zoologique.

Tenagola incisa, Mörch, vix Chemn.

Hab. Senegal, Zanzibar?

In the rosy variety there is a strong resemblance to pink coral; the other varieties are unknown to us.

Species 9. (Mus. Brit.)

SILQUARIA BERNHARDI. *Sil. testâ albâ, fulvâ-âbrâ latâ, levîter oblongatâ, angustâ et laxè convolutâ, versus apicem irregulariter pyramidatâ; tubi angustâ, crenulatim striatâ; fissurâ spirali rotundato-articulatâ.*

BERNHARD'S SILQUARIA. Shell white, clouded with fawn, thin, elongated, narrowly and loosely twisted, irregularly pyramidal towards the apex; tube narrow, crenulately striated; spiral fissure roundly articulated.

MÖRCH.

Hab. Senegal.

A large group in the British Museum, containing hundreds of specimens, testifies to the very-gregarious nature of this species.

Species 10. (Mus. Brit.)

SILQUARIA ENCAUSTICA. *Sil. testâ parvâ, crassâ, rugosâ, irregulariter pyramidatâ; tubi parvâ, intus levigatâ, costis incrassatâ, rubè concentricè rugatâ et*

fissuratâ; fissurâ spirali, in anfractibus superioribus clausâ, tùm articulatâ, deindè simplici.

THE ENAMELLED SILQUARIA. Shell small, thick, rugose, irregularly pyramidal; tube small, smooth on the inner side, thickened on the outer, roughly concentrically wrinkled and fissured; spiral fissure closed in the upper whorls, then articulated, afterwards simple.

MÖRCH. Proc. Zool. Soc. 1860, p. 408.

Hab. Ceylon.

But for the very strongly wrinkled exterior, this shell would seem to bear a rather strong resemblance to *S. trochlearis*. In the latter species, however, the slit is articulated throughout.

Species 11. (Mus. Brit.)

SILQUARIA TOSTI'S. *Sil. testâ parvâ, ferruginâ, ad apicem intus fissâ; tubi angustâ, levîsculâ; anfractibus ad apicem orbiculatis; fissurâ spirali, articulatâ, utrinque lineâ denticulatâ marginatâ.*

THE BAKED SILQUARIA. Shell small, ferruginous, very strong brown at the apex; tube narrow, rather smooth; whorls orbicular at the apex; spiral fissure articulated, bordered on both sides with a denticulated line.

MÖRCH. Proc. Zool. Soc. 1860, p. 405.

Hab. Ceylon.

Species 12. (Mus. Brit.)

SILQUARIA REENTZII. *Sil. testâ parvâ, superâ et ad medium spiralter pyramidatâ, fuscâ; tubi parvâ, costis concentricè fissuratâ, fissurâ spirali articulatâ.*

REENTZ'S SILQUARIA. Shell small, spirally pyramidal above and at the middle, brown; tube small, concentrically fissured outside; spiral fissure articulated.

MÖRCH. Proc. Zool. Soc. 1865.

Hab. —?

SILIQVARIÄ. —PLATE IV.

Species 13. (Mus. Brit.)

SILIQVARIÄ TAHITIENSIS. *Sil. testä laccigatä, pallidä fulvâ; tubä angustä, laxè contortä, liratä, inter liras cancellatä; fissurä spirali angustä, simplici.*

THE TAHITIÄN SILIQVARIÄ. Shell smooth, pale, fulvous; tube narrow, loosely twisted, ridged, cancellated between the ridges; spiral fissure narrow, simple.

MÖRCH. Proc. Zool. Soc.

Hab. South Seas.

We have only a fragment of this species, which M. Mörch describes as differing from *Sil. lactea* in the greater size, the stronger ridges, the cancellated interstices, and the narrow slit.

Species not known.

Sil. dubius, DeFrance; Sil. gigas, Lissou; Sil. porosa, Boch; Sil. (Ten.) Aquilæ, Mörch; Sil. (Ten.) cylindrella, Mörch; Sil. (Pyxipoma) Möbi, Mörch.

MONOGRAPH

OF THE GENUS

CYRENA.

"NATURE'S GENIUS pure work, unsullied by sin; and therefore the study of it is a pure delight to those who love Him."—*Dean Goulborn*



1



2a



2b



CYRENA.

PLATE II.

Species 3. (Mns. Brit.)

CYRENA TRIQUETRA. *Cyr. testā subtrigoni, altā, subcompressā, leri, epidermide subviridi, partim nigrescenti indutā; latere antico brevissimo, declivi; umbonibus elevatis; latere postico angulato, margine dorsali declivi.*

THE THREE-CORNERED CYRENA. Shell rather trigonal, high, rather flat, smooth, covered with a rather green epidermis, blackish in parts; anterior side very short, sloped; umboes raised; posterior side angular, dorsal margin sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 13.

Hab. Philippines.

Species 4. (Mus. Brit.)

CYRENA ROTUNDATA. *Cyr. testā rotundā, tumidā, inaequilaterali, irregulariter rugatā et sulcatā, epidermide solidā, subviridi, nitenti, medio radiatum striatā indutā; intus sparsim violascenti; latere antico brevi, compresso; latere postico tumidissimo, sublexigato, margine laterali subquadrato.*

THE ROUNDED CYRENA. Shell round, tumid, inequilateral, irregularly wrinkled and grooved, covered with a solid, greenish, shining epidermis, radiately striated in the middle; sparingly purpled within; anterior side short, compressed; posterior area very tumid, rather smooth, lateral margin rather square.

LEA. Trans. Am. Ph. Soc. Pl. XVII. f. 51.

Hab. East Indies.

More tumid in the middle, and more depressed at the dorsal margin than *Cyrena lenticularis*.

Species 5. (Mus. Brit.)

CYRENA OBESA. *Cyr. testā subovata, levigatā, castanea, tumidā, distanter leviter sulcatā; latere antico brevi, tenuiter rugato, declivi; latere postico obscure triangulato; margine dorsali rectiusculo.*

THE FAT CYRENA. Shell subovate, smooth, chestnut, tumid, distantly slightly grooved; anterior side short, finely wrinkled, sloped; posterior side obscurely three-angled; dorsal margin rather straight.

HINDS. Voy. Sulphur.

Hab. Feejee Islands.

The posterior side is much produced, and the margin modified in shape by the three radiating obscure angles.

Species 6. (Mus. Brit.)

CYRENA KERAUDEENI. *Cyr. testā magnā, crassā, subovata, posticè distanter, anticè crebrè sulcata, epidermide nigra indutā; intus margine cardinali postico purpureo maculato, medio subcaudato, latere antico brevi, declivi; latere postico peduncato, subacuminato, ligamento maximo, elongato.*

KERAUDEEN'S CYRENA. Shell large, thick, subovate, posteriorly distantly, anteriorly closely sulcated; covered with a black epidermis; with a purple spot on the posterior cardinal margin within, somewhat rayed in the middle; anterior side short, sloped; posterior side produced, a little acuminated, ligament very large, long.

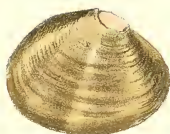
LESSON. Voy. de la Coquille. Pl. II. f. 3.

Hab. Philippines.

Has very much the form and appearance of a large dark *Cyprina*.



7



8^a



8^b



9

CYRENA.

PLATE III.

Species 7. (Mus. Brit.)

CYRENA UNIFORMIS. *Cyr. testâ elongato-subquadrata, subcompressâ, antice rugis elevatis, undulatis, in a-nulis bifurcatis lirata, posticè lœvigatâ; latere antico brevi, rotundo; latere postico subquadrato, areâ dorsali impressâ obliquè radiatâ; umbonibus depressis; margini ventrali cœtiosculo.*

THE WONDERFUL CYRENA. Shell elongated-subquadrated, rather compressed, anteriorly ridged with raised, undulating, some of them bifurcated wrinkles, posteriorly smooth; anterior side short, round; posterior side rather square, obliquely rayed with a dorsal area; umboes depressed, ventral margin rather straight.

DESHAYES. Proc. Zool. Soc. 1854, p. 18.

Hab. Philippines.

The wrinkles on the anterior surface of this shell are very remarkable.

Species 8. (Fig. a, b, Mus. Brit.)

CYRENA MISOE. *Cyr. testâ ovato-subrotundâ, depressâ, compressâ, subviridi-stramineâ, medio albo lirato, lœvigatâ; intus viridè purpureo radiatâ; latere antico breviter lirato, brevi, valdè declivi; latere postico latiori; umbonibus obtusis; margine dorsali depresso; cardine angusto, dente laterali antico brevissimo.*

THE SMALLER CYRENA. Shell ovate-roundish, depressed, compressed, greenish straw, with two

white rays, smooth; rayed with bright purple within; anterior side shortly ridged, shortly much sloped; posterior side wider; umboes obtuse; dorsal margin depressed; hinge narrow, lateral anterior tooth rather short.

PRIME. MS. Mus. Brit.

Hab. —

This little shell being rayed within and without, and being more depressed at the dorsal margin than most of the group to which it belongs, may show it to be a distinct species, rather than the young of some other.

Species 9. (Mus. Brit.)

CYRENA UNIFORMIS. *Cyr. testâ crassâ, oblongâ, costiformi, subrotundâ, epidermide nigra, ovato bi-dentâ; latere antico brevi, margine dorsali declivi; umbonibus parvis incurvis, depressis, latere postico producto, margine dorsali arcuato, margine ventrali excavato; ligamento mucoso.*

THE UNIO-SHAPED CYRENA. Shell thick, oblong, kidney-shaped, rather arched, covered with a black, rough epidermis; anterior side short, dorsal margin sloped; umboes small, incurved, depressed; posterior side produced, dorsal margin arched; ventral margin excavated; ligament very large.

PRIME. Proc. Zool. Soc. 1860, p. 319.

Hab. — ?



10



11



12

CYRENA.

PLATE IV.

Species 10. (Mus. Brit.)

CYRENA INFLATA. *Cyr. testā tumidissimā, crassā, valdē inæquilaterali, epidermide rugosā, crassi, nigri indutā, intūs versus marginem densē purpurēā, ad marginem nigrescenti; margine cardinali lato, fulcro latissimo, dente antico brevi, magno; latere antico brevi, angusto; latere postico expanso, inflato, ad marginem biangulato; margine dorsali elevato.*

THE INFLATED CYRENA. Shell very tumid, thick, very inequilateral, covered with a rough, thick black epidermis, deep purple within towards the margin, deepening into black at the margin; cardinal margin broad, fulcrum very broad; anterior tooth short, large; anterior side short, narrow; posterior side expanded, inflated, with two angles at the margin; dorsal margin raised.

PRIME. Proc. Zool. Soc. 1860, p. 20.

Hab. Nicobar Islands.

Species 11. (Mus. Brit.)

CYRENA VENERIFORMIS. *Cyr. testā ovatā, solidā, costatā, tumidā; intūs purpureo partim suffusā; latere antico brevi, declivi, ferē usque ad medium subregulariter lirato; latere postico inflato, tumido, ad marginem rotundato; umbonibus prominentibus.*

THE VENUS-SHAPED CYRENA. Shell ovate, solid, chestnut, tumid, suffused with purple inside; anterior side short, sloped, rather regularly ridged as far as the middle; posterior side in-

flated, tumid, rounded at the margin. umbones prominent.

SOWERBY.

Batissa fuscata. Prime.

Cyrena fuscata of Lamarek belongs to the section separated by authors as a genus under the name *Corbicula*. It is a very inconvenient practice, in naming new shells, to repeat a name already applied to a species in what has recently been considered the same genus.

Species 12. (Mus. Brit.)

CYRENA PRODUCTA. *Cyr. testā magnā, alti, subrotundā, epidermide fusco-subviridi nitenti indutā, medio triligatā, utroque latere distanter sulcatā; intūs roseā, densē purpurascenti, latere antico brevissimo, arcu depressā subnullari, ad marginem sinuati; latere postico subquadrato, margine dorsali elevato; umbonibus elevatis, prominentibus, incurvis; ligamento magno, brevi.*

THE PRODUCED CYRENA. Shell large, elevated, rather round, covered with a greenish brown shining epidermis; smooth in the middle, distantly grooved on each side; rose, shading into deep purple within; anterior side very short, sinuated at the margin by a depressed lunule-like area; posterior side rather square, dorsal margin elevated; umbones raised, prominent, turned inwards; ligament large, short.

DESHAYES (*Batissa*). Proc. Zool. Soc. 1854, p. 13.

Hab. — ?



CYRENA.

PLATE V.

Species 13. (Mus. Brit.)

CYRENA AUSTRALIS. *Cyr. testâ ovatâ, crassâ, inflatâ, castaneâ, intus posticè roseo-purpurascenti radiatâ; latere antico brevi, angustato, subacuminato, subregulariter lirato, pepe marginem dorsalem arcu depressâ subsinuatâ; latere postico tumidissimo, ciliatim biangulato; umbonibus ventis, depressis.*

THE AUSTRALIAN CYRENA. Shell ovate, thick, inflated, chestnut, posteriorly rayed with rose-purple within; anterior side short, narrow, rather acuminate, nearly regularly ridged; slightly sinuated near the dorsal margin by a depressed area; posterior side very tumid, radiately biangular; umbos ovate, depressed.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. South Australia.

Species 14. (Mus. Brit.)

CYRENA TENEBROSA. *Cyr. testâ ovato-oblongâ, compressâ; intus posticè dense purpureâ, et his epidermide fumoso-castaneâ indatâ; latere antico brevi, angustâ, obtuso, liris acutiusculis rugato; umbonibus depressis; medio liri, complanato; latere postico producto, lato, validè biangulato; margine dorsali rectiusculo, subelevato.*

THE SHADOWY CYRENA. Shell ovate-oblong, compressed; deep purple posteriorly within, covered outside with a smoky chestnut epidermis; anterior side short, narrow, obtuse, wrinkled with rather sharp ridges; umbos depressed, middle smooth, flat; posterior side produced, broad, with two strong angles, dorsal margin somewhat straight, rather raised.

HINDS. Voy. Sulphur.

Hab. Feejee Islands.

Species 15. (Mus. Brit.)

CYRENA VIOLACEA. *Cyr. testâ ovato-oblongâ, subcompressâ, castaneâ, intus violaceo suffusâ; latere*

antico liris distinctis, conchalis lateralibus ad medium extensis sculpto, margine dorsali ducto; latere postico producto, obscure radiatim triangulato, margine dorsali elevato, arcuato, margine ventrali paulò excavato.

THE VIOLET CYRENA. Shell ovate-oblong, rather compressed, chestnut; suffused with violet within; anterior side sculptured with distinct ridges, some intercalated, extending to the middle, dorsal margin sloped; posterior side produced, with three obscure radiating angles; dorsal margin raised, arched, ventral margin a little excavated.

LAMARCK. Anim. s. Vert. Chénn: Illus. Conch. Pl. VII. f. 5.

Hab. Indian Ocean.

There can be little certainty as to the identification of this Lamarckian species. The specimen figured resembles in form and compression the one figured by Chénn as Lamarek's shell. It is, however, uncoated.

Species 16. (Mus. Brit.)

CYRENA FORTIS. *Cyr. testâ subcompressâ, subovata, crassâ; intus dentibus lateralibus subequalibus, elongatis, serratis, cardinalibus bifidis armatâ; extus epidermide viridi-fusâ, crassâ, subrugosâ indatâ; latere antico subhis crebris sculpto; latere postico sulcis distantibus rugato; latè angulato, post angulum liris divergentibus submolis rugato.*

THE STRONG CYRENA. Shell rather compressed, rather oval, thick; armed within with rather equal elongated, serrated, lateral and bifid cardinal teeth, covered outside with a greenish-brown, rather rough epidermis; anterior side sculptured with numerous ridges; posterior side wrinkled with distant sulci; broadly angular, behind the angle wrinkled with diverging, rather nodose ridges.

PRIME. Proc. Zool. Soc. 1860, p. 329.

Hab. New Caledonia.



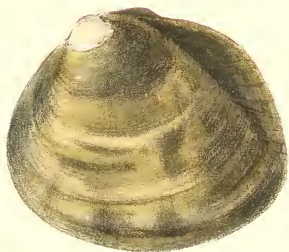
17



18



19



20



21

CYRENA.

PLATE VI.

Species 17. (Mus. Brit.)

CYRENA CHILDRENI. *Cyr. testâ subrotundâ, compressâ, lorigatâ, fusco-virescenti, intâs caraco violaceo-que umbulatâ; latere antico brevi, declivi, liris paucis brevibus rugatâ; latere postico subinflato, rotundatim angulato; margine dorsali rectilisculo, margine ventrali convexo, margine postico obliquè subquadrato.*

CHILDREN'S CYRENA. Shell rather rounded, compressed, smooth, greenish brown; within clouded with flesh tint and violet; anterior side short, sloped, wrinkled with few short ridges; posterior side rather inflated, roundly angular; dorsal margin rather straight, ventral margin convex. posterior margin obliquely subquadrate.

GRAY. MS. Mus. Brit.

Hab. Philippines.

Species 18. (Mus. Brit.)

CYRENA HUMEROSA. *Cyr. testâ ovato-subtrigona, castaneâ, latere antico brevi, declivi, subcuneato, conspicuè lorigato; umbonibus depressis, obtusis; latere postico obtusè triangulato, lorigato, cœsus angulato posticum tumido, gibboso, margine dorsali elevato, subulato.*

THE SHOULDERED CYRENA. Shell ovate-subtrigonal, chestnut, anterior side short, sloped, rather acuminated, conspicuously ridged; umbones depressed, obtuse; posterior side with two obtuse angles, smooth, very tumid and gibbous, dorsal margin raised, somewhat winged.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. —?

Although a little resembling *Cyr. triquetra*, Desh., this species is not so elevated at the dorsal margin, nor so directly sloped in front.

Species 19. (Mus. Brit.)

CYRENA JAYENSIS. *Cyr. testâ rotundâ, altâ, solidâ, tumidi, castaneâ, versus marginem viridescenti; latere antico brevissima, ad marginem arâ depressâ umbonato, sulcis brevibus rugato; umbonibus rotundis, prominentibus; latere postico inflato, rotundo, margine dorsali elevato; ligamento angulo.*

JAY'S CYRENA. Shell round, high, solid, tumid, chestnut, becoming greenish towards the margin. anterior side very short, sinned at the margin by a depressed area, wrinkled with short grooves; umbones rounded, prominent; posterior side inflated, round, dorsal margin raised; ligament large.

LEA. Trans. Am. Ph. Soc. Vol. 5. Pl. XVII, f. 52.

Hab. Waigiori.

Species 20. (Mus. Brit.)

CYRENA GRACILIS. *Cyr. testâ subrotundâ, compluviatâ, fuscis-stramineâ, intâs caraco purpureo-que suffusâ; latere antico brevissimo, arâ depressâ angustâ, supero declivi; latere postico obliquè angulato, post angulum liris divaricatis distinctibus rugato; margine dorsali fere recto, margine postico obliquè subtruncato.*

THE SLENDER CYRENA. Shell rather round, flat, smoky straw, within suffused with flesh and purple; anterior side very short, with a narrow depressed area, sloped above; posterior side obliquely angular, wrinkled behind the angle with diverging ridges; dorsal margin nearly straight, posterior margin obliquely truncated.

PRIME. Proc. Zool. Soc. 1860, p. 319.

Hab. —?

Species 21. (Mus. Brit.)

CYRENA CORBULOIDES. *Cyr. testâ obliquè subtrigona, subcompressâ, altâ, compluviatâ; vireidè viridifuscescenti; epidermide undulatum striatâ indatâ; latere antico brevissimo, margine laterali vixidè declivi, umbonibus elevatis; latere postico obscure trigono, margine ventrali rectilisculo.*

THE CORBULA-SHAPED CYRENA. Shell obliquely subtrigonal, subcompressed, high, flat, bright brownish green, covered with a wavy striated epidermis, anterior side very short, lateral margin much sloped downwards, umbones raised; posterior side obscurely trigonal, ventral margin rather straight.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. Louisiade Archipelago.



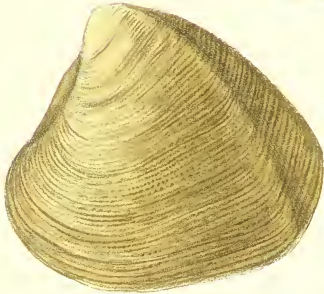
22



23



24



25



26

CYRENA.

PLATE VII.

2nd Division, Cyrena proper. Anterior lateral tooth short, not serrated.

Species 22. (Mus. Brit.)

CYRENA PAPUA. *Cyr. testâ oratâ, compressâ, stramineâ, concentricè subtiliter fimbriatâ striatâ; versus umbones utrinque arcu impressâ marginatâ; latere antico brevi, rotundo, margine dorsali convexo, declivi; latere postico producto, radiatim angulatâ, margine dorsali prope umbones convexo, tum declivi, margine terminali breviter truncato; umbonibus depressis.*

THE PAPUA CYRENA. Shell ovate, compressed, straw-coloured, concentrically rather distantly fringed-striated; bordered on each side near the umbones with an impressed area; anterior side short, round, dorsal margin convex, sloped downwards; posterior side produced, radiately angular, dorsal margin convex near the umbones, then sloped downwards, terminal margin shortly truncated; umbones depressed.

LARSON. Guérin: Mag. Zool. Pl. XI.

Hab. — ?

Species 23. (Mus. Brit.)

CYRENA BENGALENSIS. *Cyr. testâ solidâ, tumidâ, crassâ, subtriangulâ, fusco-nigrescenti, rugoso-striatâ; latere antico albo, brevissimo, declivi, amplo; latere postico producto, margine dorsali longè declivi, ad terminum truncato, ante angulum eâ excavato.*

THE BENGAL CYRENA. Shell solid, tumid, thick, subtriangular, blackish-brown, roughly striated; anterior side high, very short, sloped, full; posterior side produced, dorsal margin with a long slope, truncated at the end, very slightly excavated in front of the angle.

LAMARCK. Anim. sans Vert. Cyreua, 10.

Hab. Bengal.

Species 24. (Mus. Brit.)

CYRENA CYPRINOIDES. *Cyr. testâ magis, altissimâ, orbato-subquadratâ, subcirculè fuscâ, rugoso-striatâ; latere antico brevissimo, subtus umbones convexo, arcu subnullari impresso; umbonibus convexis, fere terminalibus; latere postico subquadrato, radiatim impresso, margine dorsali convexo, margine terminali sinuato.*

THE CYPRINA-LIKE CYRENA. Shell large, very high, roundly subquadrated, greenish-brown, roughly striated; anterior side very short, excavated under the umbones, impressed with a humle-like area; umbones incurved, nearly terminal; posterior side rather square, radiately impressed, dorsal margin arched, terminal margin sinuous.

GRÖY. Voyage de l'Astrolabe. Pl. LXXXII. f. 1-3.

Hab. — ?

Species 25. (Mus. Brit.)

CYRENA TRIANGULARIS. *Cyr. testâ triponâ, altissimâ, compressâ, concentricè tenuiter, minute radiatim striatâ; latere antico brevissimo, versus marginem centradem annulatim producto, subtus umbones subconvexo, fere perpendiculariter declivi; umbonibus altissimis; latere postico versus marginem radiatim impresso, margine terminali subnullo, margine dorsali longè arcuatim declivi.*

THE TRIANGULAR CYRENA. Shell trigonal, very high, compressed, concentrically finely, minutely, wavily striated; anterior side very short, acuminately produced towards the ventral margin, somewhat excavated under the umbones, almost perpendicularly sloped; umbones very high; posterior side radiately impressed not far from the margin, dorsal margin with a long, arched slope.

METCALFE. MS. Cum Coll.

Hab. — ?

Species 26. (Mus. Brit.)

CYRENA SINUOSA. *Cyr. testâ subquadratâ, altissimâ, ponderosâ, epidermide fusco-nigrescenti rugoso-striatâ indolâ; latere antico brevi, infere subrotundâ; umbonibus fere terminalibus; latere postico producto, subquadrato, sulcis duobus sinuatis radiatim impressis, margine terminali sinuato, margine dorsali arcuatim declivi.*

THE SINUOUS CYRENA. Shell subquadrated, rather high, ponderous, covered with a blackish-brown roughly-striated epidermis; anterior side short, roundish below, umbones nearly terminal; posterior side produced, rather square, radiately impressed with two sinuated grooves, terminal margin sinuous, dorsal margin sloped with a curve.

DESHAYES. Proc. Zool. Soc. 1854, p. 18.

Hab. Ceylon.



27^a



27^b



28



29



30



31

CYRENA.

PLATE VIII.

Species 27. (Fig. a, b, Mus. Brit.)

CYRENA CARDIFORMIS. *Cyr. testā tenuisculā, sub-
globosā, profundā, inflatā; obscure fuscā, intus
concentricè papyraceo-undulatā, estūs concentricè
subobscuro striatā; latere postico brevi, excavato,
subterminali impresso; latere postico producto,
declivi, ad terminum breviter truncato; umbonibus
inflatis, rotundis; margine ventrali convexo, prope
terminum posticum paulo concavo.*

THE HEART-SHAPED CYRENA. Shell rather thin, sub-
triangular, deep, inflated; dull brown, sometimes
clouded with purple inside, outside concentrically
rather distantly striated; posterior side produced,
sloped, shortly truncated at the end; umboes
inflated, rounded; ventral margin convex, a
little concave near the end.

DESHAYES. — ? MS. in Cum. Coll.

Hab. Payta, Peru.

Species 28. (Mus. Brit.)

CYRENA BIVARIATA. *Cyr. testā crassā, tumidiusculā,
nigrescenti, concentricè, undulatā, late striatā;
lobos pallide caruā; latere antico brevissimo, de-
clivi, subexcavato; umbonibus depressis, fere termi-
nalibus, latere postico tumido, angulato, post
angulum et paulo ante denticulatū angulato, margine
dorsali arcuato.*

THE DIVERGENT CYRENA. Shell thick, rather tumid,
nearly black, with concentric undulating broad
striae; pale, fleshy within; anterior side very
short, sloped, slightly excavated; umboes de-
pressed, almost terminal, posterior side tumid,
angular, behind and a little before the angle
divergently wrinkled; dorsal margin arched.

DESHAYES. Proc. Zool. Soc. 1874, p. 17.

Hab. New Guinea.

Species 29. (Mus. Brit.)

CYRENA PANAMAENSIS. *Cyr. testā inflatā, globosā, albā,
fuscescensubstriatā, latere antico subtus umbonos rotundē
excavato, intus rotundē producto; umbonibus elev-
atis, rotundis; margine ventrali convexo; latere*

*postico angulato, ad angulum denticulato (perforato),
areā postangulārē excavatā, planulatā.*

THE PANAMA CYRENA. Shell inflated, globose, high,
greenish-brown; anterior side roundly excavated
under the umboes, roundly produced below;
umboes elevated, round; ventral margin convex;
posterior side angular; very obscurely keeled at
the angle, postangular area concaved, flat.

PRIME. — ? MS. Mus. Brit.

Hab. Panama.

Species 30. (Mus. Brit.)

CYRENA MARITIMA. *Cyr. testā inflatā, subglobosā,
altissimā, epidermide papyraceā intus, concen-
tricè striatā; margine dorsali utrimque declivi;
latere postico angulato, ad angulum obtusè en-
rinato; umbonibus rotundis, inflatis.*

THE MARITIME CYRENA. Shell inflated, subglobose,
very high, covered with a papyraceous epi-
dermis, concentrically striated; dorsal margin
sloped on each side; posterior side angular, with
an obscure keel at the angle; umboes rounded, in-
flated.

C. B. ADAMS. Proc. Zool. Soc. 1854, p. 355.

Hab. — ?

Species 31. (Fig. a and Fig. b, c. Pl. X. Mus. Brit.
and Sowerby.)

CYRENA CAROLINIENSIS. *Cyr. testā altā, brevi, tumidā,
valde inflatā, epidermide rugoso-striatā, olivaceā
vel pallide fuscā intus, intus subtus umbonos
caruā, ad latera curvaturaque papyraceo-undulatā
et rotulatā; latere antico brevissimo, declivi; um-
bonibus altis, tumidis, prominentibus; latere pos-
tico lato, subtruncato, margine dorsali declivi.*

THE CAROLINA CYRENA. Shell raised, short, tumid,
much inflated, covered with a roughly striated
olive or pale fulvous epidermis, fleshy within,
under the umboes spotted and rayed, with purple
at the sides and hinge; anterior side very short,
sloped; umboes broad, tumid, prominent; pos-
terior side broad, slightly truncated, dorsal
margin sloped.

BOSC. Nich. Enc. Am. Pl. I. f. 10.

Hab. S. Carolina, N. America.



CYRENA.

PLATE IX.

Species 32. (Mus. Sowerby.)

CYRENA OLIVACEA. *Cyr. testâ tenui, stramineâ, subtri-
cidi, subtrigoni, undulatim striatâ, latib. purpureâ,
dentibus cardinalibus parvis, lateralibus anticis
hirsutissimis; latere antico declivi; latere postico
angulato, margine dorsali declivi, laterali obliquè
truncato, infâ acuminatâ, margine ventrali ante
angulum excavato, umbonibus subcentralibus.*

THE OLIVACEOUS CYRENA. Shell thin, straw-coloured,
greenish, subtrigonal, undulately striated, inside
purple, cardinal teeth small, anterior lateral
rather short; anterior side sloped, posterior
side angular, dorsal margin sloped, lateral ob-
liquely truncate; acuminated below; ventral
margin excavated in front of the angle; umbones
nearly central.

CARPENTER. — ? MS.
Hab. California.

Species 33. (Mus. Brit.)

CYRENA OESCIUA. *Cyr. testâ crassâ, trigonâ, subova-
pressâ, el. rubrissimâ, epidermide nigra, crassâ, densè
striatâ indutâ; latere antico brevi, subexcavato,
arâ lunulari impresso; latere postico angulato,
caldâ declivi, margine ventrali ante angulum sub-
excavato.*

THE OESCINE CYRENA. Shell thick, trigonal, some-
what compressed, much elevated, covered with
a black, thick, closely striated epidermis; anterior
side short, rather excavated, impressed with a
lunular area; posterior side angular, much sloped,
ventral margin a little hollow in front of the
angle.

PRIMI. Proc. Zool. Soc. 1860, p. 321.
Hab. New Granada.

Species 34. (Mus. Brit.)

CYRENA FONTANEL. *Cyr. testâ altissimâ, subtrigoniâ,
crassâ, compressâ; densè castaneâ, striatâ; latere
antico brevi, declivi, margine ventrali rotundo;
umbonibus elevatis subcentralibus; latere postico
subovato angulato, caldâ declivi, infâ acuminatâ.*

FONTANEL'S CYRENA. Shell very high, subtrigonal,
thick, compressed; deep chestnut, striated; an-
terior side short, sloped, ventral margin rounded;
umbones elevated, rather acuminated; posterior

side rather acutely angled, much sloped, un-
minuted below.

D'ORIGNY. — ? MS.
Hab. — ?

Species 35. (Mus. Brit.)

CYRENA VENTRIOSA. *Cyr. testâ subovata, crassâ, tumida,
pallidè stramineâ, levigatâ; latere antico brevi,
rotundo; latere postico producto, margine dorsali
declivi, margine laterali truncato, infâ subova-
vata.*

THE VENTRILOSE CYRENA. Shell sub-ovate, thick,
tumid, pale straw, smooth; anterior side short,
rounded; posterior side produced, dorsal margin
sloped, terminal margin slightly truncate.

DESHAYES. Proc. Zool. Soc. 1854, p. 16.
Hab. Australia.

Species 36. (Mus. Brit.)

CYRENA ESSINGTONENSIS. *Cyr. testâ ovata, castanea,
distanter concentricè fringed striatâ; latere antico
brevi, declivi, arâ lunulari impresso; latere postico
producto, margine dorsali arcuato; margine ven-
trali convexo; umbonibus depressis.*

THE PORT-ESSINGTON CYRENA. Shell ovate, chestnut,
distantly concentrically fringe-striated; anterior
side short, sloped, impressed with a lunular area;
posterior side produced, dorsal margin arched;
ventral margin convex; umbones depressed.

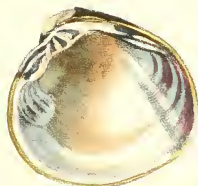
DESHAYES. Proc. Zool. Soc. 1854, p. 19.
Hab. Port-Essington, Australia.

Species 37. (Mus. Brit.)

CYRENA OBLONGA. *Cyr. testâ oblongo-ovata, crassâ,
undulatim subdistanter striatâ, stramineo-rubres-
cente; latere antico hirsutissimo, subtus umbones
excavato, arâ lunulari impresso; latere postico
paulatim, obscure angulato, ad terminum truncato,
margine dorsali declivi.*

THE OBLONG CYRENA. Shell oblong-ovate, thick, rather
distantly wavyly striated, reddish straw, anterior
side rather short, hollow under the umbones, im-
pressed with a lunular area; posterior side
produced, with an obscure angle, truncate at
the end; dorsal margin sloped.

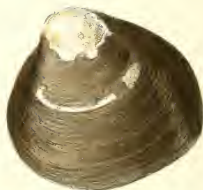
DESHAYES. Proc. Zool. Soc. 1854, p. 341.
Hab. — ?



39A



38



39B



40



41



42

CYRENA.

PLATE X.

Fig. 31, b, c. CYRENA CAROLINIENSIS. (See Pl. VIII.)

Species 38. (Mus. Brit.)

CYRENA NITIDULA. *Cyr. testis ovata, subcompres. sat, concentricè leviter striata, straminea, anticè breviori, subacuminata, posticè magis expansa, obtusa; umbonibus subdepressis, marginè dorsali posticè paulò, anticè valdè declivi.*

THE SHINING LITTLE CYRENA. Shell ovate, subcompressed, concentrically finely striated, straw-coloured, in front rather short, subacuminated, posteriorly more expanded, obtuse; umbones rather depressed, dorsal margin a little sloped behind, much in front.

DES-HAYES, Proc. Zool. Soc. 1854, p. 21.

Hab. — ?

Species 39. (Mus. Brit.)

CYRENA SUBOBLATA. *Cyr. testis magna, crassa, oblonga, epidermide fusca, rugosa lobata; latere antico brevissimo, sub umbones areâ lunulari convexâ impresso; latere postico producto, radiatim bisulcato, marginè dorsali arcuato declivi, marginè terminali leviter sinuato lobato.*

THE SUBOBLATE CYRENA. Shell large, thick, oblong, covered with a brown rough epidermis; anterior side very short, impressed with lunular convex area; posterior side produced, with two radiating grooves, dorsal margin sloped in an arch, terminal margin sinuously slightly lobed.

DES-HAYES — ? MS. Camb. Col.

Hab. The Louisiade Archipelago.

In some degree like *Cyrena Cyprioides*, but more oblong, and having a double groove at the back, which gives a lobed character to the posterior margin.

Species 40. (Mus. Brit.)

CYRENA CALEDONICA. *Cyr. testis subquadrata, imbricè epidermide crassa, rugosa, olivaceo-fusca, concentricè striata, stris spatuloso-fimbriatis; latere antico brevissimo, areâ lunulari impressa, convexâ laterali levè perpendiculari; umbonibus subterminalibus; latere postico subquadrato, marginè dorsali arcuato, marginè terminali sinuato.*

THE CALEDONIAN CYRENA. Shell subquadrate, thick, covered with a thick, rough, olive-brown epidermis, distantly striated, striae with a scaly fringe; anterior side very short, impressed with a lunular area; lateral margin almost perpendicular; umbones nearly terminal; posterior side rather square, dorsal margin arched, terminal margin sinuated.

GASSIES. — ? MS. Brit. Mus.

Hab. New Caledonia.

Species 41. (Mus. Brit.)

CYRENA FALLAX. *Cyr. testis obliquè subtriangulâ, tumida, medio distanter, ad latera dense striata, surtidè olivacea, prope umbones subgibbosa; latere antico brevi, declivi, areâ lunulari, convexâ impressâ; umbonibus declivis, ventis, marginè dorsali declivi, marginè postico-laterali breviter truncato.*

THE FALLACIOUS CYRENA. Shell obliquely subtriangular, tumid, striated distantly in the middle, closely at the sides, dull olive, rather gibbous near the umbones; anterior side short, sloped, lunule, impressed with a convex lunular area, umbones elevated, oval, posterior area sloped, dorsal margin sloped, postero-lateral margin shortly truncated.

DES-HAYES, Proc. Zool. Soc. 1854, p. 15.

Hab. — ?



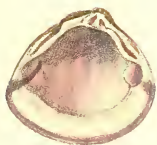
44



43



45



47 a



46



48 b



46



48



49



50

CYRENA.

PLATE XI.

(Species 42 inadvertently omitted.)

Species 43. (Mus. Brit.)

CYRENA TRIGONA. *Cyr. testâ ovata, subinæquilaterali, stramineâ, concentricè tenuiter striatâ; latere postico majori, subarcuatum declivi, prope marginem angulato, margine centrali convexo; latere antico subacuminato, umbonibus versus marginem anticam inclinatis; margine antico valdè declivi.*

THE TRIGONAL CYRENA. Shell ovate, rather inequilateral, straw-coloured, concentrically finely striated; posterior side the larger, sloped in a slight curve, angular near the margin, ventral margin convex; anterior side slightly acuminated, umboes inclined towards the anterior margin, anterior margin much sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 344. Hanley, Conch. Ind. Pl. 155.

Hab. Pondicherry.

This is given on the authority of the British Museum (as type) and the Conch. Ind., but the shell is far from being of a trigonal form.

Species 44. (Mus. Brit.)

CYRENA BENSONI. *Cyr. testâ subovata, subcompressâ, stramineâ, tenuissimè radiatâ, tenuiter undulatum concentricè rugatâ, æquilatèrâ; latere antico prope marginem angulato; latere postico angulato, ad angulum dextrorsum rugatâ; umbonibus centralibus intus rubrisque rubris.*

BENSON'S CYRENA. Shell subovate, subcompressed, straw-coloured, very finely rayed, wrinkled with fine concentric undulations, equilateral; anterior side angulated near the margin; posterior side angular, divergently wrinkled at the angle; umboes central, red inside and out.

DESHAYES. Proc. Zool. Soc. 1876, p. 345. *Hab.* River Jumna.

Said to be notable for its general smoothness. To the writer it appears most remarkable for the acutely angular diverging wrinkles on the posterior angle.

Species 45. (Mus. Hanley.)

CYRENA IRRAWADDICA. *Cyr. testâ tripartito-subovata, albâ, centricâ, concentricè profunde rugatâ, ad umbones carulatâ; infra olivaceâ, intus purpureâ, umbonibus subcentralibus, elevatis, margine dorsali utrinque declivi; margine centrali valdè convexo.*

THE IRRAWADDY CYRENA. Shell trigono-subovate, blue at the umboes, olivaceous below, purple within; umboes nearly central, raised, dorsal margin sloped on each side; ventral margin very convex.

BLANDFORD. MS. Hanley. Conch. Ind. Pl. 155.

Hab. River Irrawaddy, Pegu, Ava.

Species 46. (F. a, b, Mus. Sowerby.)

CYRENA EROSA. *Cyr. testâ altissimâ, solidiusculâ, subæquilatèrâ, trigonâ; intus omnino, prope marginem densissimè purpuratâ, dentibus lateralibus elongatis, serratis, cardinalibus tribus, elongatis; latere antice breviusculo, arcu semilunatâ, planulatâ, latere postico infra subproducto, umbonibus elevatissimis; liris concentricis distantibus, tenuibus.*

THE TRIANGULAR CYRENA. Shell very high, rather solid, subequilateral, trigonal, purpled within all over, very deeply near the margin: lateral teeth elongated, serrated; cardinal three; anterior side rather short, with a semilunar, flattened area; posterior side a little produced below, umboes much raised; concentric ridges distant, thin.

DESHAYES. MS. Proc. Zool. Soc. 1854, p. 354.

Cyrena triangularis. Deshayes?

Hab. —?

Species 47. (a, b, Mus. Sowerby.)

CYRENA RADIATA. *Cyr. testâ albâ, obliquè subtrigoniâ, tumidâ, regulariter subdistanter liratâ, intus utrinque radiatim purpureo-fuscâ; latere antico breviusculo, arcu depressâ, lunulari; latere postico obliquè paulo producto, radiatim angulato; umbonibus elevatis, acuminatis, marginibus lateralibus declivibus.*

THE RAYED CYRENA. Shell elevated, obliquely sub-trigonal, tumid, regularly rather distantly ridged, radiately banded within on each side with purple; anterior side rather short, with a depressed lunular area; posterior side a little produced obliquely, radiately angular; umbos elevated, acuminate, lateral margins sloped.

HANLEY. —? MS.

Hab. —?

Species 48. (Mus. Hanley.)

CYRENA OCCIDENS. *Cyr. testâ ovatâ, subcompressâ, subâpressâ, inæquilaterali, liris subdistantibus, regularibus concentricè rugatâ; intus purpureâ, subtus umbones tridantâ; apice corculo; epidermide nitenti, subviridi; latere antico breviusculo, corculo, uniradiato; latere postico paulo producto, subattenuato, ad terminum subtruncato.*

THE SUN-SET CYRENA. Shell ovate, slightly compressed, slightly depressed, inequilateral, concentrically wrinkled with rather distant, regular ridges; purple within, three-rayed under the umbos; apex blue; epidermis shining, greenish; anterior side rather short, with a single ray of blue; posterior side a little produced, rather attenuated, slightly truncated at the end.

BENSON. Deshayes, Cat. Mus. Brit.
Sikkim, Bundelkund.

The umbonal rays from which the name is derived are not always present in the specimens.

Species 49. (Mus. Hanley.)

CYRENA STRIATELLA. *Cyr. testâ subovatâ, subacculâ, subcorculâ, subinflatâ; distanter regulariter rugatâ; umbonibus moderatè elevatis; intus purpureâ; latere antico breviusculo, rotundo, uniradiato; latere postico producto, subtruncato; margine dorsali utrinque declivi.*

THE SMALL-STRIATED CYRENA. Shell subovate, greenish, rather blue, slightly inflated, distantly regularly wrinkled; umbos moderately raised, purple within; anterior side rather short, rounded, single-rayed; posterior side produced, slightly truncated; dorsal margin sloped on each side.

DESHAYES. Proc. Zool. Soc. 1854, p. 344.

Hab. Pondicherry.

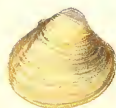
Species 50. (Mus. Hanley.)

CYRENA BENGALENSIS. *Cyr. testâ pureâ, ovatâ, roscofulvâ, tenuiter liratâ, compressâ; latere antico angusto, subacuminato, breviusculo; latere postico paulo magis producto; umbonibus moderatè declivibus.*

THE BENGAL CYRENA. Shell small, ovate, pinky-fulvous, finely ridged, compressed; anterior side narrow, rather acuminate; rather short; posterior side a little more produced; umbos moderately sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 344.

Hab. River Juma.



52



51a



53



54



57b



55



56



52a



57a



54a

CYRENA.

PLATE XII.

Species 51. (Fig. a, b, Mus. Brit.)

CYRENA COR. *Cyr. testā subtriangulā, crassā, tumidā, altā; aurantio-fusca, et gibbā, purpureo-fuscatā; testāters-subulā; sulcis versus marginem magis numerosis, ad latera cessantibus; latere antico brevī, superius excavato; latere postico producto, angulato; a regione dorsali declivi, margine terminali truncato; et is albi, medio purpurei.*

THE HEART CYRENA. Shell subtriangular, thick, tumid, high, orange-brown, or grey, banded with purple, finely grooved, grooves more numerous towards the margin, fading off at the sides; anterior side short, excavated above; posterior side produced, angular, dorsal margin sloped, terminal margin truncated, white within, purplish in the middle.

LAMARCK. *Anim. sans Vert.*

Cyrena consobrina, Deshayes.

Hab. River Euphrates. (small var.)

Species 52. (Mus. Brit.)

CYRENA RHOMBODEA. *Cyr. testā arato-subtriangulā, subdepressā, superius regulariter rugatā, versus marginem breviusculā, latere postico angulato, post angulum complanato, margine dorsali declivi, latere antico brevi; umbonibus levatis, subaeuminatis, a regione ventrali retibusculis.*

THE RHOMBODAL CYRENA. Shell ovate, subtriangular, subdepressed, regularly wrinkled above, rather smooth towards the margin, posterior side angular, flattened behind the angle, dorsal margin sloped; anterior side short; umbones raised, rather raised, slightly acuminated, ventral margin rather straight.

PRIME. *Catalogue of Corbiculae*, 3, 1863.

Hab. Malacca.

Species 53. (Mus. Brit.)

CYRENA CUMINGII. *Cyr. testā subovata, inflata, tenui, subaurantiā, liris distantibus, acutis, lineis illic concentricis rugatā; latere antico brevi, subrotundo; latere postico producto, breviter angulato, ad terminum truncato, a regione dorsali declivi.*

CUMING'S CYRENA. Shell rather oval, inflated, thin, rather orange, wrinkled with distant, sharp, here and there concurrent ridges; anterior side short, rather round; posterior side produced, slightly angular, truncated at the end; dorsal margin sloped.

DESHAYES.

Hab. Philippines.

Species 54. (F. a, b, Mus. Hauley.)

CYRENA ORIENTALIS. *Cyr. testā solidā, subtriangulā, altā, liris crassis, orbuculis, rugatā, epidermide nitenti, aurantio-diparvā, nigrescenti, indurā, intūs purpureā; latere antico breviusculo, a regione laterali declivi; latere postico angulato, caldē declivi, ad terminum truncato.*

THE ORIENTAL CYRENA. Shell solid, subtriangular, high, wrinkled with thick, rounded ridges; covered with a shining orange-olive blackish epidermis, purple within, anterior side rather short, lateral margin sloped, posterior side angular, much sloped, truncated at the end.

LAMARCK.

Cyrena fluminalis, Müller.

Hab. India, (var. f, b), Japan.

Species 55. (Mus. Brit.)

CYRENA YOKOHAMENSIS. *Cyr. testā ovata, solidā, subdepressā, subdistanter concentricè linitā; epidermide nitenti, crassā, nigrescenti imbutā, intūs purpureā; latere antico brevissimo; latere postico angulato, obliquè truncato, subaeuminato.*

THE YOKOHAMA CYRENA. Shell ovate, solid, rather depressed, rather distantly concentrically ridged; covered with a thick, shining, blackish epidermis, purple within; anterior side very short, posterior side angular, obliquely truncated, rather acuminated.

SOWERBY.

Hab. Yokohama, Japan.

Species 56. (Mus. Brit.)

CYRENA FLUMINEA. *Cyr. testâ subtrigona, altâ, fere equilaterali, latâ, epidermide subaerantiâ levigatâ indatâ; liris distantibus validis rugatâ; umbonibus elevatis, subaruminatis, margine dorsali atrinque declivi; latere postico obscure angulato, ad terminum truncato; dentibus lateralibus elongatis.*

THE RIVER CYRENA. Shell trigonal, high, nearly equilateral, broad, covered with a smooth, somewhat orange epidermis, wrinkled with distant, strong ridges; umboes raised, slightly acuminated, dorsal margin sloped on each side; posterior side with an obscure angle, truncated at the end; lateral teeth elongated.

LAMARCK. Anim sans Vert. V. VI. p. 274.

Hab. China, &c.

Species 57. (F. a, b, Mus. Hanley and Brit.)

CYRENA PUSILLA. *Cyr. testâ parvâ, ovatâ, albidâ, vel purpurascenti, vel fusco-flavâ, subcompressâ, medio tumidâ, tenuissimè rugatâ; latere antico*

breviâculo, latere postico magis producto, subtruncato.

THE DWARF CYRENA. Shell small, oval, whitish or purple, or brownish-yellow, rather compressed, tumid in the middle, very finely wrinkled; anterior side rather short; posterior side more produced, slightly truncated.

PHILIPPI. —? Mus. Brit.

Hab. Upper Nile, Syene.

Species 58. (Mus. Brit.)

CYRENA COMPRESSA. *Cyr. testâ subovatâ, compressâ, concentricè leviter rugatâ, ad latera levigatâ, epidermide pallidâ indatâ; latere antico breviâculo, rotundo; latere postico angulato, obliquè truncato, margine dorsali raldè declivi.*

THE FLATTENED CYRENA. Shell subovate, compressed, concentrically slightly wrinkled, smooth at the sides, covered with a pale epidermis, anterior side rather short, round, posterior side angular, obliquely truncated, dorsal margin much sloped.

MOUSSON. Deshayes, B. M. Cat. 1854.

Hab. Java.



CYRENA.

PLATE XIII.

Species 59. (Mus. Brit.)

CYRENA AFRICANA. *Cyr. testâ subcompressâ, subtriangulâ, fusâ, tenuiter concentricè rugatâ; intus scabidè violaceâ, dentibus lateralibus aequalibus; apice elevatâ, marginè dorsali atrique declivi; margine postico laterali subtruncato; subis versus aurigam subcruratis.*

THE AFRICAN CYRENA. Shell rather compressed, somewhat trigonal, brown, finely concentrically wrinkled, dull violet within; lateral teeth equal; apex raised, dorsal margin sloped downwards on each side, posterior lateral margin somewhat truncated; wrinkles dying out towards the margin.

KRAUSS. Süd-Afrikanischen Mollusken, p. 8, Tab. I. f. 8.

Cyrena *Geist. Zool.* Krauss, in correspondence.

Hab. River Guaritz, South Africa.

Species 60. (Mus. Brit.—Hanley.)

CYRENA CASHMIRIENSIS. *Cyr. testâ compressâ, albâ, subtriangulâ, regularitè, profundè, et densè concentricè rugatâ, epidermide fusco-aurigantiâ imbutâ; intus dense violaceâ, vel albâ; umbonibus rotundis, et levibus, marginè dorsalè atrique declivi, margine post-costalibus subtruncato; margine centrali rotundato; subis vel latera cruratis.*

THE CASHMERE CYRENA. Shell compressed, raised, subtrigonal, regularly, deeply, and closely concentrically ridged, covered with a blackish-brown epidermis, deeply violet or white within; umboes rounded, raised, dorsal margin sloped on each side, postero-lateral margin rather truncated, ventral margin rounded; grooves disappearing at the sides.

DESHAYES, PRIME. Pro. Ac. Nat. Sci. Phil. 1854.

Hab. Cashmere.

M. Hanley has a single valve of this shell densely purple within; while the specimens in the British Museum are pure chalky white.

Species 61. (Mus. Sowerby.)

CYRENA LARGILLIERTI. *Cyr. testâ subtriangulâ, tumidâ, epidermide stramineo-olivaceâ imbutâ, umbonibus irregularitè rugatis, postico levissimè, intus prope marginem purpureo-fuscato; umbonibus tumidis, purpureo tricoloratis, declivi; margine dorsali atrique declivi, margine ventrali rotundato, latera postico truncato, subangulato.*

LARGILLIERT'S CYRENA. Shell trigonal, tumid, covered with an olive-straw epidermis, anteriorly somewhat irregularly wrinkled, posteriorly rather more smooth; banded with purple inside near the margin; umboes tumid, three-rayed with purple, raised; ventral margin rounded; posterior side truncated, slightly angular.

PHILIPPI. Zeitschrift für Malak. 1844.

Hab. China.

Species 62. (Mus. Sowerby.)

CYRENA SUMATRENSIS. *Cyr. testâ subovatoâ, tumidâ, concentricè irregularitè rugatâ, epidermide olivaceo-fusâ, subfulvaceâ imbutâ; intus albâ, medio pallidissimè aurantiâ, dentè cardinali nullo leccissimo, postico magis rotundâ; latera nullo brevis, margine dorsalè declivi; latera postico marginibus, margine dorsali declivo; umbonibus obtusissimis, depressis.*

THE SUMATRA CYRENA. Shell subovate, tumid, concentrically irregularly wrinkled, covered with an olive-brown slightly leafy epidermis; white within, very pale orange in the middle; anterior cardinal tooth very short, posterior more remote; anterior side short, dorsal margin sloped; posterior side more produced, dorsal margin raised; umboes very obtuse, depressed.

SOWERBY. Genera of Shells. No. 2.

Cyrena *Saigonensis.* —?

Hab. Sumatra.—Saigon, China.

CYRENA—PLATE XIII.

Species 63. (Mus. Brit.)

CYRENA WOODIANA. *Cyr. testâ subovatâ, altâ, obliquâ, epidermid. crasso, nitenti, olivaceo-nigricanti, aurantio-fusciatâ indutâ, medio distanter rugatâ, latere antico brevissimo, margine dorso-laterali valdè declivi; umbonibus elevatis, margine ventrali valdè convexo; latere postico producto, angulato, subacuminato, margine ventrali sursum declivi, margine dorsali longè declivi.*

WOOD'S CYRENA. Shell subovate, high, oblique, covered with a thick, shining, blackish-olive epidermis, banded with orange, distantly wrinkled in the middle; anterior side very short, dorso-lateral margin much sloped; umbones raised, ventral margin very convex; posterior side produced, angular, slightly acuminated, ventral margin sloped upwards, dorsal margin with a long slope.

LEA. Trans. Amer. Phil. Soc. 1832.

Cyrena Primeana. Möhre.

Hab. China.

Cyrena similis, Gray, and *Cyrena grandis*, Deshayes, both resemble this species, which, however, is much more oval and higher than either. The first-named is a more triangular shell with a radiated angle, while the second holds a middle station between the other two.

Species 64. (Mus. Brit.)

CYRENA SIMILIS. *Cyr. testâ ponderosâ, subtriangulâ, tumidâ, irregulariter rugatâ, epidermid. ferrugineâ, striatâ indutâ; latere antico brevi, latere dorsali declivi; latere postico producto, acuminato, substrato, angulato, margine laterali longè declivi.*

THE SIMILAR CYRENA. Shell ponderous, subtriangular, tumid, irregularly wrinkled, covered with a ferruginous, striated epidermis; anterior side short, dorsal margin sloped downwards; posterior side produced, acuminated, somewhat beaked, angular; dorsal margin with a long slope.

GRAY. Griffith's Cuvier. 1834.

Hab. Philippines.

See remark on the preceding species.

Fig. 47, *c.* (Mus. Hanley.)

CYRENA RADIATA. Young. See Plate XI. for species.

Fig. 48, *b.* (Mus. Brit.)

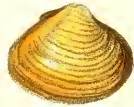
CYRENA OCCIDENS var. See Plate XI. for species.



66



65



67



68



69



70



71

CYRENA.

PLATE XIV.

Species 66. (Mus. Brit.)

CYRENA BREVIS. *Cyr. testā subtriangulā, solidā, altā, conchaliā, liris appressivis ad latera carinatis concentricis rugatis; epidermide densè olivaceo-virescente pubescenti; latera antica rotundata, infra umbones excavata; latera postica angulata, obliquè triangularia; umbonibus parvis acutibus, subroscis.*

THE BREVIS CYRENA. Shell subtriangular, solid, high, regularly concentrically wrinkled with approximate ridges, obsolete at the sides; covered with a dark blackish-olive epidermis; anterior side rounded, excavated near the umbones; posterior side angular, obliquely truncated; umbones prominent, rather pink.

VOY. BÉCH. Phil. Abild. III. 110, Pl. 3. 1849.

Hab. Java.

Species 66. (Mus. Sowerby.)

CYRENA COSQUINA. *Cyr. testā griseā, fuscā, tumidissimā, subtriangulā, solidā, altā, liris rubris, profundis, ad latera carinatis copulā, latūs pallidi rubescētis, ad latera parvis carinatis; latera antica brevī, tumidissima, infra umbones excavata; latera postica producta, subacuminata, angulata, ad latera antica detruata, subrotunda.*

THE NEAR CYRENA. Shell greyish-brown, very tumid, subtriangular, solid, high, wrinkled with close, deep ribs continued at the sides, pale violet within, with a purple ray at each side; anterior side short, very tumid, excavated at the umbones; posterior side produced, slightly acuminated, angular, subtruncated, and beaked at the end.

SOWERBY.

Hab. — ?

I have seen only one specimen of this species. Its locality is unknown.

Species 67. (Mus. Hanley.)

CYRENA GRACILIS. *Cyr. testā tumidā, depressā, ovalā, tenui, liris irregularibus, majusculis, distantibus, concentricis, ad latera obsolete, rugatis, epidermide*

aurantio-sabulevili indubi, fatis, ad marginem cardiacum purpureā, versus marginem glaciā; latera postica producta, cir tenues, subacuminata, latera antica rotunda, infra umbones excavata; umbonibus raris, obtusis.

THE SLENDER CYRENA. Shell tumid, depressed, ovate, thin, wrinkled with irregular, rather large, distant, concentric ridges, obsolete at the sides, covered with a greenish-orange epidermis, inside purple at the hinge margin, yellowish towards the margin; posterior side produced, scarcely truncated, subacuminated, anterior side rounded, excavated beneath the umbones; umbones pinkish, obtuse.

PRIME. American Journal of Conchology, X. 389. 1862.

Hab. Java.

Species 68. (Mus. Brit.)

CYRENA BULLATA. *Cyr. testā altā, tumidissima, brevissimā, epidermide rugosa, leviter striatā, fumosofusca indubi; latera antica brevi, subrotunda; latera postica magis producta, obtusè angulata, margine dorsali declivi; umbonibus ovatis, obtusissimis; margine ventrali convexo.*

THE BULLATED CYRENA. Shell high, very tumid, rather short, covered with a rough, finely striated smoky-brown epidermis; anterior side short, rather round; posterior side more produced, obtusely angular; dorsal margin sloped; umbones oval, very obtuse; ventral margin convex.

SOWERBY.

Cyrena insignis. Deshayes.

Hab. California.

Having already figured a species of *Cyrena* (*Instituta*) under the name of *insignis*, Deshayes, we cannot repeat the name in a second division of what we regard as the same genus.

Species 69. (Mus. Brit.)

CYRENA CYRENIFORMIS. *Cyr. testā crassā, altissima, subtriangulā, tumidā, subobliquā, distanter rugatā,*

CYRENA.—PLATE XIV.

epidermide levigatâ fusco-subviridâ, intus violacâ; latere postico obliquè producto, angulato, versus marginem levigato; latere antico brevi, declivi, infra umbones areâ levigatâ lunulato; umbonibus productis.

THE CYRENIFORM CYRENA. Shell thick, very high, subtrigonal, tumid, rather oblique, distantly wrinkled, covered with a smooth, greenish-brown epidermis, violet within; posterior side obliquely produced, angular, smooth towards the margin; anterior side short, sloped, with a smooth lunular area; umbones produced.

PEIME —? (Corbicula) MS. Brit. Mus.

Hab. —?

It would be better to avoid giving such specific names to species of very closely allied genera as cannot with propriety be used when the genera are considered as one. Such tautologies as the 'Cyrena-shaped Cyrena' would not then occur.

Species 70. (Mus. Hanley.)

CYRENA SULCATINA. *Cyr. testâ subtrigoniâ, roseo-purpureâ, altâ, tenuissimè sulcatâ striatâ, posticè et ad latera brevissimè, epidermide stramineâ iudatâ, intus purpureo marginatâ; umbonibus elevatis, margine dorsali utrinque declivi, infra umbones areâ pullidâ, planulatâ; anticâ subexcavatâ; margine centrali concavo.*

THE FINE-GROOVED CYRENA. Shell subtrigonal, purplish-pink, high, very finely groove-striated, posteriorly and at the sides rather smooth. covered with a straw-coloured epidermis, purple-bordered within; umbones elevated, dorsal margin sloped on each side with a pale, flattened area, slightly excavated anteriorly; ventral margin convex.

DESHAYES. Proc. Zool. Soc. London. 1864.

Hab. China.

Species 71. (Mus. Brit.)

CYRENA GRANDIS. *Cyr. testâ magnâ, ovato-subtrigoniâ, irregulariter rugatâ, subcompressâ, intus et ad umbones roseo-aurantiâ; latere antico brevi; latere postico acuminato, angulato; margine ventrali valdè convexo; margine dorsali utrinque declivi.*

THE LARGE CYRENA. Shell large, ovate-subtrigonal, irregularly wrinkled, compressed within and at the umbones pinky orange; anterior side short; posterior side acuminated, angular; ventral margin convex; dorsal margin sloped on each side.

DESHAYES —? MS. Brit. Mus.

Hab. —?

About half way in character between *C. Woodwardiana* and the more beaked and acuminated *C. similis*.



72



73



74



75



76



77



78



79



80



81

CYRENA.

PLATE XV.

Species 72. (Mus. Brit.)

CYRENA OBLIQUA. *Cyr. testâ altissimi, subtriangulâ, angustâ, subarcuatâ, tenaciter lîvâ, crassi, epidermide olivaceâ iulâtâ, ad apicem latâsq; excavatâ, rotundâ; latere postico arcuatâ, prope marginem lateralem angulatâ; latere antico subarcuatâ; umbonibus inæqualibus fere lateraliter terminalibus.*

THE THICK CYRENA. Shell very high, subtriangular, narrow, rather arched, finely ridged, thick, covered with an olive epidermis; bluish at the tip and inside; posterior side arched, angular near the margin; anterior side somewhat excavated; umbones curved inwards, almost terminal at the side.

MUSSON — ? MS. in Brit. Mus.

Hab. Lebanon.

Species 73. (Mus. Brit.)

CYRENA AMBIGUA. *Cyr. testâ subtriangulâ, subquadrilaterâ, olivaceo-nigrescenti, moderate tumidi, tenaciter lîvâ; latere antico declivi, subarcuatâ; latere postico declivi, obtusè bimarginatâ.*

THE AMBIGUOUS CYRENA. Shell subtriangular, blackish-olive, moderately tumid, finely ridged; anterior side sloped downwards, rather round; posterior side sloped downwards, with two obscure angles.

DESHAYES. Proc. Zool. Soc. London. XXII. p. 345.

Hab. River Euphrates.

Species 74. (Mus. Sowerby.)

CYRENA MANILLENSIS. *Cyr. testâ crassi, subrhomboidi, distanter lîvâ, versus umbones griseâ, versus marginem subarcuatâ, intûs albâ excavatâ, epidermide nitenti iulâtâ; latere antico brevi, margine dorsali declivi, laterali brevi, truncatâ; latere postico productâ, margine dorsali declivi, terminali truncatâ; umbonibus rotundis.*

THE MANILLA CYRENA. Shell thick, rather rhomboidal, distantly grooved, grey towards the umbones, somewhat orange, bluish-white within,

covered with a shining epidermis; anterior side short, dorsal margin sloped, lateral short, truncated; posterior side produced, dorsal margin sloped, terminal, truncated; umbones round.

PHILIPPI. Abld. Zeit. f. Malak. 1844.

Hab. Manilla.

Species 75. (Mus. Brit.)

CYRENA NEPEANENSIS. *Cyr. testâ subrhomboidi, fuscâ et arcuatâ, acutâ, laevigatâ, compressâ; latere antico hecristeulo; latere postico magis productâ, latè tenacatâ; apice parvo, subarcuatâ, margine dorsali utrinque leviter declivi; margine ventrali cristosculo.*

THE NEPEAN CYRENA. Shell rather rhomboidal, brown or orange, straight, smooth, compressed; anterior side rather short; posterior side more produced, broadly truncated; apex small, somewhat acuminated; dorsal margin slightly sloped on each side; ventral margin rather straight.

LESSON — ? MS. Brit. Mus.

Hab. River Nepea.

Species 76. (Mus. Brit.)

CYRENA REGULARIS. *Cyr. testâ pallidâ, subovatâ, subdepressâ, regulariter costâ lîvâ; latere antico hecristeulo, subarcuatâ, infra umbones excavatâ; latere postico latè truncatâ, margine dorsali declivi; umbonibus obtusis, depressis.*

THE REGULAR CYRENA. Shell pale, rather oval, rather depressed, regularly, closely ridged; anterior side rather short, slightly acuminated, excavated below the umbones; posterior side broadly truncated, dorsal margin sloped; umbones obtuse, depressed.

PRIME — ? MS. Brit. Mus.

Hab. — ?

Species 77. (Mus. Brit.)

CYRENA OVALINA. *Cyr. testâ acutâ, tumidi, epidermide nitenti, nigrescenti iulâtâ, rugis distantibus, sup-*

rioribus validis, posticis, versus marginem ventralem epinidii, posticè obsœctis indutâ; latere antico breviusculo, rotundo; latere postico producto, latè truncato; umbonibus obtusissimis, margine dorsali utrinque levigato, margine ventrali æqualiter convexo.

THE OVAL CYRENA. Shell ovate, tumid, covered with a shining, blackish epidermis dying out towards the ventral margin, posteriorly obsolete; anterior side rather short, rounded; posterior side produced, broadly truncated; umbones very obtuse, dorsal margin smooth on each side, ventral margin equally convex.

DE SHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. Port Essington, Australia.

Species 78. (Mus. Brit.)

CYRENA MAXIMA. *Cyr. testâ subtrigoni, altissimâ, subcompressâ, levi, rugis paucis, distantibus, posticè erantidii irregulariter cuncti; epidermidè flavido-sabaurantiâ indutâ; latere antico brevi, arcu lunulari convexo; latere postico producto, infra medium acuminato, margine dorsali longè declivi, convexo; umbonibus elevatis; margine ventrali prominenter convexo.*

THE VERY LARGE CYRENA. Shell rather trigonal, very high, rather compressed, smooth, irregularly belted with few, distant wrinkles disappearing posteriorly, covered with a yellowish-orange epidermis; anterior side short, lunular area convex; posterior side produced, acuminated below the middle, dorsal margin with a long slope, convex; umbones raised; ventral margin prominently convex.

DE SHAYES. Proc. Zool. Soc. 1860, p. 321.

Hab. — ?

Species 79. (Mus. Brit.)

CYRENA BRAZILIANA. *Cyr. testâ altâ, tenuissimè liratâ, suborbiculâ, intus albâ; latere antico rotundo, brevi; latere postico obliquè producto, margine dorsali longè declivi; epidermidè aurantio-strawsonâ, costano angustè fasciatâ, umbonibus elevatis, versus lateram anticam declinatis.*

THE BRAZILIAN CYRENA. Shell high, very finely grooved, rather rounded; white within, anterior side rounded, short; posterior side obliquely produced, dorsal margin with a long slope; epidermis orange-straw, with narrow bands of chestnut; umbones raised, tilted towards the anterior side.

DESHAYES. Cat. Brit. Mus. 1854.

Hab. Brazil.

Species 80. (Mus. Brit.)

CYRENA TENUISTRATA. *Cyr. testâ subtrigoni, altâ, pullidè fulcâ, ferè levigatâ, compressâ, obscureè tenuissimè striatâ; latere antico brevi, usque ad marginem ventralem declivi, margine ventrali rotundo, producto, latere postico declivi, producto, infra medium subacuminato, margine ventrali sursum alevi; umbonibus elevatis.*

THE FINE-STRIATED CYRENA. Shell subtrigonal, high, pale fulvous, almost smooth, compressed, obscurely, very finely striated; anterior side short, sloped down to the ventral margin; ventral margin round, produced, posterior side sloped downwards, produced, slightly acuminated below the middle, ventral margin sloped upwards; umbones elevated.

PRIME. Proc. Zool. Soc. 1860, p. 323.

Hab. — ?

Species 81. (Mus. Brit.)

CYRENA PARACENSIS. *Cyr. testâ altissimâ, angustâ, liris irregularibus posticè erantidii rugatâ, obscureè olivaceâ, intus purpurâ; latere antico brevissimo, margine laterali rectiusculo; latere postico, margine dorsali breviter declivi, margine laterali obliquè declivi; margine ventrali subconvexo.*

THE PARACA CYRENA. Shell very elevated, narrow, wrinkled with irregular ridges, posteriorly fading, obscurely olivaceous, purple within; anterior side very short, lateral margin rather straight; posterior side, dorsal margin shortly sloped, lateral margin obliquely sloped; ventral margin rather convex.

D'ORBIGNY — ? MS. Brit. Mus.

Hab. Paraca.



81



82 a



81



82 b



85



86



87 a



88



87 b



89

CYRENA.

PLATE XVI.

Species 82. (Fig. *a, b*, Mus. Brit.)

CYRENA ACROBOLUS. *Cyr. testâ ovato-subtriangulâ, depressâ, compressâ, pallidiorâ; foveâ foveâ, et fossâ, et 3 costâ, tero-angulâ et leviter rugatâ; latere antico brevi, margine latero-dorsali declivi, brevitatâ; foveâ postico producto, infra medium acuminate, margine dorso-laterali convergènti, declivi, brevitatâ.*

THE AUSTRALIAN CYRENA. Shell ovate-subtriangular, depressed, compressed, very pale smoky-fulvous, or brown, or orange, irregularly and slightly wrinkled; anterior side short, latero-dorsal margin sloped, smooth; posterior side produced, acuminate below the middle, dorso-lateral margin rather convex, sloped, smooth.

DESHAYES. Ed. Lamarck.

Hab. Isl. of Timor.

Species 83. (Mus. Brit.)

CYRENA LYDIA. *Cyr. testâ tumidâ, subrotundâ, all'india, lobulâ in aequali, a quadratâ, cœnâ leviter sub-pallide et sub-distanter rugatâ, infra griseo-sulcâ; rili, supra nigricantâ, costâ in eadentâ, intus densâ violacâ; umbonibus rotundis, elevatis, margine dorsali utriusque declivi; latere postico infra in linea subacuminatâ.*

THE LYDIA CYRENA. Shell tumid, rather rounded, the height equalling the breadth, equilateral, regularly rather equally and distantly wrinkled, greyish-green below, blackish above, rayed with chestnut, deep purple within; umboes rounded, raised, dorsal margin sloped on each side; posterior side rather acuminate below the middle.

PRINCE. Cal. Corb. 3. 1863.

Hab. Siam.

Species 84. (Mus. Brit.)

CYRENA SEMISULCATA. *Cyr. testâ oblongâ, depressâ, fere brevitatâ, leviter partim rugatâ, obscurâ fulvâ, areolâ-fuscâ, intus densâ purpurâ; latere antico brevissimo, infra umbones subcurvato, margine dorsali valde declivi; latere postico*

pro-fundè obtusâ, margine dorsali leviter declivi, margine laterali valde truncato.

THE HALF-BOOTH CYRENA. Shell oblong, depressed, almost smooth, slightly wrinkled in parts, dull fulvous, banded with blue, deep purple within; anterior side very short, slightly hollow under the umboes, dorsal margin much sloped; posterior side produced, oblong, dorsal margin slightly sloped, lateral margin broadly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. Pondicherry.

Species 85. (Mus. Brit.)

CYRENA OBSOLITA. *Cyr. testâ obliquè triangulâ, acutâ, tenuissimè striatâ, compressâ, superâ subcœnâ, medio rufo-fuscâ, intus purpurâ; latere antico brevi, valde declivi; umbonibus elevatis, subcœnâ nitentibus, margine ventrali convexo; latere postico producto, declivi, infra medium acuminate.*

THE OBSOLETE CYRENA. Shell obliquely triangular, high, very finely striated, compressed, greenish above, reddish-brown in the middle, purple within; anterior side short, much sloped; posterior side produced; umboes raised, somewhat acuminate, ventral margin convex; posterior side produced, sloped, acuminate below the middle.

DESHAYES. Proc. Zool. Soc. 1854, p. 345.

Hab. — ?

Species 86. (Mus. Brit.)

CYRENA INCRASSATA. *Cyr. testâ subovatâ, depressâ, crassâ, subcompressâ, densè fusco-subcœnâ, tenuissimè striatâ, fere brevitatâ, anticè distanter tenuiter rugatâ; latere antico brevissimo, infra umbones excavato; umbonibus antico inclinatâ, depressâ; latere postico producto, acuminate, margine arcuâtâ declivi.*

THE THICKENED CYRENA. Shell rather oval, depressed, thick, slightly compressed, dark greenish-brown, very finely striated, almost smooth, with distant slender wrinkles; anterior side very short, flat.

CYRENA.—PLATE XVI.

low under the umbones; umbones leaning to the front, depressed; posterior side produced, acuminate, margin sloped in an arch.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. — ?

Species 87. (Fig. *a, b*, Mus. Brit.)

CYRENA VARIEGATA. *Cyr. testâ altâ, subrotundâ, tenui, subcristâ et nigra, vel subaurantiâ, nebulis radiisque variegatâ, tenuissimè striatâ, vix rugatâ, latere postico producto, rotundo, latere antico brevissimo.*

THE VARIEGATED CYRENA. Shell high, rather rounded, thin, greenish or black, or rather orange, variegated with clouds and rays of purple, very finely striated, scarcely wrinkled, posterior side produced, rounded, anterior side very short.

DESHAYES. MS. Mus. Cuming.

Hab. La Plata.

Species 88. (Mus. Sowerby.)

CYRENA MALLACENSIS. *Cyr. testâ tenui, subrhomboidi, fimbriato olivaceâ, nitenti, regulariter, distanter, acutè rugatâ, intus albâ; latere antico brevi, declivi; latere postico producto, obliquè truncato.*

THE MALACCA CYRENA. Shell thin, subrhomboidal, smoky-olive, shining, regularly, distantly, sharply wrinkled, white within; anterior side short, sloped; posterior side produced, obliquely truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. Malacca.

Species 89. (Mus. Hanley.)

CYRENA NITENS. *Cyr. testâ subaurantiâ, nitenti, compressâ, subdepressâ, obliquè trigonâ, tenuiter sulcatâ, intus et ad umbones subrosâ; latere antico brevi, rectiusculo, valdè declivi; latere postico obliquè producto, margine dorsali longè declivi, ad marginem ventralem acuminato; margine ventrali rectiusculo.*

THE SHINING CYRENA. Shell rather orange, shining, compressed, rather depressed, obliquely trigonal, finely grooved, rather pink at the umbones; anterior side short, rather straight, much sloped; posterior side obliquely produced, dorsal margin with a long slope, acuminate at the ventral margin; ventral margin rather straight.

DESHAYES. MS. Cum. Coll.

Hab. — ?



21



22



23



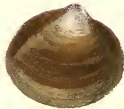
24



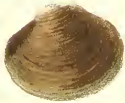
25



26



27



28



29



30



31

CYRENA.

PLATE XVII.

Species 90. (Mus. Hanley.)

CYRENA ANGASI. *Cyr. testâ orato-oblongâ, subrhomboidi, tenui, depressâ, subcompressâ, intus et ad apicem subroseâ vel cinerâ, epidermide flavidâ tenui indubi; latere antico brevi, angustè subtruncato; latere postico producto, obtusè angulato, latè truncato.*

ANGAS'S CYRENA. Shell ovate-oblong, somewhat rhomboidal, thin, depressed, rather compressed, pinky or ashy within and at the apex, covered with a thin yellowish epidermis; anterior side short, narrowly subtruncated; posterior side produced, obtusely angular, broadly truncated.

PRIME. Cat. Corb. 1863, p. 4.

Hab. Murray River, South Australia.

Species 91. (Mus. Hanley.)

CYRENA JAPONICA. *Cyr. testâ altâ, trigonâ, compressâ, subsulcatâ, nitentâ, fuscoscabiâ, sulcis partim obsolete rugatâ; intus eversis apicem purpureo strigatâ, ad latera marginemque cinctâ; latere antico valdè declivi, breviori, latere postico obtusè angulato, obliquè truncato, sup. rotè declivi.*

THE JAPAN CYRENA. Shell high, trigonal, compressed, rather solid, shining, smoky chestnut, wrinkled with partly obsolete grooves, striped with purple inside towards the apex, bluish at the sides and edge; anterior side much sloped, shorter; posterior side obtusely angular, obliquely truncated, supernè declivi.

PRIME. Ann. Lyc. New York, 1864.

Hab. Japan.

A beautiful little shell, having much the aspect of a young *Cytherea*.

Species 92. (Mus. Hanley.)

CYRENA TUMIDA. *Cyr. testâ subtrigonâ, altâ, tenui, subequilaterali, tumidi, irregulariter distanter rugatâ, ad latera purpureo-fuscatâ, epidermide aurantiâ indubi, intus et ad apicem densè purpurâ; latere postico longiusculo, obtusissimè angulato.*

THE TUMID CYRENA. Shell trigonal, high, thin, somewhat equilateral, tumid, irregularly distantly

wrinkled, purple-brown at the sides, covered with an orange-brown epidermis, deep purple within and at the apex; posterior side rather long, very obtusely angular.

DESHAYES. Proc. Zool. 1854, p. 343.

Hab. Borneo.

Species 93. (Mus. Hanley.)

CYRENA ARATA. *Cyr. testâ ovali, tenuissimâ, eusævi, tumidissimâ, liris marginis, distantibus ad latera subobliquè terminantibus rugatâ, epidermide aurantâ-flavidi indubi; latere antico rotundo, calbè inflato; latere postico magis producto, subat. tenui, angustè truncato.*

THE PLOUGHED CYRENA. Shell ovate, very thin, pinky, very tumid, wrinkled with large, distant ridges, terminating rather obliquely at the sides, covered with an orange-yellow epidermis; anterior side rounded, much inflated; posterior side more produced, slightly attenuated, narrowly truncated.

BLANFORD. — ? MS. Hanley Coll.

Hab. Tenasserim.

Species 94. (Mus. Hanley.)

CYRENA PROLONGATA. *Cyr. testâ ovato-subtrigonâ, depressâ, elongatâ, compressâ, tenuissimè levatâ, epidermide tenui, stramineâ, indubi, intus suberruleo, alba; latere antico brevi, declivi, latere postico attenuato, subacuminato.*

THE LENGTHENED CYRENA. Shell ovate-subtrigonal, depressed, elongated, compressed, very finely ridged, covered with a thin straw-coloured epidermis, bluish white within; anterior side short, sloped; posterior side attenuated, subacuminated.

PRIME. — ? MS. Hanley's Collection.

Hab. Wide Bay, Australia.

Species 95. (Mus. Hanley.)

CYRENA MILLERIANA. *Cyr. testâ subobovata, altissimâ, tumidâ, intus etâque densè purpurâ, epidermide subviridi, nitentè inclatâ, liris valdè distantibus, nonnullis concurrentibus rugatâ; umbonibus jeri centralibus, elevatis, margine dorsali utriusque declivi.*

MÜLLER'S CYRENA. Shell rather round, very high, tumid, deep purple within and without, covered with a greenish shining epidermis, wrinkled with strong, distant ridges, some of them running into each other; umboes nearly central, raised, dorsal margin sloped downwards on each side.

PRIME. —? MS. Hanley's Collection.
Hab. Fuh Chan, China.

Species 96. (Mus. Hanley.)

CYRENA LIMOSA. *Cyr. testâ albi, ovato-subrotundâ, compressâ, tenuiter lirata, forcè æquilaterali, intus extusque purpureâ, epidermide subviridi vel nigricanti indutâ; latere antico quam posticum breviori, margine dorsali convexo-declivi; latere postico subrotundo, margine dorsali paulò elevato; umboibus versus latus anticum inclinatis, margine ventrali convexo.*

THE MUDDY CYRENA. Shell high, ovate-subrotund, compressed, finely ridged, almost equilateral, purple inside and out, covered with a greenish or blackish epidermis; anterior side shorter than posterior, with dorsal margin convexly sloped; posterior side rather rounded, dorsal margin a little raised; umboes leaning towards the anterior side, ventral margin convex.

MATOX. Hanley, in Photographic Illustrations.
Hab. La Plata.

Species 97. (Mus. Brit.)

CYRENA MOUSSONIANA. *Cyr. testâ ovatâ, subimpressâ, tenuissimâ, medio lirata, ad latera levigatâ, epidermide densè olivaceâ vel flavidâ indutâ, intus albâ; latere antico brevi, rotundo; latere postico producto; margine dorsali rectiusculo, paulò declivi, margine laterali latè truncato.*

MOUSSON'S CYRENA. Shell ovate, rather compressed, rather thin, ridged in the middle, smooth at the sides, covered with a dark olive or rather yellow epidermis, white within; anterior side short, round, posterior side produced; dorsal margin rather straight, a little sloped, lateral margin broadly truncated.

DESHAYES. —? MS. Brit. Mus.
Hab. —? ?

Species 98. (Mus. Brit.)

CYRENA FRAGILIS. *Cyr. testâ oblongâ, tenuissimâ, densè subviridi, liris distinctibus subobliquis, posticè excavatis, nonnullis concurrentibus rugatâ, intus albâ; latere antico brevi, infra umboes excavato; latere postico oblongo, margine dorsali leviter declivi, margine terminali latè, obliquè truncato.*

THE FRAGILE CYRENA. Shell oblong, very thin, deep greenish, wrinkled with distant, rather oblique ridges disappearing posteriorly, some running into each other, white within; anterior side short, hollowed beneath the umboes; posterior side oblong, dorsal margin slightly sloped, terminal margin broadly, obliquely truncated.

DESHAYES. —? MS. Brit. Mus.
Hab. —? ?

Species 99. (Mus. Brit.)

CYRENA SQUALIDA. *Cyr. testâ tenui, oblongâ, depressâ, compressâ, epidermide sordidè olivaceâ, violaceo-lobulatâ indutâ, ad latera levigatâ, medio irregulariter rugatâ; latere antico brevi, rotundo, infra umboes excavato, latere postico producto; margine dorsali declivi, margine laterali obliquè truncato, infra subacuminato.*

THE SQUALID CYRENA. Shell thin, oblong, depressed, compressed, covered with a dirty olive epidermis clouded with violet, smooth at the sides, irregularly wrinkled in the middle; anterior side short, rounded, hollowed under the umboes; posterior side produced, dorsal margin sloped, lateral margin obliquely truncated, slightly acuminated below.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.
Hab. —? ?

Species 100. (Mus. Brit.)

CYRENA SALMACIDE. *Cyr. testâ donaciformi, tenui, levigatâ, albâ, purpureo-nebulatâ; latere antico alto, brevissimo, umboibus acutis, margine dorsali valdè declivi, latere postico producto, acuminato.*

THE SALMACIDIAN (?) CYRENA. Shell donax-shaped, thin, smooth, whitish, clouded with purple; anterior side high, very short; umboes acute, dorsal margin much sloped, posterior side produced, acuminated.

MORELET. —? MS. Brit. Mus.
Hab. —? ?



CYRENA.

PLATE XVIII.

Species 101. (Mus. Brit.)

CYRENA CYRENA. *Cyr. testâ brevi, ovata, subaequilaterali, regulariter, dense striata, ephemeride olivacea nigrescente, nitens; intus, luteis maculis; latere antico tumescens, striato; latere postico latè subtruncato; umbonibus elevatis, purpureo perpendiculariter fasciatis.*

THE OVAL CYRENA. Shell thin, ovate, subequilateral, regularly and very closely ridged, covered with an olive-blackish, shiny epidermis, purple within; anterior side the shorter, rounded; posterior side broadly subtruncated; umbones raised, perpendicularly banded with purple.

PRIME. Journal de Conchyliologie, Pl. 2, f. 6.

Hab. — ?

The ridges in this corbicula are more fine, close, and continuous than either of the two similarly shaped species.

Species 102. (Mus. Brit.)

CYRENA FLORIDANA. *Cyr. testâ brevi, albâ, crassâ, tumidissimâ, impariter caliter subtruncatâ, levigatâ, subtus epidermidem rosâ, intus carneo, ephemeride fasciculatâ, costis maculatâ; latere postico declinatè angulato, ad angulum fere carinato, infra acuminatâ; umbonibus tumidis, elevatis; latere antico brevi, declivi.*

THE FLORIDA CYRENA. Shell short, high, thick, very tumid, inequilaterally trigonal, smooth, pinky under the epidermis, flesh-coloured within; epidermis yellowish tawn, spotted with chestnut; posterior side sloped, almost keeled at the angle, acuminated below; umbones tumid, raised; anterior side short, sloped.

CONRAD. Freshwater Shells of United States.

Hab. Florida.

Species 103. (Mus. Brit.)

CYRENA ISOCARDIODES. *Cyr. testâ brevi, altissimâ, tenui, tumidissimâ, superâe subtruncatâ, ephemeride levigatâ, tenui, corneo intus, intus ad carinam et subtus umbones purpureâ; latere antico brevissimo, subtus umbones excavato, versus medianam caldè inflato; umbonibus subdistantibus, latere*

postico subtruncato, angulato, truncato, marginem ventrali subtruncato.

THE ISOCARDIA-LIKE CYRENA. Shell short, very high, thin, very tumid, triangular at the upper part, covered with a smooth, thin, horny epidermis, purple inside at the hinge, and under the umbones; anterior side very short, excavated beneath the umbones; umbones a little distant, posterior side rather beaked, angular, truncated; ventral margin very convex.

DESHAYES — ? MS. Cam. Col.

Hab. — ?

Species 104. (Mus. Brit.)

CYRENA SOLIDA. *Cyr. testâ crassâ, angulâ, breviter subrhomboidâ, tumidissimâ, ephemeride tenuissimâ intus, antico leviter angulâ; latere antico brevissimo, umbonibus fere terminalibus; latere postico producto, alidè angulato; margine latere dorsali elongato, arcuato; margine ventrali convexo, versus angulum posticum carinato declivi.*

THE SOLID CYRENA. Shell thick, large, shortly subrhomboidal, very tumid, covered with a very thin epidermis, anteriorly lightly wrinkled; anterior side very short, umbones nearly terminal, posterior side produced, obtusely angular; dorsal margin lengthened, arched; ventral margin convex, sloped up towards the posterior angle.

DESHAYES — ? MS. Cam. Coll.

Hab. Australia.

Species 105. (Mus. Brit.)

CYRENA JUKESEI. *Cyr. testâ ovatâ, compressâ, levigatâ, ephemeride fascâ, crenulatum striatâ intus; latere antico brevi; latere postico producto, margine dorsali arcuatim declivi.*

JUKES'S CYRENA. Shell ovate, compressed, smooth, covered with a brown epidermis with crenulated striae; anterior side short; posterior side produced, dorsal margin slightly arched, sloped downwards.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. Port Essington.

CYRENA.—PLATE XVIII.

Species 106. (Mus. Brit.)

CYRENA PLACIDA. *Cyr. testâ ovato-rotundatâ, compressâ, albâ, levigatâ, epidermide striatâ indutâ, ferè equilaterali, intus pallidè roseâ, lateribus rotundis, umbonibus depressis, obtusissimis.*

THE PLACID CYRENA. Shell ovately rounded, compressed, high, smooth, covered with a striated epidermis, almost equilateral, pale rose within, sides rounded; umboes depressed, very obtuse.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. —? Cum. Coll.

Species 107. (Mus. Brit.)

CYRENA NOTABILIS. *Cyr. testâ subrhomboides, depressâ, subcompressâ, tenuiter striatâ, epidermide tenuis-*

simâ indutâ; latere antico brevi, rotundo, infra umboes excavato; latere postico oblongo, angulato, post angulum extâs intusque purpureo, margine dorsali paulò declivi, arcuato, margine terminali latè truncato.

THE REMARKABLE CYRENA. Shell subrhomboidal, depressed, rather compressed; finely striated, covered with a very thin epidermis; anterior side short, rounded, excavated under the umboes; posterior side oblong, angular, purple within and without behind the angle, dorsal margin a little sloped, arched, terminal margin broadly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 21.

Hab. Payta, Peru.

Having much the form of a *Cypriocardia*.



CYRENA.

PLATE XIX.

Species 108. (Mus. Sowerby.)

CYRENA BREVICOCCIGERIS. *Cyr. testis parvâ, tenuissimâ flosâ, ovata, valdè inequilaterali; marginibus dorsalibusque costâ declivi, arcu purpureo, utriusque costâ unguiculatâ; latere antico breviusculo, declivi, subacuminato, latere postico attenuatiusque declivi, ad terminum acuminato.*

THE BOWEN-SHAPED CYRENA. Shell small, very finely edged, trigonal, very inequilateral; dorsal margin much sloped on each side, with a semilunar area of purple on each valve; anterior side rather short, sloped, rather acuminated, posterior side taperingly produced, acuminated at the end.

SOWERBY.

Hab. Florida.

This species belongs to the *Corbicula* group in the character of the hinge.

Species 109. (Mus. Brit.)

CYRENA ANOMALA. *Cyr. testis tenuissimâ, inflatâ, albâ, subtrigona, epidermide tenui, pallidè subviridi inflatâ, int'is ad cardinem et infra umbones purpureâ; latere antico inflatâ, rotundâ, brevi; umbonibus i'gatis, rotundis, marginibus ventrali valdè convexo; latere postico producto, acutè rostrato, attenuato.*

THE ANOMALOUS CYRENA. Shell very thin, inflated, high, subtrigonal, covered with a thin greenish epidermis, purple within on the hinge and under the umbones; anterior side inflated, rounded, short; umbones inflated, rounded, ventral margin very convex; posterior side produced, sharply beaked, attenuated.

DESHAYES. Proc. Zool. Soc. 1851, p. 51.

Hab. Bay of Caraccas.

Very full and globular in front, compressed and narrowed to a point at the back.

Species 110. (Mus. Sowerby, odd valves.)

CYRENA MEXICANA. *Cyr. testis ovatâ, inflatâ, tenui, epidermide obscurè fuscâ indutâ, int'is pallidissimè*

carnei, ad latera posticum porporinâ; latere antico brevissimo, modo inflato; latere postico producto, margine latero-dorsali declivi, margine terminali obtuso, obtusissimè angulato.

THE MEXICAN CYRENA. Shell ovate, inflated, thin, covered with a dull brown epidermis, very pale flesh-colour within, purple at the posterior side; anterior very short, middle inflated; posterior side produced, dorso-lateral margin sloped, terminal margin obtuse, very obtusely angular.

BODDERIP and SOWERBY. Zool. Journ. V. 5.

Hab. Mazatlan, Mexico.

Species 111. (Mus. Sowerby.)

CYRENA CEYLANICA. *Cyr. testis magna, solida, subtrigona, subcompressâ, albâ, subequilaterali, epidermide tenui, flavidâ, gembratum striatâ inflatâ; latere postico obtusè biangulato, ante angulum anticam subconcavo, post angulum posticum concavato, valdè declivi; latere antico breviusculo, margine latero-dorsali convexato, declivi.*

THE CEYLON CYRENA. Shell large, solid, subtrigonal, subcompressed, high, subequilateral, covered with a thin, yellowish epidermis, with fringed striae; posterior side obtusely two-angled, rather concave in front of the anterior angle; flattened, much sloped behind the posterior angle; anterior side rather short, latero-dorsal margin flattened, sloped.

CHEMNITZ. (Venus) Marl. and Chemn.

Venus concava. Gmel.

Cyrena Zeylanica. Lamarek.

Cyrena pallida. Deshayes.

Hab. Ceylon.

Species 112. (Mus. Brit.)

CYRENA COMITA. *Cyr. testis ovato-oblongâ, depressâ, tumidâ, crassâ, levigatâ, epidermide pallidè flavidâ int'is indutâ; latere antico brevi; latere postico producto, subattenuato, angulato, ante angulum subcompresso, margine dorsali declivi, margine terminali biangulato, truncato.*

THE SPEUCE CYRENA. Shell ovate-oblong, depressed.

CYRENA.—PLATE XIX.

tumid, thick, smooth, covered with a pale yellowish shining epidermis; anterior side short; posterior side produced, rather attenuated, angular, rather flattened in front of the angle; dorsal margin sloped, terminal margin biangular, truncated.

DESHAYES. Proc. Zool. 1854, p. 21.

Hab. — ?

Species 113. (Mus. Sowerby.)

CYRENA BUSCHII. *Cyr. testâ venæiformi, ovato-subtri-*
gonâ, solidâ, subcompressâ, epidermide fusco-
flavidâ fimbriatâ striatâ indatâ; latere antico
brevi, prope marginem dorso-lateralem plavulato;
latere postico magis producto, margine dorso-
laterali arcuato; umbonibus elevatis, versus latus
anticum inclinatâ.

VON BUSCH'S CYRENA. Shell venus-shaped, ovately subtriangular, solid, rather compressed, covered with a brownish-yellow epidermis; anterior side short, flattened near the dorso-lateral margin; posterior side more produced, dorso-lateral

margin arched; umboes raised, leaning towards the anterior margin.

PHILIPPI — ? Adams' Genera.

Laud. Deshayes.

Hab. — ?

Species 114. (Mus. Brit.)

CYRENA EQUILATERALIS. *Cyr. testâ subtriagonâ, com-*
pressâ, altâ, subæquilaterali, fulvo-subaurantiâ,
hevigatâ; latere antico breviusculo, declivi, infra
umboes excavato; latere postico paulo magis
producto, infra acuminato, prope marginem dorso-
lateralem angulato.

THE EQUILATERAL CYRENA. Shell rather trigonal, compressed, high, nearly equilateral, fulvous orange, smooth; anterior side rather short, sloped, hollowed under the umboes; posterior side a little more produced, acuminated below, with an angle near the dorso-lateral margin.

DESHAYES. Proc. Zool. Soc. 1854. p. 20.

Hab. Cayenne.

CYRENA.

	Flora	Species		Flora	Species
aequilatralis. <i>Deshayes</i>	XIX.	114	Floridana. <i>Curol</i>	XVIII.	102
Africana. <i>Krauss</i>	XIII.	59	fluminea. <i>Lamareck</i>	XII.	56
ambigua. <i>Deshayes</i>	XV.	73	Fontainei. <i>D'Orbigny</i>	IX.	34
Angasi. <i>Praine</i>	XVII.	90	fortis. <i>Praine</i>	V.	16
angulata. <i>Deshayes</i> , not met with			fragilis. <i>Deshayes</i>	XVII.	98
anomala. <i>Deshayes</i>	XIX.	109	fuscata. (Batissa) <i>Prime</i>	IV.	21
arata. <i>Blanford</i>	XVII.	93	galathea. <i>Morch</i> , not met with		
orbata. <i>Deshayes</i> , not met with			gigantea. <i>Praine</i>	I.	1
Australis. <i>Deshayes</i> (Batissa) * ..	V.	13	gracilis. <i>Prime</i> (Batissa) *	VI.	20
Anstralis. <i>Deshayes</i> (Corbicula) * ..	XVI.	82	gracilis. <i>Prime</i> (Corbicula) *	XIV.	67
Bengalensis. <i>Deshayes</i> (Corbicula) * ..	XI.	50	grandis. <i>Deshayes</i>	XIV.	71
Bengalensis. <i>Lamareck</i> (Cyrena) * ..	VII.	23	<i>Gauvitziana</i> . <i>Krauss</i>	XIII.	59
Bensoni. <i>Deshayes</i>	XI.	44	humerosa. <i>Deshayes</i>	VI.	18
Braziliana. <i>Deshayes</i>	XV.	79	incrassata. <i>Deshayes</i>	XVI.	86
Bullata. <i>Sowerby</i>	XIV.	68	inflata. <i>Praine</i>	IV.	10
Busehii. <i>Philippi</i>	XIX.	113	insignis. <i>Deshayes</i>	III.	7
Caledonica. <i>Goswami</i>	X.	40	insignis. <i>Deshayes</i>	XIV.	68
Carolinensis. <i>Bosc</i>	VIII.	31	iravadiæ. <i>Deshayes</i>	XI.	45
Cashmirensis. <i>Deshayes</i>	XIII.	60	isocardiodes. <i>Deshayes</i>	XVIII.	103
Ceylanica. <i>Cheyne</i>	XIX.	111	Japonica. <i>Prime</i>	XVII.	91
Childreni. <i>Guy</i>	VI.	17	Jayensis. <i>Lot</i>	VI.	19
coaxana. <i>Göbel</i>	XIX.	111	Jukesii. <i>Deshayes</i>	XVIII.	105
compressa. <i>Monsson</i>	XII.	58	Kerandreni. <i>Lesson</i>	II.	6
compta. <i>Deshayes</i>	XIX.	112	Largillierti. <i>Philippi</i>	XIII.	61
concinna. <i>Sowerby</i>	XIV.	66	lata. <i>Deshayes</i>	XIX.	113
convolvuta. <i>Caillaud</i>	XII.	51	lenticularis. <i>Deshayes</i>	I.	2
cor. <i>Lamarck</i>	XII.	51	limosa. <i>Mabou</i>	XVII.	96
corbuloides. <i>Deshayes</i>	VI.	21	Lydigiana. <i>Praine</i>	XVI.	83
cordiformis. <i>Deshayes</i>	VIII.	27	maetroides. <i>Desch</i> , not met with		
crassula. <i>Morse</i>	XV.	72	Mallaccensis. <i>Deshayes</i>	XVI.	88
Cumiugii. <i>Deshayes</i>	XII.	53	Manillensis. <i>Philippi</i>	XV.	74
Cyprinoides. <i>Guy</i>	VII.	24	maritima. C. B. <i>Adams</i>	XIII.	30
Cyrena. <i>Prime</i>	XVII.	95	maxima. <i>Deshayes</i>	XV.	78
eyreniformis. <i>Prime</i>	XIV.	69	Mexicana. <i>Broderip</i> and <i>Sowerby</i> ..	XIX.	110
decipeus. <i>Deshayes</i> , not met with			minor. <i>Prime</i>	III.	8
depressa. <i>Lamarck</i> , not met with			Monssoniana. <i>Deshayes</i>	XVII.	97
divaricata. <i>Deshayes</i>	VIII.	28	Mulleriana. <i>Prime</i>	XVII.	95
donaciformis. <i>Sowerby</i>	XIX.	108	nitens. <i>Deshayes</i>	XVI.	89
erosa. <i>Deshayes</i>	XI.	46	Nepeanensis. <i>Lesson</i>	XV.	75
Essingtonensis. <i>Deshayes</i>	IX.	36	nitidula. <i>Deshayes</i>	X.	38
extima. <i>Dkr.</i> , not met with			notabilis. <i>Deshayes</i>	XVIII.	107
fallax. <i>Deshayes</i>	X.	41	obesa. <i>Hinds</i>	II.	5

* Owing to the separation of Cyrena into separate genera, authors have repeated specific names. The above instances were not observed till too late for avoidance or explanation in the plates.

CYRENA.

	Plate.	Species.		Plate.	Species.
oblonga. <i>Deshayes</i>	IX.	37	salmacidae. <i>Morelet</i>	XVII.	100
obscura. <i>Prime</i>	IX.	33	semisulcata. <i>Deshayes</i>	XVI.	84
obsoleta. <i>Deshayes</i>	XVI.	85	similis. <i>Gray</i>	XIII.	64
occidens. <i>Benson</i>	XI. XIII.	48	sinuosa. <i>Deshayes</i>	VII.	26
olivacea. <i>Curpenter</i>	IX.	32	solida. <i>Deshayes</i>	XVIII.	104
orientalis. <i>Lamarck</i>	XII.	54	squalida. <i>Deshayes</i>	XVII.	99
ovalina. <i>Deshayes</i>	XV.	77	striatella. <i>Deshayes</i>	XI.	49
ovalis. <i>Prime</i>	XVIII.	101	sublobata. <i>Deshayes</i>	X.	39
pallida. <i>Deshayes</i>	XIX.	111	suborbicularis. <i>Phil.</i> , not met with		
Papua. <i>Lesson</i>	VII.	22	sulcata. <i>Deshayes</i>	XIV.	70
Panamaensis. <i>Prime</i>	VIII.	29	sumatrensis. <i>Sowerby</i>	XIII.	62
Panormitana. <i>Bison</i> , not met with			tenebrosa. <i>Hinds</i>	V.	14
Paracensis. <i>D'Orbigny</i>	XV.	81	tenuistriata. <i>Prime</i>	XV.	80
Paranensis. <i>D'Orb.</i> , not met with			trigona. <i>Deshayes</i>	XI.	43
Peruviana. <i>Deshayes</i> , not met with			Iravadia. <i>Blanford</i>	XI.	45
Petitiana. <i>Bourg</i> , not met with			triangularis. <i>Metcalf</i>	VII.	25
placida. <i>Deshayes</i>	XVIII.	106	trigonella. <i>Lamck.</i> , not met with		
<i>Primeana</i> . <i>Moreh</i>	XIII.	63	triquetra. <i>Deshayes</i>	II.	3
producta. <i>Deshayes</i>	IV.	12	tumida. <i>Deshayes</i>	XVII.	92
prolongata. <i>Prime</i>	XVII.	94	turgida. <i>Lea</i> , not met with		
pusilla. <i>Philippi</i>	XII.	57	unioformis. <i>Prime</i>	III.	9
radiata. <i>Hawley</i>	XI. XIII.	47	Vanikorensis. <i>Quoy</i> , not met with		
<i>Ramondi</i> . <i>Bourg</i> , not met with			variegata. <i>Deshayes</i>	XVI.	87
recurvata. <i>Valeuciennes</i> , not met with			veniciformis. <i>Sowerby</i>	IV.	11
regularis. <i>Prime</i>	XV.	76	ventricosa. <i>Deshayes</i>	IX.	35
rhomboida. <i>Prime</i>	XII.	52	violacea. <i>Lamarck</i>	V.	15
rivalis. <i>Von Busch</i>	XIV.	65	Woodiana. <i>Lea</i>	XIII.	63
rotundata. <i>Lea</i>	II.	4	Yokohamensis	XII.	55
Saigouensis. — ?	XIII.	62	<i>Zeylanica</i> . <i>Lamarck</i>	XIX.	111

MONOGRAPH
OF THE GENUS
SPHÆRIUM.

— While Thee, by Whom were all things made, we praise,

For ever, and tell out in sweetest lays.

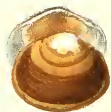
An endless Alleluia! — No. 1.



2



1



3



5



6



7



8



9



4

SPHERIUM.

PLATE I.

Genus SPHERIUM. *Sopel.*

MOLLUSCUM ACEPHOLOPODUM, BIMUSCULOSUM, FLUVIATILE, SIPHONIBUS SEPARATIS. *Testa tenuis, intus tenuiter testacea, valis cornea, aequalibus, fere aequaliteralis, plerumque inflata. Cardio utriusque valvæ dentibus duobus cardinalibus divergentibus, lateralibus oblongatis, compressis, duplicatis et simplicibus. Pallii impressionibus integris.*

MOLLUSC ACEPHOLOPODUS, BI-MUSCULAR, FLUVIATILE, WITH SEPARATED SIPHONS. Shell thin, thinly shelly within, horny without, equivalve, nearly equilateral, generally inflated. Hinge in each valve with two cardinal diverging teeth, lateral teeth, two and one in each valve, elongated, compressed. Pallial impression entire.

Synonym. *Cyclus*. Bruguière.

The chief difference between this genus and *Pisidium* is to be found in the siphons of the animal, which are divided in the former, and separated in the latter. The shells, however, are in general to be distinguished by those of the present genus being less oblique, and more equilateral. Wherever there are rivers and lakes, are also to be found shells of the *Sphærium* genus, excepting, perhaps, in the torrid regions. They abound in Europe and North America. The British Museum, largely reinforced by the Cumingian Collection, presents a large array of species which are given in this monograph, besides others which are accessible to me; still, however, leaving some which cannot be got together for identification.

Species 1. (Mus. Brit.)

SPHERIUM STEINBUCHII. *Sph. testâ parvâ, politâ, sub-obliquâ, semipellucidâ, pallidâ; latere postico obliquè productâ, margine dorsali declivi; latere antico breviusculo; umbonibus prominentibus, versus laterem anticum inclinatâ.*

STEINBUCH'S SPHERIUM. Shell small, polished, rather oblique, semipellucid, pale; posterior side obliquely produced, dorsal margin sloped; anterior

side rather short; umbos prominent, leaning towards the anterior side.

MÜLLER. Adams. Geneva.

Hab. Greenland.

Species 2. (Mus. Brit.)

SPHERIUM TRANSVERSUM. *Sph. testâ transverse ovata, pallidè corneâ, tenui, opacâ, umbonibus ovalis, subcentralibus, margine dorsali rectiusculo; latere antico breviusculo, marginebus lateralibus sub-truncatis, margine ventrali convexo.*

THE TRANSVERSE SPHERIUM. Shell transversely ovate, pale horn, thin, opaque, umbos ovate, subcentral, dorsal margin rather straight; anterior side rather shorter, posterior lateral margin, a little obliquely truncated, ventral margin convex.

SAY. Proc. Acad. Nat. Sci. Phil. 1862.

Hab. United States.

Species 3. (Mus. Brit.)

SPHERIUM RIVALIS. *Sph. testâ rectiusculâ, subangulâ, laterali, inflatâ, transversâ, corneâ, fusco-subviridi, fasciatâ; umbonibus ovalis, marginibus centrali recto, lateribus subtruncatis.*

THE RIVER SPHERIUM. Shell rather straight, nearly equilateral, inflated, transverse, horny, banded with greenish brown; umbos oval, large; ventral margin straight, sides rather truncated.

Drap. Moll. Pl. X.

Hab. Europe.

Generally regarded as a variety of *Sphærium corneum*, but more transverse and rhomboidal.

Species 4. (Mus. Sowerby.)

SPHERIUM RIVICOLUM. *Sph. testâ magis, ovali, tenuiter sulcatâ, intense fusco-viridi, intus medio carneâ, versus marginem corneâ; umbonibus subcentralibus, obtusis, margine dorsali utriusque declivi.*

THE RIVER-DWELLING SPHERIUM. Shell large, oval,

SPLERIUM.—PLATE I.

finely grooved, deep greenish-brown, within fleshy in the middle, blue towards the margin; umboes rather central, obtuse, dorsal margin sloped at both sides.

LAMARCK. Anim. s. Vert.

Cyclus coccaum. Dilwyn.

Hab. Great Britain. Europe generally.

Species 5. (*f. a, b*, Pl. V. Mus. Brit.)

SPLERIUM LACUSTRE. *Sph. testâ ovata, inflata, pallidâ, lavi, latere antico breviori, latere postico vie obliquè truncato, margine dorsali sublectivâ.*

THE PALE SPLERIUM. Shell ovate, inflated, pale, smooth, anterior side shorter; posterior side, scarcely obliquely truncated, dorsal margin a little sloped.

DEAPARNAUD. Hist. Moll. p. 130, Pl. X. f. 6, 7.

Cyclus arabe. FERTUSSAC.

Cyclus pallidum. Gray.

Hab. Rugent's Park, London. France.

Species 6. (Mus. Sowerby.)

SPLERIUM LENTICULARIS. *Sph. testâ subcompressâ, pallidâ, breviter ovali, cocco-griseoventi, albi; umbonibus subcentralibus, margine dorsali utriusque declivè, margine postico obtusissimè truncato.*

THE LENTICULAR SPLERIUM. Shell rather compressed, polished, shortly oval, greyish horn, high; umboes rather central, dorsal margin sloped on each side; posterior margin very obtusely truncated.

SOWERBY.

Hab. —? We have no locality for this rather peculiar shell.

Species 7. (Mus. Brit.)

SPLERIUM SILEPTUM. *Sph. testâ angustâ, inflatâ, sub-rhomboidali, validè sulcatâ, fusco-subviridâ, transversâ; umbonibus subcentralibus, prominentibus; aregion dorsali utriusque parva declivè, marginibus latioribus obliquè subtruncatis, margine ventrali rectiusculo.*

THE GROOVED SPLERIUM. Shell large, inflated, rhomboidal, strongly sulcated, greenish brown, transverse; umboes nearly central, prominent; dorsal margin a little sloped on each side;

lateral margins a little truncated obliquely; ventral margin rather straight.

LAMARCK. Anim. s. Vert.

Hab. Massachusetts.

Species 8. (Mus. Hanley.)

SPLERIUM INDICUM. *Sph. testâ subrotundâ, pallidâ, lavi, altiusculâ; umbonibus subcentralibus, prominentibus, rotundis, margine ventrali convexo, margine dorsali postico rectiusculo.*

THE INDIAN SPLERIUM. Shell rather rounded, pale, smooth, rather high; umboes rather central, prominent, rounded, ventral margin convex, dorsal margin rather straight posteriorly.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. Loodianah, India.

Species 9. (Mus. Brit.)

SPLERIUM SCALDIANUM. *Sph. testâ oblongo-subquadratâ, pallidè aurantâ, tumidâ, brevigratâ, subinequilaterali, latere antico breviori; umbonibus prominentibus; margine dorsali postico rectiusculo, margine centrali rectiusculo.*

SCALDI'S SPLERIUM. Shell oblong-subquadrate, pale orange, tumid, smooth, rather inequilateral, anterior side shorter; umboes prominent, postero-dorsal margin rather straight, ventral margin rather straight.

NORMAND. Note Cycl. Nord. p. 3, 1854.

Hab. Europe.

Species 10. (Mus. Brit.)

SPLERIUM CALYCATUM. *Sph. testâ subquadratâ, complanatâ, compressâ, inequilaterali; latere antico breviori, obliquè subtruncato, margine dorsali recto, brevi; latere postico expanso; obliquè quadrato, margine dorsali recto, pauli elevato; umbonibus acutis, tuberculo calyciformi desinenti.*

THE CAPPED SPLERIUM. Shell rather square, flattened, compressed, inequilateral; anterior side shorter, obliquely subtruncated, dorsal margin straight, short; posterior side expanded, obliquely square, dorsal margin straight, a little raised; umboes sharp, ending in a little cup-shaped tubercle.

DEAPARNAUD. Moll. Pl. X. f. 14, 15.

Hab. Europe.

Quite distinct from *Cyclus lacustris* of the same author.



12



11



15



14



13



16



17



18



18



19



19

SPHERIUM.

PLATE II.

Species 11. (Mus. Brit.)

SPHERIUM XULEUS. *Sph. testâ tumidâ, altâ, pallidâ, conoïdâ, fuscâ, griseâ ornatâ, subrhomboidâ; sub-angulatis colli; umbonibus marginis, obtusis, margine dorsali utriusque ceteroconvexo, margine ventrali ceteroconvexo, marginebus lateralibus subtruncatis.*

THE XUL-LIKE SPHERIUM. Shell tumid, high, pale, horny, ornamented with grey bands, subrhomboidal, nearly equilateral; umboes large, obtuse; dorsal margin rather straight on each side, ventral margin rather straight, lateral margins a little truncated.

STUBER. Jay's Catalogue.

Hab. Moravia.

Species 12. (Mus. Brit.)

SPHERIUM PISIDIOIDE. *Cypr. testâ viridâ, subdistanter sulcatâ, obliquâ, tumidâ, lateri quam altâ; latere postico obliquè producto, margine dorsali declivi; latere antico breviori, margine dorsali declivi; umbonibus elevatis, tumidis, rotundis.*

THE PISIDIUM-SHAPED SPHERIUM. Shell green, rather distantly grooved, oblique, tumid, longer than high; posterior side obliquely produced, dorsal margin sloped downwards, anterior side shorter, dorsal margin sloped, umboes elevated, tumid, rounded.

GRAY. MS. Brit. Mus.

Hab. Europe.

Species 13. (Mus. Brit.)

SPHERIUM STRIATINUM. *Sph. testâ subrhomboidâ, subdistanter sulcatâ, obliquâ; latere antico brevi, liris calidis; latere postico obliquè producto, ad marginem ventralem obtusè angulato, liris subconvexis; margine dorsali declivi, margine postico-laterali obliquè truncato.*

THE LITTLE STRIATED SPHERIUM. Shell rather rhomboidal, rather distantly sulcated, oblique; anterior side short, ridges strong; posterior side obliquely produced, obtusely angular at the ventral

margin, ridges almost disappearing; dorsal margin sloped, postero-lateral margin obliquely truncated.

LAMARCK. Anim. s. Vert. Cyelas, Sp. 10.

Hab. South America.

Species 14. (Mus. Brit.)

SPHERIUM TUMIDUM. *Sph. testâ subconvexâ, tumidâ, calidâ et distanter liris, fuscâ ornatâ, altâ, liris subconvexis; latere antico rotundo, latere postico subobliquè producto, prope marginem ventralem subconvexato.*

THE TUMID SPHERIUM. Shell rather round, tumid, strongly and distantly ridged, horny-brown, high, rather orange within; anterior side round, posterior side rather obliquely produced, acuminated near the posterior margin.

BAIRD. Proc. Zool. Soc. 1863, p. 69.

Hab. Vancouver's Island.

Species 15. (Fig. a, b, Pl. IV.)

SPHERIUM PARTUMEIUM. *Sph. testâ pallidâ, flavidâ, et griseo-ornatâ, subrotundâ, tumidâ, altâ, liris patâ; latere antico brevi, rotundo; latere postico subproducto, subquadrato.*

THE PRODUCTIVE SPHERIUM. Shell pale yellowish, horny-grey, rather rounded, tumid, high, smooth; anterior side short, round; posterior side a little produced, rather square.

SAY. Gould. Invertebrata, p. 75, f. 55.

Hab. Ohio.

Species 16. (Mus. Brit.)

SPHERIUM RUGOSUM. *Sph. testâ solidiusculâ, subrhomboidâ, subcicridi-fuscâ, medio sulcatâ, ad latera liris patâ; latere antico brevi, ad marginem dorsalem subconvexato, latere truncato; latere postico producto, obliquè truncato.*

THE RUGOSE SPHERIUM. Shell rather solid, subrhomboidal, greenish-brown, sulcated in the

SPLERIUM.—PLATE II.

middle, smooth at the sides; anterior side short, a little cornered at the dorsal margin, truncated at the side; posterior side produced, obliquely truncated.

WHITMORE. MS. Mus. Brit.

Hab. — ?

Species 17. (Fig. a, b, c, and d, Pl. V. Mus. Brit.)

SPLERIUM CORNEUM. *Sph. testā breviter ovata, tumida, subrotundā, fusca vel flavida, griseo-fusciata, vel albida; umbonibus obtusis, margine dorsali utrinque declivi; marginibus lateralibus obtusissimè truncatis.*

THE HORNY SPLERIUM. Shell shortly ovate, tumid, rather round, brown or yellow, or banded with grey or whitish; umboes obtuse, dorsal margin sloped on both sides; lateral margins very obtusely truncated.

LINNEUS (*Tellina cornu*). Syst. Nat.

Cyclus ricollis. Draparnaud.

Hab. Great Britain. Europe generally.

Species 18. (Mus. Brit.)

SPLERIUM TERVERIANUM. *Sph. testā subglobosā, alid, ad apicem corneā, ferè omnino castaneā; latero-antico ante umboes cecarato; umbonibus proni-acutibus, latere postico inflato, margine dorsali declivi.*

TERVEE'S SPLERIUM. Shell rather globose, high, horny at the apex, chestnut nearly all over, anterior side excavated in front of the umboes; umboes prominent, posterior side inflated, dorsal margin sloped.

DUPUY. Extr. Gall. Test. 87, 1849.

Hab. France.

Species 19. (Mus. Brit.)

SPLERIUM CONSOBRINUM. *Sph. testā compressā, subquadrata, laevigatā, corneā; latere antico brevi, depresso, latere postico subexpanso; margine dorsali elevato, marginibus lateralibus ventralique rectiusculis; umbonibus parvis, acutis.*

THE RELATED SPLERIUM. Shell compressed, subquadrate, smooth, horny; anterior side short, depressed; posterior side rather expanded; dorsal margin raised, lateral and ventral margins rather straight; umboes small, sharp.

CAILLAUD. Voyage de la Méroé.

Hab. Pyrmont.

A smaller species than *Sph. calydatum*, resembling it, but without the calyx-shaped tubercle.

Species 20. (Mus. Brit.)

SPLERIUM OCCIDENTALE. *Sph. testā subcompressā, ovato-subquadrata, corneo-flavescenti, laevigatā; lateribus subtruncatis, margine dorsali antico declivi, postico paulo elevato.*

THE WESTERN SPLERIUM. Shell rather compressed, ovato-subquadrate, yellowish, horny, smooth: sides a little truncated, anterior dorsal margin sloped downwards, posterior a little raised.

PRIME. MS. Mus. Brit.

Hab. Montreal.



10



11



12



13



14



15



16



17



18



19

SPHERIUM.

PLATE III.

Species 21. (Mus. Brit.)

SPHERIUM MACULATUM. *Sph. testâ parvâ, albâ, compressâ, subquadratâ, tenui, coracâ, maculis nigris variegatâ; latere antico brevi, ante umbones paulo excavatâ; latere postico magis excavato, subquadrato, margine dorsali rectiusculo, margine laterali latè truncato.*

THE SPOTTED SPHERIUM. Shell small, high, compressed, rather square, thin, horny, variegated with blackish spots; anterior side short, a little excavated in front of the umbones; posterior side more expanded, rather square, dorsal margin rather straight, lateral margin broadly truncated.

MORELET. Test. Nov. p. 25. 1851.
Hab. Yucatan, Mexico.

Species 22. (Mus. Brit.)

SPHERIUM MADAGASCARIENSE. *Sph. testâ ovato-subrhomboidè, ferruginè, coracis-subcirrâ, fasciatâ, tumidâ, concentricè et molissimè striatâ, margine dorsali rectiusculo, marginibus lateralibus subtransversis; umbonibus obtusis.*

THE MADAGASCAR SPHERIUM. Shell ovate, subrhomboidal, ferruginous or banded with greenish horn, tumid, concentrically very minutely striated, dorsal margin rather straight, lateral margins rather truncated; umbones obtuse.

TRISTAN (?) MS. Mus. Brit.
Hab. Madagascar.

Species 23. (Mus. Brit.)

SPHERIUM STRAMINEUM. *Sph. testâ subrhomboidè, solidâ, epidermidè fulvo-flavidâ indatâ; medio versus apicem distanter levatâ, ad latera et versus marginem ventralè levigatâ; umbonibus rotundis prominèntibus.*

THE STRAW-COLOURED SPHERIUM. Shell subrhomboidal, solid, covered with a fulvous yellowish epidermis; middle, towards the apex, distantly ridged, smooth at the sides and towards the ventral margin; umbones rounded, prominent.

OSBORN. Silliman's Journal, Vol. XXV., p. 342.
Hab. Missouri.

Species 24. (Mus. Brit.)

SPHERIUM ELEGANS. *Sph. testâ tenui, albâ, compressâ, subquadratâ, levigatâ, pallidè coracâ, lineis nigris, ovalibus et fasciis albis ornatâ; umbonibus subcentralibus, margine dorsali utrinque paulo declivè.*

THE ELEGANT SPHERIUM. Shell thin, high, compressed, rather flat, smooth, pale horn, ornamented with dark lines and white bands; umbones nearly central, dorsal margin a little sloped on each side.

ADAMS. Boston Journal of Science, 4. Pl. IV. f. 2.
Hab. Vermont.

Species 25. (Mus. Brit.)

SPHERIUM Eburneum. *Sph. testâ albâ, solidâ, eburnâ, levigatâ, rotundè-subquadratâ; latere antico angustiori, breviori, rotundò; latere postico excavato, lato, subquadrato, margine dorsali recto, ad truncum excavato.*

THE IVORY SPHERIUM. Shell high, solid, ivory-white, smooth, roundly subquadrate; anterior side narrower, shorter, rounded; posterior side expanded, broad, rather square, dorsal margin straight, cornered at the end.

ANTHONY (?) MS. Brit. Mus.
Hab. United States.

Species 26. (Mus. Brit.)

SPHERIUM FADALE. *Sph. testâ compressâ, leviter ovali, costatâ, epidermidè ferruginâ indatâ, subrotatâ, depressâ, valde inequilateralè; latere antico brevi, declivè, subacuminato; latere postico productulo, margine dorsali declivo, subrotato, margine ventrali rectiusculo.*

THE BEAN SPHERIUM. Shell compressed, slightly grooved, chestnut, covered with a ferruginous epidermis, rather oval, depressed, very inequilateral; anterior side short, sloped, rather acuminated; posterior side produced, broad, dorsal margin raised, slightly arched; ventral margin rather straight.

PRIME. Proc. Soc. Nat. Hist. Brit. IV. 1851, p. 159.

Sphaerium castroaeum. Prime.
Sphaerium sulcatum. Charpentier.
 Hab. United States.

Species 27. (Mus. Brit.)

SPHERIUM SIMILE. *Sph. testá subovatá vel subrhomboidá, cornéa, subaequilaterali, liris validis, versus apicem fortioribus rugatá; latere antico declivi, infra subacuminato, latere postico obliqué et obtusissimé truncato.*

THE SIMILAR SPHERIUM. Shell subovate or subrhomboidal, horny, nearly equilateral, wrinkled with strong ridges, stronger towards the apex; anterior side sloped, rather acuminated below; posterior side obliquely and very obtusely truncated.

SAY. Nichol's Eucycl. Am. Ed. 11.
 Hab. North America.
Cyclos Sarragota. Lemarek.

It is not so rhomboidal as *Sphaerium sulcatum*, and the sulci are larger at and towards the apex.

Species 28. (Mus. Brit.)

SPHERIUM TRUNCATUM. *Sph. testá parvâ, pallidè cornéa, griseanti, compressi, subobliquâ; latere antico brevi, subrotundo; latere postico expanso, obliqué truncato.*

THE TRUNCATED SPHERIUM. Shell small, pale horn, greyish, compressed, rather oblique; anterior

side short, rather round; posterior side expanded, obliquely truncated.

LINSLEY. Amer. Journ. Sci. N. Ser. VI. p. 234.
 Hab. United States.

Species 29. (Mus. Brit.)

SPHERIUM INCURVUM. *Sph. testá parvâ, oblongâ, compressâ, subferrugineâ; latere antico brevissimo, depresso; latere postico producto, truncato; umbonibus acuminatis, incurvis.*

THE INCURVED SPHERIUM. Shell small, oblong, compressed, rather ferruginous; anterior side very short, depressed; posterior side produced, truncated; umbones acuminated, turned inwards.

GUPPY. Proc. Sci. Assn. Trinidad. 1872.
 Hab. Isl. Trinidad.

Species 30. (Mus. Brit.)

SPHERIUM ELEVATUM. *Sph. testá rotundâ, altâ, pallidissimè aurantio-cornéa; latere antico brevi, rotundo; latere postico subexpanso, ad marginem dorsalem emucato; umbonibus rotundis, prominentibus.*

THE RAISED SPHERIUM. Shell rounded, high, very pale, orange-tinted, horny; anterior side short, round; posterior side a little expanded, cornered at the dorsal margin; umbones round, prominent.

HALDEMAN. Proc. Ac. Nat. Hist. Phil. I p. 53.
 Hab. America.



32



33



34



35



36



38



39



39

SPHÆRIUM.

PLATE IV.

Species 31. (Mus. Sowerby.)

SPHÆRIUM CAROLINENSIS. *Sph. testâ subcompressâ, altâ, rotundo-subquadratâ, fusco-cornuâ; latere antico subrotundo, angusto; latere postico obliquè obtusissimè truncato; margine ventrali paulò convexo; umbonibus parvis, basi prominentibus.*

THE CAROLINA SPHÆRIUM. Shell rather compressed, high, subquadrate, brown-horny; anterior side rather round, narrow; posterior side obliquely very obtusely truncated; ventral margin a little convex; umbones small, not prominent.

DESHAYES. Lamarck. N. ed. Anim. sans Vert.

Hab. Carolina, United States.

Species 32. (Mus. Brit.)

SPHÆRIUM RHOMBOIDEUM. *Sph. testâ subrotatâ, pallidâ, levî, altiusculâ; latere antico breviusculo, margine dorsali depresso, latere postico subreptanso, subtruncato; margine ventrali rectiusculo; umbonibus prominentibus, acuminatis.*

THE RHOMBOIDAL SPHÆRIUM. Shell subovate, pale, smooth, rather high; anterior side rather short, dorsal margin depressed, posterior side a little expanded, slightly truncated; ventral margin rather straight; umbones prominent, acuminate.

SAY. Journ. Acad. Nat. Sci. 2. p. 380.

Hab. Vermont.

Species 33. (Mus. Sowb.)

SPHÆRIUM SECURIS. *Sph. testâ subquadratâ, griseo-cornuâ, tumidâ, brevitatâ, umbonibus productis, calceulatis; latere antico brevi, rectiusculo; latere postico convexo, latè truncato, margine ventrali paulò convexo.*

THE HATCHET SPHÆRIUM. Shell subquadrate, grey-horny, tumid, smooth; umbones produced, calceulated; anterior side short, rather straight; posterior side cornered, broadly truncated, ventral margin a little convex.

PRIME. Proc. Zool. Soc. Nat. Hist. Bost. iv. p. 160. 1851.

Hab. United States.

Species 34. (Mus. Brit.)

SPHÆRIUM DISTORTUM. *Sph. testâ solidâ, obliquâ, anticè subcatâ, posticè brevitatâ, cornuo-subcitrili, latere antico brevi, rotundo, amplo; latere postico obliquè producto, angusto, post umbones excavato, margine terminali obliquè truncato.*

THE DISTORTED SPHÆRIUM. Shell solid, oblique, anteriorly grooved, posteriorly smooth, greenish horny, anterior side short, round, full; posterior side obliquely produced, narrow, excavated behind the umbones, terminal margin obliquely truncated.

C. B. ADAMS.

Hab. America.

Species 35. (Mus. Brit.)

SPHÆRIUM CREPLINI. *Sph. testâ subglobosâ, subrotundâ, lineis nigrescentibus et fasciis albidis concentricè cinctâ; latere postico brevi, ad marginem dorsalem convexo; latere antico obliquè producto, rotundo, ante umbones excavato.*

CREPLIN'S SPHÆRIUM. Shell rather globose, rather rounded, concentrically belted with dark lines and whitish bands; posterior side short, cornered at the dorsal margin; anterior side obliquely produced, round, excavated in front of the umbones.

DUNKER. Zeit. für Malak. 20, 1845.

Hab. Europe.

This little rounded shell has a peculiar bend forward in the anterior side, with a hollow under the umbones.

Species 36. (Mus. Brit.)

SPHÆRIUM SOLIDUM. *Sph. testâ subquadratâ, solidâ, tumidâ, cornuâ, griseo-fasciatâ, regulariter subcatâ; umbonibus productis, subcentralibus, margine dorsali utrinque paulò declivi; lateribus obtusissimè subtruncatis, margine ventrali rectiusculo.*

THE SOLID SPHÆRIUM. Shell subquadrate, solid, tumid,

horny, banded with grey, regularly grooved; umboes produced, nearly central, dorsal margin slightly sloped on both sides; sides very obtusely truncated, ventral margin rather straight.

NORMAND. Nat. Cycl. Valenc. 6, f. 34.
Hab. France.

Species 37. (Mus. Brit.)

SPILERIUM NOVE-ZELANDIE. *Sph. testâ parvâ, semipellucidâ, compressâ, cornâ, griseo-fusciatâ, levi, subquadratâ, anticè rotundâ, posticè obtusè truncatâ, umbonibus subcentralibus.*

THE NEW ZEALAND SPILERIUM. Shell small, semipellucid, compressed, horny, banded with grey, smooth, rather square, anteriorly rounded, posteriorly obtusely truncated; umboes nearly central.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.
Hab. New Zealand and New Holland.

Species 38. (Mus. Brit.)

SPILERIUM SUBTRANSVERSUM. *Sph. testâ hyalinâ, compressâ, pallidè stramineâ, versus apicem concavâ; latere antico subacuminato; latere postico lato, subexpanso; margine dorsali recto, margine laterali obliquè truncato.*

THE SUBTRANSVERSE SPILERIUM. Shell hyaline, compressed, pale straw, fleshy towards the apex; anterior side rather acuminated; posterior side broad, slightly expanded; dorsal margin straight, lateral margin obliquely truncated.

PRIME. Proc. Zool. Soc. 1860, 322.
Hab. Mexico.

Species 39. (Mus. Brit.)

SPILERIUM SOLIDULUM. *Sph. testâ ovato-subtrigona, solidâ, rugatâ, rugis versus apicem magis distantibus; latere antico brevissculo, declivi; latere postico obliquè truncato, prope marginem ventralem producto, subacuminato, margine dorsali declivi.*

THE SOLID SMALL SPILERIUM. Shell ovate-subtrigonal, solid, wrinkled, wrinkles more distant towards the apex; anterior side rather short, sloped, posterior side obliquely truncated, produced near the ventral margin, slightly acuminated, dorsal margin sloped.

PRIME. Proc. Soc. Nat. Hist. Bost. iv. 158, 1852.
Hab. North America.

Species 40. (Mus. Brit.)

SPILERIUM FUNCTIFERUM. *Sph. testâ parvâ, compressâ, obliquè subrotundâ, semipellucidâ, pallidissimâ, umbonibus anticè inclinatâ, acutis; margine dorsali utriusque recto; margine postico-ventrali subproducto.*

THE PUNCTURED SPILERIUM. Shell small, compressed, a little obliquely rounded, semipellucid, very pale, umboes leaning anteriorly, sharp, dorsal margin straight on each side; postero-ventral margin slightly produced.

GUPPY — ? MS. Mus. Brit.
Hab. Trinidad.





41



42^c



42



43



44^a



44^b



45



45^b



45^a



46



47

SPHERIUM

PLATE V.

Plate V. (Mns. Brit.)

Fig. 17 *d* Sphaerium cornutum, var. *glaucescens*, Macgillivray v. Pl. II.

Fig. 5 *h*. Sphaerium laenstre. See Plate I.

Species 41. (Mus. Brit.)

SPHERIUM INCONSPECTUM. *Sph. testâ siccâ forâti, flavido-caracoâ, superâ siccâ, laxigatâ, obliquâ, inaequilaterali; latere antico brevi, obliquè truncato; latere postico subexpanso, margine postico ventrali obliquè producto, margine dorsali elevato; margine ventrali rectiusculo, lato; umbonibus productis, subaenunatis.*

THE INCONSPECTOUS SPHERIUM. Shell hatchet-shaped, yellowish-flesh, amber above, smooth, oblique, inequilateral; anterior side short, obliquely truncated; posterior side a little expanded; postero-ventral margin obliquely produced, dorsal margin raised; ventral margin rather straight, broad; umbones produced, a little acuminated.

PIÑE. Proc. Zool. Soc. Bost.

Hab. Asia Minor.

Species 42. (Mus. Brit.)

SPHERIUM BORNEENSE. *Sph. testâ oblongâ, ferrugineâ, tenuiter striatâ, fuscobasento-angulatum murentatâ; latere antico subquadrate; latere postico obliquo, subquadrato, margine ventrali rectiusculo; margine dorsali utrinque parvobtusâ.*

THE BORNEAN SPHERIUM. Shell oblong, ferruginous, finely striated, angularly spotted with dull brown; anterior side rather round; posterior side oblique, rather square, ventral margin rather straight, dorsal margin on each side a little sloped.

SOEWERY.

Hab. Borneo.

Species 43. (Mns. Sowerby.)

SPHERIUM ELONGATUM. *Sph. testâ magis oblongâ, tunicâ, subovatâ, subrotundâ, cæcis apicem griseo-*

coraci; umbonibus obliquis depressis, subrotundatis; latere antico ferrugineo; latere postico parvè magis obliquè productis magis laterali obliquè subtruncato; margine ventrali rectiusculo elongato; margine dorsali utrinque recto, lato.

THE ELONGATED SPHERIUM. Shell large, oblong, tumid, subovate, greenish, horny grey towards the apex; umbones obtuse, depressed, nearly central; anterior side rather short; posterior side a little more obliquely produced, lateral margin obliquely slightly truncated; ventral margin rather straight, elongated; dorsal margin on each side straight, short.

SOEWERY.

Hab. — ?

We have no information respecting the locality of this rather handsome species, of which the three fine specimens in our possession are the only ones we have seen.

Species 44. (*f. a, b*, Mus. Brit.)

SPHERIUM MOERMONIUM. *Sph. testâ solidâ, subquadrata, fere hexigatâ, albâ, subaequilaterali, coraci, fuscâ-fuscâti et lineatâ; intus carinata, fuscâti; lateribus obtusissimè truncatis; umbonibus rotundis obtusis; margine dorsali utrinque brevi, cæcâ declivi.*

THE MOERMON'S SPHERIUM. Shell solid, rather square, nearly smooth, high, subequilateral, horny, banded and lined with brown; bluish within, banded; sides very obtusely truncated; umbones rounded, obtuse, dorsal margin short on each side, scarcely sloped.

SOEWERY.

Hab. Great Salt Lake.

Broader and more solid than the European *Sph. rivularis*.

Species 45. (Fig. *a, b*, Mus. Brit.)

SPHERIUM CAPENSE. *Sph. testâ subquadrata ovata, tunicâ, ferrugineâ, intus subrotundâ, fuscâti, umbonibus rotundis; latere antico brevi, depresso-*

rotundo; latere postico obscure angulato, obtusissime subquadrato.

THE VINOUS SPHERIUM. Shell subquadrately ovate, tumid, ferruginous, a little wine-coloured, banded; umbos rounded; anterior side short, depressed, rounded; posterior side obtusely angular, very obtusely quadrate.

SOWERBY.

Hab. S. Africa.

Spherium Capense of Krauss is a more shortly ovate and more compressed lenticular shell than this.

Species 46. (Mus. Brit.)

SPHERIUM TRANSLUCIDUM. *Sph. testâ parvâ, translucidâ, subcompressâ, oblongâ, anticâ subacuminatâ, posticâ expansâ, latè subtruncatâ, margine ventrali convexo, lato, margine dorsali breviusculo, recto; umbonibus acutis.*

THE TRANSLUCID SPHERIUM. Shell small, translucent, rather compressed, oblong, anteriorly slightly acuminated, posteriorly expanded, broadly sub-

truncated, ventral margin convex, broad; dorsal margin rather short, straight; umbos sharp.

SOWERBY.

Hab. Palm-tree Creek, Australia.

Species 47. (Mus. — ? Copied.)

SPHERIUM FERRUGINEUM. *Sph. testâ parvâ, tenui, fuscâ, obliquâ, levi, valdè inæquilaterali; latere antico brevissimo, angusto, subacuminato, margine ventrali acclivo; latere postico expanso, oblongo, margine dorsali convexiusculo; margine postico-laterali obliquè subtruncato.*

THE FERRUGINOUS SPHERIUM. Shell small, thin, brown, oblique, smooth, very inequilateral; anterior side very short, narrow, subacuminate, ventral margin sloped upwards; posterior side expanded, oblong, dorsal margin rather convex, postero-lateral margin obliquely subtruncated.

KRAUSS. Sudafrikanischen Mollusken.

Hab. River Kysba, S. Africa.

Resembling *Sph. inæquans*.

SPHERIUM.

Species	Author	Year	Locality	Number	Year	Number
Borinquense	Sowerby	V.	42	ovale, Ferrussac	I.	5
calyculatum	Deshayes	I.	10	pallidum, Gray	I.	5
Capense	Kew	V.	45	partumicum, Gould	II.	15
Carolinensis	Deshayes	IV.	31	Pisidioides, Gray	II.	12
castaneum, Prime		III.	26	punctiferum, Guppy	IV.	49
consobrinum, Gaillard		II.	19	rhomboideum, Say	IV.	32
cornutum, L'Herminier		II, V.	17	rivalis, Dupuy	I.	3
ereplini, Decker		IV.	35	riviculum, Lamour	I.	4
distortum, C. B. Adams		IV.	34	ragosum, Whitman	II.	16
eburneum, A. Hong		III.	25	scaldianum, Normand	I.	9
elegans, Adams		III.	24	securis, Prime	IV.	33
elevatum, Haldeman		III.	30	simile, Say	III.	27
elongatum, Sowerby		V.	43	solidum, Normand	IV.	36
fabale, Prime		III.	26	solidulum, Prime	IV.	39
ferrugineum, Kew		V.	47	Steinbuchii, Mallet	I.	1
inconspicuum, Prime		V.	41	stramineum, Coues	III.	23
incarvum, Guppy		III.	29	striatum, Lamour	II.	13
Indicum, Deshayes		I.	8	subtransversum, Prime	IV.	38
lacustre, Deshayes		I, V.	5	sulcatum, Lamour	I.	7
lenticularis, Sowerby		I.	6	sulculosum, Charpentier	III.	26
maculatum, Mallet		III.	21	Terrestrinum, Dupuy	II.	18
Madagascariense, Tristram		III.	22	translucidum, Sowerby	V.	46
Mormonicum, Sowerby		V.	44	transversum, Say	I.	2
Novaezelandiae, Deshayes		IV.	37	truncatum, Tinsley	III.	28
melens, Studer		II.	11	unatum, Baird	II.	14
occidentale, Prime		II.	20			

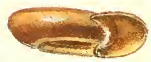
MONOGRAPH

OF THE GENUS

PLANORBIS.

Lord, Thy glory fills the heavens,
Earth is with its fulness stor'd :
Unto Thee be glory given,
Holy, holy, holy, Lord! — *Bishop Moore*





7a

6b

7b

PLANORBIS.

PLATE I.

Genus PLANORBIS. *Gmelin*.

Molluscum aquaticum.

Testa interduum sinistralis, spiralis, discoidem, spiram depressam, anfractibus tribus ad septem; aperturam semilunari, vel ovata vel trigona, margine plerumque tenui.

MOLLUSC, FRESHWATER. Shell spiral, sometimes sinistral, spire depressed, whorls three to seven; aperture semilunar, or ovate or trigonal, margin generally thin.

SYNONYMS. *Corelus*, Adams, Orbis, *Schroet.*
Inclisus, *Planorbis*, Hald. *Sequentini*.

The late Mr. G. B. Sowerby, in his *Genera of Shells*, expresses his conviction that the Planorbis are sinistral shells, because when the shell is so placed that the aperture is on the left side, the whole of the whorls of what seems to be the spire are visible, while what is then the lower disc is hollow, and the apical whorls are more or less engulfed. This, however, is not the case throughout the genus, but chiefly among the typical forms. The Messrs. Adams describe the genus as consisting of dextral shells. My impression is that some are sinistral and others dextral. My attention had not been drawn to the subject before several plates had been drawn, and some of the figures being placed as if dextral will seem to have an upside-down appearance. The genus is widely diffused throughout all parts of the globe. Wherever there are ditches, ponds, wells, and rivers, there the Planorbis appear.

Species 1. (Fig. a, b, Mus. Sowerby.)

PLANORBIS CORNEUS. *Pla. testâ tumidâ, latâ, sinistrali, cornuâ, levigatâ, multo anfractu non castaneâ; spirâ concaviâsculâ, anfractibus senis, concaviâsculis, rapidè crescentibus, prope suturam rotundis; tum declivibus, infra centricos; disco inferiori concavi, anfractibus rotundis, apicalibus obtectis, aperturâ latâ, altâ, subquadratâ.*

THE HORNY PLANORBIS. Shell tumid, broad, sinistral, horny, smooth, chestnut in the middle of the whorls; spire rather concave; whorls six, rather convex, rapidly increased, rounded near the suture, then sloped, ventricose below; lower

disc concave, whorls rounded, apical hidden; aperture broad, high, subquadrate.

LINNEUS. *Systema Nature.*

Hab. Great Britain.

The specimen represented by figure b belongs to a recently discovered albino variety.

Species 2. (Mus. Brit.)

PLANORBIS TRIVOLVIS. *Pla. testâ tumidâ, altâ, pallidâ, fuscâ, obliquè rugatâ, sinistrali; spirâ excavatâ, angustâ, supra suturam elevatâ, angulatâ; anfractibus quateris superâ, tribus inferâ apparentibus; aperturâ subtrigona, altâ, intus castaneomarginatâ.*

THE THREE-WHORLED PLANORBIS. Shell tumid, high, pale brown, obliquely wrinkled, sinistral; spire hollowed, narrow, raised above the suture, angular; whorls, four appearing above, three below; aperture subtrigonal, high, bordered inside with chestnut.

SAY. *American Conchology*, 1860.

Hab. New York.

Species 3. (Mus. Sowerby.)

PLANORBIS PERUVIANUS. *Pla. testâ albidâ, semipellucidâ, altissimâ, sinistrali, spirâ angustâ, anfractibus quateris, angustis, supra suturam elevatis, altino magno, subdeclivi; versus aperturam cavilidè expanso; suturâ profundâ; aperturâ subtrigona, supra infraque anfractum ultimum productâ, disco inferiori excavato, anfractibus rotundis, apicali obtecto.*

THE PERUVIAN PLANORBIS. Shell whitish, semipellucid, rather high, sinistral, spire narrow, whorls four, narrow, raised above the suture; last large, somewhat sloped, much expanded towards the aperture; suture deep; aperture subtrigonal, produced above and below the last whorl; lower disc hollow, whorls rounded, the apical one hidden.

BRODERIP. *Proc. Zool. Soc.* 1842, f. 125.

Hab. Peru.

Species 4. (And Fig. b, Pl. X., Mus. Sowerby.)

PLANORBIS CORPULENTUS. *Pla. testâ tenui, inflatâ, subglobosâ, subviridâ cornâ, concentricè obliquè rugatâ, alidâ, superne angulatâ, infrâ subangulatâ, sinistrali; spirâ infundibulatâ, anfractibus supra suturam elevatis, angulatis, lateraliter planulatis; medio altis, convexis; ultimo versus aperturam expansis; aperturâ maximâ, supra infraque ultimum anfractum productis, superne subangulatâ, infernè latâ, margine expanso, intus castaneis; disco superiori profundè umbilicato.*

THE CORPULENT PLANORBIS. Shell thin, inflated, subglobose, greenish horny, concentrically obliquely wrinkled, high, angular above, a little angular below, sinistral; spire funnelled, whorls raised above the suture, angular, laterally flattened, high, convex in the middle; last expanded towards the aperture; aperture very large, produced above and below the last whorl, rather narrow above, broad below, margin expanded, chestnut within; upper disc deeply umbilicated.

SAY. Albers. Mon. Pl. III. f. 79.

Hab. Winnipeck River.

It is difficult to distinguish the less developed forms of this species from the more elevated forms of *Planorbis leutus*. The latter is a stouter shell, with the wrinkles more defined, and it is never quite so high. *Planorbis trivoleis* is considerably more depressed than either.

Species 5. (Mus. Sowerby, &c.)

PLANORBIS COMPLANATUS. *Pla. testâ dextrali corneo-fulvâ, loricatâ, compressâ, superne concavâ, infernè planulatâ; spirâ medio subcavatâ; anfractibus quinis, moderatè crescentibus, ultimo infrâ carinatis; aperturâ obliquè suborâtâ, supra anfractum ultimum elevatâ et productâ.*

THE FLATTENED PLANORBIS. Shell horny fulvous, smooth, compressed, rather convex above, flattened below; spire a little hollowed in the middle; whorls five, increasing moderately, last

keeled below; aperture obliquely subovate, raised and produced above the last whorl.

LINNEUS. *Systema Nature.*

Planorbis marginatus. Draparnaud.

Planorbis umbilicatus. Müller.

Hab. France, England, Sicily.

Species 6. (Fig. a, b, Mus. Brit.)

PLANORBIS OLIVACEUS. *Pla. testâ sinistrali, depressâ, olivaceo-fuscâ, nitenti, latâ, supernè declivi, infrâ latissimâ, spirâ concavâ, angulatâ, anfractibus senis, compressis, supra suturam paulò elevatis, tam lentè declivibus; aperturâ subtrigondâ, margine inferiori obliquè productâ; disco inferiori concavo.*

THE OLIVE PLANORBIS. Shell sinistral, depressed, olive-brown, shining, broad, sloped above, very broad beneath; spire concave, narrow; whorls six, compressed, a little raised above the suture, then gently sloped; aperture subtrigonal, lower margin obliquely produced; lower disc concave.

SPEIX. *Testacea Braziliana.* p. 26, Pl. XVIII. f. 1, 2.

Planorbis Cunninghamus. Dunker. *Proc. Zool.* 1848.

Hab. Brazil.

Species 7. (Mus. Brit.)

PLANORBIS BICARINATUS. *Pla. testâ sinistrali, tenui, loricatâ, altissimâ, pallidè stramineâ; spirâ angustâ, propemodè infundibulatâ, anfractibus tribus, superne infernèque carinatis; ultimo anfractu maximo, ad aperturam altissimo, superne acuminato, infrâ latiusculo; disco inferiori profundè umbilicato, anfractu apicali obtecto.*

THE TWO-KEELED PLANORBIS. Shell sinistral, thin, smooth, very high, pale straw; spire narrow, deeply funnelled, whorls three, keeled above and below; last whorl very large, very high at the aperture, acuminated above, rather wide below; lower disc deeply umbilicated, apical whorl hidden.

SAY. *Journ. Nat. Sci. Phil.*

Hab. River Ohio.





PLANORBIS.

PLATE II.

Species 5. (Mus. Sowb.)

PLANORBIS NAUTILUS. *Pla. testâ albidâ, piceâ, subd. pressâ, angustibus quatuor, rapidè crescentibus, labio externo ad marginem spinosis annulatis, ultimo deflexo; disco superiori planulato, anfractibus quatuor subpressis; disco inferiori lato usque ad medium subreflexo.*

THE SMOOTH PLANORBIS. Shell whitish, small, rather depressed, whorls four, quickly enlarging, colour hoary, annulated with horny ridges spinous at the margin, last disjoined, upper disc flattened with round-depressed whorls; lower disc broadly umbilicated as far as the apex.

LINNEUS. *Systema Naturæ.*

Planorbis nautilus. Müller.

Planorbis cretatus. Deparnaud.

Hab. France, Great Britain.

Species 9. (Fig. a, b, Mus. Sowb.)

PLANORBIS CONTORTUS. *Pla. testâ fulvâ, mollicriter depressâ, superiori planulata, infirâ angulatâ umbilicatâ; anfractibus sexis, labio crescentibus, angustis, superioribus rotundatis, infirâ ad marginem umbilicâ angulatis, umbilico angustâ, profundi; apertura semilunari.*

THE LAIN-WORLEED PLANORBIS. Shell fulvous, moderately depressed, flattened above, angularly umbilicated below; whorls six, slowly increased, narrow, rounded above, angular at the edge of the umbilicus, umbilicus narrow, deep; aperture semi-lunar.

MÜLLER. *Drap. Mol. Pl. I. f. 39-41.*

Planorbis crassus —?

Planorbis umbilicatus —?

Hab. England, France.

Species 10. (Fig. a, b, Mus. Sowb.)

PLANORBIS GLABER. *Pla. testâ subaurantiâ, nitenti, altiusculâ, anfractibus tribus, rapidè crescentibus, ultimo lato, superiori subplanulatis, disco superiori quam inferiori angustiori, disco inferiori plano, tuberculato; apertura obliquâ, labio externo convexo obliquo.*

THE SMOOTH PLANORBIS. Shell somewhat orange, shining, rather elevated; whorls three, quickly increasing; the last wide, rather flattened at the top, upper disc a little narrower than lower; lower disc flat, tuberculated; aperture oblique, outer lip convexly oblique.

JEFFREYS —? British Mollusca, &c.

Planorbis levis. Alder.

Hab. Penzance, Falmouth, Swansea, Belfast, &c.

Species 11. (Fig. a, b, Mus. Brit.)

PLANORBIS CAMPANULATUS. *Pla. testâ altâ, levè siccè obliquè flexâ; anfractibus sexis, rapidè crescentibus, exterioribus magis; disco superiori profundi excavato, anfractibus interioribus calatis, exterioribus calatis, ultimo convexo aperturam contractâ, limbo expanso; disco inferiori anfractibus prope suturam angulatis; apertura subpyriformi, expansâ, superiorè elevatâ, intus contractâ.*

THE BELL PLANORBIS. Shell high, finely obliquely ridged; whorls six, rapidly increased, outer one large; upper disc deeply hollow, inner whorls hidden, outer rounded, last contracted towards the aperture, then expanded; lower disc with whorls angular near the suture; aperture rather pyriform, expanded, raised above, contracted within.

SAY. *Journ. Am. Soc. Phil. Vol. II. p. 166.*

Hab. Newport, Iowa, U.S.

Species 12. (Mus Sowerby.)

PLANORBIS CARINATUS. *Pla. testâ depresso; anfractibus quatuor, calis paulè infra medium acutè carinatis; ultimo lato; disco superiori excavato, anfractibus convexis; disco inferiori magis convexo, anfractibus subplanulatis.*

THE KEELED PLANORBIS. Shell depressed; whorls four, sharply keeled on the outer side a little below the middle; last broad; upper disc hollow, whorls convex; lower disc more convex, with rather flattened whorls.

MÜLLER. *Drap. Mol. Pl. 2. f. 13, 14.*

Hab. *Planorbis planatus.* Linnaeus.

Planorbis planatus —?

PLANORBIS.—PLATE II.

Planorbis lutescens. Lamarek.

Hab. Britain and other parts of Europe.

Resembling *Planorbis marginatus*, but with outer whorls wider, and the keel planed more towards the middle of the whorls.

Species 13. (Fig. a, b, Mus. Brit.)

PLANORBIS VORTEX. *Pla. testâ depressâ, utrinque complanatâ; anfractibus octavis, angustissimis, lentè crescentibus; disco superiori subexcavato, inferiori paulò convexo, anfractibus angustè propè suturam elevatis.*

THE VORTEX PLANORBIS. Shell depressed, flattened on both sides; whorls eight, very narrow, slowly increasing; upper disc a little hollow, lower a little convex, with whorls narrowly raised near the suture.

LINNÆUS. (*Helix*) Systema Naturæ.

Planorbis compressus. Michelet.

Hab. Europe generally.

Species 14. (Fig. a, b, Mus. Sowerby.)

PLANORBIS SPIROBIS. *Pla. testâ compressâ; anfractibus senis, lentè crescentibus, superiorè angustioribus; disco superiori angustiori, planulato; disco inferiori concavo; apertura supra anfractum ultimum elevata; infus productâ, rotundâ.*

THE SPIROBIS PLANORBIS. Shell compressed; whorls six, slowly increasing, narrower above; upper disc narrower, flattened; lower disc concave; aperture raised above the last whorl, produced, rounded below.

MÜLLER. Verm., Test. et Fluv. p. 161. No. 347.

Hab. Britain, France.

Species 15. (Fig. a, b, Mus. Sowerby.)

PLANORBIS NIDIBIS. *Pla. testâ compressâ, succineâ, medio obtusè angulatâ, suprâ infriqûe ferè equalitèr convexâ; ultimo anfractu maximo; disco spirali contracto, planato, anfractibus internis angustis; disco inferiori latè excavato.*

THE NEAT PLANORBIS. Shell flattened, amber, obtusely angular in the middle, almost equally convex above and below; last whorl very large; spiral disc contracted, flattened, with narrow inner whorls; lower disc broadly excavated.

MÜLLER. Drap. Moll. Pl. 2, f. 20-22.

Hab. Britain, France.

Species 16. (Fig. a, b, Mus. Sowerby.)

PLANORBIS LACUSTRIS. *Pla. testâ compressâ, succineâ, internè divisiâ, lineis subris distantibus, obliquè concentricis etâis notatâ; superiorè subconicâ; spirâ minimâ; medio subcutè angulatò, infra angulum planulato, umbilicato.*

THE LAKE PLANORBIS. Shell compressed, amber, internally divided, externally marked by distant obliquely concentric red lines; somewhat conical above; spire very small; middle rather sharply angular, flattened below the angle, umbilicated.

LIGHTFOOT. — ? Brit. Moll.

Sagwanima lineata. — ?

Hab. Ponds and ditches in England.





18



17



a



b

19



20



21a



21b



22b



22a



a



b

23



a

b

24



b



a



b

25

PLANORBIS.

PLATE III.

Species 17. (Mus. Sowerby.)

PLANORBIS ALBUS. *Pla. testâ pallidissimâ, depressâ, spicilliter liris tenuibus hirsutis ornatâ; anfractibus paucis, ultimo maximo; apertura obliquè productâ; disco superiori lenticulari, disco inferiori concavo.*

THE WHITE PLANORBIS. Shell very pale, depressed, spirally ornamented with thin hairy ridges; whorls few, last very large; aperture obliquely produced; upper disc lenticular: lower disc concave.

MILLER. *Drap. Moll. Pl. I. fig. 45-46.*

Planorbis hispidus. Draparnaud.

Hab. Britain, France.

Species 18. (Mus. Sowb.)

PLANORBIS AEMIGERUS. *Pla. testâ subdepressâ, solutissimâ, pallidâ; cornuâ; anfractibus quinis, subcontractis, ultimo superne subcontracto, supra anfractus spicatos elevato, versus aperturam depresso; disco inferiori profunde umbilicato; apertura declivi, intus prope marginem incrassato, ovato.*

THE ARMOUR-BEARING PLANORBIS. Shell rather depressed, solid, pale horny; whorls five, rather compressed, last rather contracted above, raised above the spiral whorls, depressed towards the aperture; lower disc deeply umbilicated; aperture sloped, thickened within near the margin, ovate.

SAY. Halleman's Monograph, Pl. IV. f. 11-15.

Hab. New York.

Species 19. (Fig. a, b, Mus. Sowerby.)

PLANORBIS SUCCINEUS. *Pla. testâ depressâ, succineâ, politâ; anfractibus quaternis, sublentè crescentibus, apicalibus angustis, cetero tumido; disco inferiori latè concavo, subcomplanato; apertura depressâ, obliquè ovatâ, angustâ.*

THE AMBER PLANORBIS. Shell depressed, amber, polished, whorls four, rather slowly increasing, apical ones narrow, last tumid; lower disc widely

concave, rather flattened; aperture depressed, obliquely ovate, narrow.

SOWERBY.

Hab. — ?

Two specimens are all I have seen of this pretty little amber-coloured species.

Species 20. (Fig. a, b, c, Mus. Brit.)

PLANORBIS REDFIELDI. *Pla. testâ pallidè fulcâ, albâ, anfractibus paucis, supra infraque carinatis; disco superiori profunde excavato, ultimo anfractu convexo; disco inferiori profundissimè umbilicato; apertura altissimâ, superne expansâ, auriformi, supra infraque angulatâ.*

THE BARED PLANORBIS. Shell pale fawns, high, whorls few, keeled above and below; upper disc deeply excavated, last whorl convex; lower disc very deeply umbilicated; aperture very high, expanded above, auriform, angular above and below.

C. B. ADAMS. *Conch. Contrib. p. 23.*

Hab. Jamaica.

Species 21. (Fig. a, b, Mus. Sowerby.)

PLANORBIS COARCTATUS. *Pla. testâ alidâ, pallidè stramineâ; anfractibus quinis, compressis, supra infraque rotundè angulatis, medio convexis; disco superiori profunde excavato, disco inferiori complanato, anfractibus gradatim crescentibus, ultimo anfractu versus aperturam angustato, apertura angustâ, subovatâ, margine paulè expanso, intus excavato.*

THE CONTRACTED PLANORBIS. Shell high, pale straw; whorls five, compressed, roundly angular above; convex in the middle; upper disc deeply excavated; lower disc flattened, whorls gradually increasing, last whorl narrow towards the aperture; aperture narrow, rather oval, margin a little expanded, narrow within.

SOWERBY.

Hab. — ?

PLANORBIS.—PLATE III.

Species 22. (Fig. a, b, Mus. Sowerby.)

PLANORBIS ORBICULATUS. *Pla. testâ depressâ, albâ, semipellucidâ; anfractibus quinis, supernè concavo-planulatis, latiusculis, infrâ angustatis; apertura obliquè elevatâ, margine inferiori sursùm declivi.*

THE ORBICULAE PLANORBIS. Shell depressed, white, semipellucid; whorls five, convexly flattened above, rather broad, narrow below; aperture obliquely raised, lower margin sloped upwards.

MORELET — ? Adams.

Hab. — ?

Species 23. (Fig. a, b, Mus. Sowerby.)

PLANORBIS PHILIPPINARUM. *Pla. testâ depressâ, griseâ, subopacâ; anfractibus senis, subcompressis, suprâ infraque convexiusculis, mediò obtusissimè angulatis; disco inferiori planulato; disco superiori magis concavo; apertura supernè paulò elevatâ.*

THE PHILIPPINE PLANORBIS. Shell depressed, grey, rather opaque; whorls six, rather compressed, rather convex above and below, very obtusely

angular in the middle; lower disc flattened, upper disc more concave; aperture a little raised above.

DENKER, C. B. Adams. P. Z. 1848.

Hab. Philippines.

This shell is stouter and deeper than the preceding, and the discs are less flattened.

Species 24. (Mus. Sowerby.)

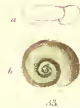
PLANORBIS LUGUBRIS. *Pla. testâ altiusculâ, tenui, levigatâ, nitenti, castaneâ; anfractibus quinis, supernè rotundis, latiusculis, infrâ magis contractis; disco superiori profundè excavato, disco inferiori subviridi, subcontracto.*

THE DARKSOME PLANORBIS. Shell rather deep, thin, smooth, shining, chestnut; whorls five, rather rounded above, rather broad, more contracted below; upper disc deeply excavated; lower disc greenish, rather contracted.

WAGNER, Spix, Testacea Braziliana. P. 27. No. 2.

Hab. Brazil.





PLANORBIS.

PLATE IV.

Species 25. (Mns. Sowerby.)

PLANORBIS DIANGULATUS. *Pla. testâ altiusculâ, solidâ, jamoso-fusci, utrinquè angulatâ latè umbilicatâ dextrali; anfractibus paucis, suprâ infriquè subcarinatis, aperturâ subtrigoniâ, declivi, infra acuminate labio externo intus incrassato.*

THE TWO-ANGLED PLANORBIS. Shell rather high, solid, smoky-brown, angularly broadly umbilicated on each side; whorls few, keeled above and below; aperture subtrigonal; sloped, acuminate below; outer lip thickened within.

—? Sowerby.

Hab. Brazil.

The whorls are not flattened at the top, as in *Planorbis hisariantus*, but the lower funnel-shaped umbilicus is very similar.

Species 26. (Fig. a, b, Mus. Brit.)

PLANORBIS COSTULATUS. *Pla. testâ parvâ, compressissimâ, obliquè concentricè costulatâ, ceruleo-subviridi; anfractibus paucis, rapidè crescentibus, supernè lentè convexis, ultimo magno: aperturâ obliquè suborbatâ, disco inferiori subplanulatâ.*

THE RIBBED PLANORBIS. Shell small, very compressed, obliquely concentrically ribbed, greenish blue; whorls few, rapidly increased, slightly convex above, last large; aperture obliquely rather oval; lower disc a little flattened.

KRAUSS. Sudafrikan. Mollusken. Tab. V. f. 8.

Hab. Natal.

Species 27. (Fig. a, b, Mus. —? Copied.)

PLANORBIS BENGALENSIS. *Pla. testâ compressâ, tenui, pallidè succinâtâ, levè, supernè convexâ, infra planulatâ, anfractibus tribus, apicalibus paulo depressis; umbilico basali parvo; aperturâ subtrigoniâ.*

THE BENGAL PLANORBIS. Shell compressed, thin, pale amber, smooth, convex above, flattened below, whorls three, apical a little depressed, basal umbilicus small; aperture subtrigonal.

DUNKER. Index Molluscorum. Tab. II. f. 1-4.

Hab. Bengal.

This shell does not appear from Dunker's figures to have the chambered character of the *Segmentina* group, as shown in *Planorbis calathus*, which it somewhat resembles otherwise, although not nearly so tumid.

Species 28. (Mus. Sowerby.)

PLANORBIS APTINIS. *Pla. testâ cornuâ, tumidâ; spirâ concavâ, anfractibus quinque altiusculis, prope suturam subangulatâ elevatis, tum declivibus, infra rotundatis, apicali obbebo; aperturâ majusculâ, supernè depressâ.*

THE RELATED PLANORBIS. Shell horny, tumid; spiræ concave, whorls five, rather high, subangularly elevated near the suture, then sloped, rounded beneath, the apical one hidden; aperture rather large, depressed above.

ADAMS, C. B. Conchological Contributions, p. 44.

Hab. Jamaica.

More depressed and slight than *Planorbis cornuæ*, with the whorls beneath more deeply sunk in the umbilicus.

Species 29. (Mus. Brit. Sowb.)

PLANORBIS DECLIVIS. *Pla. testâ altâ, angustiusculâ, cornuâ vel subcaudâ, tenuissimè lirâtâ; spirâ planiusculâ, anfractibus angustis, ultimo magno, supernè angustè elevato, tum declivi, infra rotundo, disco inferiori profundè concavo, anfractibus rotundis; aperturâ magnâ, auriformi, infra calthæ expanso, productâ.*

THE SLOPED PLANORBIS. Shell raised, rather narrow, horny, or chestnut, very finely ridged; spiræ rather flat, whorls narrow, last large, narrowly raised above, then sloped, rounded below, lower disc deeply concave, whorls rounded, aperture large, ear-shaped, much expanded and produced below.

SOWERBY.

Hab. —? ?

Differing from *Planorbis cornuæ* in the narrowness and elevation of the whorls, and in the great expansion and production of the lower part of the mouth.

PLANORBIS.—PLATE IV.

Species 30. (Fig. 1, a, b, Mus. Hanley.)

PLANORBIS CALATHUS. *Pla. testâ parvâ, dextrali, nitenti, succineâ, internè segmentatâ, extâs fasciis albâs obliquè radiatibus ornatâ, supernè convexâ, infrâ planulatâ, spirâ coldè contractâ; anfractibus tribus, ultimo magno, subconico, infrâ acutè angulato, angustè umbilicato.*

THE BASKET PLANORBIS. Shell small, dextral, shining, amber, divided by segments within, ornamented without by white rayed bands, convex above, flattened below; spire much contracted, whorls three; last large, somewhat conical, acutely angular, narrowly umbilicated.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. V. (1850), p. 349.

Hab. Moradabad, Kattiawar, Ceylon, Cashmere.

Belonging to the 'Segmentaria' group.

Species 31. (Mus. Hanley.)

PLANORBIS EXUSTUS. *Pla. testâ subviridi, fusco, tenuiter liratâ, spirâ subplanulatâ, anfractibus tribus, ultimo maximo, aperturâ supernè subangulatâ elevatâ, tum depresso, declivi, infrâ expansâ, subproductâ, disco inferiori latè concavo.*

THE BURNT PLANORBIS. Shell greenish brown, finely ridged; spire rather flattened; whorls three, last large; aperture angularly raised, then depressed, sloped, expanded below, rather produced; lower disc broadly concave.

DESHAYES. Belanger's Voyage. Ind. Ori. Zool. p. 417.

Planorbis Indicus. Benson.

This appears quite distinct from *Planorbis coromandelicus* in form and surface.

Species 32. (Fig. a, b, Mus. — ? Copied.)

PLANORBIS NATALIS. *Pla. compressâ, fumoso-fusâ; spirâ subplanulatâ, anfractibus quaternis, rotundis; ultimo lato, medio prominenti; disco inferiori latè concavo; aperturâ compressâ, lateraliter elongatâ.*

THE NATAL PLANORBIS. Shell smoky brown; spire rather flat, whorls four, rounded; last broad, prominent in the middle; lower disc broadly concave, aperture compressed, laterally elongated.

KRAUSS. Sudafrikanischen Mollusken. Tab. V. f. 9.

Hab. Cape Natal, S. Africa.

Species 33. (Mus. — ? Copied.)

PLANORBIS PTEIFFERI. *Pla. testâ olivaceâ, lavi, subcompressâ; spirâ subcomplanatâ, anfractibus tumidis, rotundis, supernè concavèsculis, infrâ angustatis; aperturâ rotundè subquadratâ; disco inferiori angustè umbilicato.*

PTEIFFER'S PLANORBIS. Shell olive, smooth, rather compressed; spire rather flattened, whorls tumid, rounded, convex above, narrow below; aperture roundly subquadrate; lower disc narrowly umbilicated.

KRAUSS. Sudafrikanischen Mollusken. Tab. V. f. 33.

Hab. Cape Natal, South Africa.

Species 34. (Mus. Brit.)

PLANORBIS COROMANDELICUS. *Pla. testâ altâ, castaneo-corneâ, tenui, levigatâ, irregulariter undatâ; spirâ contractâ, concavâ; anfractibus quaternis, supra suturam angulatim elevatis, perpendiculariter subcomplanatis; ultimo magno, ad aperturam expanso; aperturâ supra suturam elevato, tum declivi, infrâ obliquè expansâ, productâ; disco inferiori concavo, anfractibus rotundis, apicali obtecto.*

THE COROMANDEL PLANORBIS. Shell high, chestnut-horn, smooth, irregularly undated; spire contracted, concave; whorls four, angularly raised above the suture, perpendicularly flattened, last large, expanded towards the aperture; aperture raised above the suture, then sloped, obliquely expanded, produced; lower disc concave, whorls rounded, apical one hidden.

KÜSTER, as of Fabricius.

Hab. Co. of Coromandel.



PLANORBIS.

PLATE V.

Species 35. (Fig. a, b, Mus. Brit.)

PLANORBIS SIBIRICUS. *Pla. testâ parvâ, tumidâ, dextrâ, rubescenti-cornuâ; spirâ planulatâ, anfractibus tribus ad quaternos, tumidis, subrotundis; disco inferiori valdè concavo, anfractu apicali profunde oblecto; aperturâ obliquè subovatâ.*

THE SIBERIAN PLANORBIS. Shell small, tumid, dextral, reddish horn; spire flattened, whorls three to four, tumid, rather round; lower disc very concave, apical whorl deeply hidden; aperture obliquely subovate.

DUNKER. Proc. Zool. Soc. 1848, p. 42.
Hab. Siberia.

Species 36. (Fig. a, b, Mus. Brit.)

PLANORBIS STRELNICKI. *Pla. testâ dextrâ, pallidissimè fulvâ, solidâ, compressâ, disco superiori complanato, inferiori ad marginem convexo, limbo angulato, planulato, medio latè umbilicato; anfractibus quinque, superiorè concavissimis, supra medium subangulatis, limbo excois columellam inclinatâ; aperturâ obliquè subovatâ.*

STRELNICK'S PLANORBIS. Shell dextral, very pale fulvous, solid, compressed; upper disc flattened, lower convex at the margin, then angular, flattened, broadly umbilicated in the middle; whorls five, rather convex above, subangular above the middle, then sloped inwards towards the columella; aperture obliquely subovate.

DOHEN. Proc. Zool. Soc. 1858.
Hab. Ceylon.

Species 37. (Fig. a, b, Mus. Brit.)

PLANORBIS GILBERTI. *Pla. testâ subcompressâ, dextrâ, tenui, fere albâ; spirâ parvâ; anfractibus tribus; ultimo magno, tumido, superiè subconvexo, infra medium obtusè angulato; disco inferiori planulato, umbilicato; aperturâ angustâ, infra medium angulatâ.*

GILBERT'S PLANORBIS. Shell subcompressed, dextral, thin, almost white; spire small; whorls three,

last large, tumid, rather conical above, obtusely angular below the middle; lower disc flattened, umbilicated; aperture narrow, angular below the middle.

DUNKER. Proc. Zool. Soc. 1848, 40.
Hab. East Australia.

Species 38. (Fig. a, b, c, Mus. Brit.)

PLANORBIS EBBERNEUS. *Pla. testâ altâ, tumidâ, undulatâ, levi, albâ, medio anfractuum costaturâ fasciatâ; apice parvo, anfractibus tribus, superiè subplanulatis, tum declivibus, infra inflatis, ultimo magno, alto, rapidè crescenti; disco inferiori convexo, anfractu apicali oblecto; aperturâ magno, superiè flexuosim depressâ, infra inflatâ, productâ.*

THE IVORY PLANORBIS. Shell high, tumid, undulating, smooth, white, banded with chestnut in the middle of the whorls; apex small, whorls three, rather flattened above, then sloped, inflated below; last large, high, rapidly increased; lower disc convex, apical whorl hidden; aperture large, flexuously depressed above, inflated below, produced.

GRAY — ? MS. Mus. Brit.
Hab. Ceylon.

Species 39. (Fig. a, b, Mus. Brit.)

PLANORBIS OBTUSUS. *Pla. testâ compressâ, subrugosâ, ferruginâ, apice lato, planulato; anfractibus quinque, lentè crescentibus, convexissimis, superiè subdeclivibus, infra obtusè angulatis, infra angulum planulatis; aperturâ obliquè subovatâ, infra obtusè angulatâ.*

THE OBTUSE PLANORBIS. Shell compressed, rather rough, ferruginous, apex broad, flattened; whorls five, slowly increased, rather convex; rather sloped above, obtusely angular below, flattened below the angle; aperture obliquely subovate, obtusely angular below.

DESHAYES. Proc. Zool. Soc.
Hab. Adelaide.

Species 40. (Fig. a, b, Mus. Brit.)

PLANORBIS BRUNNEUS. *Pla. testâ subglobosâ, altâ, lævi, ferruginâ, spirâ parvâ, anfractibus tribus, superne contractis, suprâ suturam, elevatis, subangulatis, tum rotundis, medio inflatis; disco inferiori angustè umbilicato, apertura semilunari, infri producti, expansi.*

THE BROWN PLANORBIS. Shell subglobose, high, smooth, ferruginous, spire small, whorls contracted above, raised, a little angular above the suture, then rounded, inflated in the middle; lower disc narrowly umbilicated; aperture semilunar, produced and expanded below.

GRAY. Adams. Genera.

Hab. Bombay.

Species 41. (Fig. a, b, Mus. Brit.)

PLANORBIS MACNABIANUS. *Pla. testâ tenuissimâ, pellucidâ, succineâ, utrinque planulatâ, compressissimâ; anfractibus septem, lentissimè crescentibus, apertura subrhomboidè; infri angulatâ.*

MACNAB'S PLANORBIS. Shell very thin, pellucid, amber, flattened on both sides, very compressed; whorls seven, very slowly increased; aperture subrhomboidal, angular below.

ADAMS, C. B. Conchological Contributions, p. 42.

Hab. Jamaica.

Species 42. (Mus. Brit.)

PLANORBIS TENIATUS. *Pla. compressâ, dextrâ, pallidè corvâ; spirâ parvâ, anfractibus quateris vel quinâ, internis tribus angustissimis, ultimo tumido, latiusculo, utrinque rotundato; medio fasciato, apertura obliquè oblongâ.*

THE RIBAND PLANORBIS. Shell compressed, dextral, pale horny; spire small, whorls four or five, inner three very narrow; last tumid, rather broad, rounded on both sides, banded in the middle, aperture obliquely oblong.

MORELET. Adams. Genera.

Hab. Isle of Pines.

Species 43. (Fig. a, b, Mus. Brit.)

PLANORBIS STAGNICOLO. *Pla. testâ dextrali, complanatâ, olivaceâ, minutissimè liratâ, superne convexiusculâ, anfractibus tribus, rapidè crescentibus, ultimo lato; apertura obliquè subovatâ; disco inferiori concavo, anfractibus conspicuis, planulatis.*

THE STILL-WATER PLANORBIS. Shell dextral, flattened, olive, very finely ridged; rather convex above; whorls three, quickly increasing, last broad; aperture obliquely subovate; lower disc concave, whorls conspicuous, flattened.

MORELET. —? Adams. Gen. of Shells.

Hab. —?

Very like *Planorbis albus* in form, but of a dark green colour, and finely wrinkled.





PLANORBIS.

PLATE VI.

Species 44. (Fig. a, b, Mus. Brit.)

PLANORBIS HINDSIANUS. *Pla. testâ parvâ, dextrali, compressâ, pallidè succineâ, supernè concavâ, infrâ concavâ, lœvi; spirâ parvâ, anfractibus tribus, duobus apicalibus angustis, ultimo lato, rapidè crescenti; aperturâ latâ, yerobliquâ.*

HINDS' PLANORBIS. Shell small, dextral, compressed, pale amber, convex above, concave below, smooth, spire small, whorls three, two apical narrow, last broad, rapidly enlarged; aperture broad, very oblique.

DUNKER. Proc. Zool. Soc. 1848, p. 41.

Hab. Puna Islands.

Species 45. (Fig. a, b, Mus. Brit.)

PLANORBIS CATILLUS. *Pla. testâ atriâque compressâ, parvâ, albâ, dextrali; spirâ compressâ, anfractibus quinque, angustis, lentè crescentibus, infrâ angulatis; aperturâ obliquè subovatâ, angustâsculâ, anticè productâ, margine inferiori subangulatâ.*

THE LITTLE DISH PLANORBIS. Shell compressed on both sides, small, white, dextral, spire compressed, whorls five, narrow, slowly increased, angular below; aperture obliquely subovate, rather narrow, anteriorly produced, lower margin rather angular.

ANTON. — ? Adams. Genera of Mollusca.

Hab. — ?

Species 46. (Fig. a, b, Mus. Brit.)

PLANORBIS SALLEANUS. *Pla. testâ tumidi, dextrali, ferruginâ, lœvisculâ; spirâ subcompressâ, angustâ; anfractibus quateruis, altis, supernè angustatis, infra medium inflatis; aperturâ subobliquè ovatâ, anticè subexpansâ; disco inferiori lato, umbilicato.*

SALLE'S PLANORBIS. Shell tumid, dextral, ferruginous, rather smooth; spire rather compressed, narrow; whorls four, raised, narrow above, inflated below the middle; aperture rather obliquely

ovate; anteriorly rather expanded; lower disc broadly umbilicated.

DUNKER. Proc. Zool. Soc. 1853, p. 54.

Hab. St. Domingo.

Species 47. (Fig. a, b, Mus. Brit.)

PLANORBIS INFLATUS. *Pla. testâ magna, robustâ, altâ, lævigatâ, pallidè olivaceâ, infra medium intusque costatâ; spirâ parvâ, profundè concavâ; anfractibus quateruis, apicalibus tribus parvis, ultimo altissimo, supra suturam perelevato, rotundo, infra medium magis inflato; disco inferiori concavo, anfractu apicali oblecto; aperturâ subauriformi, altâ, margine inferiori subexpanso.*

THE INFLATED PLANORBIS. Shell large, robust, high, smooth, pale olive, chestnut below the middle and within; spire small, deeply concave; whorls four, three apical small, last very high, much raised above the middle, round, more inflated below the middle; lower disc concave, apical whorl hidden; aperture rather ear-shaped, lower margin a little expanded.

DUNKER. Proc. Zool. Soc. 1848, p. 40.

Hab. — ?

Species 48. (Fig. a, b, Mus. Brit.)

PLANORBIS CIRCUMLINEATUS. *Pla. testâ succineâ, subpellucidâ, tumidiâsculâ, dextrali, lœvi; spirâ parvâ, anfractibus quateruis, rapidè crescentibus, ultimo lato, prope aperturam subexpanso, aperturâ obliquè subovatâ, angustâsculâ, infrâ paulo expansâ.*

THE CIRCUMLINEAR PLANORBIS. Shell amber, rather pellucid, rather tumid, dextral, smooth; spire small, whorls four, rapidly increasing, last broad, a little expanded near the aperture; aperture obliquely subovate, rather narrow; a little expanded below.

SHUTTLEWORTH. — ? MS. Mus. Brit.

Hab. Porto Rico.

PLANORBIS.—PLATE VI.

Species 49. (Fig. a, b, Mus. Brit.)

PLANORBIS TERVERSANUS. *Pla. testâ tumidâ, pallidissimè corvâ, levigatâ; spirâ parvâ, planulatâ, anfractibus tribus, ultimo tumida, supra suturam rotundè elevato; aperturâ obliquâ, angustâ, superiôrè subûllatâ; disco inferiori concavo.*

THE THREE-TURNED PLANORBIS. Shell tumid, very pale horn, smooth; spire small, flattened; whorls three, last tumid, roundly elevated above the suture; aperture oblique, narrow, rather dilated above; lower disc concave.

D'ORBIGNY. — ? MS. Coll. Cum. in Brit. Mus.

Hab. St. Thomas, West Indies.

Species 50. (Fig. a, b, Mus. Brit.)

PLANORBIS ANDECOLIS. *Pla. testâ albâ, altâ, dextrali; spirâ subcomplanatâ, anfractibus tribus, conœris; ultimo maximo, altissimo versus marginem superiorem et paulò supra medium, angulato infrâ, ad marginem inferiorem subcarinato, post carinam latè et profundè umbilicato; aperturâ paulò depressâ, trigonâ, anticè productâ, acuminatâ, superiôrè latâ, subdepressâ.*

THE PLANORBIS OF THE ANDES. Shell white, high, dextral; spire rather flattened; whorls three, convex; last very large, very high, angular near the upper margin and a little above the middle,

slightly keeled at the lower margin, broadly and deeply umbilicated behind the keel; aperture a little depressed, trigonal, anteriorly produced, acuminated, broad, rather depressed above.

D'ORBIGNY. Voyage dans l'Amérique Méridionale. Pl. XLV.

Hab. South America.

Species 51. (Mus. Brit.)

PLANORBIS TENAGOPHILUS. *Pla. testâ, compressâ, solidâ, griseo-fulvâ; utriusque concavâ; apicè umbilicato; anfractibus quinque, supra suturam angulatis; ultimo magno, superiôrè declivi, infrâ subcentricosâ, disco inferiori lato, versus marginem complanato, medio (hinc profundè) umbilicato.*

THE SHALLOW-WATER PLANORBIS. Shell broad, compressed, solid, fulvous-gray; concave on each side; apex umbilicated; whorls five, angular above the suture, last large, sloped above, somewhat ventricose below, lower disc broad, flattened towards the margin, umbilicated (not deeply) in the middle.

D'ORBIGNY. Voy. Amér. Meridionale, Pl. XLV., f. 17-20.

Hab. South America.

The funnel-shaped umbilicus on the spire is narrower and more decidedly angular than in *Planorbis commutatus*.





PLANORBIS.

PLATE VII.

Species 52. (Fig. *a, b*, Mus. Brit.)

PLANORBIS KERATOIDES. *Pla. testâ subcompressâ, albidiâ, suprâ leucato-conicâ, infrâ plumulatâ, carinata, ad medium umbilico infundibuliformi excavato; spirâ depressâ, anfractibus quateris, ultimo magno.*

THE SHALOW-SHAPED PLANORBIS. Shell a little compressed, whitish, truncate-conical above, flattened below, keeled, hollowed in the middle, with a funnel-shaped umbilicus; spire depressed, whorls four, last large.

D'ORBIGNY. Voy. Amér. Mériid. Pl. XLV., f. 1-4.

Hab. S. America

Species 53. (Mus. Brit.)

PLANORBIS LUCIDUS. *Pla. testâ compressâ, semipel-lucidâ, lœvi, absque castaneo-conicâ; spirâ depressâ, anfractibus quinâ subplumulatis, ultimo convexâ, infrâ médium subangulato; disco inferiori concavo, angustissimo, aperturâ subquadratâ, infrâ latissimo.*

THE LUCID PLANORBIS. Shell compressed, semipel-lucid, smooth, chestnut-horn; spire depressed, whorls five, rather flat, last convex, rather angular below the middle; lower disc concave, rather narrow, aperture rather square, rather broad below.

PHILIPPI — ? MS. Brit. Mus.

Hab. — ?

Species 54. (Fig. *a, b*, Mus. Brit.)

PLANORBIS SEPTEMGYRATUS. *Pla. testâ valde depressâ, utrinque concavâ, fuscescensubviridi, anfractibus septenis, angustissimis, ultimo angusto, aperturâ parvâ, obliquè oratâ.*

THE SEVEN-WHORLED PLANORBIS. Shell much de-

pressed, concave on both sides, brownish-green, whorls seven, very narrow, last narrow; aperture small, obliquely ovate.

ZIEGLER — ? MS. Brit. Mus.

Hab. Vienna.

A remarkably thin, wafer-like shell.

Species 55. (Fig. *a, b*, Mus. Sowerby.)

PLANORBIS BECKIANUS. *Pla. testâ tumidâ, sinistrâ, brevitatâ, conicâ, medio anfractuum et infrâ castaneâ, spirâ depressâ, anfractibus quateris, supra suturam elevatis, rotundis, ultimo maximo, ventricosâ, rotundo, infrâ latissimo, aperturâ magnâ; disco inferiori profundè excavato, anfractu apicali obtuso.*

BECK'S PLANORBIS. Shell tumid, sinistral, smooth, horn, chestnut at the middle of the whorls and below; spire depressed, whorls four, raised above suture, rounded, last large, ventricose, rounded, rather broad below; aperture large, lower disc deeply excavated, apical whorl hidden.

DUNKER — ? Ad. Gen. of Sh.

Hab. — ?

Little differing from *Planorbis convexus*, but with the whorls more uniformly rounded than in that somewhat variable species.

Species 56. (Fig. *a, b*, Mus. Brit.)

PLANORBIS PALLIDUS. *Pla. testâ tumidissimâ, lœvi, pallidè conicâ, utrinque subcomplanatâ; spirâ angustatâ, anfractibus quateris, rapidè crescentibus, ultimo latissimo, superiè declivi, infra medium inflato, disco inferiori subcomplanato; aperturâ obliquè subovatâ, marginè superiori sinuatum pro- ducto, depressâ.*

PLANORBIS.—PLATE VII.

THE PALE PLANORBIS. Shell rather tumid, smooth, pale horn, flattened on each side; spire narrow, whorls four, quickly increasing, last rather broad, sloped above, inflated below the middle; lower disc a little flattened; aperture obliquely subovate, lower margin sinuously produced, depressed.

C. B. Adams. Basl. Proc. Nat. Hist. Vol. II. p. 102.
Hab. Jamaica.

Species 57. (Fig. a, b, Mus. Brit.)

PLANORBIS CHILENSIS. *Pla. testâ tumidiâsculâ, albiâ, superiè complanâtâ; infriè concavi; anfractibus quibus, mediocriter crescentibus, ultimo tumido; aperturâ magnâ, subquadratâ, margine inferiori rectiâsculo.*

THE CHILI PLANORBIS. Shell rather tumid, white, flattened above, concave below; whorls five, moderately increased, last tumid; aperture large, rather square, lower margin rather straight.

ANTON —? MS. Brit. Mus.
Hab. Chili.

Species 58. (Fig. a, b, Mus. Brit.)

PLANORBIS LANIERANUS. *Pla. testâ depressâ, corneâ, castoreâ, translucidâ, levigatâ; spirâ compressâ, parvâ; anfractibus quaternis, ultimo superiè latiusculo, infriè angustiori, aperturâ angulatâ.*

LANIER'S PLANORBIS. Shell depressed, horny chestnut, translucent, smooth; spire compressed, small; whorls four, last rather broad above, rather narrower below.

D'ORBIGNY. Moll. Cuba.
Hab. Isl. Cuba.

Species 59. (Fig. a, b, Mus. Brit.)

PLANORBIS ROSSMÄSLERI. *Pla. testâ parvâ, compressâ, ferruginâ; spirâ subcomplanatâ, anfractibus quaternis, rapidiè crescentibus, rotundis; disco inferiori umbilicato; aperturâ obliquè ovatâ.*

ROSSMÄSLER'S PLANORBIS. Shell small, compressed, ferruginous; spire rather flattened, whorls four, quickly increased, rounded; lower disc umbilicated; aperture obliquely ovate.

SCHMIDT —? Adams, Genera of Shells.
Hab. Anerswald, near Leipsic.





PLANORBIS.

PLATE VIII.

Species 60. (Fig. a, b, Mus. Brit.)

PLANORBIS SPENCERI. *Pla. testâ parvâ, flavido-fusâ, subdepressâ, sinistrali, levigatâ; spirâ complanatâ, parvâ, anfractibus quateris, ultimo latissimâ, apicâ concentricâ, ad marginem obscurem angulatâ, infra angulum angulatâ; disco inferiori excavato; aperturâ semilunari.*

SPENCER'S PLANORBIS. Shell small, yellowish-brown, subdepressed, sinistral, smooth; spire flattened, small, whorls four, last rather broad, rather convex above, very obscurely angular at the margin, narrowed below; lower disc excavated; aperture semilunar.

ALLEN — ? MS. Brit. Mus.

Hab. Portugal.

Species 61. (Fig. a, b, Mus. Brit.)

PLANORBIS NYMPHEUS. *Pla. testâ tenui, pellucidâ, pallidissime cornuâ, tumidissimâ; spirâ planiusculâ, medio excavatâ, angustâ, anfractibus quateris, atrique tumidissimâ; disco inferiori excavato; aperturâ superâ lato, infâ angustâ.*

THE NEAT LITTLE PLANORBIS. Shell thin, pellucid, very pale horn, rather tumid; spire rather flat, a little excavated in the middle, narrow; whorls four, rather tumid on each side; lower disc excavated; aperture broad above, narrow below.

DUNKER. Proc. Zool. Soc. 1848, p. 40.

Hab. Malacca.

Species 62. (Fig. a, b, Mus. Brit.)

PLANORBIS UNGULATUS. *Pla. testâ latâ, depressâ, arcuatâ, cono-rubescenti; spirâ rix convexâ, anfractibus septenis, levit' crescentibus, superâ angulatâ, subcarinata; disco inferiori convexo; aperturâ obliquâ, superâ levit' angulatâ, productâ.*

THE TALONED PLANORBIS. Shell broad, depressed,

arched, reddish-horny, spire hardly convex; whorls seven, slowly increased, angular above, somewhat keeled, lower disc convex; aperture oblique, sharply angular above, produced.

CHITTY — ? MS. Brit. Mus.

Hab. Jamaica.

The sharp prominent angle in the margin of the whorls, with the slightly arched under surface, gives the profile of this shell a talon-like appearance.

Species 63. (Fig. a, b, Mus. Brit.)

PLANORBIS COMMUTATUS. *Pla. testâ sinistrali, tumidi, ventricosâ, pallidè fusâ, tenui; spirâ infundibulâtâ; anfractibus quinâ, angulatis, superâ angustatis, infâ ventricosis, rotundis; disco inferiori profundè umbilicato, anfractâ apicali oblecto; aperturâ rotundo-subtrigoniâ.*

THE CHANGED PLANORBIS. Shell sinistral, tumid, ventricose, pale brown; spire funnelled, whorls five, angular, narrow, ventricose, rounded below; lower disc deeply umbilicated, apical whorl hinder; aperture roundly subtrigonal.

DUNKER — ? MS. Brit. Mus.

Hab. N. America.

Species 64. (Fig. a, b, Mus. Brit.)

PLANORBIS ARCTICUS. *Pla. testâ parvâ, pallidè fulvâ, subdepressâ; spirâ parvâ, pauli' excavatâ; anfractibus tribus, rotundis, rapidè crescentibus, tumidissimis, disco inferiori lato umbilicato, aperturâ rotundâ.*

THE ARCTIC PLANORBIS. Shell small, pale fulvous, rather depressed; spire small, a little excavated; whorls three, rounded, quickly increasing, rather tumid, lower disc broadly umbilicated; aperture rounded.

BECK — ? MS. Mus. Brit.

Hab. Greenland.

PLANORBIS.—PLATE VIII.

Species 65. (Fig. a, b, Mus. Brit.)

PLANORBIS GRACILENTUS. *Pla. testā dextrali, albidā, opacā; spirā planiusculā; anfractibus quinīs, apicalibus angustis, externis latiusculis, ad aperturam subdilatis; apertura subtriangulā; disco inferiori latē umbilicō.*

THE SLENDER PLANORBIS. Shell dextral, whitish, opaque; spire rather flat; whorls five, apical narrow, external rather broad; a little dilated at the aperture; aperture a little trigonal; lower disc broadly umbilicated.

GOULD —? MS. Brit. Mus.

Hab. Colorado Desert.

Species 66. (Fig. a, b, Mus. Brit.)

PLANORBIS DEPRESSISSIMUS. *Pla. testā complanata, valdē depressā, pellucidā, pallidē concolā, spirā complanata; anfractibus septenis, tenuibus, latē crescentibus, superne ad marginem acutē angulatis; disco inferiori planulata; apertura lateraliter elongatā, angulo externo acuto.*

THE VERY FLAT PLANORBIS. Shell flattened, much depressed, pellucid, pale horn, spire flattened; whorls seven, thin, slowly increased, at the margin above sharply angular; lower disc flattened; aperture laterally lengthened, outer angle sharp.

MOERICAND —? MS. Mus. Brit.

Hab. —? —?

The whorls are perhaps the flattest of any in the genus.

Species 67. (Fig. a, b, Mus. Brit.)

PLANORBIS SUBANGULATUS. *Pla. testā pallidē concolā, tumidiusculā, sinistra; anfractibus tribus, rapidē crescentibus, superne convexis, latiusculis; disco superiori lato, convexo; inferiori subangulato, excavato; apertura superne lateraliter productā, infra versus medium inclinata.*

THE SUBANGULAR PLANORBIS. Shell pale, horny, rather tumid, sinistral whorls three, quickly increased; convex, rather broad; upper disc broad, convex, lower rather angular, excavated; aperture laterally produced above, inclined towards the middle below.

PHILIPPI. *Encycl.* 2, Pl. XXI, f. 6.

Hab. Malta, Sicily.

Species 68. (Mus. Brit.)

PLANORBIS SERICEUS. *Pla. testā sinistra, tumidiusculā, pallidē fuscā, spirā angustē infundibulata; anfractibus quinīs, superne angulatis, angustatis; disco inferiori excavato, anfractibus rotundis; apertura subtriangulā, infra contractā, rotundā.*

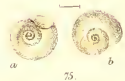
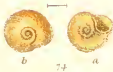
THE CHOCROY PLANORBIS. Shell sinistral, rather tumid, pale brown, spire narrowly funnelled; whorls five, angular above, narrow; lower disc excavated, whorls rounded; aperture subtrigonal, expanded, rounded below.

DUNKER. *Proc. Zool. Soc.* 1848, 42.

Hab. —? —?

Differing from *Planorbis conmutatus* in the proportionate narrowness of the whorls, and the funnel-shaped excavation is more angular, distinct, and narrow.





PLANORBIS.

PLATE IX.

Species 69. (Mns. Brit.)

PLANORBIS ELEGANTULUS. *Pla. testâ obliquè compressâ, pellucida, coracâ, dextrali, tenuiter striatâ, superâi convexâ, infra concavâ; spirâ parvâ, anfractibus tribus, ultimo lato, ad aperturam obliquè expanso; aperturâ perobliquè ovatâ.*

THE ELEGANT PLANORBIS. Shell obliquely compressed, transparent, horny, dextral, finely striated, convex above, concave below; spire small, whorls three, last wide, obliquely expanded at the aperture; aperture very obliquely ovate.

DOBEN. Proc. Zool. Soc. 1858, p. 134.

Hab. —?

Species 70. (Mns. Hanley.)

PLANORBIS TROCHOIDEUS. *Pla. testâ tumidioreculâ, lani, semipellucidâ, subciliâ, distanter concentricè albofasciatâ, superâi convexâ, infra subcomplanatâ, angustissimè umbilicatâ, internè segmentatâ; spirâ angustissimâ, ultimo anfractu superâi latè expanso; infra medium angulatâ, acutè corinatâ.*

THE TROCHIFORM PLANORBIS. Shell rather tumid, thin, semipellucid, rather green, constantly concentrically banded with white, convex above, rather flattened below, very narrowly umbilicated, internally divided in segments; spire very narrow, last whorl broadly expanded above; angular below the middle, acutely keeled.

BENSON. Asiatic Society Bengal, 1836, p. 742.

Hab. Barrackpore.

Remarkable for the way in which the outer whorl covers the inner, and the very small opening left in the centre of the upper and under discs.

Species 71. (Mus. Brit.)

PLANORBIS MORICANDI. *Pla. testâ sinistrali, tumidâ, ferruginâ; spirâ angustè infundibulatâ, anfractibus supra suturam angulatim elevatis; ultimo latè declivi; aperturâ triangulâ, infra medium subangulatâ, infra subrotundâ; disco inferiori umbilicatâ.*

MORICAND'S PLANORBIS. Shell sinistral, tumid, ferruginous; spire narrow, with narrow funnel-shaped cavity, whorls raised angularly above the suture, last broadly sloped; aperture trigonal, rather angular below the middle, a little rounded underneath; lower disc umbilicated.

BECK. Adams, Genera of Shells.

Hab. —?

A narrower shell than *Planorbis leucoglyphus*, with the funnel-shaped opening more narrow and angular.

Species 72. (Fig. a, b, c, Mus. Brit.)

PLANORBIS MULTIVALVIS. *Pla. testâ coracâ, sinistrali, altâ; spirâ erectâ, subturretâ; anfractibus septenis, superâi angustatis angulatâ, ultimo compresso, alto, propè aperturam contracto tumido, ad aperturam expanso; aperturâ elevatâ, marginè expanso; disco inferiori profundè umbilicato; anfractibus octavis, tribus apicalibus obtectis.*

THE MANY-WHORLED PLANORBIS. Shell horny, sinistral, high, spire exserted, subturreted; whorls seven, narrow and angular above, last compressed, deep, contracted near the aperture, then tumid, expanded at the aperture; aperture raised, margin expanded, lower disc deeply umbilicated; whorls rounded, three apical hidden.

CASE. Adams, Genera of Shells.

Hab. Lake Superior, Michigan.

In the contraction and swelling of the last whorl near the mouth, and expansion of the lip, this shell resembles *Planorbis campanulatus*, but the whorls of the spire are more numerous and are pushed out conically.

Species 73. (Fig. a, b, Mus. Brit.)

PLANORBIS FERRUGINEUS. *Pla. testâ tumidâ, ventricosâ, sinistrali, castaneo-cornuâ; spirâ convexâ, anfractibus senis, subangulatâ, supra suturam elevatis, infra angulum subdelectibus, ultimo lato, infra subconvexâ; aperturâ obliquè subtriangulâ; disco inferiori latè concavo; anfractibus subrotundis.*

PLANORBIS.—PLATE IX.

THE FERROUGINOUS PLANORBIS. Shell tumid, ventricose, sinistral, chestnut horn, spire concave; whorls six, rather angular, raised above the suture, rather sloped below the angle, last broad, rather convex below; aperture obliquely subtrigonal; lower disc broadly concave, whorls somewhat rounded.

SFIX. Test. Braz. Tab. XVIII., f. 1-2.

Hab. Brazil.

The whorls are more angular above than is the case in *Planorbis olivaceus*.

Species 74. (Fig. a, b, Mus. Brit.)

PLANORBIS FUSCUS. *Pla. testâ dextrali, depressâ, ferruginâ, superâ concavissimâ, infâ latè excavatâ; spirâ angustâ; anfractibus tribus, ultimo lato; aperturâ obliquè angustâ, margine integrâ.*

THE BROWN PLANORBIS. Shell dextral, depressed, iron-rust, rather convex above, broadly excavated below, spire narrow; whorls three, last broad; aperture obliquely narrow, margin entire.

DUNKER. Proc. Zool. Soc. 1848, p. 42.

Hab. Valparaiso.

Species 75. (Fig. a, b, Mus. Brit.)

PLANORBIS NANUS. *Pla. testâ pallidè fuscâ, dextrali, compressâ, superâ concavissimâ, infâ latè et profundè umbilicatâ; spirâ angustâ, emplanatâ;*

anfractibus tribus, obliquè striatis, rapidè crescentibus, ultimo latissimo; aperturâ depressâ, latissimâ, lobis externo superâ obliquè producta.

THE DWARF PLANORBIS. Shell pale fulvous, dextral, compressed, rather convex above, broadly and deeply umbilicated below; spire narrow, flat; whorls three, obliquely striated, rapidly increased, last very broad; aperture depressed, very broad, outer lip obliquely produced above.

BENSON. Proc. Zool. Soc. 1856, p. 186.

Hab. India.

Species 76. (Mus. Brit.)

PLANORBIS MODICUS. *Pla. testâ corneâ, tumidâ, sinistrali, spirâ infundibulatâ; anfractibus quinque, propè suturam elevatis et angulatis, ultimo lato, declivi, concentricè tenuiter rugatâ; aperturâ subtrigoniâ, disco inferiori concavo, anfractibus subplanatis.*

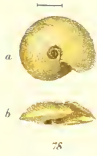
THE MIDDLING PLANORBIS. Shell horny, tumid, sinistral, spire funnel-shaped; whorls five, raised and angular near the suture, last broad, sloped, concentrically finely wrinkled; aperture subtrigonal, lower disc concave, whorls rather flat.

BENSON. Adams, Genera of Mollusca.

Hab. India.

Belonging to the same group as *Planorbis corneus*, but smaller, with narrow, angular, funnel-like spiral excavation.





PLANORBIS.

PLATE X.

Species 77. (Fig. *u, l.* Mns. Hanley.)

PLANORBIS UMBILICALIS. *Pla. testā dextrali, segmentatā, foveā, b. nūi, nitenti, levigatā, superiō tumido, infriā planiusculo, infra medium carinatā; spirā angustā, planatā; anfractibus tribus, ultimo magno, lato, supra carinam tumido; apertura obliquē lato, margine superiori sinuatum producto, disco inferiori medio angustē umbilicato.*

THE UMBILICAL PLANORBIS. Shell dextral, divided in segments, brown, thin, shining, smooth, tumid above, rather flat below, keeled below the middle; spire narrow, flat; whorls three, last large, broad, tumid above the middle; aperture obliquely broad, upper margin sinuately produced, lower disc narrowly umbilicated in the middle.

BENSON. Journ. Asi. Soc. Bengal, Vol. V. p. 741.

Hab. East Bengal.

Species 78. (Fig. *a, b.* Mus. Hanley.)

PLANORBIS GENOSUS. *Pla. testā dextrali, segmentatā, pallidē subviridi, levigatā, superiō truncato-conicā, infriā subplanatā, medio angustē umbilicatā; spirā angustissimā, ultimo anfractū latissimū, infra medium acutē carinatū; apertura trigonā, margine superiō infriāque flexuosiū depresso.*

THE MIREY PLANORBIS. Shell dextral, divided in segments, greenish, smooth, truncated-conical above, rather flat below, narrowly umbilicated in the middle; spire very narrow, sharply keeled below the middle; aperture trigonal, margin flexuously depressed above and below.

BENSON. Ann. Nat. Hist. 1850, p. 349.

Hab. Near Moradabad, Ceylon.

Species 79. (Fig. *a, b.* Mus. Hanley.)

PLANORBIS CANTORI. *Pla. testā sordidē subviridi, dextrali, segmentatā, superiō tumidā, infriā convexiusculā, medio umbilicatā; spirā latiusculā, ultimo anfractū lato, infra medium obtusē carinatū;*

apertura subtriangulā, margine superiō flexuosiū producto.

CANTOR'S PLANORBIS. Shell dull greenish, dextral, divided in segments, tumid above, convex below, umbilicated in the middle; spire rather broad, last whorl broad, obtusely keeled below the middle; aperture rather trigonal, upper margin flexuously produced.

BENSON. Ann. Nat. Hist. 1850, p. 349.

Hab. Barrackpore, India.

Species 80. (Fig. *a, b.* Mus. Brit.)

PLANORBIS PONSOMBYI. *Pla. testā dextrali, altissimā, ventricosā, albā, epidermide tenui pallidē flavicā, iudatā, superiō subconicā, infriā latē et profundiū umbilicatā; spirā subturritā; anfractibus duobus, brevibus, subangulatis, ultimo anfractū superiō planulato, marginibus superiori inferiorique carinatis; apertura latā, subtriangulā, infriā acuminatā, superiō expansā.*

PONSOMBY'S PLANORBIS. Shell dextral, very high, ventricose, white, covered with a yellowish thin epidermis, a little conical above, broadly and deeply umbilicated below; spire subturritated; whorls two, short, rather angular, last whorl flattened above, upper and lower margin keeled; aperture broad, rather trigonal, acuminated below, expanded above.

SMITH. (*Carinifer.*) Proc. Zool. Soc. 1875, No. 2.

Hab. California.

In *Planorbis bicarinata* and *Pl. aurita*, the spire is sunk, and not, as in this species, exerted. Otherwise, the two former much resemble the latter. I cannot see any reason for separating these shells generically. At least one very different species has an exerted spire.

Species 81. (Mus. Brit.)

PLANORBIS NEWBERRYI. *Pla. testā dextrali, altissimā, ventricosā, coruscā, epidermide tenui iudatā, infriā*

late et profundè infundibulata; spirâ exsertâ; anfractibus duobus, subangulatis, ultimo anfractu magno, ventricoso, superè inferèque crenulatum carinato, mediò obscurè carinato; aperturâ trigonâ, ferè ad mediùm ultimi anfractus depressâ, superè angulata, infra angulam productâ, infra mediùm angustatâ, acuminatâ.

NEWBERRY'S PLANORBIS. Shell dextral, very high, ventricose, horny, covered with a pale thin epidermis, with a deep and wide funnel-shaped cavity below; spire exserted; whorls two, rather angular, last whorl large, ventricose, crenulately keeled above and below, obscurely keeled in the middle; aperture trigonal, depressed almost to the middle of the last whorl, angular above, produced below the angle, narrow and acuminated below the middle.

LEE. Proc. Acad. Phil. 1854, p. 51.

Genus. *Carinifer*. Binney.

Hab. California.

Species 82. (Mus. Sowerby.)

PLANORBIS OBESES. *Pla. testâ tumidâ, altâ, sinistrali, castaneo-subcitrili, tenui, inflatâ; spirâ angustiusculâ, angulatâ concavâ; anfractu ultimo magno, superè angulato, inferè rotundo; aperturâ semi-circulari, disco inferiori mediò concavo, anfractibus spiralibus obtectis.*

THE FAT PLANORBIS. Shell tumid, high, sinistral, greenish chestnut, thin, inflated; spire rather narrow, angularly concave; last whorl large, angular above, rounded below; aperture semi-circular, lower disc concave in the middle, apical whorls hidden.

DYCKER. Proc. Zool. Soc. 1848, p. 41.

Hab. —?

Species 83. (Mus. Sowerby.)

PLANORBIS LENTUS. *Pla. testâ fusco-subcitrili, mediò anfractuum subcervicâ, sinistrali, tumidâ, altâ; spirâ depressâ; anfractibus planiusculis, propè suturam obscurè carinatis, ultimo concentricè lirato, tenuiter spiraliter striatâ; disco inferiori excavato, anfractu apicali obtecto; aperturâ magnâ, ad anfractum ultimum contractâ, paulo elevatâ; intus fenoso-fuscâ, margine incrassato, fœvoso, albo.*

THE SLACK PLANORBIS. Shell greenish-brown, bluish in the middle of the whorls, sinistral, tumid, high; spire depressed; whorls rather flat, obscurely keeled near the suture, last concentrically ridged, finely spirally striated, lower disc hollow, apical whorl hidden; aperture large, contracted at the last whorl, a little raised, smoky-brown within, margin thickened, white.

SAY. Alps, Monograph. Planorbis, Pl. III. f. 4-6.

Hab. S. Carolina.

More tumid and deep, and less sloped at the top of the whorls than *Planorbis tricoloris*.

Species 84. (Mus. Brit.)

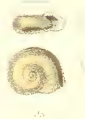
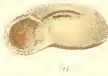
PLANORBIS PEREGRINUS. *Pla. testâ subcompressâ, dextrali, pallidissimè corvâ; obliquè striatâ; spirâ angustiuscula, mediò subcavo; ultimo anfractu lato, tumido, supra mediùm obscurissimè angulato; disco inferiori angulatâ umbilicato; aperturâ subquadrangulatâ.*

THE WANDERING PLANORBIS. Shell subcompressed, dextral, very pale horn, obliquely striated; spire rather narrow, slightly excavated in the middle; last whorl broad, tumid, very obscurely angular above the middle, lower disc angularly umbilicated; aperture slightly quadrangular.

D'ORBIGNY. Voy. Amér. Mériç. Pl. XLIV. f. 13-16.

Hab. Bahia





PLANORBIS.

PLATE XI.

Species 85. (Mus. Sowerby.)

PLANORBIS MERGUIENSIS. *Pla. testâ fuscâ, concentricè tenuiter striatâ, tumida, angustâ, albâ, sinistrali; spirâ parvâ, infundibulatâ; anfractibus apicalibus angustis, ultimo superiôrè angulato, supra suturam elevata; medio et infra rotundato; apertura semilunari, supra anfractum ultimum elevata, in-bis castaneo, margine subrepanso, intus incrassato.*

THE MERGUI PLANORBIS. Shell brown, concentrically finely striated, tumid, narrow, high, sinistral; spire small, funnelled; apical whorls narrow, last angular above, raised above the suture; rounded in the middle and below; aperture semilunar, raised above the last whorl, chestnut within, margin a little expanded, thickened within.

PHILIPPI. — ? Hanley, Indian Shells.

Hab. Mergui, Burmah.

Species 86. (Fig. *a, b*, Mus. Sowerby.)

PLANORBIS CONCAVUS. *Pla. testâ parvâ, albâ, depressâ, dextrali, laevigatâ; spirâ planiusculâ, anfractibus quaternis, capiti crescentibus, superiôrè inférieque rotundatis; apertura obliquè rotundâ, magnâ; disco inférieori excavato.*

THE CONCAVE PLANORBIS. Shell small, white, depressed, dextral, smooth; spire rather flat, whorls four, quickly increased, rounded above and below; aperture obliquely rounded, large; lower disc hollow.

ANTHOXY. — ? MS. Mus. Brit.

Hab. River Ohio.

Species 87. (Fig. *a, b*, Mus. Sowerby.)

PLANORBIS PARVUS. *Pla. testâ depressâ, complanatâ, semipellucidâ, subcicillâ fuscâ, dextrali; spirâ latâ, subcomplanatâ; anfractibus quaternis, superiôrè concavissimis, inférie rotundatis; ultimo latiusculo; apertura obliquè subovata, depressâ; disco inférieori convexo.*

THE SMALL PLANORBIS. Shell depressed, flat, semipellucid, greenish brown, dextral; spire broad, flattened; whorls four, convex above, rounded below; last rather broad; aperture obliquely subovate, depressed; lower disc concave.

SAY. Alb. Monog. Pl. IV. f. 19, 20.

Planorbis fallax. Say (?)

Hab. New York.

Species 88. (Mus. Brit.)

PLANORBIS DEFLEXUS. *Pla. testâ depressâ, pallidè cornuâ, laevigatâ, dextrali; spirâ angustâ, depressâ, anfractibus tribus, superiôrè convexis, inférie rotundis, rapide crescentibus, ultimo lato; apertura angustâ, valdè deflexâ.*

THE DOWN-BENT PLANORBIS. Shell depressed, pale horn, smooth, dextral; spire narrow, depressed, whorls three, convex above, rounded below, rapidly increased, last broad; aperture large, strongly deflected.

SAY. Long's Expedition, Appendix, Pl. XV. f. 8.

Planorbis circus. Adams.

Hab. River Ohio.

Species 89. (Mus. Brit.)

PLANORBIS ORIENTALIS. *Pla. testâ tenui, irregularitè undulatâ, flavidè albâ, sinistrali; spirâ angustâ, depressâ; anfractibus supra suturam parvis ch-catis, ultimo lato, declivi, ceteris aperturam repansâ; apertura supra inférieque compressâ, magnâ, obliquè deflexâ; margine sinuato; disco inférieori concavo.*

THE ORIENTAL PLANORBIS. Shell thin, irregularly undulated, yellowish white, sinistral; spire narrow, depressed; whorls a little raised above the suture; last broad, sloped, expanded towards the aperture; aperture compressed above and below, large, obliquely deflected; margin sinuous; lower disc concave.

LAMARCK. Anim. s. Vert.

Hab. India.

Species 90. (Mus. Brit.)

PLANORBIS STRAMINEUS. *Pla. testâ tumidâ, depressâ, dextrali, stramineâ; spirâ complanatâ, medio subdepressâ, anfractibus quaternis, superâ planulatis, medio ventricosis, infâ rotundis; disco inferiori excavato, anfractu apicali obtecto.*

THE STRAW-COLOURED PLANORBIS. Shell tumid, depressed, dextral, straw-coloured; spire flattened, middle rather depressed, whorls four, flattened above, ventricose in the middle, rounded below; lower disc excavated, apical whorl hidden.

DUNKEE. Proc. Zool. Soc. 1848, p. 42.

Hab. — ?

Species 91. (Mus. Brit.)

PLANORBIS GLABRATUS. *Pla. testâ sinistrali, pulvornaeâ, tumidâ, subdepressâ, levigatâ; spirâ angustâ, depressâ, anfractibus angustis supra suturam elevatis; ultimo lato, superâ declivi; aperturâ magnâ, margine inferiori producto; disco inferiori medio excavato.*

THE POLISHED PLANORBIS. Shell sinistral, fulvous-horny, tumid, somewhat depressed, smooth; spire narrow, depressed; whorls narrowly raised above the suture; last broad, sloped above; aperture large, lower margin produced, and lower disc hollowed in the middle.

SAT. Adams' Genera of Mollusca.

Hab. Florida.

Species 92. (Fig. a, b, Mus. Sowerby.)

PLANORBIS ANTIGUENSIS. *Pla. testâ latâ, compressâ, levigatâ, fusco-corneâ, sinistrali; spirâ depressâ, anfractibus quinis, compressis, rotundis, prope marginem supra suturam elevatis, rapidè crescentibus; ultimo latiusculo; aperturâ magnâ, elevatâ, subtrigoniâ; disco inferiori emcavo.*

THE ANTIGUA PLANORBIS. Shell broad, compressed, smooth, brown-horny, sinistral; spire depressed, whorls five, compressed, rounded, raised near

the margin above the suture, quickly increased; last broad; aperture large, raised, rather trigonal; lower disc concave.

GUIDING. — ?

Hab. Antigua, West Indies.

Species 93. (Fig. a, b, Mus. Hanley.)

PLANORBIS CONVEXIUSCULUS. *Pla. testâ subcomplanatâ, albâ, tumidiusculâ, levigatâ, dextrali; anfractibus quaternis, rapidè crescentibus; ultimo lato, versus aperturam expanso; aperturâ obliquè subovata, supra ultimum anfractum elevato; disco inferiori excavato.*

THE RATHER CONVEX PLANORBIS. Shell rather flattened, white, rather tumid, smooth, dextral; whorls four, rapidly increased; last broad, expanded towards the aperture; aperture obliquely subovate, raised above the last whorl; lower disc excavated.

HUTTON. Journ. Asiat. Soc. Beng. 1849, Vol. XVIII. p. 652.

Hab. Afghanistan.

Species 94. (Fig. a, b, Mus. Sowerby.)

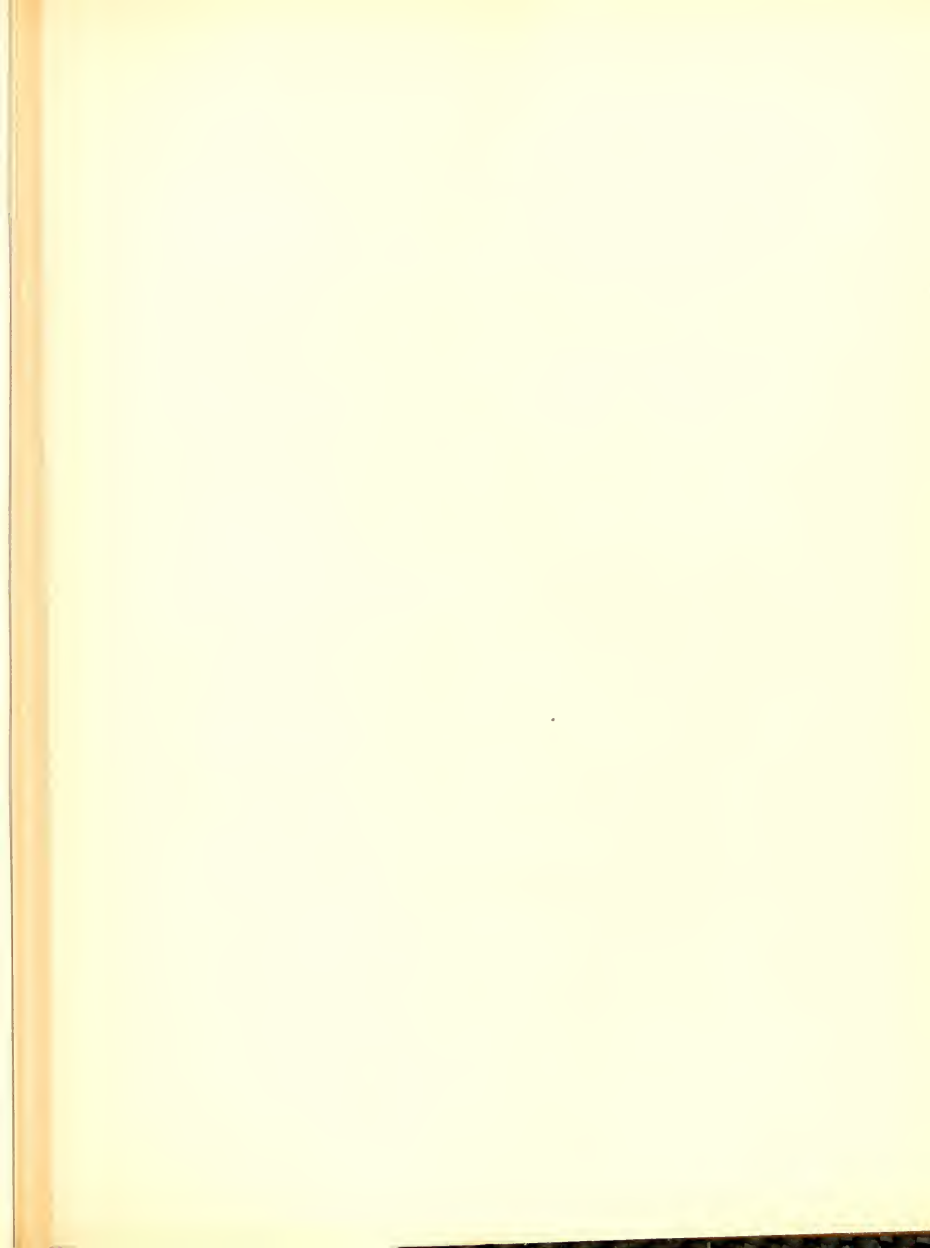
PLANORBIS EXACUTUS. *Pla. testâ depressâ, fusco-corneâ, dextrali, superâ convexâ, inferâ planiusculâ, paulò infra medium acutè carinatâ; aperturâ compressâ, lateraliter obliquè elongatâ, margine externo acuminatâ; disco inferiori subcomplanatâ, medio umbilicato.*

THE SHARP PLANORBIS. Shell depressed, brown-horny, dextral, convex above, rather flat below, sharply keeled a little below the middle; aperture compressed, laterally obliquely elongated, outer margin acuminated; lower disc rather flat, umbilicated in the middle.

SAY. Journ. Amer. Journ. Soc. Phil.

Planorbis Indicus. Benson.

Hab. United States.





107

108

102

101

105

104

100

103

97

99

101

106

105

105

108

108

PLANORBIS.

PLATE XII.

Species 95. (Fig. a, b, Mus. Brit.)

PLANORBIS PANAMENSIS. *Pla. testâ parvâ, albâ, compressâ, semipellucidâ, dextrali; spirâ parvâ; anfractibus tribus, depresso-concavis, distinctis, raptidè crescentibus; ultimo lato; disco inferiori concavo, anfractibus rotundis; apertura subovata.*

THE PANAMA PLANORBIS. Shell small, whitish, compressed, semipellucid, dextral; spire small; whorls three, depressed-concave, distinct, quickly increased; last broad; lower disc concave, anfractibus rotundis; aperture subovate.

D'ORBIGNY, Proc. Zool. Soc. 1848, p. 41.

Hab. Panama.

Resembling *Planorbis albus*, but with the whorls more rounded and distinct.

Species 96. (Mus. — ? Copied.)

PLANORBIS HELOICUS. *Pla. testâ latâ, complanatâ, dextrali, fusco-ferruginâ, striatâ, paulo arcuatâ; spirâ planulatâ, anfractibus quinque, rotundis; apertura obliquè ovata, subrotundâ; disco inferiori excavato.*

THE NAIL-SHAPED PLANORBIS. Shell broad, flat, dextral, rusty-brown, striated, a little arched; spire flattened, whorls five, round; aperture obliquely rounded-oval; lower disc hollow.

D'ORBIGNY, Voy. Amér. Mérid. Pl. XLV. fig. 9-12.

Hab. South America.

Species 97. (Mus. — ? Copied.)

PLANORBIS PAROSEIDES. *Pla. testâ rectâ, parvâ, latiusculâ, subcomplanatâ, dextrali, fusco, ferruginâ, obliquè striatâ; spirâ complanatâ, anfractibus quinque, superioribus subcomplanatis, angustis, infra medium tumidiusculis, apertura depressâ, infra paulo inflatâ; disco inferiori latè umbilicato.*

THE 'DISH-LIKE' PLANORBIS. Shell straight, small, rather broad, flattish, dextral, rusty-brown, obliquely striated; spire flattened; whorls five, rather flattened above, narrow, rather tumid below the middle, aperture depressed, a little inflated below; lower disc broadly umbilicated.

D'ORBIGNY, Voy. Amér. Mérid. Pl. XLV. f. 5-8.

Hab. South America.

Species 98. (Fig. a, b, Mus. Brit.)

PLANORBIS HELIOPHILUS. *Pla. testâ planatâ, subdepressâ, pallidè fulvâ, sinistrali, levigatâ; spirâ infundibulatâ; anfractibus quinque, tumidiusculis, supra suturam angulatum elevatis, infra rotundis; ultimo superiorè subangustatâ, tum declivi, cæcus aperturam expanso; apertura superiorè subacuminatâ, infra latâ.*

THE SUN-LOVING PLANORBIS. Shell flattened, sable-pressed, pale fulvous, sinistral, smooth; spire funnelled; whorls five, rather tumid, angularly raised above the suture, rounded below; last somewhat angular above, then sloped, expanded towards the aperture; aperture subacuminated above, broad below.

D'ORBIGNY, Voy. Amér. Mérid. Pl. XLV. f. 13-16.

Hab. South America.

Species 99. (Fig. a, b, Mus. Brit.)

PLANORBIS ANATINUS. *Pla. testâ minutâ, tumidâ, corneâ, depressâ, subglobosâ; spirâ parvâ, subarcuatâ; anfractibus tribus, altis, medio convexis; apertura angustâ, semilunari; disco inferiori angustè umbilicato.*

THE DUCK'S PLANORBIS. Shell minute, tumid, horny, depressed, subglobose; spire small, slightly excavated; whorls three, high, convex in the middle; aperture narrow, semilunar, lower disc narrowly umbilicated.

D'ORBIGNY, Voy. Amér. Mérid. Pl. XLV. fig. 17-20.

Hab. South Africa.

Species 100. (Fig. a, b, Mus. Brit.)

PLANORBIS ARAKANENSIS. *Pla. pallidè corneâ, translucidâ, tumidâ, dextrali; spirâ angustâ; anfractu ultimo tumidâ, superiorè subangustato, infra medium ventricosè; disco inferiori concavo, anfractu apicali obtecto.*

THE ARAKAN PLANORBIS. Shell pale horn, translucent, tumid, dextral; spire narrow; last whorl tumid, a little angular above, ventricose below the middle; lower disc concave, apical whorl hidden.

GOULD. — ? MS. Brit. Mus.

Hab. Trinidad.

Species 101. (Fig. a, b, Mns. Brit.)

PLANORBIS ISABEL. *Pla. testâ parvâ, tumidâ, albâ, dextrali, ferruginosâ, levigatâ; spirâ parvâ, sub-complanatâ; anfractibus tribus, angustissimâ, superâ subangulatâ, tùm declivibus; ultimo magno, prope aperturam expanso; disco inferiori umbilicato; aperturâ angustâ, semilunari, margine superiori sinuatim prolata.*

THE ISABEL PLANORBIS. Shell small, tumid, high, dextral, ferruginous, smooth; spire small, rather flat; whorls three, rather narrow, slightly angular above, then sloped; last large, expanded near the aperture; lower disc umbilicated; aperture narrow, semilunar, upper margin sinusly produced.

MORELET. —? Adams. Genera of Mollusca.

Hab. —? —————

Species 102. (Fig. a, b, Mns. Brit.)

PLANORBIS ACIES. *Pla. testâ parvâ, utrinque complanatâ, albâ, levigatâ; anfractibus quinâ, subrotundis, superâ angustissimâ, inferâ magis rotundis; aperturâ obliquè ovatâ, supra suturam elevatâ.*

THE SPEAR PLANORBIS. Shell small, flattened on each side, white, smooth; whorls five, rather rounded, rather narrow above, more rounded below; aperture obliquely ovate, raised above the suture.

POREDO. Meg. Villa. Cat. 1844, p. 8.

Hab. Milan. —————

Species 103. (Mns. Brit.)

PLANORBIS LARGILLIERTI. *Pla. testâ truncato-conicâ, costatâ, altissimâ, nitentâ, infra medianâ sub-plauiatâ, superâ declivi; spirâ angustâ, anfractibus tribus, angustissimâ, ultimo magno, tumido; aperturâ subtrigoniâ, margine superiori flexuosim depressâ; disco inferiori angustè umbilicato.*

LARGILLIERT'S PLANORBIS. Shell truncate-conical, chestnut, rather raised, shining, rather flattened below the middle, sloped above; spire narrow; whorls three, very narrow, last large, tumid; aperture rather trigonal; upper margin flexu-ously depressed; lower disc with a narrow umbilicus.

— MS.

Hab. —? —————

Species 104. (Fig. a, b, Mus. Sowerby.)

PLANORBIS VERMICULARIS. *Pla. testâ olivaceo-viridi, politâ, parvâ, dextrali; spirâ planiusculâ, anfractibus quinâ, rotundis, angustis, declivibus, infra medianâ subcentricosis, subangulatis; disco inferiori concavo; aperturâ subtrigoniâ.*

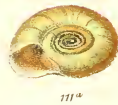
THE VERMICULAR PLANORBIS. Shell olive-green, polished, small, dextral; spire rather flattened; whorls five, rounded, narrow, sloped, rather ventricose below the middle, slightly angular; lower disc concave; aperture subtrigonal.

SOWERBY.

Hab. —? —————

Shell with a broader disc and more whorls than *Planorbis parrens*, which, from its colour and general form, it resembles.





PLANORBIS.

PLATE XIII.

Species 105. (Fig. a, b, Mus. Brit.)

PLANORBIS PERFORATUS. *Pla. testâ parvâ, tumidâ, pallidâ coriâ, truncato-subconicâ, spirâ angustissimâ, anfractu ultimo tumido, alto, superâ declivi, infra medianâ ventricosa; disco inferiori planulato, medio angustissimo et profunde umbilicato.*

THE PERFORATED PLANORBIS. Shell small, tumid, pale horn, truncated-subconical, spire very narrow, last whorl tumid, raised, sloped above, ventricose below the middle; lower disc flattened, narrowly and deeply umbilicated in the middle.

GOULD —? MS. Mus. Brit.

Hab. United States.

Species 106. (Mus. Brit.)

PLANORBIS CELTRATUS. *Pla. testâ pellucidâ, hyalina, albâ, truncato-conicâ, spirâ parvâ, anfractibus tribus, depressis; anfractu ultimo declivi, infra planato, margine acuminato; apertura obliquè subtriangulâ, angustâ; marginè externo infusè acutè angulato; disco inferiori plano, medio angustè umbilicato.*

THE SHARPENED PLANORBIS. Shell pellucid, hyaline, white, truncated-conical, spire small, whorls three, sunk; last whorl sloped, flattened below, margin acuminated; aperture obliquely subtriangular, narrow; outer margin sharply angular below; lower disc umbilicated.

D'ORBIGNY —? MS. Mus. Brit.

Hab. St. Vincent.

Species 107. (Mus. Brit. —? Copied.)

PLANORBIS MONTANUS. *Pla. testâ depressâ, pallidâ fulcâ, sinistrali; spirâ infundibulatâ; anfractu ultimo tumido, superâ infraque angulato; disco inferiori concavo; apertura subquadrilaterali, magis, superâ anfractuum ultimâ elevatâ.*

THE MOUNTAIN PLANORBIS. Shell depressed, pale fulvous, sinistral; spire funnelled; last whorl tumid, angular above and below; lower disc concave; aperture rather quadrilateral, large, raised above the last whorl.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLIV. f. 5, 8.

Hab. South America.

Species 108. (Mus. Brit.)

PLANORBIS AMMON. *Pla. testâ sinistrali, maximâ, concentricissimâ, albâ, pallidâ subviridi-fulcâ, concentricè rugatâ; spirâ profunde infundibulatâ; anfractibus quaternis, superâ suturam rotundè elevatâ; ultimo lato, rapide crescenti, ad aperturam expanso; disco inferiori profunde excavato; apertura magna, altissimâ, subconicâ, superâ superâ suturam elevatâ, acuminatâ; infra anfractum ultimam rotundè productâ, intus subcastaneo, margine interno incrassato.*

THE AMMON PLANORBIS. Shell sinistral, very large, very ventricose, high, pale greenish-fawn, concentrically wrinkled; spire deeply funnelled; whorls four, roundly elevated above the suture; last wide, rapidly enlarged, expanded at the aperture; lower disc deeply hollow; aperture large, very high, subovate, raised above over the suture, acuminated; roundly produced below the last whorl, rather chestnut within, lower margin thickened.

GOULD. United States' Expedition.

Hab. America.

The deep specimen of *Pla. corporulentus*, figured in the first plate, resembles this species, but is not nearly so high nor so ventricose, and the upper part of the whorls are angular instead of being round.

Species 109. (Mus. Brit.)

PLANORBIS ELEVATUS. *Pla. testâ parvâ, albâ, dextrali, levigatâ, altissimâ; spirâ planulatâ, anfractibus convergèntibus, ultimo subquadrato, superâ declivi, superâ infraque angulato; apertura infra angulum ultimâ anfractis depressâ, magna, superâ infraque angulatâ, medio concaâ; disco inferiori angulatin concaâ.*

THE ELEVATED PLANORBIS. Shell small, white, dextral, smooth, rather high; spire flat, whorls a little convex, last rather square, sloped above, angular above and below; aperture depressed below the angle of the last whorl, convex in the middle; lower disc angularly concave.

SAY. Journ. Bost. Soc. Nat. Hist. 3, Pl. III. f. 15.

Hab. Vermont.

The above name is probably given to the shell because the last whorl against the mouth is raised considerably above the aperture.

Species 110. (Mus. Brit.)

PLANORBIS LENTICULARIS. *Pla. testâ parvâ, subcompressâ, fuscâ, lrvâ, dextrali; spicâ planiusculâ, anfractibus tribus, convexiusculis, ultimo superius angulato, carinato, infra angustatâ; disco inferiori profundè umbilicato; apertura subtriangulâ, ad angulum externum subacuminatâ.*

THE LENTICULAR PLANORBIS. Shell small, rather flat, brown, smooth, dextral; spire rather flattened, whorls three, rather convex, last angular above, keeled, narrow below; lower disc deeply umbilicated; aperture subtriangular, acuminated at the outer angle.

HARTMAN —? Adams, Genera of Mollusca.

Planorbis opercularis. Gould.

Hab. Sacramento River.

Species 111. (Fig. a, b, Mus. Brit.)

PLANORBIS GUADALOUPENSIS. *Pla. testâ sinistrali, compressâ, latâ, fulvâ, politâ; spicâ convexâ, anfractibus senis, convexiusculis; ultimo anfractu magno, supra suturam elevato, tum declivi, infra liliusculâ; disco inferiori convexo; apertura subtriangulâ, margine inferiori ad anfractum ultimum producto.*

THE GUADALOUPE PLANORBIS. Shell sinistral, compressed, broad, fulvous, polished; spire concave, whorls six, convex; last whorl large, raised above the suture, then sloped, rather broad below; lower disc convex; aperture rather triangular, lower margin produced on the body whorl.

SOWERBY. Genera of Recent and Fossil Shells.

Hab. Guadaloupe.

Species 112. (Mus. Brit.)

PLANORBIS DILATATUS. *Pla. testâ albâ, dextrali, superius angulati, infra angulum angustatâ, disco inferiori profundè excavato, apertura maximâ, triangulâ, superius complanatâ, infra acuminatâ.*

THE DILATED PLANORBIS. Shell white, dextral, angular above, narrow below the angle, lower disc deeply excavated, aperture very large, trigonal, flattened above; acuminated below.

PFEIFFER. Moll. de l'Allemagne, Vol. II. p. 165.

Hab. Massachusetts.

The last whorl suddenly expands towards the mouth, which is the largest of the whole genus in proportion to the body whorl.

Species 113. (Mus. Brit.)

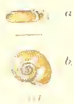
PLANORBIS SWINHOEI. *Pla. testâ subdepressâ, semipellucidâ, fuscâ, subconvexo-truncatâ, superius planulâ, medio subangulatim productâ, infra planulâ; disco inferiori angustè umbilicato; apertura subtriangulâ, margine externo producto, margine superiori flexuosim depressâ.*

SWINHOE'S PLANORBIS. Shell subdepressed, semipellucid, brown, rather angularly truncated, flattened above, somewhat angularly produced in the middle, flattened below, lower disc narrowly umbilicated; aperture rather trigonal, outer margin produced; upper margin flexuously depressed.

H. ADAMS. Proc. Zool. Soc.

Hab. Isl. Formosa.





PLANORBIS.

PLATE XIV.

Species 114. (Fig. a, b, Mus. Brit.)

PLANORBIS DEFORMIS. *Pla. testâ porriâ, cinereo-ferruginea, complanata, dextrali; spirâ planulatâ; anfractibus quateris, tumidis, subrotundis; ultimo versus aperturam irregulariter tumido, ad marginem expanso; apertura arcuatâ-coarctâ, anfractum ultimum supra inférieure superante; disco inferiori ad marginem planulato, medio convexo.*

THE DEFORMED PLANORBIS. Shell small, rusty-grey, flattened, dextral; spire flattened, whorls four, tumid, rather rounded, last irregularly swelled, expanded at the margin; aperture curved-conical, extending above and below the last whorl; lower disc flattened at the margin, concave in the middle.

LAMARCK. Anim. sans Vert.

Hab. —?

The last whorl becomes tumid a little way before the expansion of the aperture.

Species 115. (Fig. a, b, Mus. Brit.)

PLANORBIS ALEXANDRINUS. *Pla. testâ dextrali, subcompressâ, fulvâ, anfractibus quateris, ultimo latiusculo, medio tumido, infra subangustato; apertura subtrigona, dentibus quinque laminatis longè internis armatâ; margine intus incrassato; disco inferiori latè umbilicato.*

THE ALEXANDRINE PLANORBIS. Shell dextral, rather compressed, fulvous, whorls four, last rather wide, middle tumid, rather narrow below; aperture subtrigonal, armed far back internally with five teeth; margin thickened within; lower disc broadly umbilicated.

EHRENBERG. Roth. Moll. Sp. Pl. II. f. 8.

Genus, *Planorbula*, Haldeman.

Hab. Egypt.

This species belongs to the section which has been separated under the generic name of *Planorbula*. Far back in the throat may be seen laminated plates jutting out so as to contract the opening.

Species 116. (Mus. Brit.)

PLANORBIS DENTATUS. *Pla. testâ dextrali, compressâ, fulvâ, spirâ planiusculâ; anfractibus convexis, supernè latâ, infra medium angustatis, disco superiorî lato, disco inferiorî angustato, profunde et angustè excavato; apertura magna, infra anfractum ultimum productâ, longè intus laminatâ tridentatâ, margine intus incrassato.*

THE TOOTHED PLANORBIS. Shell dextral, compressed, fulvous, spire rather flat; whorls convex, broad above, narrow below the middle, upper disc broad, lower disc narrow, deeply and narrowly excavated; aperture large, produced below the last whorl, with three laminar teeth far within, margin thickened within.

DUNKEE. (*Planorbula*) —? Adams' Gen. of Moll.

Hab. —?

Species 117. (Fig. a, b, Mus. Brit.)

PLANORBIS ALBICANS. *Pla. testâ albidi, solidiusculâ, dextrali, spirâ planulatâ; anfractibus convexiusculis, quateris, moderatè crescentibus, ultimo ad aperturam valdè deflexo, disco inferiorî angulatâ excavato; apertura usque ad marginem inferiorem ultimi anfractûs depressâ.*

THE WHITISH PLANORBIS. Shell whitish, rather solid, dextral, spire rather flattened; whorls four, rather convex, moderately increased, last much bent down at the aperture, lower disc angularly convex; aperture bent down to the lower margin of the last whorl.

PFEIFFER.

Hab. Lima.

Species 118. (Fig. a, b, Mus. Brit.)

PLANORBIS COMPRESSUS. *Pla. testâ compressâ, latiusculâ, pallidâ, levigatâ, dextrali, supernè angustatâ, infra latâ, subcoriâ, spirâ depressâ; apertura obliquè pyramidalâ, supernè angustatâ, margine inferiorî productâ.*

THE COMPRESSED PLANORBIS. Shell compressed, rather broad, pale, smooth, dextral, narrowed above, broad below, somewhat keeled, spire depressed; aperture obliquely pyramidal, angular above, lower margin produced.

HUTTON. Journ. Asi. Soc. Beng. Vol. III. p. 91.

Planorbis Tumbanensis. MOUSSON.

Hab. River Gauges.

Species 119. (Mus. Brit.)

PLANORBIS DENTIFERUS. *Pla. testâ angustâ, tumidâ, albidâ, spirâ planiusculâ; anfractibus quaternis, altis, superâ ventricosâ, inferâ subangustatis, disco inferiori subangustè excavato; aperturâ magnâ, auriformi, superâ infraque ultimam anfractum productâ, longè intus quinqueferarum laminarum dentatâ.*

THE TOOTH-BEARING PLANORBIS. Shell narrow, tumid, whitish, spire rather flat; whorls four, high, ventricose above, slightly narrowed below, lower disc rather narrowly excavated; aperture large, ear-shaped, produced above and below the last whorl, with five laminar teeth far within.

ADAMS, C. B. Contributions to Conchology.

Hab. Jamaica.

Species 120. (Fig. a, b, Mus. Hanley.)

PLANORBIS HYPTIOCYCLOS. *Pla. testâ tumidâ, albidâ, dextrali, spirâ depressâ; anfractibus tribus, latiusculis, supra suturam tumidè elevatis; aperturâ supra suturam elevatâ, tum delectâ, margine inferiori obliquâ, disco inferiori excavatâ.*

THE REFLECTED PLANORBIS. Shell tumid, whitish, dextral, spire depressed; whorls three, rather broad, raised in a swelling above the suture; aperture raised above the suture, then sloped, lower margin oblique, lower disc excavated.

BENSON. Ann. Nat. Hist. 1863, Ser. III. Vol. II. p. 89.

Hab. Ceylon.

Species 121. (Fig. a, b, Mus. Hanley.)

PLANORBIS ROTULA. *Pla. testâ parvâ, pallidè fulcâ, tumidiusculâ, levigatâ, dextrali, spirâ depressâ;*

anfractibus quinis, convexis, supra suturam paulè elevatis, disco inferiori latè concavo, anfractibus rotundis; aperturâ obliquè ovatâ.

THE LITTLE WHEEL PLANORBIS. Shell small, pale fulvous, rather tumid, smooth, dextral, spire depressed; whorls five, convex, a little raised above the suture, lower disc broadly concave, whorls round; aperture obliquely ovate.

BENSON. Ann. Nat. Hist. 1863, Series II. Vol. V. p. 351.

Hab. Moradabad.

Species 122. (Fig. a, b, Mus. Brit.)

PLANORBIS CORINNA. *Pla. testâ parvâ, albidâ, levigatâ, dextrali; anfractibus quaternis, rotundis, distinctis; disco superiori subdepresso, disco inferiori concavo; aperturâ transversè subovata.*

THE CORINNA PLANORBIS. Shell small, whitish, smooth, dextral; whorls four, rounded, distinct; upper disc rather depressed, lower disc concave; aperture transversely subovate.

GRAY. Proc. Zool. Soc. 1850.

Hab. New Zealand.

Species 123. (Fig. a, b, Mus. Brit.)

PLANORBIS INTERTEXTUS. *Pla. testâ angustâ, altâ, sinistrâli, tenuissimè striatâ, castaneâ, distanter concentricè albo-fasciatâ et nigro-lineatâ, spirâ medio angustè infundibulatâ; anfractu ultimo supra suturam angulatim elevato, disco inferiori lato, angulato, excavato; aperturâ altâ, subtriangulâ, intus griseâ.*

THE TEXTILE PLANORBIS. Shell narrow, high, sinistral, very finely striated, chestnut, distantly concentrically white-banded and black-lined, spire narrowly funnelled in the middle; last whorl raised above the suture in an angle, lower disc broad, angular, hollow; aperture high, subtriangular, grey within.

SHUTTLEWORTH. —? MS. Brit. Mus.

Hab. Florida.

Resembling *Planorbis biangulatus*, excepting in the white bands bordered by dark lines appearing on the surface of the outer whorl.

PLANORBIS.

	Plate.	Species.		Plate.	Species.
<i>Aeies, Pösch</i>	XII.	102	<i>costulatus, Koenig</i>	IV.	26
<i>affinis, Adams</i>	IV.	28	<i>cultratus, D'Orbigny</i>	XIII.	106
<i>albicans, Pfeiffer</i>	XIV.	117	<i>declivis, Sowerby</i>	IV.	29
<i>albus, Muller</i>	III.	17	<i>deflexus, Say</i>	XI.	88
<i>Albatani, C. B. Ad.</i> Not identified.			<i>deformis, Lamarek</i>	XIV.	114
<i>Alexandrinus, Ehrenberg</i>	XIV.	115	<i>dentatus, Dunker</i>	XIV.	116
<i>ammonius, Beck.</i> Not identified.			<i>dentiferus, Adams</i>	XIV.	119
<i>Ammon, Goidl</i>	XIII.	108	<i>depressissimus, Mollat</i>	VIII.	66
<i>anatius, D'Orbigny</i>	XII.	99	<i>dilatatus, Pfeiffer</i>	XIII.	112
<i>Andecolus, D'Orbigny</i>	VI.	50	<i>dubius, Hartman.</i> Unidentified.		
<i>anisus, Beck.</i> Not identified.			<i>eburneus, Goy</i>	V.	38
<i>Antiquensis, Goding (?)</i>	XI.	92	<i>elegantulus, Bohra</i>	IX.	69
<i>atropensis, Conrad.</i> Not identified.			<i>elevatus, Say</i>	XIII.	109
<i>Arakanensis, Goidl</i>	XII.	100	<i>eugonotus, Conrad.</i> Not identified.		
<i>Areticus, Beck</i>	VIII.	64	<i>exantus, Say</i>	XI.	94
<i>armigerus, Say</i>	III.	18	<i>exustus, Deshayes</i>	IV.	31
<i>auritus, Sowerby (Rehfeldt, by error)</i>	III.	20	<i>ferugineus, Spie</i>	IX.	73
<i>Babion's, Dunker.</i> Not identified.			<i>Folkii, Dunker.</i> Not identified.		
<i>Beckinus, Dunker</i>	VII.	55	<i>fusus, Dunker</i>	IX.	74
<i>Bengalensis, Dunker</i>	IV.	27	<i>Gilberti, Dunker</i>	V.	37
<i>biangulatus, Sowerby</i>	IV.	25	<i>glaber, Jaffres (?)</i>	II.	19
<i>bicarinatus, Say</i>	I.	7	<i>glabratus, Say</i>	XI.	91
<i>brunneus, Gray</i>	V.	40	<i>gracilentus, Goidl</i>	VIII.	65
<i>calathus, Benson</i>	IV.	30	<i>Guadaloupenensis, Sowerby</i>	XIII.	111
<i>campanulatus, Say</i>	II.	11	<i>heliophilus, D'Orbigny</i>	XII.	98
<i>Cantori, Benson</i>	X.	79	<i>helicus, D'Orbigny</i>	XII.	96
<i>carinatus, Muller</i>	II.	12	<i>hemisphaerata, Benson.</i> Not identified.		
<i>cutillus, Adams (?)</i>	VI.	45	<i>Hindsinus, Dunker</i>	VI.	44
<i>Chilensis, Adams</i>	VII.	57	<i>hanslii, C. B. Adams.</i> Not identified.		
<i>Chineasis, Dunker.</i> Not identified.			<i>hypticus, Benson</i>	XIV.	120
<i>circumlineatus, Shuttleworth</i>	VI.	48	<i>Indicus, Benson</i>	XI.	94
<i>coarctatus, Sowerby</i>	III.	21	<i>inflatus, Dunker</i>	VI.	47
<i>caenosus, Benson</i>	X.	78	<i>intermedius, Charp.</i> Not identified.		
<i>commutatus, Dunker</i>	VIII.	63	<i>intertextus, Shuttleworth</i>	XIV.	123
<i>complanatus, Lindner</i>	I.	5	<i>Isabel, Morelet</i>	XII.	101
<i>compressus, Hutton</i>	XIV.	118	<i>kermatoides, D'Orbigny</i>	VII.	52
<i>conevus, Anthony</i>	XI.	86	<i>lanstris, Lightfoot</i>	II.	16
<i>contortus, Muller</i>	II.	9	<i>Lanieranus, D'Orbigny</i>	VII.	58
<i>convexiusculus, Hutton</i>	XI.	93	<i>Largillierii</i> —?	XII.	103
<i>coratus, Adanson.</i> Not identified.			<i>lenticularis, Hartman (?)</i>	XIII.	110
<i>coriuna, Gray</i>	XIV.	122	<i>lentus, Say</i>	X.	83
<i>corneus, Linnaeus</i>	I.	1	<i>leucostoma=spirorbis</i>	II.	14
<i>Coromandelicus, Koster</i>	IV.	34	<i>limosa, Dunker.</i> Unidentified.		
<i>corpulentus, Say</i>	IX.	4	<i>lucidus, Philippi (?)</i>	VII.	53

PLANORBIS.

	Plate.	Species.		Plate.	Spec.
lugubris, <i>Wagner</i>	III.	24	Ponsonbyi, <i>Smith</i>	X.	80
Macnabianus, <i>Adams</i>	V.	41	Redfieldi, <i>C. B. Adams</i> (<i>succineus</i> , Sowb. by error)	III.	19
magnificus, <i>Conrad</i> . Not identified.			<i>regularis</i> , <i>Lea</i> . Unidentified.		
marmoratus, <i>Michand</i> . Unidentified.			Rossmäsleri, <i>Schmidt</i>	VII.	59
Merguensis, <i>Philippi</i>	XI.	85	rotula, <i>Benson</i>	XIV.	121
modicus, <i>Benson</i>	IX.	76	<i>Rupelli</i> , <i>Dunker</i> . Unidentified.		
montanus, <i>D'Orbigny</i>	XIII.	107	Sallcaus, <i>Dunker</i>	VI.	46
Moricandi, <i>Beck</i>	IX.	71	septemgyratus, <i>Zeigler</i>	VII.	54
multivalvis, <i>Cuse</i>	IX.	72	sericus, <i>Dunker</i>	VIII.	68
nanus, <i>Benson</i>	IX.	75	Sibiricus, <i>Dunker</i>	V.	35
Natalis, <i>Krauss</i>	IV.	32	sindicus, <i>Benson</i> . Omitted.		
nautilus, <i>Linnaeus</i>	II.	8	Spenceri, <i>Allen</i>	VIII.	60
Newberryi, <i>Lea</i>	X.	81	spirorbis, <i>Müller</i>	II.	14
nitidulus, <i>Dunker</i>	VIII.	61	stagnicola, <i>Morelet</i>	V.	43
nitidus, <i>Müller</i>	II.	15	Stelzneri, <i>Dohrn</i>	V.	36
obesus, <i>Dunker</i>	X.	82	stramineus, <i>Dunker</i>	XI.	90
obtusus, <i>Deshayes</i>	V.	39	subangulatus, <i>Philippi</i>	VIII.	67
olivaceus, <i>Spix</i>	I.	6	snbercnatus, <i>Carpenter</i> . Omitted.		
opercularis, <i>Gould</i>	XIII.	110	<i>succineus</i> , <i>Sowb.</i> , see <i>Redfieldi</i>	III.	19
orbiculatus, <i>Morelet</i>	III.	22	Swinhoci, <i>H. Adams</i>	XIII.	113
orientalis, <i>Lamarck</i>	XI.	89	teniatus, <i>Morelet</i>	V.	42
pallidus, <i>C. B. Adams</i>	VII.	56	tomagophilus, <i>D'Orbigny</i>	VI.	51
Panamensis, <i>D'Orbigny</i>	XII.	95	tersversanus, <i>D'Orbigny</i>	VI.	49
parallelus, <i>Say</i> . Unidentified.			<i>Tondawnsis</i> , <i>Mousson</i>	XIV.	118
paropscides, <i>D'Orbigny</i>	XII.	97	trivolvus, <i>Say</i>	I.	2
parvus, <i>Say</i>	XI.	87	trochoides, <i>Benson</i>	IX.	70
peregrinus, <i>D'Orbigny</i>	X.	84	umbilicatus, <i>Benson</i>	X.	77
perforatus, <i>Gould</i> (?)	XIII.	105	ungulatus, <i>Chitty</i>	VIII.	62
Peruvianus, <i>Broderip</i>	I.	3	vermicularis, <i>Sowerby</i>	XII.	104
Pfeifferi, <i>Krauss</i>	IV.	33	vortex, <i>Linnaeus</i>	II.	13
Philippinarum, <i>Dunker</i>	III.	23			

MONOGRAPH
OF THE GENUS
PLANAXIS.

By Thy kind power and influencing care
The various creatures live, and move, and are —*Milton*





2



1



3



4a



5



6



4b



7a



7b



4c

PLANAXIS.

PLATE I.

Genus PLANAXIS. *Lesauvick*

Testa ovato-conica, solida, plerumque spiraliciter sulcata; spira plerumque brevis, conica; apertura subtriangularis, labris dentato-lineata, autem leviter canalifera, emarginata; columella subarenata, planata, ad terminum truncata; operculum ovato-oblongum, mucronato, nucleo fere terminali.

Shell ovately conical, solid, generally spirally grooved; spire for the most part short, conical; aperture rather trigonal, tooth-ridged within, with a slight canal and notch in front; columella slightly arched, flattened, truncated at the end; operculum ovate-oblong, with one-whorled spire, nucleus nearly terminal.

Few genera so restricted in numbers are so widely spread in their habitats. We have identified 39 species, of which the greater number are tenants of Australian, South Sea Island, and Philippine groups. The Red Sea and Persian Gulf, the Mauritius and West Indies contribute their portion; the Chinese and Indian Seas have several, but there are no European species. The animals are marine, but partly amphibious, and spend a large portion of their existence above water. The slight canal and notch at the front of the aperture, and the flattened columella terminating in a notch, render this genus characteristic and easily distinguishable.

Species 1. (Mus. Hanley.)

PLANAXIS ENCAUSIENSIS. *Pla. testâ crassâ, brevî, albâ, verrucâ, fasciâ oblongâ et fasciatâ, levigatâ; anfractibus sex ad septem, ultimo ventricosâ, infra medium rotundâ, ad suturam angustè angulata, nigro-punctatâ, spiraliciter, tenuiter, distanter, infra angulum valvè sulcatâ; apertura castaneâ, columellâ brevî, latè truncatâ, præq̃ suturam valvè callusâ; labris dentatis distanter et valvè dentato-lineatis.*

THE ENAMELLED PLANAXIS. Shell thick, short, whitish, clouded, and banded with blue and brown, smooth; whorls six to seven, the last ventricose, roundly angular below the middle, and narrowly at the suture; black-spotted, spirally, finely, distantly grooved, strongly below the angle; aperture chestnut, columella short, broadly truncated, with a strong callus near the suture,

outer lip distantly and strongly tooth-ridged within.

SMITH. Proc. Zool. Soc. 1872, p. 38.

Hab. Aracan.

In the specimens from which the description was taken (no others being known) the upper whorls are much corroded, and the body whorl being smooth, with spiral grooves almost obsolete above, gives the remaining surface a sort of enamelled appearance.

Species 2. (Mus. Brit.)

PLANAXIS CASTANEUS. *Pla. testâ subpyriformi, levigatâ, castaneâ, spiraliciter tenuiter striatâ, longitudinè lève obliquè subtriatâ; spirâ elevatâ, acuminatâ, anfractibus sex, emarginatis; ultimo bulliformi, apertura parvâ, labris dentato-lineatis, nigro-punctatis, columellâ subarenatâ, infra subexpansâ.*

THE CHESTNUT PLANAXIS. Shell somewhat pyriform, smooth, chestnut, spirally finely striated, longitudinally obliquely slightly ridged; spire raised, acuminated, whorls six, rather convex; end bulb-shaped, aperture small, outer lip seven-toothed within, margin thin, columella slightly arched, rather expanded below.

SMITH. Proc. Zool. Soc. 1872, p. 41.

Hab. —?

Species 3. (Mus. Brit.)

PLANAXIS CRASSISPIRA. *Pla. testâ oblongâ, subdistansè, spiraliciter sulcatâ, griseâ, nigro-punctatâ; spirâ elevatâ, crassâ, subcylindricâ, obtusâ; anfractu ultimo obtusè angulato, apertura parvâ, subtriangulâ, columellâ albâ, infra latè productâ, labris dentatis.*

THE THICK-SPIRED PLANAXIS. Shell oblong, rather distantly spirally grooved, grey, spotted with black; spire elevated, thick, subcylindrical, obtuse; last whorl obtusely angular; aperture small, subtriangular, columella white, broadly produced below; outer lip strongly toothed within.

SMITH. Proc. Zool. Soc. 1872, p. 39.

Hab. —?

Differing from *Planaxis sulcatus* in the narrow, straight-sided form.

Species 4. (Fig. a, b, c, Mus. Hanley.)

PLANAXIS SULCATUS. *Pla. testâ trochiformi, crassâ, profunde sulcatâ, fusco-rubescenti, nigro alboque maculatâ, costis prominentibus; spirâ conicâ, anfractibus quinis, ultimo magno, infra medium obscure angulato; aperturâ subtrigoniâ, columellâ cœliâsculâ, latâ, ad suturam valde callosâ et canaliculatâ; labro intus validè lirate-denticulato, margine crenulato.*

THE GROOVED PLANAXIS. Shell trochus-shaped, thick, deeply-grooved, spotted with reddish-brown, black and white, ribs prominent; spire conical; whorls five, last large, obscurely angular below the middle; aperture subtrigonal, columella rather straight, broad, with a strong callosity and a canal at the suture; outer lip strongly tooth-ridged within, margin crenulated.

BOEN. (Buccinum) Mus. Vindob. p. 258, Pl. X. f. 5, 6.

Planaxis buccinoides. Deshayes.

Planaxis maculata. Lamarck.

Buccinum pyramidale. Lamarck.

Hab. Australia, Philippines, Mauritius, South Africa.

Species 5. (Mus. Brit.)

PLANAXIS OBSCURUS. *Pla. testâ angustâ pyramulatâ, profunde et crebri sulcatâ, griseâ, maculatâ; spirâ elevatâ, anfractibus quinis, aperturâ breviusculâ, canali postico lato, columellâ arcuatâ, ad terminum acutè truncatâ; labro intus validè dentato, margine tenui, subflexuoso.*

THE OBSCURE PLANAXIS. Shell narrowly pyramidal, deeply and closely grooved, grey, spotted; spire elevated, whorls five; aperture rather short, sharply truncated; outer lip strongly toothed within, margin thin, rather flexuous.

A. ADAMS. Proc. Zool. Soc. 1851, p. 271.

Hab. —?

The whorls are more straight-sided than in *Planaxis planicostata*, and the grooves narrower.

Species 6. (Mus. Brit.)

PLANAXIS BREVICULUS. *Pla. testâ breviter trochiformi, latâ, crassâ, spirâlicè (infusè magis profunde)*

sulcatâ, griseo-brunneâ, nigro maculatâ, spirâ brevi, anfractibus quinis, ultimo maximo, infra medium obscure angulato; aperturâ subtrigoniâ, fuscâ, ad marginem nigro maculatâ, columellâ brevi, superne validè callosâ, infra latâ, latè truncatâ, labro fusco, liris dentiformibus magnis.

THE SHORT LITTLE PLANAXIS. Shell shortly trochus-shaped, broad, thick, spirally-grooved (more deeply below), grey-brown, spotted with black; spire short, whorls five, last very large, obscurely angular; aperture subtrigonal, brown, black-spotted at the margin, columella short, with a strong callus above, broad below, broadly truncated, outer lip brown, with large tooth-shaped ridges.

DESHAYES. Mag. de Zool. 1844, Pl. CVIII.

Hab. Guam and New Guinea.

Broader and more finely grooved than *Planaxis sulcata*.

Species 7. (Mus. Hanley.)

PLANAXIS NUCLEUS. *Pla. testâ ovato-acuminatâ, nigro-fuscâ, prope suturam, infra medium et post marginem aperturâ profundè sulcatâ, medio lævigatâ; spirâ breviusculâ, acuminatâ; anfractibus brevibus, unguisculis; aperturâ pyriformi, longiusculâ, valdèssimè bicamulatâ, columellâ latissimâ, planulatâ, medio longitudinaliter sulcatâ, termino subcylindrico; labio externo expanso, validè crenulato.*

THE LITTLE SUT PLANAXIS. Shell ovate-acuminate, black-brown, deeply grooved near the suture, below the middle and behind the margin of the aperture, smooth in the middle; spire rather short, acuminate, whorls short, a little convex; aperture pyriform, rather long, strongly bicamculated, columella very broad, flattened, with a longitudinal groove in the middle, with rather round end; outer lip expanded, strongly crenulated.

LAMARCK. Anim. s. Vert. Vol. VII. p. 249.

Planaxis semisulcato. Sowerby.

Hab. West Indies, Jamaica.

The grooves, which are deep at the margins and lower part of the last whorl, are obsolete in the middle of the whorls.





9



8



10



13



12



11



14 a



15



14 b



16

PLANAXIS.

PLATE II.

Species 8. (Mus. Hanley.)

PLANAXIS NIGRITELLUS. *Pla. testâ brunneo-nigrescenti; spirâ obtusâ, conicâ; anfractibus quinis, convexo-âsculis, distanter sulcatis, ultimo magno, sulcis medio subconoidis; columellâ superâ callusâ, arcuatâ; labro subpatulo, intus tenuiter lirato.*

THE LITTLE BLACK PLANAXIS. Shell blackish brown; spire obtuse, conical; whorls five, rather convex, distantly sulcated; last large, with the sulci nearly obsolete in the middle; columella callous above, arched; outer lip rather patulous, finely ridged within.

FORBES. (*Nigritella*.) Proc. Zool. Soc. 1850. Pl. II. f. 6.

Planaxis acutus. Menke.

Planaxis obsoletus. Menke.

The above name is given to the species by Mr. Smith on account of the name *acutus* being previously applied to another species.

Hab. Mazatlan.

Species 9. (Mus. Brit.)

PLANAXIS ACUTUS. *Pla. testâ brunneâ, acutâ pyramidalâ; anfractibus septenis, convexis, mediolâ rigatis, suprâ infraque tenuiter sulcatis; apertura breviusculâ, latâ, subconoidi; columellâ latâ, labro intus tenuiter lirato.*

THE ACUTE PLANAXIS. Shell brown, sharply pyramidal; whorls seven, convex, smooth in the middle, finely sulcated above and below; aperture rather short, broad, slightly blue; columella broad; outer lip finely ridged within.

KRAUSS. Südafrikaischen Mollusken. Tab. VI., f. 2. *Hab.* Natal.

Species 10. (Mus. Brit.)

PLANAXIS ATROPURPUREUS. *Pla. testâ nigro-plumbeâ, oblongâ, obtusâ, lævigatâ, anfractibus tribus, parum convexis, ultimo infriâ sulcis tribus leviter sculpto; apertura subtrigoniâ, custaneâ, labro intus lævigato, superâ sublepresso.*

THE PURPLE-BLACK PLANAXIS. Shell black-lead, oblong, obtuse, smooth, whorls three, rather convex, last lightly sculptured below with three grooves; aperture subtrigonal, brown; outer lip smooth within, slightly depressed above.

RECLUZ. Revue Zoologique, 1843, p. 261.

Planaxis Albersii. Dunker.

Hab. South Seas.

Species 11. (Mus. Hanley.)

PLANAXIS SIMILIS. *Pla. testâ subpyramidalâ, hemisâ, omnino subdistanter sulcatâ, sulcis prope suturam et infra medianâ fortioribus; spirâ pyramidalâ, acuminatâ; anfractibus septenis, superioribus convexo-âsculis; apertura purpurascenti, labro crasso, intus dentato-lirato, callo labiali postico distincto, parvo; rimâ angustâ.*

THE SIMILAR PLANAXIS. Shell rather pyramidal, brown, in every part rather distantly grooved; grooves stronger near the suture and below the middle; spire pyramidal, acuminated; whorls seven, upper rather convex; aperture purplish, lip thick, tooth-ridged within, posterior labial callus distinct, small; notch narrow.

SMITH. Proc. Zool. Soc. 1872, p. 41.

Hab. Sandwich Islands.

More conical than *Planaxis Hanleyi*, with less expanded aperture, thicker outer lip and nearly equal grooves in every part.

Species 12. (Mus. Hanley.)

PLANAXIS HANLEYI. *Pla. testâ subovâtâ, hemisâ; spirâ convexo-conicâ; anfractibus senis, nucleatâ convexis, apicalibus pollitâ, cæteris suprâ infraque spirâlliter sulcatis; ultimo magno, infriâ fortissimè sulcato; apertura magni, patulâ; labro tenuissimè, intus tenuissime lirato, rimâ suturali subrotundâ.*

HANLEY'S PLANAXIS. Shell subovate, brown; spire convexly conical; whorls six, moderately convex;

apical polished, others spirally grooved above and below; last large, very strongly grooved below; aperture large, patulous; outer lip very thin, very finely ridged within, sutural notch rather rounded.

SMITH. Proc. Zool. Soc. 1872.

Hab. Sandwich Islands.

Mr. Smith mentions as a variety a specimen in which the posterior callus and inflected edge of the outer lip almost meet, so as to form a rounded hole like that in *Lupina*. I regard this as only a slight malformation. Yet the slit in this species is generally rounder than in *Planaxis similis*.

Species 13. (Mus. Hanley.)

PLANAXIS NIGER. *Pla. testis nigri, ovato-pyramidalis, spirali acuminata, anfractibus senis, apicalibus altis, politis, ultimis magno, epidermide tenui, subviridi, infra anguste sulcata; aperturâ subtrigona, canali antice rotundo, canali postice lato; labro expanso, pulato, intus incrassato, tenuissimi crenulato.*

THE BLACK PLANAXIS. Shell black, ovately pyramidal, spire acuminated, whorls six, apical, white, polished, last large, covered with a greenish epidermis, narrowly grooved below; aperture rather trigonal, anterior canal rounded, posterior canal broad; outer lip expanded, patulous, thickened and very finely crenulated within.

QUOY. (*Nigra*.) Voyage de l'Astrolabe, p. 49.

Hab. New Ireland.

Species 14. (Mus. Hanley.)

PLANAXIS LABIOSUS. *Pla. testis oblique subpyramidalis, grisei, fasciis nigrescentibus, medio angustatis cincti, epidermide dense ciliata imbrata, anfractibus quinque, apicali acuto, ultimo maximo; aperturâ magis intus, prope marginem crassi, brevitate.*

THE LIPPED PLANAXIS. Shell obliquely subpyramidal, grey, and girt with blackish bands, narrow in the middle, covered with a thickly ciliated epidermis,

whorls five, apical sharp, last very large; aperture large, thick within, near the margin, smooth.

ADAMS (A.) Proc. Zool. Soc. 1851, p. 272.

Planaxis plumbei. Pease.

Planaxis Browni. Dunker.

Planaxis pediculus. Kusten.

Hab. Sandwich Islands.

Species 15. (Mus. Hanley.)

PLANAXIS CINGULATUS. *Pla. testis acute pyramidalis, spiritaliter crebre sulcata; anfractibus septenis, superiorâ fascio late fasciatis, medio anguste lineatis; aperturâ breviusculâ, purpurascenti, labio exteriori lino dentato, margine lineo-punctato; columelli subumbilicati.*

THE BELTED PLANAXIS. Shell sharply pyramidal, spirally closely grooved; whorls seven, broadly banded above with brown, narrowly lined in the middle; aperture rather short, purplish, outer lip tooth-ridged within, margin line-spotted; columella subumbilicated.

ADAMS (Arthur). Proc. Zool. Soc. 1851, p. 271.

Hab. China Seas.

Species 16. (Mus. Hanley.)

PLANAXIS STRIATULUS. *Pla. testis ovato-pyramidalis; fulvâ, laevigatâ, rubra spiritaliter lineatâ; spirâ acuminatâ, conicâ; anfractibus senis; aperturâ breviusculâ, columelli luteoque purpuris, labro intus incrassato, sic limbo.*

THE STRIATED PLANAXIS. Shell pyramidal; fulvous, smooth, spirally lined with red; spire acuminated, conical; whorls six; aperture rather short, columella and outer lip purple, outer lip thickened within, scarcely ridged.

PHILIPPI. Zeitschrift für Malak. 1851, p. 91.

Hab. — ?

The species is subject to some variation, one variety being nearly white and another (in the British Museum) with only a broad cerulean band in the middle of the whorls.





18



17



19



20



21



22



23a



24



23b



25

PLANAXIS.

PLATE III.

Species 17. (Mus. Hanley.)

PLANAXIS SUTURALIS. *Pla. testâ parvâ, albâ, crassiusculâ, turritâ, pyramidalâ, apice acuminatâ; anguloibus septem, suturâ cretatâ separatis, spirâliter profundè subatis, superâ angulatis, inter sulcos planatis, columellâ superâ breviter callosâ, canali postico brevi, apertura brevi; labro crasso, dentibus laterâlis lîriformibus decem.*

THE SUTURAL PLANAXIS. Shell small, white, rather thick, turreted, pyramidal; apex acuminate; whorls seven, separated by a deep suture, spirally deeply grooved, angular above, flat between the grooves; columella shortly callous above, posterior canal short; aperture short; outer lip thick, inner ridge-shaped teeth ten.

SMITH. Proc. Zool. Soc. 1872.

Hab. Chinese Seas.

Species 18. (Mus. Brit.)

PLANAXIS ATER. *Pla. parvâ, oblongo-pyramidalâ, nigri, obscurissimè fasciatâ; spirâ elongatâ, conicâ, anfractibus sex, lateraliter subcomplanatis, ultimâ angulatis; apertura parvâ, breviter subtrigoni, intus septem-lîatis; canali postico nullo.*

THE DARK PLANAXIS. Shell small, oblong-pyramidal, black, very obscurely banded; spire elongated, conical, whorls six, laterally rather flat, last rather large; aperture small, shortly subtrigonal, with seven internal ridges; no posterior canal.

PEASE. (*Proc.*) American Journ. of Conchology.

Hab. Marquesas Islands.

In the obscurity of the dark colouring, light interstices of dark lines can be traced; and the species somewhat resembles the more obscure varieties of *Planaxis lineata*.

Species 19. (Mus. Hanley.)

PLANAXIS ABBREVIATUS. *Pla. testâ nigri, levigatâ, subovatâ, brevi; spirâ brevissimâ, anfractibus quaternis, ultimâ mucronâ, infus quinque-sulcatâ, apertura parvâ angulatis, angulâ, intus teniter lîatis, canali postico latiusculâ.*

THE ABBREVIATED PLANAXIS. Shell black, smooth, subovate, short; spire very short, whorls four, last large, five-grooved below; aperture blackish-

purple, large, finely ridged within, posterior canal rather wide.

PEASE. (*Abbreziata.*) Proc. Zool. Soc. 1865, p. 515.

Hab. Sandwich Islands.

Considerably shorter in the spire than *Planaxis nigra* of Guoy, which it otherwise much resembles.

Species 20. (Mus. Hanley.)

PLANAXIS LINEATUS. *Pla. testâ parvâ, oblongo-pyramidalâ, fulvâ vel grisâ, curvâ spirâliter rubro vel nigro spirâliter lineatâ et fasciatâ, spirâ elongatâ, acuminatâ, anfractibus sex ad septem, quatuor primis sulcato-lîatis; apertura brevi, subtrigoni, intus distanter dentato-lîatis, canali postico nullo.*

THE LINEATED PLANAXIS. Shell small, oblong-pyramidal, fulvous or grey, variously spirally lined and banded; spire elongated, acuminate, whorls six or seven, first four groove-ridged; aperture short, subtrigonal, distantly tooth-ridged within, no posterior canal.

COSTA. (*Buccinum.*) Brit. Conch. p. 130.

Buccinum pediculari. Lamarck.

Hab. West Indies.

This well-known West Indian shell was first described by Da Costa as British. A foreign specimen must have come into his hands by mistake.

Species 21. (Mus. Hanley.)

PLANAXIS SUCCINCTUS. *Pla. testâ parvâ, ovato-pyramidalâ, fulvâ subtiliter teniter rubro-lineatâ; spirâ subelevatâ, acuminatâ; anfractibus sex, concavissimâ, superioribus lîatis-sulcatâ; apertura brevissimâ, latâ, intus lîatis, canali postico nullo.*

THE LINE-GIRT PLANAXIS. Shell small, ovately pyramidal, fulvous, rather distantly, finely red-lined; spire slightly elevated, acuminate; whorls six, rather convex, upper groove-ridged; aperture rather short, broad, ridged within; no posterior canal.

A. ADAMS. Proc. Zool. Soc. 1851, p. 272.

Hab. West Indies.

The lines are thinner and more distant, the whorls are more rounded and the spire is shorter in pro-

PLANAXIS.—PLATE III.

portion to the aperture than in *Planaxis lineatus*. Yet the variations in individuals is such that the two species are determined with difficulty.

Species 22. (Mus. —? Copied)

PLANAXIS HERMANNSENI. *Testâ parvâ, solidâ, ovato-oblongâ, atro-fuscâ, lineis fulvis cinctâ; spirâ acuminatâ, anfractibus senis, convexis, apicalibus sulcatis, ultimo infra sulcato, ventricoso; caudâ post columellam umbilicatâ; aperturâ ovatâ, patulâ, albâ, lineatâ, intus incrassatâ, liratâ.*

HERMANNSEN'S PLANAXIS. Shell small, solid, ovately oblong, black-brown, girt with fulvous lines; spire acuminated; whorls six, convex, apical, grooved, last grooved below, ventricose, cauda umbilicated behind the columella; aperture ovate, patulous; white, lineated, thickened within, ridged.

DUNKER. Ind. Moll. p. 16. Pl. II. f. 33.

Hab. Benguela.

Species 23. (Mus. Brit.—Hanley.)

PLANAXIS VARIABILIS. *Plt. testâ parvâ, elongatâ, albâ, lineis spiralibus rubescentibus ornatâ, spirâ conicâ, rectilaterâ, acuminatâ; anfractibus superioribus sulcatis, ultimo supra infraque validi, medio leviter sulcato; aperturâ parvâ, brevî; columellâ infra brunneo tinctâ, collo canalique posticis nullis.*

THE VARIABLE PLANAXIS. Shell small, elongated, white, ornamented with spiral reddish lines, spire conical, straight-sided, acuminated; upper whorls grooved, last grooved strongly above and below, slightly in the middle; aperture small, short; columella tinged with brown below; no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 44.

Hab. Fiji Islands. Var. China Seas.

Figure *b* represents the variety in the Collection of Sylvaanus Hanley, Esq.

Species 24. (Mus. Brit.)

PLANAXIS VIRGATUS. *Pla. testâ elongatâ, fuscâ, lineis spiralibus paucis, et strigis longitudinalibus irregularibus ornatâ; spirâ acuminatâ productâ; anfractibus octonis, convexis, superioribus sulcatis, ultimo infra sulcato; aperturâ subovatâ, parvâ; labro acutè marginato; intus incrassato, denticulato; collo canalique posticis nullis.*

THE STRIPED PLANAXIS. Shell elongated, fulvous, ornamented with few spiral lines and longitudinal irregular stripes, spire acuminately produced; whorls eight, rather convex, upper grooved, last grooved below; aperture subovate, small; outer lip sharp-edged; thickened within, denticulated; no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 44.

Hab. Fiji Islands.

Species 25. (Mus. Hanley.)

PLANAXIS STRIGATUS. *Pla. testâ parvâ, albâ, solidâ, spirâliter distanter rubro-lineatâ; spirâ acuminatâ, anfractibus novenis, superioribus sulcatis, penultimo tenuiter striato; ultimo infra sulcato; aperturâ spiram longitudine æquantî; columellâ labroque albis vel pullidè violaceis; labro intus incrassato, denticulato, margine acuto.*

THE STREAKED PLANAXIS. Shell small, white, solid; spirally distantly red-lined; spire acuminated, whorls nine, upper grooved, last finely striated; last grooved below; aperture equalling spire in length; columella and lip white or pale violet, outer lip thickened within, denticulated, margin sharp.

HANLEY. MS. in Coll.

Hab. Pacific.

Neither the *P. virgatus* var. so marked in the British Museum, nor the "*strigatus* var." in Mr. Hanley's Collection seem to me to agree with the type of Mr. Smith's *P. virgatus*, but resemble each other, with the exception that the former has a little purple in the lips.





27



26a



28



26b



29a



29b



30a



31



30b



32

PLANAXIS.

PLATE IV.

Species 26. (Mus. Hanley.)

PLANAXIS PLANICOSTATUS. *Pla. testâ trochiformi, magna, solida, fusca, epidermide tenuiter rugatâ indurâ, costis planatis latè cinctâ, interstitiis profundis; spirâ conicâ, aufractibus septenis ad suturam angustè angulatis; suturâ profundâ, ultimo angulo, infra medium obscurissimè angulato; aperturâ subtriangulâ, columellâ latè planatâ, collo postico brevissimo, labro ad marginem tenui, crenulato, spirâ et illo presso, intus liris dentiformibus septenis armato, canali postico angusto elongato.*

THE FLAT-RIBBED PLANAXIS. Shell trochus-shaped, large, solid, brown, covered with a finely wrinkled epidermis, girt with flat, broad ribs; interstices deep; spine conical, whorls seven, narrowly angular at the suture; suture deep; last large, very obscurely angular below the middle; aperture subtriangular, columella broadly flattened, posterior callus very large, outer lip thin, crenulated at the margin, depressed above, strengthened within with seven tooth-like ridges; posterior canal narrow, elongated.

SOWERBY. Append. Tank. Cal. p. 13. 1825.

Planaxis ovalifera Du. Duvai.

Planaxis circinata. Lessen.

Hab. Galapagos Island and Panama.

Species 27. (Mus. Hanley.)

PLANAXIS TENUIS. *Pla. testâ tenui, elongatâ, politâ, semipellucidâ, albidd, liris rubris paucis distantibus cinctâ; spirâ elongatâ; aufractibus octonis, curvâsseulis, spirâ lites leviter sulcatâ, ultimo elongato, infra sulcâ sulcato et ventricoso; aperturâ brevi, angustâ, labro tenui, collo canaliculo postico nullis.*

THE THIN PLANAXIS. Shell thin, elongated, polished, semipellucid, whitish, girt with few distant red lines; spine elongated; whorls eight, rather

convex, spirally lightly grooved, last elongated, strongly short and ventricose below the middle, aperture short, narrow, outer lip thin, no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 45.

Hab. —?

Species 28. (Mus. Brit.)

PLANAXIS INEPTUS. *Pla. testâ parvâ, pallidissimâ fulvâ, supra suturam rubra lineatâ, spirâ lites sulcatâ; spirâ elongatâ, aufractibus septenis, curvâsseulis, ultimo ventricoso, medio hiliato; aperturâ brevi, subrotundâ.*

THE UNIMPORTANT PLANAXIS. Shell small, very pale fulvous, with a red line above the suture, spirally grooved; spine elongated, whorls seven, rather convex; last ventricose, with two lines in the middle; aperture short, rather rounded.

GOULD. (*Inopta*.) Proc. Boston. Soc. Nat. Hist. 1860.

Hab. Kikaia Bay.

Species 29. (Fig. a, b, Mus. Brit.)

PLANAXIS ZONATUS. *Pla. testâ parvâ, politâ, solidd, albidd, supra suturam et medio infroque aufractibus altâi lineâ rubri cinctâ; aufractibus septenis, ultimo subventricoso; aperturâ latâ, brevi; labro prope marginem incrassato, denticulato.*

THE BANDED PLANAXIS. Shell small, polished, solid, whitish, girt with a red line above the suture and in the middle and below the middle of the last whorl; whorls seven, last rather ventricose; aperture broad, short; outer lip thickened near the margin, denticulated.

A. ACAMS. Proc. Zool. Soc. 1851, p. 271.

Hab. Calapan, Philippines.

Species 30. (Fig. a, b, Mus. Hanley.)

PLANAXIS SAVIGNYI. *Pla. testâ magna, crassi, breviter trochiformi, infra medium subangulatâ, canaliculo*

PLANAXIS.—PLATE IV.

crebrè sulcatà, griseo-fuscà; strigis numerosis angustis, undulatis, longitudinalibus ornata; spirà brevì; anfractibus quinìs, brevibus, convexisculis; ultimo magno, supra mediam tumidisculo; aperturà subtrigona, labro intus calidè dentato, virato, margine fusco, tenui, crenato, columellà brevissculà, callo postico conspicuo.

SAVIGNY'S PLANAXIS. Shell large, thick, shortly trochiform, slightly angular below the middle, numerously grooved all over, grey brown, ornamented with numerous narrow undulating longitudinal stripes; spire short; whorls five, short, rather convex; last large, rather tumid above the middle, aperture rather trigonal; outer lip strongly tooth-ridged within, margin broad, thin, crenated, columella rather short; posterior callus conspicuous.

DESHAYES. Mag. Zool. 1844. Pl. CIX.

Hab. Red Sea.

The sulci are more numerous than in *Planaxis sulcatus*, and not deeply cut.

Species 31. (Mus. Brit.)

PLANAXIS LINEOLATUS. *Pla. testa parvè, densè spiràliter sulcatà, rubro lineatà, subventricosà, spirà acuminatà, anfractibus convexisculis; aperturà subrotundà, columellà tenui, calidè arcuatà, labro intus denticulato, prope marginem incessatò, marginem rotundò.*

THE FINE-LINED PLANAXIS. Shell small, closely spirally grooved, lined with red, rather ventricose; spire acuminate, whorls rather convex; aperture rather round, columella thin, much arched, outer lip denticulated within, thickened near the margin, margin rounded.

GOULD. Otia Conch. p. 60.

Hab. Wilson's Island, near the Sandwich Islands.

Species 32. (Mus. Hanley.)

PLANAXIS LONGISPIRA. *Pla. testà parvè, elongatà, angustà, albibi, medio ultimi anfractis et infra rubro bilineatà; spirà productà, anfractibus convexisculis, brevibus, pallidis, ultimo basi sulcato; aperturà parvè, quam spirà longe breviori; columellà brevì, arcuatà, pallidè violaceà; labro crassisculo, callo postico nullo.*

THE LONG-SPIRED PLANAXIS. Shell small, elongated, narrow, whitish, with two red lines in the middle of the last whorl and below; spire produced, whorls rather convex, smooth, polished; last grooved at the base; aperture small, much shorter than spire; columella short, arched, pale violet; outer lip rather thick; no posterior callus.

SMITH. Proc. Zool. Soc. 1872. p. 45.

Hab. Chinese Seas.





14.



15.



16.



17.



18.



19.



20.



21.



22.



23.

PLANAXIS.

PLATE V

Species 33. (Mus. Brit.)

PLANAXIS TROBIS. *Pla. testâ albi, parvè, ovato-angulata, ad apicem fulvâ; spirâ elevatâ, macronatâ; anfractibus octonis, imperceptis concentricis, spirâ ter sulcatis, costis inter sulcos distinctis; apertura subovata; labro ad marginem acuto, lacinia emarginata, intus incrassato, denticulato; columella arcuata, callis postico parvo.*

THE TROBY PLANAXIS. Shell white, small, ovately acuminate, fulvous at the apex; spire raised, macronated; whorls eight, lower convex, spirally grooved, ribs between the grooves divided; aperture subovate, outer lip sharp at the margin, spotted with brown, thickened and denticulated within; columella arched, posterior callus small.

SMITH. Proc. Zool. Soc. 1872, p. 42.

Hab. St. Thomas and St. Vincent, West Indies.

The ribs are divided by a spiral line in the centre.

Species 34. (Fig. a, b, Mus. Brit.)

PLANAXIS PUNCTO-STRIATUS. *Pla. testâ angustè pyramidalâ, lacinâ minutissimè puncto-striatâ spirâliber elevatâ, laci, pallidi fulvâ, maculis parvis subquadatis et lacinis seriatis dispositis ornata; spirâ elongatâ, anfractibus sexis, concentricis, ultimâ subcalcareosa; apertura brevis, subovata, antice calli emarginatâ, marginè labii maculato.*

THE PUN-FRE-STRIATED PLANAXIS. Shell narrowly pyramidal, spirally encircled with very minute puncture-striated lines, smooth, pale fulvous, ornamented with small square chestnut spots; spire elongated, whorls six, rather convex, last rather ventricose; aperture short, subovate, anteriorly strongly notched, margin of the outer lip spotted.

SMITH. MS. Mus. Brit.

Hab. —?

Species 35. (Fig. a, b, Mus. Hanley.)

PLANAXIS BRASILIENSIS. *Pla. testâ elongato-pyramidalis, laci, albi, crassissimâ, epidermide pilosâ intus; spirâ chetâ, anfractibus septenis, supe-*

rioribus propinque spiram imitante, albâ, costis molibus illius arcuatis, apertura parva, ovalis, fulvâ; lacinia denticulata, epidermide crassa d. fovea, callis antice emarginatâ, calli, columella brevis, incrassatâ, antice calli parvo, produciâ canali antice elongatâ, subchambrâ.

THE BRAZILIAN PLANAXIS. Shell elongate-pyramidal, smooth, white, very thick, covered with a velvety epidermis; spire raised, whorls seven, upper often banded with grey, last obtusely angular below the middle; aperture small, ovate, fulvous, outer lip tumid at the back, bent down above the margin, much thickened and denticulated within; columella short, thickened, arched, produced anteriorly, anterior canal lengthened, tumid outside.

LAMARCK. (Buccinum.) Anim. s. Vert. Vol. VII. p. 272.

Planaxis mollis. Sowerby.

Buccinum longigatum. Wood.

Planaxis fulva. A. Adams.

Planaxis nigra. Forbes.

Hab. Brazil.

Species 36. (Fig. a, b, Mus. Hanley and Brit.)

PLANAXIS (QUOYIA) MICHAUDI. *Pla. testâ pyramidalâ, elevatâ, levigatâ, fuscâ, lacinâ vel apice longitudinaliter fuscâ; spirâ elongatâ, conicâ, anfractibus septenis, concentricis, ultimâ infimo medio angulatâ, super cavicem canali leviter spirâliber striatâ; apertura brevis, subtriangula, columella superâ quadratè excisa, acutè emarginatâ, ad terminum truncatâ; labro intus truncato-lirato-denticulato; canali antice brevis, obtuso.*

MICHAUD'S PLANAXIS. Shell pyramidal, raised, smooth, brown, longitudinally striped with fawn or grey; spire elongated, conical; whorls seven, rather convex, last angular below the middle, lightly spirally striated above the varix of the canal; aperture short, subtriangular, columella cut out in a square above, with a sharp tooth, truncated at the end; outer lip finely ridge-toothed; anterior canal short, round.

CROSSE and FISCHER. Journ. Conch. Vol. XI. p. 375

Hab. Eastern Seas.

The variety in the British Museum is banded longitudinally with light grey, and that in M. Hanley's collection is of a more uniform brown colour. The shell is more slender than *Quoyia decollata*, which is deeply grooved.

Species 37. (Fig. a, b. Mns. Hanley.)

PLANAXIS (Quoyia) DECOLLATA. *Pla. testâ oblongo-pyramidatâ, spirâliâter costâte subulatâ, subvittâ fideâ, fusco longitudinaliter strigatâ, sulcis prope suturam et supra carinam canalis majoribus; angustibus lateraliter cœtusculis, superioribus deciduis; aperturâ brevi, subtriangulâ, columella superâ quadratum sessis, acutâ indentatâ, ad occurrâ truncatâ; labro intâs tenuiter lirato-lobatâ; canali ostio brevi, cubo.*

THE DECOLLATED PLANAXIS. Shell oblong-pyramidal, spirally strongly grooved, greenish-fawn, longitudinally striped with brown, grooves larger near the suture and above the canal varix; whorls laterally rather straight, upper deciduous;

aperture short, rather trigonal, columella cut out above in a square, with a sharp tooth; anterior canal short, rounded.

GRAY. Proc. Zool. Soc. 1847, p. 138.

Hab. New Guinea, Philippines.

Species 38. (Mus. Brit.)

PLANAXIS (Holecostoma) PILIGER. *Pla. testâ ovata, brevi, latè plumbea fasciatâ; spirâ brevissimâ; aperturâ ovata, acutâ, canali postico elongato, sinuato, columellâ arcuatâ, infâ latâ, latè truncatâ, labro intâs breviter dentato, margine superâ flexuoso.*

THE HAIRY PLANAXIS. Shell ovate, smooth, broadly banded with plum-colour; spire very short; aperture large, oval, posterior canal elongated, sinuous, columella arched, broad below, broadly truncated, outer lip lightly toothed, margin flexuous above.

PHILIPPI. Zeitschrift für Malak. 1848, p. 164.

Holecostoma stipigerum, A. Adams.

Hab. Mauritius

PLANAXIS.

Species.	Page.	Species.	Page.		
<i>albiventris</i> , Pease	III.	19	<i>Menckhaus</i> , Dunker. Not identified.		
<i>alutis</i> , Ker	II.	9	<i>Micaudi</i> , Crasse and Fischer	V.	36
<i>aratus</i> , Menke	II.	8	<i>Mollis</i> , Sowerby	V.	35
<i>Albiviti</i> , Dunker	II.	10	<i>nucleus</i> , Lamarek	I.	7
<i>areolatus</i> , A. Adams. Not identified.			<i>Nicolarius</i> , Zelebor. Not identified.		
<i>ater</i> , Pease	III.	18	<i>niger</i> , Quoy	II.	13
<i>atropurpureus</i> , Reclus	II.	10	<i>nigritellus</i> , Forbes	II.	8
<i>Brasilianus</i> , Lamarek	V.	35	<i>obscurus</i> , A. Adams	I.	5
<i>breviculus</i> , Deshayes	I.	6	<i>obsoletus</i> , Menke	II.	8
<i>brevis</i> , Quoy. Not identified.			<i>pedicularis</i> , Lamarek	III.	20
<i>Bryani</i> , Dunker	II.	14	<i>pediculus</i> , Kuster (?)	II.	14
<i>Buccineus</i> , A. Adams. Not identified.			<i>pigra</i> , Forbes	V.	35
<i>buccinoides</i> , Deshayes	I.	4	<i>piliger</i> , Philippi	V.	38
<i>caudilobata</i> , Duval	IV.	26	<i>planicostata</i> , Sowerby	IV.	26
<i>castaneus</i> , Smith	I.	2	<i>plumbea</i> , Pease	II.	14
<i>cingulatus</i> , Adams	II.	15	<i>puncto-striatus</i> , Smith	V.	34
<i>circinata</i> , Lesson	IV.	26	<i>pyramidale</i> , Lamarek	I.	4
<i>crassispira</i> , Smith	I.	3	<i>Saviguyi</i> , Deshayes	IV.	30
<i>decollata</i> , Gray	V.	37	<i>semisulcata</i> , Sowerby	I.	7
<i>eboreus</i> , Smith	V.	33	<i>setigerum</i> , A. Adams	V.	38
<i>eneumsteius</i> , Smith	I.	1	<i>similis</i> , Smith	II.	11
<i>fasciatus</i> , Pease. Not identified.			<i>striatulus</i> , Philippi	II.	16
<i>folia</i> , A. Adams	V.	35	<i>strigatus</i> , Hanley	III.	25
<i>Goedlii</i> , Smith. Not identified.			<i>succinctus</i> , A. Adams	III.	21
<i>Hanleyi</i> , Smith	II.	12	<i>sulcatus</i> , Born	I.	4
<i>Hermanseui</i> , Dunker	III.	22	<i>suturalis</i> , Smith	III.	17
<i>lacioides</i> , Philippi. Not identified.			<i>toniatus</i> , Philippi. Not identified.		
<i>ineptus</i> , Gould	IV.	28	<i>tenuis</i> , Smith	IV.	27
<i>labiosus</i> , Adams	II.	14	<i>undulata</i> , Lamarek	I.	4
<i>lavigatum</i> , Wood	V.	35	<i>variabilis</i> , Smith	III.	23
<i>lineatus</i> , Costa	III.	20	<i>virgatus</i> , Smith	III.	21
<i>lineolatus</i> , Gould	IV.	31	<i>zonatus</i> , A. Adams	IV.	29
<i>longispira</i> , Smith	IV.	32			

MONOGRAPH

OF THE GENUS

VELORITA.

Thou jubilant abyss of ocean cry,

Alleluia!

Ye tracts of earth and continents reply.

Alleluia!—*N. al.*



1a



1b



2



2a



2b

VELORITA.

Genus VELORITA, Gray.

MOLLESCUM ACEPHALOPODUM, BIMUSCULOSUM, FLUVIATILE.

Testa crassa, solidâ, æquivalvi, epidermide crassâ, obtusi indurâ; umbonibus a cardine separatis; sordine crasso, utraq; valvi dentibus tribus cardinalibus divergentibus; dentibus lateralibus, antice brevissimo, angulato, postice elongato. Pallii impressio postice angulatum sinuosa. Ligamentum æternum, iniquum.

MOLLESC. ACEPHALOPODUS, BIMUSCULAR, FLUVIATILE.

Shell thick, solid, equivalve, covered with a thick, shining epidermis; umbones separated from hinge. Hinge thick, with three diverging cardinal teeth in each valve; lateral teeth, anterior rather short, angular, posterior elongated. Impression of the mantle posteriorly, angularly sinuated. Ligament external, large.

The two species described are from Japan and Cochin, in India. The former is the well-known *Velorita cyprinoides*, and the latter recently described by Mr. Smith of the British Museum. We are unacquainted with the so-called *Velorita recurvata* of Valenciennes. The solidity of the shell, the very peculiarly angular front lateral tooth, and the separation by a small area of the umbones, are the characteristics of the genus.

Species 1. (Mus. Sowerby.)

VELORITA CYPRINOIDES. *Vel. testâ altissimâ, solidissimâ, tumidissimâ, valvi obliquâ, iris concentricis distantibus, plerumque ad latera continuâ rugatâ, intus albâ, vel roseo violaceoque tinctâ; latere antico brevissimo, perpendiculari, infra umbones areâ subrotundâ, planulatâ; latere postice producto, infra acuminato, angulato, subcarinato, post angulum planulatâ.*

THE CYPRINA-LIKE VELORITA. Shell very high, very solid, very firm, very oblique, wrinkled with distant concentric ridges, for the most part continued to the sides, white, or tinged with rose or violet within; anterior side very short, perpendicular, with a rather rounded, flattened area; posterior side produced, acuminated below, angular, slightly keeled, flattened behind the angle.

GRAY. —? MS. Brit. Mus.

Hab. Japan.

Species 2. (Mus. Brit.)

VELORITA COCHINENSIS. *Vel. testâ subovatâ, latâ, obliquâ, subcompressâ, iris concentricis distantibus, plerumque postice post medium discontinuis rugatâ, intus salmonâ et aurantiâ; latere antico brevi, ferè perpendiculari, infra umbones planulatâ; latere postice obliquâ producto, viz carinato, angulato, post angulum planulato, ad terminum subtruncato.*

THE COCHIN VELORITA. Shell subovate, broad, oblique, subcompressed, wrinkled with distant concentric ridges, for the most part discontinued posteriorly behind the middle, salmon and orange within; posterior side obliquely produced, hardly keeled, angular, flattened behind the angle, truncated behind the middle.

HANLEY, Smith, Proc. Zool. Soc. 1875.

Hab. Cochin, Kinderpore, Madras.

The differences between this and the former species, consisting in the greater breadth and less elevated apex of the latter, the tendency of its wrinkles to stop near the anterior half of the shell, are more comparative than positive, and, in a number of specimens, some are found in which these characters are almost interchangeable.

MONOGRAPH

OF THE GENUS

P T E R O P O D A .

We float upon a wild and violent sea, each way, and move.

Shakspeare

Pteropoda Pl. I.
(*Eggs*.)



2



1a



3.



4a



5a



5b



1b



6



7



11b

PTEROPODA.

PLATE I.

Genus HYALEA. Lamarck.

F. ca. Hyalina, tenuissima, subglobosa, lateraliter appendicibus, symmetrica; apice nonspicali; apertura angusta, lateraliter incisâ; labro marginato, plerumque in rostrum producto.

Shell glassy, very thin, subglobose, with lateral appendages, symmetrical; apex non-spiral; aperture narrow, laterally incised; outer lip bordered, generally produced into a beak.

SYNONYM. *Cavolina* Giovanni.

The Pteropoda are placed by authors, who have studied their peculiarities, between the Cephalopoda and the Gasteropoda. The name of the class is happily chosen to suggest the wing-like pair of flappers or fins which, placed on each side of the head, effect by their action the locomotion of the mollusc. The greater part of the species are common to all seas; a few being perhaps peculiar to the Atlantic, and a few to the Pacific. They can be seen in the evening or at night floating at the surface of the water in great numbers, but at sunrise they sink to various depths, and are seen no more till the luminary of day disappears from the horizon. It is said that each species has its own precise moment for retiring, and its own appointed depth to which to sink.

The shells of some of the genera are obliquely spiral; as *Hemifusus* and *Chelitropis*. Some are symmetrically spiral. Some have an operculum. *Cymbulia*, a boat-shaped symmetrical cartilage, but no shell. The form of the shell in *Hyalera* bears a considerable resemblance to a symmetrical bivalve shell with the valves soldered together at the dorsal hinge.

Species 1. (Mus. Brit.)

HYALEA UNGULATA. *Hya. testâ tenuissimâ, succineâ, tumbidâ, posticè trispinosa, spinis lateralibus trigonis, acutis, spinâ terminali deflexâ, uncinatâ; apertura angustiusculâ, labro angustè marginato, medio parvi producto.*

THE HOOKED HYALEA. Shell very thin, amber,

tumid, posteriorly three-spined, lateral spines three-sided, sharp terminal spine bent downwards, curved; aperture rather narrow, outer lip narrowly bordered, a little produced in the middle.

RANG. D'Orbigny. Voy. Amér. Mérid. Pl. V. f. 11 15.
Hab. Atlantic Ocean.

Distinguished from *Hyalera Trispinosa* by the more pent-up form, and by the hooked character of the central spine.

Species 2. (Mus. — ? Copied.)

HYALEA FLAVA. *Hya. testâ flavidâ, tenuissimâ, ovatâ, subcompressâ, posticè trispinosâ, spinis lateralibus subapproximatis, spinâ centrali elongatâ, apertura angustâ, labro bilobato.*

THE YELLOW HYALEA. Shell flavid, very thin, oval, subcompressed, three-spined posteriorly; lateral spines rather approximate, central spine long; aperture narrow, outer lip bilobate.

D'ORBIGNY. Voy. Amér. Mérid. Pl. V. f. 21 25.
Hab. Atlantic Ocean.

Distinguished from *Hyalera trispinosa* by its oval and more compressed form.

Species 3. (Mus. Brit.)

HYALEA AFFINIS. *Hya. testâ densè fuscâ, quatuor tridentata angustiorâ, magis rotundâ, rostro apertura producto, bilobato.*

THE RELATED HYALEA. Shell deep brown, narrower than *Hyalera tridentata*, the rostrum of the mouth produced, bilobate.

D'ORBIGNY. Voy. Amér. Mérid. Pl. V. f. 6-10.
Hab. Atlantic Ocean.

By the character of the shell alone the species would scarcely be distinguishable from the common species, and for this reason the writer has confined himself to the above very short comparative description.

Species 4. (Mus. Brit. &c.)

HYALEA TRIDENTATA. *Hya. testá intense fuscá, tenui, infra pallidiori, posticè acutè trispinosá; spinis lateralibus aloformibus, spiná terminali rectá, disco inferiori subtrigono, aperturam versus divaricatè subtrilobato; disco superiori globoso, ad latera marginato; aperturá trigoná, labro rostrato, margine subquadrilobato.*

THE THREE-SPINED HYALEA. Shell deep brown, thin, rather paler underneath, posteriorly sharply three-spined, lateral spines wing-shaped, terminal spine straight, lower disc subtrigonal to subtrilobate towards the aperture; upper disc globose, bordered at the sides; aperture trigonal, outer lip beaked, margin slightly four-lobed.

FORSKAL (Cavolina).

Hyalæa pupilloneæca. Bory St. Vincent.

Hyalæa Forskalii. D'Orbigny.

Hyalæa Pungii. Deshayes.

Hab. Mediterranean. Great Britain?

It is probable that the variety, fig. 6, with white border and appendages, may be the *H. pupilloneæca* of St. Vincent.

Species 5. (Mus. Brit.)

HYALEA CUMINGII. *Hya. testá trispinosá, pallidá, tenuissimá, iridescenti, nebulosá, vel pallidè succinosa, quam H. trispinosa magis oblongá, spinis lateralibus magis approximatis, rostro subtrigono, producto.*

CUMING'S HYALEA. Shell three-spined, pale, very thin, iridescent, clouded, or pale amber, more oblong than *Helix trispinosa*, lateral spines more approximated, beak subtrigonal, produced.

DESHAYES. MS. Mus. Cuming.

Hyalæa nebulosa. Deshayes (var.)

Hab. —?

Of a more oblong form and lighter texture than *H. trispinosa*, but the difference is not very obvious. There is something in the texture of the pale variety

giving a cloudy iridescence, which may, however, indicate a real specific distinction.

Species 6. (Fig. a, b, Mus. Brit.)

HYALEA GLOBULOSA. *Hya. testá trispinosá, ovatá, ventricosá, albá, angustiusculá, disco ventrali obliquè conico, ad apicem rotundè elevato, spinis lateralibus obtusis, subapproximatis, spiná apicali deflexá, truncatá, perforatá; aperturá angustè semilunari, labro breviter marginato.*

THE GLOBOSE HYALEA. Shell three-spined, ovate, ventricose, white, rather narrow; ventral disc obliquely conical, roundly raised at the apex, lateral spines obtuse, somewhat approximate, apical spine bent downwards, truncated, perforated; aperture narrowly semilunar, outer lip shortly marginated.

RANG. Proc. Zool. Soc.

Hab. —?

Species 7. (Fig. a, b, Mus. Brit.)

HYALEA GIBBOSA. *Hya. testá trispinosá, ovatá, ventricosá, albá, angustiusculá, elongatá, disco ventrali obliquè conico, acuminatim elevatá, ad angulum elevatum rugatá; spinis lateralibus approximatis, spiná centrali elongatá, leviter deflexá.*

THE GIBBOUS HYALEA. Shell three-spined, ovate, ventricose, white, rather narrow, elongated; ventral disc obliquely conical, acuminately elevated, wrinkled at the raised angle; lateral spines approximated, central spine elongated, slightly deflected.

RANG. D'Orbigny, Voy. Amér. Méric.

Hab. —?

This and the preceding species are swelled and raised at the ventral disc, forming an oblique cone, leaning towards the aperture in each case. In *Hyalæa globulosa* the apex of the cone is rounded. In *H. gibbosa* it is raised into an acuminated strongly-wrinkled beak.

Pteropoda Pl. II.

(*Hyalæa*)



PTEROPODA.

PLATE II.

HYALEA.

Species 8. (Fig. a, b, Mus. Sowerby.)

HYALEA OBTUSA. *Hya. testâ parvâ, tenuissimâ, pallidissimâ succinâ, hyalinâ; disco centrali brevi, rotundâ; spinis lateralibus brevibus, duplicatis, apice centrali truncato, utrinque vicè dentato, aperturâ trigonâ, labro producto.*

THE OBTUSE HYALEA. Shell small, very thin, very pale amber, glassy; ventral disc short, rounded; lateral spines short, double, central apex truncated; just perceptibly dentated on each side; aperture trigonal, outer lip produced.

SOWERBY.

Hab. — ?

The side appendages are smaller, and the bifid denticles more obtuse than in *Hyalina longirostris*, and the central apex broader and more truncated.

Species 9. (Mus. Sowerby.)

HYALEA MINUTA. *Hya. testâ minutissimâ, globosâ, subcinereâ, posticè angustâ, processibus lateralibus minutè nodulatis, apice centrali producto, latè truncato, utrinque minutissimè indentato; aperturâ angustè semilunari; margine simplici, reflexo.*

THE MINUTE HYALEA. Shell very minute, globose, rather ashy, posteriorly narrowed, lateral processes with a minute tooth, central apex produced, broadly truncate, with a single very minute tooth on each side; aperture narrowly semilunar, with a simple reflex margin.

SOWERBY.

Hab. — ?

Species 10. (Mus. Sowerby.)

HYALEA INTERMEDIA. *Hya. testâ parvâ, latè, albâ, pellucidâ, posticè subcompressâ, quadridentatâ, denticibus lateralibus trigonis, acutis, denticibus aut apicem parvis, acuminatis; apice centrali subpro-*

ducto, truncato; aperturâ angustâ, margine simplici, reflexo.

THE INTERMEDIATE HYALEA. Shell small, broad, white, pellucid, posteriorly rather compressed, with four teeth; lateral teeth trigonal, acute, teeth at the apex small, acuminated; central apex rather produced, truncated; aperture narrow, margin simple, reflected.

SOWERBY.

Hab. — ?

Larger, more compressed at the sides, and less globose than *H. minuta*. Smaller, and more contracted anteriorly than *H. quadridentata*.

Species 11. (Fig. a, b, Mus. Brit.)

HYALEA LIMBATA. *Hya. testâ pallidè lilacinâ vel fuscâ, trigonâ, disco centrali tumido, tenuiter limbo, apice angustè subtruncato, processibus lateralibus alatis, trigonis, acuminatis, acutè tridentatis; aperturâ subtrigonâ, labio interno angustè reflexo; labro longè producto, leviter elevato, rostrato; rostro ad terminum bilobato; margine medio subcontracto.*

THE BORDERED HYALINA. Shell pale lilac or brown, trigonal, ventral disc tumid, finely ridged, apex narrowly rather truncated, lateral processes winged, trigonal, acuminated, sharply tridentate; aperture subtrigonal; inner lip narrowly reflected; outer lip much produced, slightly elevated, beaked, slightly contracted in the middle.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VI. f. 11. 15.

Hab. Atlantic Ocean.

Species 12. (Fig. a, b, Mus. Brit.)

HYALEA LONGIROSTRIS. *Hya. testâ fuscâ, vel albâ, cæcis aperturam fuscâ suffusâ, disco centrali tumido, rotundo, tenuiter limbo, apice angustè subtruncato, processibus lateralibus alatis, trigonis, bidentatis; aperturâ subtrigonâ, labio interco-*

angustè reflexo, labro longè producto, validè elevato, estrato, rostro ad terminum bilobato; margine medio coarctato.

THE LONG-BEAKED HYALEA. Shell brown, or white, suffused with brown towards the aperture; ventral disc tumid, rounded, finely-ridged, apex narrowly subtruncated, lateral processes winged, trigonal, bidentate; aperture subtrigonal; inner lip narrowly reflected, outer lip much produced, strongly raised, beaked; beak two-lobed at the end; margin strongly contracted in the middle.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VI. f. 12.

Hab. Atlantic Ocean.

It is with some hesitation that the writer adopts D'Orbigny's distinction between this and the preceding species. The rostrum seems to be more distinctly contracted at the base, and more suddenly upturned in *H. longirostris* than in *H. limbata*, while the lateral ale are more spread and acuminately produced in the latter species, giving the shell altogether a more triangular appearance.

Species 13. (Fig. *a, b*, Mus. — ? Copied.)

HYALEA LEVIGATA. *Hyalea testâ discoidali, compressâ, minuto, albi; processibus lateralibus cuneatis, apice*

producto, acutè uncinato; aperturâ ad processum continuatâ, labiis subæqualibus.

THE SMOOTH HYALEA. Shell discoidal, compressed, minute, white; lateral processes cornered, apex produced, sharply hooked; aperture continued to the processes, lips nearly equal.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VII. f. 15-19.

Hab. — ?

A flat white species of *Hyalea* (?) very simple in form.

Species 14. (Fig. *a, b*, Mus. Brit.)

HYALEA QUADRIDENTATA. *Hyalea testâ succineâ, oblongâ, tumidâ, posticè subangustatâ, processibus lateralibus acutè unidentatis, apice producto, angustâ, ad terminum rotundo, utrinque prope terminum unidentato, aperturâ angustâ, semilunari, margine simplici, reflexo.*

THE FOUR-TOOTHED HYALEA. Shell amber, oblong, tumid, posteriorly rather narrowed, lateral processes sharply unidentate, apex produced, narrow; rounded at the end, narrow, with a tooth at each side near the end; aperture narrow, semilunar, margin simple, reflected.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. V. f. 11-15.

Hab. — ?

Pteropoda Pl. III.

(*Ducera Atlanta*)



20 a



15 a



21 a



15 b



17



18



16 a



19 a



19 b



20 b



16 b



21 b

PTEROPODA.

PLATE III.

HYALEA DIAECIA ATLANTA.

Species 15. (Fig. a, b, Mus. Brit.)

HYALEA (Diaecia) TRISPINOZA. *Hyalea testâ compressâ, tenuissimâ, albâ, fusca in partibus suffusâ, oblique subquadratâ, trispinosa; spinis lateralibus brevibus, acutis, utriusque ad angulum dispositis; spinâ apicali elongatâ, attenuatâ, acuminatâ; disco ventrali convexo, disco dorsali transversè licato, trilobato; aperturâ angustâ, marginibus subreflexis.*

THE THREE-SPINED HYALEA. Shell compressed, very thin, white, suffused with brown in parts, oblique, rather square, three spined; lateral spines short, sharp, placed at the angle on each side, apical spine elongated, attenuated, acuminated; ventral disc convex, dorsal disc transversely ridged, trilobate; aperture narrow, margins somewhat reflected.

LESSEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VII. f. 1-5.

Hab. Atlantic Ocean.

Species 16. (Fig. a, b, Mus. Brit.)

HYALEA (Diaecia) MUCRONATA. *Hyalea testâ latâ, compressâ, albâ, fusca prope aperturam pictâ, latè subquadratâ, trispinosa; spinis lateralibus remotis, alatis, depressis, spinâ apicali latâ eulâ, breviusculâ; disco ventrali ferè brevigato, disco dorsali lobato, eulââ caputo; aperturâ angustâ, labiis reflexis, fuscis, angustis.*

THE SHARP-POINTED HYALEA. Shell broad, compressed, white, painted with brown near the aperture, broadly subquadrate, three-spined; lateral spines remote, winged, depressed; apical spine rather wide, rather short, frequently truncated; ventral disc nearly smooth, dorsal disc lobed, strongly wrinkled; aperture narrow. lips reflected, brown, narrow.

LESSEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VII. f. 6-10.

Hab. Atlantic Ocean.

With broader disc and wider alae than in *Hyalea trispinosa*. The apical spine is also broader and shorter.

Species 17. (Fig. a, b, Mus. Sowerby.)

HYALEA INFLEXA (Diaecia). *Hyalea testâ parvâ, albâ, subtrigona, trispinosa, spinis lateralibus elevatis, brevibus; spinâ apicali productâ, uncinatâ; aperturâ usque ad spinas laterales incisâ, latiusculâ, labio interno reflexo, labro producto, margine lobato.*

THE INBENT HYALEA. Shell small, white, subtrigonal, three-spined; lateral spines raised, short; apical spine produced, hooked; aperture slit as far as the lateral spines, rather broad; inner lip reflected, outer lip produced, margin lobed.

LESSEUR. D'Orbigny, Voy. Amér. Mérid. Pl. IX. f. 16-20.

Hab. Atlantic Ocean.

Species 18. (Fig. a, b, Mus. Brit.)

HYALEA LABIATA (Diaecia). *Hyalea testâ albâ, elongatâ, subtrigona, trispinosa, subcompressâ; disco dorsali anticè producto, angustè rostrato, medio angulato; disco ventrali convexo, levigato, spinis lateralibus retrorsis, acutis, spinâ apicali breviusculâ, deflexâ, uncinatâ; aperturâ trigonâ, labro producto, angulato, labio interno elevatim reflexo.*

THE LIPPED HYALEA. Shell white, elongated, subtrigonal, three-spined, subcompressed; dorsal disc produced anteriorly, narrowly beaked, with a central angle; ventral disc convex, smooth, lateral spines turned backwards, sharp, apical spine rather short, bent downwards, hooked; aperture three-cornered, outer lip produced, angular, inner lip raised or reflected.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VI. f. 21-25.

Hab. Atlantic Ocean.

Species 19. (Fig. a, b, Mus.—? Copied.)

HYALEA DEPRESSA (Diaecia). *Hyalea testâ minutâ, albâ, subtrigona, compressâ, processibus lateralibus ad rimam aperturæ projectis; aperturâ profundè sensiliumari, simplici; labro producto, labio interno leviter elevato, apice longè producto ad terminum acuminato, uncinato.*

PTEROPODA.—PLATE III.

THE DEPRESSED HYALEA. Shell minute, white, sub-trigonal; compressed; lateral processes projected to the slit of the mouth; aperture deeply semi-lunar, simple; outer lip produced, inner lip slightly raised; apex much produced, acuminate at the end, and hooked.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VII. f. 11-14.

Hab. —?

Genus ATLANTA, Lesueur.

(*Limacina*, Cuvier.)

Testa nautiliformis, semicartilaginosa, spiræ planorbatis, anfractibus partim celatis, ultimo tenuiter carinato.

Shell nautilus-shaped, half cartilaginous, spire flat-circular; whorls partly hidden, last with a thin keel.

Species 20. (Fig. a, b, Mus. Brit.)

ATLANTA PERONII. *Atl. testâ compressâ, tenuissimâ, hyalinâ; anfractibus apparentibus acutè angulatis; aperturâ angustâ; margine externo acutissimè angulato; carinâ latâ, tenuissimâ.*

PERON'S ATLANTA. Shell compressed, very thin, hyaline; whorls visible, sharply angular; aperture narrow, its outer edge very acutely angular; keel broad, very thin.

LESEUR. Les. et Blain. D'Orb. Amér. Mérid.

Hab. Atlantic.

Species 21. (Fig. a, b, Mus. Brit.)

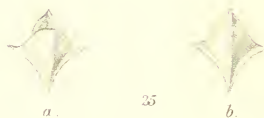
ATLANTA (Oxygyrus) KERANDRENI. *Atl. testâ ventricosâ, membranaceâ; anfractibus paucis, apicalibus celatis, ultimo, celatis, versus apicem latè carinato; aperturâ latâ, margine externo rotundo.*

KERANDRENI'S ATLANTA. Shell ventricose, membranaceous; whorls few, apical hidden, last towards the aperture outside broadly keeled; aperture broad, outer margin rounded.

RANG. Adams, Genera, p. 192.

Hab. —?

About 15 or 16 species of Atlanta and Oxygyrus have been described, but we have not the opportunity of presenting more than two representative species.



PTEROPODA.

PLATE IV.

Genus CLEODORA. *Péron and Lesueur.*

*Testis hyalina, pyramidalata, basal lateraliter appendi-
culata, tricuspidata; aperturâ trigonâ, labro pro-
ducto, rostrato.*

Shell hyaline, pyramidal, without lateral appendages,
three-spined; aperture trigonal, outer lip pro-
duced, beaked.

Of the few species composing this genus the most
exquisitely beautiful is the *Cleodora cuspidata*.

Species 22. (Fig. a, b, Mus. Brit.)

CLEODORA AUSTRALIS. *Cle. testâ angustè pyramidalatâ,
trigonâ, dorso lateribusque carinato-angulatis,
spinis lateralibus brevibus, versus aperturam elevatis,
spini apicali acuminatâ, aperturâ trigonâ,
disco centrali concavo.*

THE AUSTRALIAN CLEODORA. Shell narrowly pyra-
midal, trigonal, back and sides with carinated
angles, lateral spines short, raised towards the
aperture, apical spine acuminated, aperture tri-
gonal, ventral disc concave.

D'ORBIGNY. Voy. Amer. Mérid. T. VIII. f. 12-14.

Hab. Anstralia.

Much narrower than *Cleodora pyramidata*, which
it otherwise resembles.

Species 23. (Fig. a, b, Mus. Brit.)

CLEODORA CUSPIDATA. *Cle. testâ oblongâ, trigonâ,
transversè sinuatim liratâ, lateribus dorsalibus
trigonis, carinâ dorsalâ acutâ, in rostrum productâ,
carinâ lateralibus brevibus, longispinis; spini
apicali acutissimi, disco ventrali medio convexo.*

THE POINTED CLEODORA. Shell oblong, trigonal,
transversely sinuously ridged, dorsal sides tri-
gonal, dorsal keel sharp, produced into a beak,
lateral keels short, with long spines; apical
spine very sharp, ventral disc convex in the
middle.

QUOY. Voy. Astro. II. Pl. 27, f. 1-5

Hab. Atlantic Ocean.

The spines are long, and bend upwards from the
inverted apex, rather near which they take their
rise.

Species 24. (Mus. —? Copied.)

CLEODORA LOBATA. *Cle. testâ latè pyramidalatâ, tri-
gonâ, transversè sinuatim liratâ; spinis latera-
libus supra medium elevatis sursum acclivibus;
labro producto, marginè lobato.*

THE LOBED CLEODORA. Shell broadly pyramidal,
trigonal, transversely sinuously ridged; lateral
spines raised above the centre, sloped upwards;
outer lip produced, margin lobed.

SOWERBY.

Hab. Atlantic Ocean.

From the figure in D'Orbigny's work the writer
concludes this to be a distinct species, although
given as a variety of *Cleodora pyramidata*. It has
veritable spines at the sides, which are pointed up-
wards, and the dorsal surfaces are longitudinally
ridged, with correspondingly lobed labial margin.

Species 25. (Fig. a, b, Mus. Sowb.)

CLEODORA PYRAMIDATA. *Cle. testâ latissimè pyra-
midatâ, trigonâ, brevitatâ, facie centrali ad latera
concavâ, medio angustè tumidâ, carinâ dorsalâ
acutâ, in rostrum acuminatum productâ, angulis
lateralibus expansis, acutè subspinosis, medianis,
horizontalibus.*

THE PYRAMIDAL CLEODORA. Shell very broadly pyra-
midal, trigonal, smooth, ventral surface concave
at the sides, narrowly tumid in the middle,
dorsal keel sharp, produced into an acuminated
rostrum; lateral angles expanded, sharply sub-
spinose, central, horizontal.

QUOY. Voy. de l'Astrolabe, Vol. II. Pl. XXVII.
f. 7-13.

Hab. Atlantic Ocean.

PTEROPODA.—PLATE IV.

Genus BALANTIUM. Leach.

Testa triangularis, hyalina, compressa, longitudinaliter undata, apertura angusta, transversa, ad angulos non rimata.

Shell triangular, hyaline, compressed, longitudinally waved, aperture narrow, transverse, not slit at the angles.

This genus does not appear to differ very essentially from *Cleodora*. The angles of the aperture are not slit, and the outer lip is not produced. Several species are enumerated by authors, but with the exception of the one given below they are not known to the present writer.

Species 26. (Fig. a, b, Mus. Brit.)

BALANTIUM RECURVUM. *Bal. testis oblongo-triangulari,*

utrinque transversè undulatim lirata, facie dorsal longitudinaliter tri-lirata; facie ventrali ad latera concava, medio latè tumido; marginibus lateralibus acutè carinatis; spinâ apicali acutâ, recurvâ; apertura semilunari, marginibus undulatis.

THE RECURVED BALANTIUM. Shell oblong-triangular, transversely wavily ridged across; dorsal surface with three longitudinal ridges; ventral surface concave at the sides, broadly swelled in the middle; lateral margins sharply keeled; apical spine sharp, bent backwards; aperture semilunar, with undulating margins.

CHILDREN. Mus. Brit.

Cleodora Balantium. Rang.

Hab. Australia.

Vide notice and figures of several other species of Balantium at Plate VI.



28.



27.



29.



30.



31.



32.



33.



36.



34.



35.



38.



37.

PTEROPODA.

PLATE V.

Genus TRIPTERA. *Quoy.*

Testa tubulosa, subcompressa, vixens apicem leviter bulbiformis, ad apicem cœcâ circulari cincta; apertura coniformi.

Shell tubular, rather compressed, slightly bulbiform towards the apex, surrounded at the apex with a circular keel; aperture reniform.

Synonym. *Uricœcia*. Rang.

Species 27. (Mus. Brit.)

TRIPTELA COLUMNELLA. *Tri. testâ albâ, subpellucidâ, vixens aperturam subcompressâ, subangulatâ, apicem rotundâ.*

THE LITTLE COLUMNAR TRIPTERA. Shell white, semipellucid, rather compressed and narrowed towards the aperture; apex rounded.

RANG. D'Orbigny, Voy. Amér. Mérid., t. 8, f. 35-39. *Creseis obtusa*. Rang.

Hab. — ?

The one or two other recorded species are not found in the collections.

Genus CRESEIS. *Rang.*

Testa elongata, tubularis, pyramidata, spinifocinis, apiculata.

Shell elongated, tubular, pyramidal, spino-shaped.

Synonym. *Styloba*. Lesueur.

Species 28. (Fig. a, b, Mus. — ?)

CRESEIS ROTUNDA. *Cre. testâ subrotundâ, latiusculâ, elongatâ, fere rectâ, transversè tenuissimè striatâ; apicè attenuatâ, acuminatâ, leviter arcuatâ; apertura rotundâ.*

THE ROUNDED CRESEIS. Shell rather rounded, rather wide, elongated, nearly straight, transversely very finely striated; apex attenuated, acuminated, slightly arched; aperture rounded.

SOWERBY.

Hab. — ?

We do not find this species elsewhere described.

Species 29. (Fig. a, b, Mus. Brit.)

CRESEIS ACICULATA. *Cre. testâ angustâ, levigatâ, attenuatâ, acuminatâ, dorsa angulatâ; apertura subtriangulâ, labro producta, nispinosa.*

THE ACICULATED CRESEIS. Shell narrow, smooth, attenuated, acuminated, angular at the back; aperture rather trigonal, outer lip produced with a spine.

D'ORBIGNY. Tab. VIII., f. 29-31.

Hab. Atlantic Ocean.

Species 30. (Fig. a, b, Mus. Brit.)

CRESEIS STRIATA. *Cre. testâ latiusculâ, transversè rugatâ; apertura subrotundâ; apicè retroscim leviter arcuatâ, acuminatâ.*

THE STRIATED CRESEIS. Shell rather broad, transversely wrinkled; aperture rather round; apex slightly curved backwards, acuminated.

RANG. D'Orbigny, Voy. Amér. Mérid. Pl. VIII. f. 23-25. *Hab.* Atlantic Ocean.

Species 31. (Fig. a, b, Mus. Sowerby.)

CRESEIS CORNIFORMIS. *Cre. testâ breviusculâ, rotundâ, levigatâ; apertura rotundâ, apicè acuminatâ, valtiè recurvâ, uncinatâ.*

THE HORN-SHAPED CRESEIS. Shell rather short, rounded, smooth; aperture rounded, apex acuminated, strongly recurved, hooked.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VIII. f. 21.

Hab. Atlantic Ocean.

Species 32. (Fig. a, b, Mus. — ? Copied)

CRESEIS VIRGULA. *Cre. testâ latiusculâ, rotundâ, levigatâ; apertura rotundâ, apicè attenuatâ, acuminatâ, leviter arcuatâ.*

THE TWIG CRESEIS. Shell rather broad, rounded, smooth; aperture rounded, apex attenuated, acuminated, slightly arched.

RANG. D'Orbigny, Voy. Amér. Mérid. Pl. VIII. f. 36.

Hab. Atlantic Ocean.

Species 33. (Fig. a, b. Mus. Brit.)

CRESEIS SPINIFERA. *Cre. testâ elongatâ, levigatâ, acuminatâ, dorso subspiraliter carinatâ; carinâ ad aperturam in spinaâ desinenti; apice valde attenuatâ.*

THE SPINE-BEARING CRESEIS. Shell elongated, smooth, acuminate, with a subspiral keel at the back; keel ending in a spine at the aperture: apex much attenuated.

RANG. Sowerby, Gener. of Shells. Pteropoda. f. 4.

Cresora subula. Quoy.

Hab.—?

In this species and in *Crescis aciculata* the dorsal keel crosses the tube diagonally, so as to indicate a slight tendency to the spiral form.

Genus SPIRIALIS. *Soub. pol.*

Testa lycopina, fusiformis, vel heliciformis, sinistralis.

Operculum ovatum paucispirale.

Shell glassy, fusiform or heliciform, sinistral. Operculum ovate, few-whorled.

Syn. (Pars.) HETEROPUSUS. Fleming.

Species 34. (Mus. Jeffreys.)

SPIRIALIS FLEMINGI. *Spî. testâ subheliciformi, albâ, ventricosâ; spirâ conicâ, angustibus quatuor, ult. imo globosâ; aperturâ subpyriformi, anticâ productâ, acuminatâ, columellâ rectiusculâ.*

FLEMING'S SPIRIALIS. Shell subheliciform, white, ventricose; spire conical, whorls five, last globose, aperture somewhat pyriform, anteriorly produced, acuminate; columella rather straight.

FORBES. Forbes and Hanley, British Mollusca.

Hab. North British seas.

Species 35. (Mus. Jeffreys.)

SPIRIALIS MACANDREI. *Spî. testâ fusiformi, albâ, levigatâ; spirâ pyramidatâ, levatâ; angustibus septenis, convergentibus; aperturâ pyriformi, an-*

ticâ acuminatâ; columellâ elongatâ. lyster tortuosa.

MACANDREW'S SPIRIALIS. Shell fusiform, white, smooth, spire pyramidal, raised; whorls seven, rather convex; aperture pyriform, acuminate anteriorly; columella elongated, slightly tortuous.

FORBES and HANLEY. British Mollusca.

Hab. Ireland.

Species 36. (Mus. — ?)

SPIRIALIS ROTUNDA. *Spî. testâ subdepressâ, heliciformi, spirâ brevi; angustibus trinis, ultimo ventricosâ, magno, latè umbilicatâ; aperturâ obliquè oratâ.*

THE BOUNDED SPIRIALIS. Shell subdepressed, heliciform, spire short, whorls three; last ventricose, large, broadly umbilicated; aperture obliquely oval.

D'ORBIGNY. Voy. Amér. Mérid. Moll., Pl. XIII. f. 16.

Hab. Atlantic Ocean.

Species 37. (Mus. — ?)

SPIRIALIS JEFFREYSII. *Spî. testâ depressâ, discoidâl, spirâ brevissimâ, ultimo lato, rotundo, latè umbilicatâ.*

JEFFREY'S SPIRIALIS. Shell depressed, discoidal; spire very short, last broad, rounded, broadly umbilicated.

FORBES and HANLEY. Brit. Moll.

Hab. British Channel.

Species 38. (Mus. — ?)

SPIRIALIS VENTRICOSA. *Spî. testâ globosâ, albâ, angustibus quatuor, ultimo maximo, latè umbilicatâ; aperturâ breviter subpyriformi, anticâ angulatâ; columellâ tenuissimâ.*

THE VENTRICOSE SPIRIALIS. Shell globose, white; whorls four, last very large, not umbilicated; aperture shortly rather pyriform; anteriorly angular; columella very thin.

SOLLEYET. Voy. de la Bonite. Moll. Pl. XIII. f. 15.

Hab. Atlantic Ocean.



40.



39.



41.



42.



43.



44.



45a.



46.



47.



45b.

PTEROPODA.

PLATE VI.

Species 39. (Mus. Stockholm.)

SPECIALIS AUSTRIACAE. *Sp. testis biconvexa, hyalina, laevigata; spiræ latæ, conicæ; anfractus quinque, ultimo altissimo, operculari pyriformi; columellæ acuminatæ; umbilicus (obscuro) medio-spiralibus.*

THE AUSTRIAN SPECIES. Shell fusiform, hyaline, smooth; spire rather conical, whorls five, last ventricose; aperture pyriform, columella acuminate, produced; outer lip sinuated in the middle.

SOLLEYET. Voy. Bonite. Moll., Pl. XIII.
Hab. Austrian seas.

Species 40. (Mus. Brit.)

SPECIALIS ALPIDA. *Sp. testis subdepressa-globosa, spiræ parvæ, anfractus trius, brevissimæ, ultimo angustæ, umbilicatis; apertura angustæ, columellæ rectæ.*

THE ALPINE SPECIALIS. Shell subdepressed-globose; spire small, whorls three, very short, last large, umbilicatis; aperture large, columella straight.

FABRICIUS. (Linnaeus.)

Linnaeus helioides. Lamarek.
Hab. Greenland.

The writer scarcely sees any reason for separating the helioides from the fusiform, sinistral, spiral shells of these Pteropoda.

Species 41. (Mus. — ?)

SPECIALIS CATHARTUS. *Sp. testis fusiformis, hyalina, obliquè puncturata-striatâ, spiræ brevissimæ, anfractus quinque, ultimo inflato, operculari oblongâ; columellâ elongatâ, tenui, acuminatâ.*

THE LAITRED SPECIALIS. Shell fusiform, hyaline, obliquely puncture-striated; spire very short, whorls few, last inflated; aperture oblong, columella elongated, thin, acuminate.

SOLLEYET. Ed. et Soul. Voy. Bonite. Moll. Pl. XIII. f. 17.

Hab. Atlantic.

Species 42. (Mus. Brit.)

(Atlanta.)

ATLANTA INFLATA. *Atl. testis albi, unicoloris, symmetricali, anfractus apicalibus conicis, ultimo umbilicatis, rotundis subarcuatis; apertura subtriangulæ lobæ in processu elongato linguiformi desinens; operculo tenuissimo, hyalino.*

THE INFLATED ATLANTA. Shell white, nautilus-shaped, nearly symmetrical; apical whorls hidden; last umbilicatis slightly, keeled on the outer side; aperture subtriangular; outer lip terminating in a long tongue-shaped process.

RANG and SOLLEYET. Mon. Pterop., Pl. XIV. t. 4.
Helioides. D'Orbigny.

Hab. — ?

SINUSIGERA.

Genus **SINUSIGERA.** D'Orbigny.

Testis subglobosa, medio anfractus ultimi subovata, apertura subovata, lobæ sinuata, reflectæ, bilobata. Operculum ignotum.

Shell subglobose, sulcated in the middle of the last whorl; aperture subovate, outer lip sinuated, reflected, bilobed. Operculum unknown.

Synonym. *Chelitopsis.* Forbes.

Species 43. (Mus. Brit.)

SINUSIGERA CANCELATA. *Sinu. testis subglobosa, obliquè cancellatâ; spiræ subconicæ, anfractus quinque, rotundis; apertura subovata, lobæ sinuata, bilobata, validè reflectæ; lobis productis, superioribus terminantibus capsum, divisis.*

THE CANCELLED SINUSIGERA. Shell subglobose, obliquely cancellated, spire rather conical; whorls five, rounded; aperture subovate, outer lip sinuated, bilobed, strongly reflected; lobes produced, upper expanded, divided at the end.

D'ORBIGNY. Adams. Genera, Plate CXXXVII t. 4.

Hab. — ?

Species 44. (Mus. Sowerby.)

SINU-SIGERA MICROSCOPICA. *Siua. testâ subglobosâ, spirâ-
lîter striatâ; spirâ brevi, subconicâ; anfractibus
quinis, rotundis, ultimâ magna; aperturâ subtri-
angulâ, columellâ tenui, acutâ, rectiusculâ, labro
bilobato, lobis moderatè productis.*

THE MICROSCOPIC SINUSIGERA. Shell subglobose, spi-
rally striated, spire short, subconical; whorls
five, rounded, last large; aperture rather
rounded, columella thin, sharp, rather straight,
outer lip two-lobed; lobes moderately produced.

GRAY. (Struthiolaria). Voyage of the Blossom.

Chelonicopsis Houleyi. Forbes.

Hab. Atlantic Ocean.

The principal difference between this and the pre-
vious species is that the former is striated spirally
only, and the latter is cancellated.

almost hooked; dorsal surface radiately slightly
grooved; aperture broad, outer lip slightly lobed.
EYDOUX et SOULEYET. Voy. de la Bonite.

Hab. — ?

Species 46. (Mus. — ?)*

BALANTHUM AUSTRALE. *Bal. testâ angustâ, versus ter-
minum attenuatâ, ad latera concavâsculâ; aper-
turâ subtriangulâ, labro acuminatâ; apicè in spicu-
lum mammillatum productâ.*

THE AUSTRALIAN BALANTHUM. Shell narrow, atten-
uated towards the end; rather convex at the
sides; aperture subtriangular, outer lip acuminate;
apex produced into a mammillated spike.

D'ORBIGNY. Voy. Amér. Mériid.

Hab. — ?

Species 47. (Mus. — ?)*

BALANTHUM CHAPALAI. *Bal. testâ triangulâ, compressâ,
transversè sulcatâ, ad latera submarginatâ; an-
gulis latercilibus acutis; apicè attenuatâ, acu-
minatâ.*

CHAPALAI'S BALANTHUM. Shell trigonal, compressed,
transversely grooved, slightly bordered at the
sides; apex attenuated, acuminate.

EYDOUX et SOULEYET. Voy. de la Bonite.

Hab. — ?

Genus BALANTHUM (continued).

Species 45. (Fig. a, b. Mus. — ?)*

BALANTHUM INFLATUM. *Bal. testâ utrinquè convexâ,
triangulâ, versus apicem decurvâ, ferè nuciâtib;
faciè dorsali radiatim leviter sulcatâ; aperturâ
latâ, labro leviter lobato.*

THE INFLATED BALANTHUM. Shell convex on each
side, trigonal, vent downwards towards the apex.

* The above three specimens of Balantium are not known in the principal collections, but are copied in order to make the
crossing little genus as nearly complete as possible.

PTEROPODA.

	Plate.	Species.		Plate.	Species.
<i>meiculata</i> , D'Orbigny. Cre.....	V.	29	<i>levigata</i> , D'Orbigny. Hy.....	II.	13
<i>affinis</i> , D'Orbigny. Hy.....	I.	3	<i>limbata</i> , D'Orbigny. Hy.....	II.	11
<i>arctica</i> , Fuchs. Spi.....	VI.	40	<i>lobata</i> , Sowerby. Cleo.....	IV.	24
<i>Australe</i> , D'Orbigny. Bal.....	VI.	46	<i>longirostris</i> , Lesueur. Hy.....	II.	12
<i>Australis</i> , D'Orbigny. Cleo.....	IV.	22	<i>Mucandrei</i> , Forbes. Spi.....	V.	35
<i>Australis</i> , Soubeyt. Spi.....	VI.	39	<i>microscopica</i> , Gray. Lin.....	VI.	44
<i>Balantina</i> , Rang. Bal.....	IV.	26	<i>minuta</i> , Sowerby. Hy.....	II.	9
<i>cancellata</i> , D'Orbigny. Sin.....	VI.	43	<i>mucronata</i> , Lesueur. Dia.....	III.	16
<i>Chaptalii</i> , Epher. Bal.....	VI.	47	<i>nebulosa</i> , Deshayes. Hy.....	I.	5
<i>clathratus</i> , Soubeyt. Spi.....	VI.	41	<i>obtusa</i> , Rang.....	V.	27
<i>columnella</i> , Rang. Trip.....	V.	27	<i>obtusa</i> , Sowerby. Hy.....	II.	8
<i>corniformis</i> , D'Orbigny. Cre.....	V.	31	<i>papilionacea</i> , Vincent. Hy.....	I.	4
<i>Cumingii</i> , Deshayes. Hy.....	I.	5	<i>Peronii</i> , Lesueur. Atl.....	III.	20
<i>cuspidata</i> , Quoy. Cleo.....	IV.	23	<i>pyramidata</i> , Quoy. Cleo.....	IV.	25
<i>depressa</i> , D'Orbigny. Dia.....	III.	19	<i>quadridentata</i> , Lesueur. Dia.....	II.	14
<i>flava</i> , D'Orbigny. Hy.....	I.	2	<i>Raugii</i> , Deshayes. Hy.....	I.	4
<i>Flemingii</i> , Forbes. Spi.....	V.	34	<i>recurcum</i> , Children. Bal.....	IV.	26
<i>Forskohlii</i> , D'Orbigny. Hy.....	I.	4	<i>rotunda</i> , D'Orbigny. Spi.....	V.	36
<i>gibbosa</i> , Rang. Hy.....	I.	7	<i>rotunda</i> , Sowerby. Cre.....	V.	28
<i>globulosa</i> , Rang. Hy.....	I.	6	<i>spinifera</i> , Rang. Cre.....	V.	33
<i>inflata</i> , Rang. Atl.....	VI.	42	<i>striata</i> , Rang. Cre.....	V.	30
<i>inflatum</i> , Epher. Bal.....	VI.	45	<i>subula</i> , Quoy. Cre.....	V.	33
<i>inflexa</i> , Lesueur. Dia.....	III.	17	<i>tridentata</i> , D'Orbigny. Hy.....	I.	4
<i>intermedia</i> , Sowerby. Hy.....	II.	10	<i>trispinosa</i> , Lesueur. Dia.....	III.	15
<i>Jeffressii</i> , Forbes and Hunt. Spi.....	V.	37	<i>uncinnata</i> , D'Orbigny. Hy.....	I.	1
<i>Kerandreni</i> , Rang. Atl.....	III.	21	<i>ventricosa</i> , Soubeyt. Spi.....	V.	38
<i>labiata</i> , D'Orbigny. Dia.....	III.	18	<i>virgula</i> , Rang. Cre.....	V.	32

MONOGRAPH

OF THE GENUS

ANCYLUS.

All Thy works before Thee stood
And Thine eye beheld them good,
While they sang with one accord,
Holy, holy, holy Lord.—*James Montgomerie*



ANCYLUS.

PLATE I.

Genus ANCYLUS. *Goffroy*.

MOLLUSCUM AQUATICUM. *Testa patelliformis, plerùmque subrotata, nonsymmetrica, epidermide induta, apice sublateralis, subspirali; operculum nullum.*

MOLLUSCUM FRESHWATER. Shell patelliform, generally sinistral, non-symmetrical, covered with an epidermis, apex sublateral, subspiral; operculum, none.

Like the Linnæadæ, the Aneyle are found in ponds and rivers of fresh water, and like them are capable of living at times ncovered by water. They are found in all climates. We have two well-known British species. Others exist eastward in India and westward in the United States; southwards, we have Brazilian and Peruvian species, and the first and finest species on our list, *A. Cumingianus*, dates from Van Diemen's Land.

Species 1. (Fig. a, b, c, Mus. Sowb.)

ANCYLUS CUMINGIANUS. *Anc. testâ profundè calyciformi, subrotatâ, posticè angustâ, anticè amplâ, epidè emule olivaceo indutâ; dorso elevato, rotundâ, costatum costato, apice posticè submarginali, lateraliter calicè producto, unispirali.*

CUMING'S ANCYLUS. Shell deeply cup-shaped, sub-ovate, narrow behind, full in front, covered with an olive epidermis; back elevated, rounded, radiately ribbed, apex posteriorly submarginal, laterally much produced, unispiral.

BOURIGNONAT. Proc. Zool. Soc. 1853. Pl. XX. f. 1-9.

Hab. Van Diemen's Land.

Species 2. (Fig. a, b, Mus. Brit.)

ANCYLUS TEXTILIS. *Anc. testâ depressâ, epidermide stramineâ, ad marginem brunnescenti indutâ, costatum costato, concentricè tenuissimè striatâ, indis costatâ; dorso depresso, apice obtuso, sublateral.*

THE TEXTILE ANCYLUS. Shell depressed, covered with a straw-coloured epidermis, becoming brown at the margin, radiately ribbed, concentrically very finely striated; back depressed, apex obtuse, sublateral.

GUFFY. Proc. Zool Soc. 1870. Pl. XVII. f. 9-11. *Hab.* Trinidad.

Species 3. (Fig. a, b, c, d, Mus. Brit.)

ANCYLUS FLUVIATILIS. *Anc. testâ ovato-subrotundâ, tenui, pallidè stramineâ, cel coruleâ, subconicâ, dorso declivè; apice posticè submarginali, subcentrali.*

THE RIVER ANCYLUS. Shell ovate, rather round, thin, pale straw or bluish, subconical, back sloped; apex posteriorly submarginal, subcentral.

GMELIN. Linn. Syst. Nat.

Patella rostrata. D'Argenville.

Patella cornea. Poirct.

Patella meridionalis. Beck.

Ancylus simplex. Bourguignat.

Hab. Great Britain, and Europe generally.

Species 4. (Fig. a, b, Mus. Brit.)

ANCYLUS LACUSTRIS. *Anc. testâ subrotatâ, elongatâ, tenui, lateraliter subcompressâ, anticè subatenuatâ, epidermide fusco indutâ; dorso tenuissimè radiatum striatâ; apice postero-laterali.*

THE LAKE ANCYLUS. Shell subovate, elongated, thin, laterally rather compressed, anteriorly sub-attenuated, covered with a brown epidermis; back very finely radiately striated; apex postero-lateral.

LINNÆUS (Patella). Syst. Nat.

Patella oblonga. Dillwyn.

Hab. Great Britain, and Europe generally.

Species 5. (Mus. Brit.)

ANCYLUS CAFFRA. *Anc. testâ suboliveo-corneâ, regulariter ovatâ, profundè calyciformi, levigatâ; dorso elevato, arcuato; apice postero-sublateral, acuminato.*

THE CAFFER ANCYLUS. Shell subolive-bony, regularly oval, deeply cup-shaped, smooth; back raised, arched; apex posteriorly sublateral, acuminated.

KEAUSS. Südafricanischen Mollusken, T. IV. Pl. XIII.

Hab. South Africa.

This has a much more pointed apex than *Ancylus Cumingianus*, which is the only other species with so rounded a back.



ANCYLUS.

PLATE II.

Species 6. (Fig. a, b, Mus. Brit.)

ANCYLUS JANIL. *Anc. testis ovata, subconica, alba, exterior radiatim lineata, postice angustiori; apice acuminato, postice submarginali, lateratiler subcentrali.*

JANUS'S ANCYLUS. Shell ovate, somewhat conical, white, finely radiately ridged; anteriorly narrower, acuminate, posteriorly submarginal, laterally subcentral.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 83.

Hab. Italy.

Species 7. (Fig. a, b, Mus. Brit.)

ANCYLUS DIAPHANUS. *Anc. testis subdepressa, ovata, pallide fulva, semipellucida, levigata; apice obtusa, lateratiler submarginali, postice postmedian.*

THE TRANSPARENT ANCYLUS. Shell rather depressed, ovate, pale fulvous, semi-pellucid, smooth; apex obtuse, laterally submarginal, posteriorly a little post-median.

HALDEMAN. New Freshwater Shells.

Hab. Ohio.

Species 8. (Fig. a, b, Mus. Brit.)

ANCYLUS BACONI. *Anc. testis parva, ovato-oblonga, depressa, translucida, nitida, pallide succinea; apice obtusa, lateratiler submarginali, postice longi postmedian.*

BACON'S ANCYLUS. Shell small, ovate-oblong, depressed, translucent, shining, pale amber; apex obtuse, laterally submarginal, posteriorly far behind the centre.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 89.

Hab. Bengal.

Species 9. (Fig. a, b, Mus. Brit.)

ANCYLUS VITEX. *Anc. testis lata, depressa, rotunda, diaphana, fulva, prope marginem conica, fasciis concentricis variegata; apice obtusa, versus sinistram lateralem declivi.*

THE GLASSY ANCYLUS. Shell broad, depressed, rounded, transparent, pale fulvous, horny near the margin, variegated with blackish bands; apex obtuse, sloped towards the postero-lateral margin.

MORELET. Proc. Zool. Soc. 1853, p. 88.

Hab. Portugal.

Species 10. (Fig. a, b, Mus. Brit.)

ANCYLUS SPINA-ROSE. *Anc. testis dextrali, pallide fulva, levigata, profunde emarginata, ovata, dorso arcuato, elevato, apice uncinato, postice et lateratiler submarginali.*

THE ROSE-THORN ANCYLUS. Shell dextral, pale fulvous, smooth, deeply cup-shaped, ovate, back arched, raised; apex hooked, posteriorly and laterally submarginal.

DRAPAENAUD. Hist. Moll. Pl. XIII. f. 10-12.

Ancylus dependitius. Zeigler.

Ancylus gilbosus. Bourguignat.

Hab. Germany.

Species 11. (Mus. Brit.)

ANCYLUS DROUETIANUS. *Anc. testis conica, subriccia, levigata, radiatum leviter sulcata, ovata, postice angustiori, antice ampla, margine leviter undulata, apice acuminato, postice submarginali, lateratiler subcentrali.*

DROUET'S ANCYLUS. Shell conical, greenish, smooth, radiately slightly grooved, ovate, narrow posteriorly, full anteriorly, margin slightly undulating; apex acuminate, posteriorly submarginal, laterally subcentral.

BOURGUIGNAT. Proc. Zool. Soc. 1853, Pl. XX. f. 18-25.

Hab. Teneriffe.

Species 12. (Fig. a, b, Mus. Brit.)

ANCYLUS DESHAYESIANUS. *Anc. testis conica, breviter ovata, tenui, pallide corvina, opaca, levigata, intus*

albi, antice expansa: apice valde retrorso, acuminato, elevato, lateraltiter subcentrali; dorso declivi.

DESHAYES'S ANCYLUS. Shell conical, shortly ovate, thin pale horn, opaque, smooth, white within, anteriorly expanded; apex much thrown backwards, acuminated, elevated, laterally subcentral; back sloped.

BOURGIGNAT. Cat. esp. Journ. Conch.

Hab. Europe.

Species 13. (Fig. *a, b*, Mus. Brit.)

ANCYLUS RUPICOLA. *Anc. testâ ovato, dextrali, profunde calyciformi, cornuâ, laevigatâ, pellucidâ, dorso arcuato, apice subacuminato, ultra marginem postico-lateralem producto.*

THE ROCK-INHABITING ANCYLUS. Shell ovate, dextral, deeply cup-shaped, horny, smooth, pellucid, back arched; apex slightly acuminated, produced beyond the postero-lateral margin.

SHUTTLEWORTH. — $\frac{P}{2}$

Hab. Teneriffe (on moist rocks).

Species 14. (Fig. *a, b*, Mus. Brit.)

ANCYLUS SOULCYANUS. *Anc. testâ depressâ, patulâ, cœvâ, costellis crebris radiatis et striis minutissimis concentricis sculptâ, posticè angustâ, antice expansâ, marginæ dextrali rectiusculo; dorso obliquè declivi, apice depresso, posticè extra-marginali.*

SOULCY'S ANCYLUS. Shell depressed, patulous, coffee-colored; sculptured with radiating very minute concentric striae, posteriorly narrow, anteriorly expanded, dextral margin rather straight; back obliquely sloped; apex depressed, posteriorly extra-marginal.

BOURGIGNAT. Proc. Zool. Soc. 1853, Pl. XX. f. 26-33.

Hab. Venezuela.

A very oblique, sculptured species, with the small apex close to the margin and appearing beyond it.



ANCYLUS.

PLATE III.

Species 15. (Fig. a, b, Mus. Brit.)

ANCYLUS SIBIRICUS. *Anc. testâ obscure fusâ, conicâ, angustâ, elongatâ, brevitatâ, lateribus compressis, albis carulis-rossâ, dorso elevatâ, apice arcuato, longè post-arcuato.*

THE SUBMARGINAL ANCYLUS. Shell dull brown, conical, narrow, elongated, smooth, with compressed sides, inside bluish pink, back elevated, apex arched, placed far backwards.

MOORE — ? MS. Mus. Brit.

Hab. — ?

Species 16. (Fig. a, b, Mus. Brit.)

ANCYLUS BARIENSIS. *Anc. testâ depressâ, oblongâ, angustâ, castaneâ, brevitatâ, intus cinisâ; dorso declivè; apice acuminatâ, posticè et lateralitèr submarginali.*

BARILE'S ANCYLUS. Shell depressed, oblong, narrow, chestnut, smooth, vinctous within; back sloped; apex acuminated, posteriorly and laterally submarginal.

MORCAND. Coq. Ter. et Fluv. Bahia.

Hab. Brazil.

Species 17. (Mus. Brit.)

ANCYLUS KOOTANENSIS. *Anc. testâ lævi, latâ, subrotundâ, depressâ, corneo-rubrescenti; apice obtuso, subcentrali, frequentè nigrescenti.*

THE KOOTAN ANCYLUS. Shell short, broad, rather round, depressed, reddish horn; apex obtuse, subcentral, often black.

BALD. Proc. Zool. Soc. 1863, p. 69.

Hab. River Oregon.

Species 18. (Mus. Brit.)

ANCYLUS PARALLELUS. *Anc. testâ compressâ, oblongâ, subcylindrical, translucidâ, pallidissimè corneâ; dorso declivè, apice posticè et lateralitèr subcentrali.*

THE PARALLEL ANCYLUS. Shell compressed, oblong, rather straight-sided, transparent, very pale horn; back sloped, apex posteriorly and laterally subcentral.

HALDEMAN. Mod. Freshwater. Sh. Proc. Zool. Soc. 1853, 84.

Hab. New Orleans.

Species 19. (Mus. Brit.)

ANCYLUS CONCENTRICUS. *Anc. testâ olivaceo-cornuâ, subconicâ, subis inconspicuis undulatis radiatâ, concentricè lineatâ, oblongâ, posticè angustâ, apicè subexpansâ; dorso versus apicem elevatâ; apice acuminatâ, arcuato, ad marginem postico-lateralem approximatâ.*

THE CONCENTRIC ANCYLUS. Shell olive-horn, rather conical, rayed with indistinct undulating grooves, with concentric lines, oblong, posteriorly narrowed, anteriorly subexpanded; back raised towards apex; apex acuminated, hooked, approaching the postero-lateral margin.

D'OEIGNY. Voy. Amér. Mérid. t. v. p. 354.

Hab. Montevideo.

Species 20. (Mus. Brit.)

ANCYLUS IBERICUS. *Anc. testâ elongatâ, angustâ, compressâ, punctulis nigrescentibus aspersâ, latera dextrali rectiusculo; apice sublaterali, a margine postico subrotundâ.*

THE SPRINKLED ANCYLUS. Shell elongated, narrow, compressed, sprinkled with little blackish spots, left side rather straight; apex rather lateral, rather remote from the posterior margin.

GUILDING. Proc. Zool. Soc. 1853.

Hab. Antilles.

Species 21. (Mus. Brit.)

ANCYLUS CHITTII. *Anc. testâ griseo-fusâ, obliquâ, posticè calgulentâ, subovatâ, anticè subacuminatâ; dorso obliquè arcuato; apice gibboso, extra marginem postico-lateralem productâ.*

CHITTY'S ANCYLUS. Shell grey-brown, oblique, deeply cup-shaped, subovate, anteriorly subacuminated; back obliquely arched, apex gibbous, produced beyond the postero-lateral margin.

ADAMS. (C. B.) — ?

Hab. Jamaica.

Species 22. (Mus. Brit.)

ANCYLUS SIBIRICUS. *Anc. testâ dextrali, obliquè conicâ, fulvâ, oratâ, intus albâ; dorso alto, obliquâ, apice extra-marginali, obtusiusculo.*

THE SIBIR ANCYLUS. Shell dextral, obliquely conical, fulvous, ovate, white within; back high, oblique, apex extra-marginal, rather obtuse.

GEESFELD. Moll. Sibur. et Amur.

Hab. Sibir.

ANCYLUS.—PLATE III.

Species 23. (Mns. Brit.)

ANCYLUS MORICANDI. *Anc. testâ angustâ, compressâ, elongatâ, ferruginâ, opacâ, intus suberosâ; dorsa declivâ, apice posticâ subcentrali, lateraliter submarginatâ.*

MORICANDI'S ANCYLUS. Shell narrow, compressed, elongated, ferruginous, opaque, pinkish inside; back sloped, apex posteriorly subcentral, laterally submarginal.

D'ORBIGNY. Voy. Amér. Mèrid. T. V. p. 355.

Ancylus Bahiensis. Moricand.

Ancylus Nacina. Spix.

Hab. Lake Baril, Bahia.

Species 24. (Mns. Brit.)

ANCYLUS FULVUS. *Anc. testâ depressâ, fultâ, radiatim tenuiter striatâ, elongatâ, posticâ subconcaâ, dorsa levitè declivâ, apice subacuminatâ, subcentrali.*

THE HOOP-SHAPED ANCYLUS. Shell depressed, fulvous, radiately finely striated, elongated, posteriorly rather narrowed, back gently sloped, apex acuminated, subcentral.

D'ORBIGNY. Amér. Mèrid. III. p. 355.

Hab. South America.

Species 25. (Mns. Brit.)

ANCYLUS ILIUSUS. *Anc. testâ oratâ, conicâ, tenuissimè striatâ, semi-pellucidâ, roseo-fultâ, apice posticâ et lateraliter subcentrali.*

THE THREMOID ANCYLUS. Shell ovate, conical, very finely striated, semi-pellucid, rose-fulvous, apex posteriorly and laterally subcentral.

COLEB. New Freshwater Shells. Halleman's monograph.

Hab. Alabama.

Species 26. (Mns. Brit.)

ANCYLUS RADIATUS. *Anc. testâ parvâ, albâ, tenuissimè striatâ, subconicâ, striâ tenuissimè radiatâ, oratâ, antice subangustatâ, apice versus marginem post-lateralem productâ.*

THE RAYED ANCYLUS. Shell small, white, translucent, subconical, rayed with very fine striae, ovate, anteriorly rather narrowed, produced towards the post-lateral margin.

GÜLDING. Zool. Journ. Vol. III. p. 536.

Hab. St. Vincent.

Species 27. (Mns. Brit.)

ANCYLUS HAVANENSIS. *Anc. testâ depressâ, longiusculâ, posticâ subangustatâ, conicâ, intus suberosâ; apice obtuso, postice subcentrali, lateraliter submarginatâ.*

THE HAVANA ANCYLUS. Shell depressed, rather long, posteriorly rather narrow, horny, pinkish within; apex obtuse, posteriorly subcentral, laterally submarginal.

PFIFFER. Böhrig. Proc. Zool. Soc. 1853.

Hab. Cuba.

Species 28. (Mns. Brit.)

ANCYLUS BEANI. *Anc. testâ parvâ, conicâ, levigatâ, albâ, depressâ, oratâ, latera declivâ rectiusculâ; dorsa declivâ, apice obtuso versus marginem postico-lateralem elevatâ.*

BEAN'S ANCYLUS. Shell small, horny, smooth, shining, depressed, ovate, right side rather straight; back sloped, apex obtuse, raised towards postero-lateral margin.

BOURBIGNAT. Proc. Zool. Soc. 1853, p. 81.

Hab. Guadaloupe.

Species 29. (Mns. Brit.)

ANCYLUS OBLIQUUS. *Anc. testâ parvâ fusco-conicâ, obliquâ, profundâ, subovatâ, levigatâ, postice paulo attenuatâ; apice productâ, ad marginem postico-lateralem elevata.*

THE OBLIQUE ANCYLUS. Shell small, brownish horn, oblique, deep, subovate, smooth, posteriorly a little attenuated; apex produced, extended to the posterior-lateral margin.

BRODERIP. Proc. Zool. Soc. 1832, p. 202.

Hab. Chili.

Species 30. (Mns. Brit.)

ANCYLUS FUSCUS. *Anc. testâ auro-fuscâ, levigatâ, oblongâ, intus fere albâ, lateribus subcompressis, rectiusculis; dorsa subelevatâ, apice obtuso, lateraliter et posticè subcentrali.*

THE BROWN ANCYLUS. Shell golden brown, smooth, oblong, almost white within; sides rather compressed, rather straight; back rather raised, apex obtuse, laterally and posteriorly subcentral.

ADAMS (C. B.). Boston Journ. Nat. Hist. Vol. III., p. 329.

Hab. United States.

MONOGRAPH

OF THE GENUS

ALYCÆUS.

Thou art in all things one, in each thing many.
For Thou art infinite in one and all.—*Trench.*



2.



1a.



3.



1b.



4.



5.



6.



7.



9.



8.

ALYCEUS.

PLATE I.

Genus ALYCEUS. *Gry.*

Testa terrestris, heliciformis; spira conica, sutura profunda; ultimis anfractibus distortis, medio dorsi tumidus, callo retroverso suturam tegens, post marginem aperturæ contractus. Operculum rotundum convexum intranspicuè multispirale.

Shell terrestrial, heliciform; spire conical, suture deep; last whorl distorted, tumid at the middle of the back, covering the suture with a retroversal callus, contracted behind the margin of the aperture. Operculum rounded, horny, inconspicuously multispiral.

All the Alycei browse in eastern pastures. A large numerical proportion of the species find their homes in India proper; but Borneo, Japan, and other eastern lands and islands produce their contingents. The typical species, *Alyceus gibbus*, the first type, belongs to Cochin-China.

The peculiarities which distinguish the Alycei from other Cyclostomidae are very interesting. At first you have a more or less regular spire of several volutions; then, at the side of the last whorl, farthest removed from the aperture, the spiral tube begins to swell, increasing in volume to about the middle of the back, when it suddenly contracts, throwing back a narrow callus at the suture. Between this contraction and the back edge of the aperture, the tube is always narrow, but with various callosities, month rings, or other inequalities till the aperture itself is reached.

Species 1. (Fig. a, b, Mus. Brit.)

ALYCEUS CRENATUS. *Aly. testâ conicâ, subcicrîdi, omnino minute striatâ, ultimo anfractu ad dorsum moderate tumido, tum caldè, breviter, contracto, deinde callo magno, obliquo cincto, ante callum subexpanso; callo retroverso rugoso, albo, inæquali, elongato; aperturæ margine albo, latè laqueato; operculo lato.*

THE CRENATED ALYCEUS. Shell conical, greenish, all over minutely striated, last whorl moderately tumid at the back, then strongly, briefly, contracted, afterwards girt with a large, oblique callus, rather expanded in front of the callus; retroversal callus rough, white, unequal, long; aperture white at the margin, broadly fluted; operculum broad.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng. 1871.

Hab. Burrail Range, N. Cachar.

The white, oblique 'collar ruff' and the broadly fluted margin of the mouth distinguish this species, which is of small size.

Species 2. (Mus. Brit.)

ALYCEUS DIAGONUS. *Aly. testâ minutâ, pallidè castaneâ, lœvi, obliquè spirali; aperturâ crassâ, margine duplicato, subcrenulatâ, umbilico mediocri, tumulo dorsali hamo magno.*

THE DIAGONAL ALYCEUS. Shell minute, pale chestnut, smooth, obliquely spiral; aperture thick, with a double rather crenulated margin; umbilicus middle-sized; dorsal swelling not large.

GODWIN-AUSTIN. Journ. Asi. Soc. Bengal. 1871.

Hab. Diyung Valley, N. Cachar.

Species 3. (Mus. Brit.)

ALYCEUS VESTITUS. *Aly. testâ conicâ, pallidè castaneâ, anfractibus ad suturam crenulatis; ultimo ad dorsum moderate tumescenti; aperturâ ad anfractum penultimum emarginatâ; margine albo, crasso, simplici.*

THE INVESTED ALYCEUS. Shell conical, pale chestnut; whorls crenulated at the suture, last moderately swelling at the back; aperture emarginated at the penultimate whorl; margin white, thick, extûs declivi.

BLANFORD. Journ. Asi. Soc. Bengal, 1871.

Hab. Aracan Hills.

Species 4. (Mus. Brit.)

ALYCEUS GIBBUS. *Aly. testâ conicâ, fulcâ; spirâ breviusculâ, apicè rubro; ultimo anfractu lateralitè expanso, ad dorsum depresso-gibboso, prope aperturam angustissimo; callo suturali inconspicuo; aperturâ rotundâ, margine tenuiter duplicato; umbilico brevi.*

THE HUNCHBACK ALYCEUS. Shell conical, fulvous; spire rather short, with red apex; last whorl laterally expanded, depressed-gibbous at the back, very narrow near the aperture; sutural callus inconspicuous; aperture rounded, margin thinly doubled; umbilicus short.

FERRUSSAC.

Hab. Cochin-China.

Species 5. (Mus. — ? Copied.)

ALYCÆUS MARGARITUS. *Aly. testâ subglobosâ, albidâ; anfractibus tribus, rotundis, ultimo post aperturam moderate (?) contracto, aperturæ margine duplicato; margine interno tenui, producto; margine externo planato, expanso; umbilico parvo.*

THE PEARL ALYCÆUS. Shell subglobose, whitish; whorls three, rounded, last moderately (?) contracted behind the aperture; margin of the aperture double; inner margin thin, produced; outer margin flattened, expanded; umbilicus small.

THEOBALD MSS. Hanley, Conch. Ind. Pl. 95, f. 10.
Hab. Siam provinces.

The second figure in the Indian Conchology (Pl. XCVII, f. 7), given as representing a variety of this species, has every appearance of belonging to another. I have therefore named it *Al. microstoma* in Plate IV.

Species 6. (Mus. — ?)

ALYCÆUS PYRAMIDALIS. *Aly. testâ majusculâ, pyramidalâ, rubro-fuscâ, lœvi; ultimo anfractu lateraliter expanso, ad dorsum gibboso, subitò contracto, tum breviter continuo, callo suturali inconspicuo elongato; margine aperturæ lato, planato; umbilico angustissimo.*

THE PYRAMIDAL ALYCÆUS. Shell rather large, pyramidal, red-brown, smooth; last whorl laterally expanded, gibbous at the back, suddenly contracted, then shortly continued, sutural callus inconspicuous, long; margin of the aperture broad, flattened, rather narrow.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. 225.

Hab. Therabuin Hill, Teunasserim, Burmah.

Much resembling *Alyceus gibbus*, but more pyramidal.

Species 7. (Mus. Brit.)

ALYCÆUS PUSILLUS. *Aly. testâ parvâ, albâ, depressâ, liratâ; ultimo anfractu ad latus latè producto, ad dorsum inflato et profundè rugato; ad tumoris terminum breviter contracto, tum post aperturam subexpanso; callo suturali parvo, brevi, distincto; umbilico lato, margine aperturæ crasso, subrotundo.*

THE DWARF ALYCÆUS. Shell small, white, depressed, ridged; last whorl broadly produced at the side,

inflated and deeply-wrinkled at the back, slightly contracted at the end of the tumour, then a little expanded behind the aperture; sutural callus small, short, distinct; umbilicus broad, margin of the aperture thick, rather round.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng.

Hab. Javai to Asalu.

Species 8. (Mus. Godwin-Austin.)

ALYCÆUS KHASIACUS. *Aly. testâ depressâ, fusco-rubescenti, profundè sulcatâ, anfractibus quateris, depressis, apicali rubro, ultimo ad dorsum valdè inflato, profundè sulcato, ad terminum tumoris subitò profundè contracto, tum usque ad marginem aperturæ expanso; callo suturali brevi, tenui, conspicuo, umbilico lato, margine aperturæ crasso, subrotundo.*

THE KHASIAN ALYCÆUS. Shell depressed, reddish brown, deeply grooved, whorls four, depressed, apical red, last much inflated at the back, suddenly and deeply contracted at the end of the tumour, then expanded to the margin of the aperture; sutural callus short, thin, conspicuous; umbilicus broad, margin of the aperture thick, rounded.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng. 1871, Vol. XL.

Hab. Khasia and Jaintia Hills.

Species 9. (Mus. Godwin-Austin.)

ALYCÆUS CONICUS. *Aly. testâ solidâ, subciciliâ, obtusè conicâ, ad suturam crenulatâ; anfractibus quinâ, apicalibus rubescentibus, ultimo lato, tumore dorsali densè lirato-rugato, ad terminum tumoris breviter angusto, brevi; margine aperturæ crassissimo, retrorsim declivi, callo suturali elongato, angusto, rugoso; umbilico maximo.*

THE CONICAL ALYCÆUS. Shell solid, greenish, obtusely conical, crenulated at the suture; whorls five, apical, reddish, last broad, dorsal tumor closely wrinkled in ridges, shortly narrow, smooth at the end of the tumor; margin of the aperture very thick, shelving backwards, sutural callus lengthened, narrow, rough; umbilicus very large.

GODWIN-AUSTIN. Journ. Asi. Soc. Bengal, 1871, Vol. XL.

Hab. East of Kopili River, North Cachar.



11.



10.



12.



13.



14 a.



14 b.



15.



16.



18.



17.

ALYCÆUS.

PLATE II.

Species 10.

ALYCÆUS ANDAMAMLE. *Aly. testâ subdepressâ, latâ concentricè distantè loricâ, inter lincas spirâliter striatâ, anfractibus tervis, ultimo ad dorsum moderatè inflato, post marginem aperturæ moderatè contracto, umbilico latissimo; aperturâ ad introitum submarginatâ, margine albo, tenuiter duplicato.*

THE ANDAMAN ALYCÆUS. Shell subdepressed, broad, concentrically distantlly ridged, spirally striated between the ridges; whorls three, last very broad, moderately inflated at the back, moderately contracted behind the margin of the aperture; umbilicus very broad, aperture rather emarginated at the last whorl; margin white, thudly duplicate.

BENSON. Ann. Nat. Hist. 1861, Ser. 3, Vol. VII.

Hab. Port Blair, Andaman Islands.

Species 11. (Mus. Brit.)

ALYCÆUS POLYGONUS. *Aly. testâ conicâ, fuscâ, loricâ quadrâ; anfractibus quaternis, ultimo ad medium dorsî breviter inflato, tum breviter contracto, et margine albo, lato exfoliato, deinde antè aperturæ marginem breviter angustato; callo suturali elevato, longiusculo; umbilico parvo, margine aperturæ albo, polygono.*

THE POLYGONAL ALYCÆUS. Shell conical, brown, smooth; whorls four, last shortly inflated at the middle of the back, then briefly contracted, sutural callus raised, rather long; umbilicus small, margin of the aperture white, polygonal.

BLANDFORD. Journ. Asi. Soc. Beng. 1862.

Hab. ———?

Species 12. (Mus. Hanley.)

ALYCÆUS CUCULLATUS. *Aly. testâ depressâ, albâ, concentricè regulariter sulcatâ; anfractibus tervis, ultimo latissimo, ad dorsum breviter tumido, semi-truncato, ante tumorem brevissimè contracto; margine aperturæ cetero latè expanso, albo interno,*

longè producto, plicato et lacinato; umbilico latissimo, callo suturali concinno, breviusculo.

THE HOODED ALYCÆUS. Shell depressed, white, concentrically regularly grooved; whorls three, last very broad, shortly tumid at the back, half-truncated, very shortly contracted in front of the tumor; external margin of the aperture broadly expanded, white, internal lengthly plaited and fluted; umbilicus very broad; sutural callus neat, rather short.

THEOBALD. Journ. Asi. Soc. Vol. III, p. 51.

Hab. Shan States.

Species 13. (Mus. Brit.)

ALYCÆUS URNULA. *Aly. testâ albâ, altâ, leri; anfractibus quaternis prominentibus, supra medium subangulatis, ultimo albo, post aperturam breviter angustissimo; tumori dorsali magno, in marginem contractura concinno desinenti; callo suturali distincto, breviusculo; umbilico parvo, margine aperturæ angusto, rotunda.*

THE URN ALYCÆUS. Shell white, high, smooth; whorls four, prominent, rather angular above the middle, last high, shortly very narrow behind the aperture; dorsal tumor large, ending in a contracted neat margin; sutural callus distinct, rather short, umbilicus small, margin of the aperture narrow, round.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. II.

Hab. Darjeeling, Himalaya.

Species 14. (Fig. a, b, Mus. Brit.)

ALYCÆUS PLECTOCHEILUS. *Aly. testâ minuto, albâ, subcompressâ, tenuissimè striatâ; anfractibus quaternis angustis, ultimo ad dorsum breviter tumido, tum contracto, deinde callo flexuoso riecto; margine aperturæ producto, quinuplicato; callo suturali subelongato; umbilico mediocri.*

THE PLAITED ALYCÆUS. Shell minute, white, rather compressed, very finely striated; whorls four, narrow, last with short tumulus at the back, then narrowed, afterwards girt with a flexuous

callus; margin of the aperture produced, five-plaited; sutural callus rather lengthened; umbilicus middle-sized.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III, p. 180.
Hab. Rungun Valley.

The margin of the aperture in this interesting little shell is curiously produced and plaited like a frill.

Species 15. (Mus. Brit.)

ALYCEUS AMPHORA. *Aly. testâ altâ, albâ, levî, lateraliter subcompressâ; anfractibus quinîs, superioribus rubescentibus, brevibus; ultimo alto, ventricoso, superiù subangulato, infrà lateraliter angustato et angulato; ad dorsum valdè inflato, tum subito contracto, breviter angustissimo, post aperturam expanso; callo suturali angusto, elongato; umbilico parvo; aperturâ latâ, reflexâ, margine ad anfractûs juncturam semi-interruptâ.*

THE VASE ALYCEUS. Shell high, whitish, smooth, laterally subcompressed; whorls five, upper rather red; last high, ventricose, somewhat angular above, narrow and angular below, much inflated at the back, then suddenly contracted, very narrow for a short distance, expanded behind the aperture; sutural callus narrow, elongated; umbilicus small; aperture broad, reflected; margin half interrupted at the juncture of the whorls.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII.
Hab. Monlacin and Tennasserim.

Species 16. (Mus. —?)

ALYCEUS SUCCINEUS. *Aly. testâ subdepressâ, succineo-fuscâ; anfractibus quaternis regulariter rugatis, ultimo ad dorsum breviter gibboso, tum angustissimo, levî, medio partis anguste margine albo exantè interrupto; apertura margine albo, polygono; callo suturali obliquo, albo, conspicuo, breviusculo; umbilico mediocri.*

THE AMBER ALYCEUS. Shell subdepressed, amber-brown; whorls four, regularly wrinkled, last shortly gibbous at the back, then very narrow, smooth, interrupted in the middle of the narrow

part by a thick, outstanding white margin; margin of aperture white, polygonal; sutural callus oblique, white, conspicuous, rather short; umbilicus medium-sized.

BLANFORD. Journ. Asi. Soc. Bengal, 1862, Vol. XXXI.

Hab. Aracan Hills.

Species 17. (Mus. Brit.)

ALYCEUS VULCANI. *Aly. testâ fuscâ, subdepressâ; anfractibus quaternis, regulariter rugatis; ultimo ad dorsum lateraliterque latè tumido, post mediûm dorsi subito contracto, tum angusto levî; medio partis angusto callis duobus annularibus interrupto; callo suturali breviusculo, margine apertura subhexagono.*

VULCAN'S ALYCEUS. Shell brown, subdepressed; whorls four, regularly wrinkled; last broadly tumid at the back and laterally, suddenly contracted past the middle of the back, then narrow, smooth; interrupted in the middle of the narrow part with two annular calli; sutural callus rather short; margin of the aperture nearly hexagonal.

BLANFORD. Journ. Asi. Soc. Bengal, 1863, Vol. XXXII, p. 323.

Hab. Peak of Pappa in Ava.

Species 18. (Mus. —?)

ALYCEUS FEDDENIANUS. *Aly. testâ altâ, levî, fuscâ; anfractibus quaternis, tertio inflato, subangulato, ultimo lateraliter subcompresso, alto, triangulato; versus aperturam gradatim angustato; callo suturali elongato, levî; umbilico latiusculo, margine apertura albo, postea planulato.*

THE FEDDEN ALYCEUS. Shell high, smooth, brown; whorls four, third inflated, slightly angular; last laterally subcompressed, high, biangular; gradually narrowed towards the aperture; sutural callus elongated, smooth; umbilicus rather broad; margin of aperture white, flattened behind.

THEOPHILD. Journ. Asi. Soc. Bengal, 1870.
Hab. Shan States, Upper Salween.



20.



19.



21.



23 a.



22.



23 b.



24.



25.



27.



26.

ALYCEUS.

PLATE III.

Species 19. (Mus. Brit.)

ALYCEUS MOUHOU. *Aly. testis flavidus, ventricosus, lœvis; anfractibus quinis, superciliis parvis, ultimo ventricosus, lateraliter et infra ad dorsum ciliato; post aperturam breviter angustis, aperture marginè expanso, planato; umbilico brevissimo.*

MOUHOU'S ALYCEUS. Shell yellow, ventricose, smooth; whorls five, upper small; last inflated laterally and below at the back, shortly narrowed behind the aperture; margin of the aperture expanded, flattened; umbilicus very short.

ADAMS. Proc. Zool. Soc. 1862, p. 275.

Hab. Isl. Formosa.

Species 20. (Mus. Brit.)

ALYCEUS AVE. *Aly. testis parvis, depressis, albi, regulariter rugati; anfractibus angustis, ultimo tumori dorsali magno, subito ad terminum contracto; anfractibus parvis inter tumorem et aperture marginem brevissimulâ, medio inflatis; callo suturali brevi, distincto; umbilico lato.*

THE AVE ALYCEUS. Shell small, depressed, white, regularly wrinkled; whorls narrow, last with large dorsal tumour, suddenly contracted at the end; part of the whorl between the tumour and the margin of the aperture rather short, inflated in the middle; sutural callus short, distinct; umbilicus broad.

BLANFORD. Journ. Asi. Soc. 1863.

Hab. Hills of Mandalay and Ava.

Species 21. (Mus. Brit.)

ALYCEUS SWINHOE. *Aly. testis elevatâ, conicâ, albido-flavidâ, lœvi, anfractibus quinis, suturâ profundâ separatis; ultimo ventricosus, lato, tumori laterali subinflato, tum brevissimè angustato; callo dorsali minuto, distincto, aperture marginè tenui, planato.*

SWINHOE'S ALYCEUS. Shell raised, conical, whitish-yellow, smooth, whorls five, separated by a deep suture; last ventricose, broad, distinct, swelled

by a lateral tumour, then very shortly narrowed; dorsal callus minute, distinct, margin of aperture thin, flattened.

H. ADAMS. Proc. Zool. Soc. 1866, p. 319.

Hab. Isl. Formosa.

Species 22. (Mus. Theobald.)

ALYCEUS KURZIANUS. *Aly. testis depressâ, fulvâ, tenuiter sulcatâ, anfractibus quinis, depressis, ultimo ad dorsum medio inflato, validè rugato, tum breviter contracto et callo annulari cincto, post aperturam marginem crassitudine crescenti; apertura majusculâ, albâ, infra emicatâ, canaliferâ; margine columellari rectiusculo, marginè externo crenulato; callo suturali minuto; umbilico latissimo.*

KURZ'S ALYCEUS. Shell depressed, fulvous, finely grooved, whorls five, depressed, last dorsally inflated in the middle, strongly wrinkled, then shortly contracted and girt with an annular callus, increasing in thickness behind the margin; aperture rather large, white, cuneate below, with a canal; columellar margin rather straight, outer margin crenulated; sutural callus minute; umbilicus very broad.

THEOBALD. Journ. Asi. Soc. Bengal.

Hab. Nattarina, Brome.

Species 23. (Mus. Hanley.)

ALYCEUS RICHTOFENI. *Aly. testis subdepressâ, albidâ, regulariter sulcatâ; spirâ acuminatâ, anfractibus angustibus, ultimo medio dorsi inflato tum contracto, parte inter tumorem et aperture marginem angustâ, brevitatâ, per callum annularem in medio divisâ; margine aperture duplicato, parte externa latè planulato, parte interno producto, angustato, subcrenato; callo suturali tenui, angustato; umbilico magno.*

RICHTOFEN'S ALYCEUS. Shell subdepressed, whitish, regularly grooved; spine acuminated, whorls narrow, last inflated in the middle of the back, then contracted, the part between tumour and edge of aperture narrow, smooth, divided in the middle by an annular callus; margin of aper-

ture double, outer part broadly flattened, inner part produced, narrow, slightly crenated; sutural callus thin, narrow; umbilicus large.

BLANFORD. Journ. Asi. Soc. Bengal, 1863, Vol. XXXII. p. 324.

Hab. Moulmein.

Species 24. (Mus. Brit.)

ALYCEUS DISTORTUS. *Aly. testâ breviter conicâ, griseo-fuleâ, levi; anfractibus quaternis, rotundis; ultimo alto, post aperturam brevissimè angustâ, ad dorsam et lateraliter latè inflato, tumore dorsali prope aperturam in marginem concinnavit desinenti; umbilico parvo, margine aperturæ rotundo; collo suturali angustâ, elongatâ.*

THE DISTORTED ALYCEUS. Shell shortly conical, grey-fulvous, smooth; whorls four, rounded; last high, behind the aperture very shortly narrow; dorsal tumour ending near the aperture in a neat margin; umbilicus small, margin of aperture round; sutural callus narrow, long.

HAINES. MS. Brit. Mus.

Hab. — ?

Species 25. (Mus. Brit.)

ALYCEUS NITIDUS. *Aly. testâ fuscâ, breviter conicâ, levi, regulariter sulcatâ; anfractibus quaternis, ultimo inter marginem aperturæ et tumorem dorsalem mediè inflato, tumore dorsali mediovi, profundè rugato, collo dorsali elongatâ, distincto; aperturæ margine duplicato, parte interna subrotundâ, productâ, parte externa compluviatâ, infra angulatâ; umbilico parvo.*

THE NEAT ALYCEUS. Shell brown, shortly conical, smooth, regularly grooved; whorls four, last between the margin of the aperture and the dorsal tumour inflated in the middle, dorsal

tumour median sized, deeply wrinkled, dorsal callus elongated, distinct; margin of aperture double, inner part rather round, produced; outer part flattened, angular below; umbilicus small.

BLANFORD. Journ. Asi. Soc. Bengal, 1863.

Hab. Aracan.

Species 26. (Mus. Brit.)

ALYCEUS BACCI. *Aly. testâ conicâ, altiusculâ, levi, tenui, pallidè subviridi, apice succineo; anfractu ultimo breviter ante aperturam breviter angustâ, tumore dorsali magno, rotundo; collo suturali inconspicuo; margine aperturæ angustâ, simpliciter albo.*

THE BACCUS ALYCEUS. Shell conical, rather high, smooth, thin, pale greenish, apex amber; last whorl shortly narrow, dorsal tumour large, round; sutural callus inconspicuous; aperture of the margin narrow, simple, white.

PFEIFFER. Mon. Pneum. — ?

Hab. — ?

Species 27. (Mus. Brit.)

ALYCEUS BERTH. *Aly. testâ pallidè fulvâ, depressâ, levi, spirâ acuminatâ; ultimo anfractu post aperturam marginem brevissimè angustâ, tumore dorsali mediovi, sulcatâ; collo suturali conspicuo, calido, elongatâ; aperturæ margine angustâ, laevigatâ; umbilico lato.*

BERTH'S ALYCEUS. Shell pale fulvous, depressed, smooth, spire acuminate; last whorl very shortly narrow behind the aperture; dorsal tumour middle-sized, grooved; sutural callus conspicuous, strong, elongated; margin of aperture narrow, fluted; umbilicus broad.

GODWIN AUSTIN — ?

Hab. — ?



ALYCEUS.

PLATE IV.

Species 28. (Mus. Theobald.)

ALYCEUS MICROSTOMA. *Aly. testâ fulvâ, subdepressâ, regularitè rugulâ; utrinque venterâ; altimo anfractu genulatum inflato, tum prope aperturam marginem brevissimè angustato, tum; margine aperturæ contracto, crenato, prope suturam sinuato; umbilico lato.*

THE SMALL-MOUTHED ALYCEUS. Shell brown, subdepressed, regularly wrinkled; last whrl gradually inflated, then very shortly narrowed and smooth near the margin of the aperture; margin of aperture contracted, crenated, sinuated near the suture; umbilicus broad.

SOVEREIGN.

Alyceus microstoma, Theobald (MS.).

Hab. Shan Provinces.

This shell is so different from *Alyceus microstoma*, as originally described, that the writer has found it necessary to give it a name.

Species 29. (Mus. Brit.)

ALYCEUS NICOBARICUS. *Aly. testâ conicâ, subdepressâ, subciliatâ coracâ; anfractibus quatercis, rotundis, altimo medio dorsi moderatè inflato, ad terminum tumore dorsali conicâ margine, deinde brevi, angusto; umbilico medioeri; margine aperturæ duplicato, parte interno crassâ subproductâ; callo suturali brevissimo, conspicuo.*

THE NICOBAR ALYCEUS. Shell conical, subdepressed, greenish horny; whorls four, round, last moderately inflated in the middle of the whorl, neatly edged at the end of the dorsal tumour, then smooth, narrow; umbilicus medium-sized; margin of aperture double, inner part thick, slightly produced; sutural callus very short, conspicuous.

MURCH — ? MS. Brit. Mus.

Hab. Nicobar Islands.

Species 30. (Mus. Brit.)

ALYCEUS OPHIURUS. *Aly. testâ conicâ, altiusculâ, brevi, griseo-albidâ; anfractibus quinis, prominentibus; altimo testâ aperturam constrictâ, lêm conspicuâ*

inflato et ad marginem tumore contracto; tumore dorsali brevi; callo suturali brevissimo; umbilico parvo; margine aperturæ supra infrâque subangulato.

THE EAR-HOLE ALYCEUS. Shell conical, rather high, smooth, whitish-grey; whorls five, prominent; last constricted behind the aperture, then conspicuously inflated and contracted at the edge of the tumour; dorsal tumour short; sutural callus very short; umbilicus small; margin of aperture slightly angular above and below.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. VIII, p. 188 (Cyclostoma).

Hab. Himalaya.

Species 31. (Mus. Hanley.)

ALYCEUS GLABER. *Aly. testâ fulvâ, depresso-conicâ; breviter sulcatâ; anfractibus quatercis, angustatis, apicalibus rubris, altimo inter marginem aperturæ et tumorem dorsalem bi-calloso; tumore dorsali moderatè inflato, rugato; callo suturali subelongato; umbilico latissimo; margine aperturæ duplicato.*

THE SMOOTH ALYCEUS. Shell fulvous, depressed-conical; slightly grooved; whorls four, narrow, apical red, last with two calli between the margin of aperture and dorsal tumour; dorsal tumour moderately inflated, wrinkled; sutural callus rather lengthened; umbilicus very broad; margin of aperture double.

BLANFORD. Journ. Asi. Soc. Beng. 1865, Vol. XXXIV, p. 84.

Hab. Aracan Hills.

Species 32. (Fig. a, b, Mus. Hanley.)

ALYCEUS SCULPTILIS. *Aly. testâ subviridè-fulvâ, depresso-conicâ, sulcatâ; anfractibus quatercis, rotundis, apicalibus rubris, nanninatis; altimo, inter marginem aperturæ et tumorem dorsalem angusto, equali sulcato, subelongato; tumore dorsali elongato, conicâ marginato; callo suturali incursivâ; umbilico latissimo; margine aperturæ duplicato, parte interno calidè crenato.*

THE SCULPTURED ALYCEUS. Shell greenish-buff, depressed-conical, grooved; whorls four, rounded, apical red, acuminate; last narrowed between margin of aperture and dorsal tumour, narrow, equal, saucated, rather lengthened; dorsal tumour elongated, neatly edged; sutural callus inconspicuous; umbilicus very broad; margin of aperture double, inner part strongly crenated.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 226.

Hab. Thyet Myo, near British Barmah.

Species 33. (Mus. Brit.)

ALYCEUS SPIRAECELLUM. *Aly. testâ obscure fuscâ, depressâ, sulcatâ; anfractibus quaternis, angustis, apicalibus succineis; ultimo post aperturam breviter angusto, laevi; tumore dorsali mediocri, margine crasso; umbilico longiusculo, collo suturali brevissimo, margine aperturæ complanato; umbilico lato.*

THE SPIRACLE ALYCEUS. Shell dull brown, depressed, grooved; whorls four, narrow, apical amber; last shortly narrowed behind the aperture, smooth; dorsal tumour medium-sized; margin thick; umbilicus rather narrow, sutural callus very short, margin of aperture flattened; umbilicus broad.

ADAMS AND REEVE. Voyage of the 'Sulphur.'

Hab. ———?

Species 34. (Mus. Brit.)

ALYCEUS GRAPHICUS. *Aly. testâ pallidâ fuleâ, conicâ, altâ; anfractibus quinis, apicalibus levibus, penultimo lirato; ultimo et penultimo acutè liratis, ultimo post aperturam marginem levi, gradatim angustato; tumore dorsali inconspicuo; collo suturali brevi, conspicuo; umbilico minuto; aperturæ margine duplicato, parte externo ad juncturam anfractibus interrupto, subaurito, parte interno tenui, paulo producto.*

THE GRAPHIC ALYCEUS. Shell pale fulvous, conical, high; whorls five, apical smooth, last and last

before sharply ridged, last smooth, gradually narrowed behind the margin of the aperture; dorsal tumour inconspicuous; sutural callus short, conspicuous; umbilicus minute; margin of aperture double, outer part interrupted at the juncture of the whorl, slightly aurited; inner part thin, a little produced.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Aracan Hills.

Species 35. (Mus. Brit.)

ALYCEUS FOOTEL. *Aly. testâ depressâ, albidâ, levi; anfractibus quaternis; ultimo post marginem aperturæ breviter angustato; tumore dorsali moderatè inflato, concinno marginato, rugato; aperturæ margine cæcis annulis tribus plicato, infra columellam caucato.*

FOOTE'S ALYCEUS. Shell depressed, whitish, smooth; whorls four; last shortly narrowed behind the margin of the aperture; dorsal tumour moderately inflated, neatly bordered, wrinkled; margin of aperture plaited in three rings outside, cornered under the columella.

BLANFORD. ———?

Hab. S. India.

Species 36. (Mus. Hanley.)

ALYCEUS UMBONALIS. *Aly. testâ majusculâ, depressâ, fuleâ, levi; anfractibus quinis, apicalibus rubris; ultimo elevato, post aperturam marginem angusto; tumore; margine expanso, ad suturam elevato; collo suturali elongato; margine aperturæ transversè ovato, latè plauato, reflexo; umbilico maximo.*

THE UMBONAL ALYCEUS. Shell rather large, depressed, fawn, smooth; whorls five, apical red; last extended, elongated behind the aperture; margin of tumour expanded, raised at the suture; sutural callus elongated; margin of aperture transversely ovate, broadly flattened, reflected.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 225.

Hab. Akauktoung, near Irawaddy, Barmah.



38.



37.



39.



40. a



41.



40. b



42.



43.



45.



44.

ALYCEUS.

PLATE V.

Species 37. (Mus. Brit.)

ALYCEUS VIMMULA. *Aly. testâ acutâ, albâ, depressâ, tenuiter striatâ; ultimo angustâ post aperturâ marginem angustâ, medio crassiusculâ, tumore dorsali conicum marginatâ, anterâ inflatâ, rugatâ; callâ suturali brevi, conspicuâ; aperturâ margine duplicatâ, parte laterali planâ, parte internâ productâ.*

THE LITTLE GEM ALYCEUS. Shell minute, whitish, depressed, finely striated; last whorl behind margin of aperture narrow, thickish in the middle, dorsal tumour neatly bordered, moderately inflated, wrinkled; sutural callus short, conspicuous; margin of aperture double, outer part flattened, inner part produced.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III. 1859.

Hab. Rungun Valley.

Species 38. (Mus. Brit.)

ALYCEUS AEMILLATUS. *Aly. testâ brevi, depresso-conico, albâ; ultimo angustâ, post aperturâ breviter angustissimâ, tum latè callosâ, inflatâ; tumore dorsali subrecto, margine crasso, callosâ; callâ suturali conspicuâ, breviusculâ, aperturâ margine angustâ; umbilico latissimâ.*

THE COLLARED ALYCEUS. Shell smooth, depressed conical, whitish; last whorl shortly very narrow, callous behind the aperture, then broadly callous, inflated; dorsal tumour backward, margin thick, callous; sutural callus conspicuous, rather short, margin of the aperture narrow; umbilicus very broad.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 227.

Hab. Thyet Myo near river Irawaddy, Burmah.

Species 39. (Mus. Brit.)

ALYCEUS POLITUS. *Aly. testâ depressâ, politâ, costatâ, subtitâ albâ; ultimo angustâ post aperturâ contractâ, tum longè inflatâ, ad marginem tumoris depresso et callosâ, tumore dorsali inconspicuâ, callâ suturali albâ, brevissimâ; umbilico latâ; aperturâ margine infra columellam cuneatâ.*

THE POLISHED ALYCEUS. Shell depressed, polished, chestnut, whitish underneath; last whorl constricted behind the aperture, then with a long swelling, depressed and callous at the margin of the dorsal tumour; dorsal tumour inconspicuous; sutural callus white, very short, umbilicus broad; margin of aperture cornered below columella.

BLANFORD. Journ. Asi. Soc. Bengal, 1865.

Hab. Aracan.

Species 40. Fig. a, b. (Mus. Brit.)

ALYCEUS HUMILIS. *Aly. testâ parvâ, griseo-albâ, subcatalo-striatâ, depressâ; ultimo angustâ inter aperturâ et tumorem dorsalem inflatâ; tumore dorsali breviter conspicuâ inflatâ, callâ suturali breviusculâ; umbilico latâ; margine aperturâ infra cuneatâ.*

THE HUMBLE ALYCEUS. Shell small, grey-white, groove-striated, depressed; last whorl inflated between aperture and dorsal tumour; dorsal tumour shortly conspicuously inflated, sutural callus rather short, umbilicus broad; margin of aperture cornered below.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Akaoktong, banks of Irawaddy.

Species 41. (Mus. Hailey.)

ALYCEUS CONSTRICTUS. *Aly. testâ conicâ, albâ, fulvâ, breviusculâ; angustibus quateris, elevatis, testâ distanter breviter levatâ; ultimo post aperturâ breviter angustissimâ; tumore dorsali brevi, conicum marginatâ, callâ suturali brevi; umbilico parvâ; margine aperturâ latè reflexâ.*

THE CONSTRICTED ALYCEUS. Shell conical, high, fulvous, rather smooth; whorls four, elevated, third distantly, slightly ridged; last shortly very narrow behind the aperture; dorsal tumour short, neatly bordered; sutural callus short; umbilicus small; margin of aperture broadly reflected.

BENSON. Ann. Nat. Hist., Ser. 2, Vol. VIII. p. 272.

Hab. Sikkim, Himalaya.

Species 42. (Mus. Brit.)

ALYCEUS BEMBEX. *Aly. testâ albâ, conicâ, albâ, lœvi; anfractibus quinis, ultimo post aperturam constricto tunc inflato et constricto; tumore dorsali caldè inflato; callo suturali conspicuo, elongato; aperture margine duplicato; umbilico parvo.*

THE BEMBEX ALYCEUS. Shell white, conical, high, smooth; whorls five, last constricted, then inflated and constricted behind the aperture; dorsal tumour much inflated; sutural callus conspicuous, elongated; margin of aperture doubled; umbilicus small.

BENSON. Ann. Nat. Hist., Ser. 3, Vol. III. 1859.

Hab. Darjeeling, Himalayas.

Species 43. (Mus. Hanley.)

ALYCEUS CRENULATUS. *Aly. testâ subdepressâ, griseo-âllâ; anfractibus quatuor, ultimo post marginem aperture breviter, profundè constricto, tunc calidè inflato, rugato; margine aperture crenulato; umbilico majusculo.*

THE CRENULATED ALYCEUS. Shell subdepressed, grey-white; whorls four, last shortly, deeply, constricted, then much inflated, wrinkled; margin of aperture crenulated; umbilicus rather large.

BENSON. Ann. Nat. Hist., Ser. 3, Vol. III. 1859.

Hab. Rungun Valley.

Species 44. (Mus. Brit.)

ALYCEUS THEOBALDI. *Aly. testâ conicâ, subdepressâ, distanter liratâ, griseo-âllâ; ultimo anfractu*

crassissculâ, post aperturam breviter angusto, callo crasso uncinato; tumore dorsali moderatè inflato, rugato; callo suturali elongato, angusto; umbilico latiusculo; margine aperture polygono.

THEOBALD'S ALYCEUS. Shell conical, subdepressed, distantly ridged, grey-white; last whorl rather thick, shortly narrow behind the aperture, ringed with a thick callus; sutural callus long, narrow; umbilicus rather broad; margin of aperture polygonal.

BLANFORD. Journ. Asi. Soc. Bengal. 1862.

Hab. Khasi Hills.

Species 45. (Mus. Brit.)

ALYCEUS EXPATRIATUS. *Aly. testâ depressissimâ, fulvâ, tenuiter sulcatâ; anfractibus apicalibus rubris, ultimo longè cœteso, post aperturam marginem callo approximato et altero albo mediano extanti cincto; tumore dorsali albomarginato, caldè inflato; callo suturali breviusculo, conspicuo; umbilico lato; aperture margine tenuiter duplicato.*

THE EXPATRIATED ALYCEUS. Shell very depressed, fulvous, finely grooved; apical whorls red, last considerably extended, girt behind the margin of the aperture with an approximate callus and another white medial, outstanding; dorsal tumour white-edged, strongly inflated; sutural callus rather short, conspicuous, umbilicus broad; margin of aperture thinly doubled.

BLANFORD. Journ. Asi. Soc. Bengal. 1860, Vol. XXIX. p. 123.

Hab. Nilgherries.



47.



46.



48.



49.



50, a.



50, b.



51.



52.



54.



53.

ALYCEUS.

PLATE VI.

Species 46. (Mus. Brit.)

ALYCEUS SUBULTER. *Aly. testâ compressâ, pallidâ fulcâ, laterâfiliâ, distictâ; apice acuminatâ; ultimo anfractu laterâter bimarginato, tumore dorsali latè albo, rugato; callo suturali brevissimo; umbilico brevissimo.*

THE *PHLEPS* ALYCEUS. Shell compressed, pale fulvous, laterally distorted; apex acuminated; last whorl with two distinct margins; dorsal tumour broadly inflated, wrinkled; sutural callus rather short; umbilicus very broad.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.
Hab. Sikkim, Himalaya.

Species 47. (Mus. Brit.)

ALYCEUS SPANGULATUS. *Aly. testâ depressâ, fulcâ, lœviter striatâ; ultimo anfractu post marginem aperturæ profunde contracto, tunc callo crasso, prominenti irregulari armato; tumore dorsali brevi; callo suturali brevissimo; umbilico latissimo; marginem aperturæ duplicato.*

THE SPANGLED ALYCEUS. Shell depressed, fulvous, finely striated; last whorl deeply contracted behind margin of aperture, then armed with a prominent irregular callus; dorsal tumour short; sutural callus rather short; umbilicus rather broad; margin of aperture double.

HUTTON. MSS. Pflr. Zeitschrift Malak. 1846.
Hab. Landour.

Species 48. (Mus. Theobald.)

ALYCEUS BIFRONS. *Aly. testâ pallidâ fulcâ, depressâ, lævâ; anfractibus apicalibus rubris; ultimo anfractu post aperturam longè angustato, callo umbilici, et callo albo irregulari prominenti inter-rupto; tumore dorsali brevi; callo suturali brevissimo; umbilico lato; margine aperturæ tenuissimo.*

THE TWO-LEAVED ALYCEUS. Shell pale, fulvous, depressed, smooth; apical whorls red; last whorl with a narrow length behind the aperture, inter-

rupted by an annular and irregular, prominent callus; dorsal tumour short; sutural callus rather short; umbilicus broad; margin of aperture rather thin.

THEOBALD. Journ. Asi. Soc. Bengal, 1870, Vol. XXXIX. Pl. 2, p. 396.

Hab. Shan States.

Species 49. (Mus. Brit.)

ALYCEUS PROSECTUS. *Aly. testâ depresso-conicâ, pallidâ fulcâ, irregulariter sulcatâ et liratâ; ultimo anfractu distorto subgloboso, post aperturam marginem breviter angustato, declivi, carinato; tumore dorsali longè inflato; aperturæ margine albo, latè reflexo supra infraque subaurito; umbilico lato; callo suturali longissimo.*

THE SLASHED ALYCEUS. Shell depressed, conical, pale fulvous, irregularly grooved and ridged; last whorl distorted, subglobose, shortly narrowed behind margin of aperture, sloped, keeled; dorsal tumour lengthily swelled; margin of aperture white, broadly reflected, subaurited above and below; umbilicus broad; sutural callus rather long.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.
Hab. Khasi Hills.

Species 50. (Fig. a, b, Mus. Brit.)

ALYCEUS FUGORI. *Aly. testâ conicâ, acuminatâ, sulphureâ, ultimo anfractu ventricoso, lateraliter et dorso valdè inflato; post aperturam breviter angustato, tumore dorsali subito et conspicuo; callo suturali brevissimo; aperturâ angustè reflexâ.*

THE FUGOR ALYCEUS. Shell conical, acuminated; sulphur, last whorl ventricose laterally at the back, much inflated, shortly narrowed behind the aperture; dorsal tumour sudden and conspicuous; sutural callus very short; aperture narrow, reflected.

MÆRTENS. —? MS. Mus. Brit.

Hab. —? —?

Species 51. (Mus. Brit.)

ALYCEUS PHSIS. *Aly. testâ majusculâ, depresso-conicâ, griseo-albidâ, lævi, ultimo anfractu lateraliter extenso; post aperturam distorto, breviter angustato; tumore dorsali conicâ marginato, latè inflato; callo suturali elongato; umbilico mucoso; margine aperturæ angustè reflexo.*

THE PHSIS ALYCEUS. Shell rather large, depressed-conical, greyish white, smooth, last whorl laterally distorted, shortly narrowed behind the aperture; dorsal tumour neatly bordered, broadly inflated; sutural callus elongated; umbilicus very large; margin of aperture narrowly reflexed.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III. p. 179.

Hab. Rungan Valley, near Darjeeling.

Species 52. (Mus. Hanley.)

ALYCEUS HEDES. *Aly. testâ, depresso-conicâ, lævi, pallidè castaneâ; ultimo anfractu post marginem aperturæ constricto, callo irregulari retrorsim tortuo munito; tumore dorsali breviusculo, margine albo; callo suturali longiusculo; umbilico majusculo; aperturæ margine angusto.*

THE DULL ALYCEUS. Shell depressed-conical, smooth, pale chestnut; last whorl constricted behind margin of aperture, strengthened with an irregular backward twisted callus; dorsal tumour rather short, with white margin; sutural callus rather long; umbilicus rather large; margin of aperture narrow.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.

Hab. Khasia Hills.

Species 53. (Mus. Brit.)

ALYCEUS STOLITZII. *Aly. testâ albidâ, tenuissimè striatâ, subdepressâ; ultimo anfractu post marginem bilirato, tum longè angustissimo; tumore dorsali conicâ marginato; callo suturali conspicuo, elongato; umbilico magno.*

STOLITZSKY'S ALYCEUS. Shell whitish, very finely striated, subdepressed; last whorl with double-ridge behind aperture, then with a lengthened very narrow space; dorsal tumour neatly bordered; sutural callus conspicuous, elongated; umbilicus large.

GODWIN AUSTIN. —? MS. Brit. Mus.

Hab. Nagor Hills.

Species 54. (Mus. Brit.)

ALYCEUS INGRAMI. *Aly. testâ depressâ, albâ; ultimo anfractu lateraliter extenso, post aperturam brevissimè contracto; tumore dorsali ad aperturam subappropinquato; callo suturali elongato, conspicuo; umbilico latissimo.*

INGRAM'S ALYCEUS. Shell depressed, whitish; last whorl laterally extended, very shortly contracted behind the aperture; dorsal tumour rather near the aperture; sutural callus lengthened, conspicuous; umbilicus very wide.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Aracan.

ALYCEUS.

	Plat.	Species.		Plat.	Species.
amphora, <i>Benson</i>	II.	15	<i>margaritus</i> , <i>Theobald</i>	IV.	28
Andamania, <i>Benson</i>	II.	10	<i>margaritus</i> , <i>Theobald</i>	I.	5
armillatus, <i>Benson</i>	V.	38	<i>microstoma</i> , <i>Sowceby</i>	IV.	28
Avæ, <i>Blanford</i>	III.	20	<i>Mouhoti</i> , <i>Adams</i>	III.	19
Bacci, <i>Pfeiffer</i>	III.	26	<i>Nicobaricus</i> , <i>Marchal</i>	IV.	29
bembex, <i>Benson</i>	V.	42	<i>nitidus</i> , <i>Blanford</i>	III.	25
bifrons, <i>Theobald</i>	VI.	48	<i>otiphorus</i> , <i>Benson</i>	IV.	30
Burtii, <i>Godwin Austin</i>	III.	27	<i>physis</i> , <i>Benson</i>	VI.	51
conicus, <i>Godwin Austin</i>	I.	9	<i>plectocheilus</i> , <i>Benson</i>	II.	14
constrictus, <i>Benson</i>	V.	41	<i>politus</i> , <i>Blanford</i>	V.	39
crenatus, <i>Godwin Austin</i>	I.	1	<i>polygonus</i> , <i>Blanford</i>	II.	11
crenulatus, <i>Benson</i>	V.	43	<i>prosectus</i> , <i>Benson</i>	VI.	49
occellatus, <i>Theobald</i>	II.	12	<i>psillus</i> , <i>Godwin Austin</i>	I.	7
diagonus, <i>Godwin Austin</i>	I.	2	<i>pyramidalis</i> , <i>Benson</i>	I.	6
distortus, <i>Haines</i>	III.	24	<i>Richtofeni</i> , <i>Blanford</i>	III.	23
expatriatus, <i>Blanford</i>	V.	45	<i>sculptilis</i> , <i>Benson</i>	IV.	32
Feddenianus, <i>Theobald</i>	II.	18	<i>spiracellum</i> , <i>Adams and Reece</i>	IV.	33
Footei, <i>Blanford</i>	IV.	35	<i>Stolitzkii</i> , <i>Godwin Austin</i>	VI.	53
Fugori, <i>Martens</i>	VI.	50	<i>strangulatus</i> , <i>Hutton</i>	VI.	47
gemmula, <i>Benson</i>	V.	37	<i>stylifer</i> , <i>Benson</i>	VI.	46
gibbus, <i>Percussie</i>	I.	4	<i>succineus</i> , <i>Blanford</i>	II.	16
glaber, <i>Blanford</i>	IV.	31	<i>Swinhoci</i> , <i>H. Adams</i>	III.	21
graphicus, <i>Blanford</i>	IV.	34	<i>Theobaldi</i> , <i>Blanford</i>	V.	44
laches, <i>Benson</i>	VI.	52	<i>umbonalis</i> , <i>Benson</i>	IV.	36
humilis, <i>Blanford</i>	V.	40	<i>urnula</i> , <i>Benson</i>	II.	13
Ingrami, <i>Blanford</i>	VI.	54	<i>vestitus</i> , <i>Blanford</i>	I.	3
Khasiacus, <i>Godwin Austin</i>	I.	8	<i>Vulcani</i> , <i>Blanford</i>	II.	17
Kurzianus, <i>Theobald</i>	III.	22			

MONOGRAPH

OF THE GENUS

M A R G A R I T A.

Of Nature's gifts thou may'st with lilies boast,
And with the half-blown rose. *Shakspeare.*



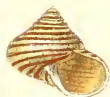
1



2



3



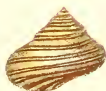
4



5



6



7



8



9



10

MARGARITA.

PLATE I.

Genus MARGARITA. Leach.

Trochus umbiliciformis, et heliciformis, intus et sub umbilicatum externum marginatam, internum umbilicata, internum clausa. Apertura magna, obliqua. Operculum coracum, subovatum, paucisporale.

Shell trochus- or helix-shaped, pearly inside and beneath the external tegument, sometimes umbilicated, sometimes closed. Aperture large, simple. Operculum horny, subovate, few-whorled.

This genus consists of a few shells that have been grouped together, as having some affinities, but no very definite uniting characters. In the work by Messrs. Adams they are separated into two genera, and other species have been added to each. In the original genus there are umbilicated and non-umbilicated examples; the former are allowed in that work to retain the name now used, while the latter are named 'Photinula.' This plate having been published in a former number, the writer now completes the monograph, including both sections, as left by his late father, in the Conehological Illustrations, with a few additions from specimens in the collection of the British Museum.

Species 1. (Fig. a, b, Mus. Brit.)

MARGARITA UMBILICALIS. *Mar. testâ magnâ, tenui laevigatâ, fulvâ, obliquâ; umbilico latissimo, apertura maxime obliquâ, intus splendide iridescenti; ultimo anfractu lato, obscurissime angulato.*

THE UMBILICAL MARGARITA. Shell large, thin, smooth, fulvous, oblique, umbilicus very broad, aperture very large, oblique, splendidly iridescent within; last whorl broad, very obscurely angular.

BRODERIP. Sowerby Con. Ill., p. 13.

Hab. — ?

Species 2. (Mus. Brit.)

MARGARITA UNDLATA. *Mar. testâ fulvâ, parvâ, depressâ, spirâliter striatâ, ad suturam undulatâ; ultimo anfractu lato; apertura magnâ, obliquâ; umbilico angusto, albo.*

THE WAVY MARGARITA. Shell fulvous, small, depressed, spirally striated, waved at the suture; last whorl broad; aperture large, oblique; umbilicus narrow, white.

SOEWERY. Mal. and Coneh. Mag. Coneh. Ill. Species 12, f. 4.

Hab. Massachusetts Bay.

Species 3. (Mus. Brit.)

MARGARITA SULCATA. *Mar. testâ albâ, depressâ subtus levi, supra spirâliter liratâ; apertura latâ; umbilico lato, subcarinato.*

THE GROOVED MARGARITA. Shell white, depressed, smooth beneath, spirally ridged above; aperture broad; umbilicus broad, subcarinated.

SOEWERY. Mal. and Coneh. Mag. p. 26.

Hab. — ?

Species 4. (Fig. a, b, Mus. Brit.)

MARGARITA TENIATA. *Mar. testa trochiformi, fulvâ, fasciis rubris tenuiatâ, levigatâ; spirâ conicâ, anfractibus quinis, rapide crescentibus, ultimo magno; apertura magnâ, columellâ albâ, crassâ obliquâ, infra subcuneatâ.*

THE RIBBANDED MARGARITA. Shell trochus-shaped, fulvous, banded with red stripes, smooth, spire conical, whorls five, rapidly increased, last large; aperture large, columella white, thick, oblique, slightly cuncate below.

SOEWERY. Coneh. Illus. Species 1, fig. 2.

Hab. Falkland Islands.

Species 5. (Fig. a, b, Mus. Brit.)

MARGARITA VIOLACEA. *Mar. testâ crassiusculâ, rubrâ, obliquâ, levi, non umbilicatâ; anfractibus trinis, rapide crescentibus; ultimo magno, subdepresso, infra planiuscula; apertura magnâ, obliquâ.*

THE VIOLET MARGARITA. Shell rather thick, red, oblique, smooth, not umbilicated; whorls three, rapidly enlarged; last large, somewhat depressed, rather flattened below; aperture large, oblique.

KING. Zool. Journ. Vol. V. p. 346.

Hab. — ?

MARGARITA.—PLATE I.

Species 6. (Mus. Brit.)

MARGARITA GREENLANDICA. *Mar. testâ subdepressâ, albâ, levigatâ; anfractibus trinis, depressis; ultimo expanso; apertura magna, columellâ tenui, umbilico lato.*

THE GREENLAND MARGARITA. Shell rather depressed, whitish, smooth; whorls three, depressed; last expanded; aperture large, columella thin, umbilicus broad.

BECK. Sowerby, Conch. III. f. 10.

Hab. Greenland.

Species 7. (Mus. Brit.)

MARGARITA STRIATA. *Mar. testâ trochusformâ, fulvâ, spiritaliter striatâ, suprâ linatâ; spirâ conicâ, anfractibus quinâ, ultimo magna; apertura rotundâ; umbilico parvo.*

THE STRIATED MARGARITA. Shell trochus-shaped, fulvous, spirally striated; ridged above; spire conical, whorls five, last large; aperture rounded; umbilicus small.

BRODERIP. Zool. Journal IV. Con. III. f. 3.

Hab. Northern Ocean?

The larger figure in the Conchological Illustrations, fig. 18, represents a different species, which will be found under the name, *Margarita maxima* in Plate III.



9.



8.



10.



11.



12.



13.



14.



15.



16.



17.

MARGARITA.

PLATE II.

Species 8. (Mus. Brit.)

MARGARITA SANDWICHIANA. *Mar. testâ subglobosâ, griseo-fulvâ, spirâliter striatâ, maculis fasciâ nigrescentibus tessellatâ corieatâ; anfractibus trinis, ultimâ capâte crescenti; aperturâ subrotundâ, columellâ crassiusculâ, obliquâ; umbilico lato.*

THE SANDWICH ISLANDS MARGARITA. Shell subglobose, greyish fulvous, spirally striated, variegated with blackish-brown tessellated spots; whorls three, last large, subglobose; aperture rather round; columella rather thick, oblique; umbilicus broad.

A. ADAMS. — ? MS. Mus. Brit.

Hab. Sandwich Islands.

Species 9. (Mus. Brit.)

MARGARITA VULGARIS. *Mar. testâ parvâ, obliquâ, depressâ, albâ, lavi; anfractibus trinis, ultimâ capâte crescenti; aperturâ angustâ, declivi; columellâ tenui; umbilico parvo.*

THE COMMON MARGARITA. Shell small, oblique, depressed, whitish, smooth; whorls three, last quickly increased; aperture large, sloped; columella thin; umbilicus small.

LEACH, SOWERBY. *Conch. Ill. Sp.* 5. f. 13.

Hab. Northern Seas.

Species 10. (Mus. Brit.)

MARGARITA SIGARETTINA. *Mar. testâ obliquâ depressâ, crassiusculâ, subhelioboidâ, rubrâ, levigatâ, iutâ splendide iridescenti; aperturâ obliquâ ovatâ, maximo; columellâ albâ, latâ, planulatâ, perobliquâ.*

THE SIGARETTA-LIKE MARGARITA. Shell obliquely depressed, rather thick, rather heliopsis-shaped, red, smooth, splendidly iridescent within; aperture obliquely ovate, very large; columella white, broad, flattened, very oblique.

SOWERBY. *Mal. and Conch. Mag.* p. 24; *Con. Ill. f.* 14.

Hab. — ?

Possibly a further knowledge of this species may lead to its placement in the GENA group.

Species 11. (Mus. Brit.)

MARGARITA PULCHERRIMA. *Mar. testâ altâ, trochusformi, subdistanter spirâliter liratâ, inter liras regulariter striatis; liris minuto mouliferis, cubo unculatis, umbilico magno, coriatis; columellâ obliquâ.*

THE VERY BEAUTY MARGARITA. Shell raised, trochus-shaped, rather distantly spirally ridged, between the ridges regularly striated; ridges minutely beaded, spotted with red; umbilicus large, keeled; columella oblique.

A. ADAMS. — ?

Hab. Japan.

Species 12. (Mus. Brit.)

MARGARITA CERULESCENS. *Mar. testâ cinereo, depressâ, non umbilicatâ, levigatâ, angustâ hirsutâ; spirâ depresso-conico; aperturâ obliquâ subquadratâ, columellâ crassâ, latâ, superâe eadê arcuatâ.*

THE BLUEISH MARGARITA. Shell ash-coloured, depressed, not umbilicated, smooth, narrowly banded; spire depressed-conical, aperture obliquely squarish; columella thick, broad, strongly arched above.

KING. — ? MS. Brit. Mus.

Hab. — ?

This species belongs to the Photinula group.

Species 13. (Mus. Brit.)

MARGARITA ACUMINATA. *Mar. testâ cinereo-albâ, albâ, conicâ, acuminatâ; anfractibus quinque; ultimo maximo, subangulari; aperturâ angustâ, columellâ tenui, umbilico angustissimo.*

THE ACUMINATED MARGARETTINA. Shell ashy white, high, conical, acuminate; whorls five; last very large, slightly angular; aperture large; columella thin; umbilicus very narrow.

SOWERBY. *Mal. and Conch. Mag.* p. 26. *Con. Ill. f.* 7.

Hab. — ?

Species 14. (Mus. Brit.)

MARGARITA PUNCTATA. *Mar. testâ elevatâ, conicâ, fulvâ; anfractibus senis turritis, suturâ profundâ*

MARGARITA.—PLATE 11.

separatis, ultimo supernè biconcato, costis rubro maculatis, infrà striato; umbilico maximo; costato, aperturà parvâ.

THE SPOTTED MARGARITA. Shell raised, conical fulvous; whorls six, turreted, separated by a deep suture, last with two ribs above, ribs spotted with red; striated below; umbilicus very large, ribbed; aperture small.

A. ADAMS. — ? MS. Brit. Mus.

Hab. Japan.

Species 15. (Mus. Brit.)

MARGARITA HELICINA. *Mar. testâ parvâ, tenui, roseo-falvâ, subd. pressâ, aperturâ magnâ, umbilico angustissimo, columellâ arcuatâ.*

THE HELICINA MARGARITA. Shell small, thin, pinky-fulvous, rather depressed, aperture large; umbilicus rather narrow, columella arched.

FABRICIUS. Vide Proc. Zool. Soc. 1851.

Hab. — ?

Species 16. (Mus. Brit.)

MARGARITA ARGENTIATA. *Mar. testâ depresso-globosâ, albâ, levî; anfractibus trinîs, ultimo maximo, supernè subcarinato; aperturâ magnâ, umbilico majusculo, columellâ arcuatâ.*

THE SILVERY MARGARITA. Shell depressed-globose, whitish, smooth; whorls three, last large, with a slight keel above; aperture large, umbilicus rather large, columella arched.

GOULD. Invert. Mass. p. 256, f. 164.

Hab. Cape Ann.

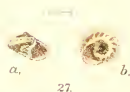
Species 17. (Mus. Brit.)

MARGARITA ZEALANDICA. *Mar. testâ depresso-conicâ, spirâlîter sulcatâ, rubro punctatâ; ultimo anfractû subtilis complanato; umbilico lato, carinato; aperturâ parvâ, columellâ validâ, infrâ subconatâ.*

THE ZEALAND MARGARITA. Shell depressed-conical, spirally grooved, spotted with red; last whorl flattened beneath; umbilicus broad, keeled; aperture small, columella strong, slightly cuneate below.

HUTTON. — ? MS. Mus. Brit.

Hab. New Zealand.



MARGARITA.

PLATE III.

Species 18. (Mus. Brit.)

MARGARITA INCARNATA. *Mar. testâ depresso-conica, evanescenti, liris uniliferis sculptâ; ultimo anfractu magno, propè suturam concentricè rugato; aperturâ magna; umbilico medioeri.*

THE FLESH-COLOURED MARGARITA. Shell depressed-conical, reddish, sculptured with beaded ridges; last whorl large, concentrically wrinkled near the suture; aperture large; umbilicus middle-sized.

CUTHBY. — ? (Ms. Brit. Mus.)

Hab. N. America.

Species 19. (Mus. Brit.)

MARGARITA ARCTICA. *Mar. testâ parvâ, lavi, depressâ, fulvo-griseâ; ultimo anfractu obliquo, expanso, aperturâ maxime, obliquè ovatâ; umbilico magno.*

THE ARCTIC MARGARITA. Shell small, smooth, depressed, greyish-falvous; last whorl oblique, expanded; aperture very large, obliquely ovate; umbilicus large.

LEACH. Sowerby. *Conch.* III. fig. 6.

Hab. Plymouth, Massachusetts.

Species 20. (Mus. Brit.)

MARGARITA COSTELLATA. *Mar. testâ depressâ, subaureâ; anfractibus subteretibus, ultimo biangulato, inter angulos spirâliter striato, infrà subplanulato; aperturâ subquadratâ; umbilico parvo, angulato, obliquè carinato.*

THE RIBBED MARGARITA. Shell depressed, slightly gold-tinted; whorls subretted, last biangular, spirally striated between the angles, rather flattened below; aperture rather square; umbilicus small, angular, obliquely keeled.

OWERBY. *Mal. & Conch. Mag.* p. 26.

Hab. — ?

Species 21. (Mus. Brit.)

MARGARITA COESEA. *Mar. testâ trochoformi, acuminatâ, fulvo-albidâ, spirâliter lirâ; anfractibus tenuis, altis, angulatis, ultimo obscure biangulato, umbilico spirâliter costato, lato; aperturâ subrotundâ, margine crenato; columella arcuatâ.*

THE HOENY MARGARITA. Shell trochus-shaped, acuminated, whitish-buff, spirally ridged; whorls six, raised, angular, last obscurely biangular; umbilicus spirally ribbed, broad; aperture rather rounded, margin crenulated; columella arched.

KIENER *Leob.* pl. 196, fig. 2.

Hab. — ?

Species 22. (Mus. Brit.)

MARGARITA CABINATA. *Mar. testâ roseo-fulvâ, elevatâ, conicâ, acuminatâ; anfractibus senis, elevatis, angulatis; ultimo propè suturam concentricè lirateo, litem tricarinato, inter carinas lirato; infrà subplanulato; umbilico magno, margine carinato; aperturâ subtriangulo; columellâ obliquâ.*

THE KEELED MARGARITA. Shell pinkish-falvous, raised, conical, acuminated; whorls six, raised, angular; last concentrically ridged near the suture, then with three keels, rather flattened below; umbilicus large, margin keeled; aperture rather trigonal; columella oblique.

A. ADAMS. *Proc. Zool. Soc.* 1851, 1890.

Hab. Calbalonga, Philippines.

Species 23. (Mus. Brit.)

MARGARITA MODESTA. *Mar. testâ trochoformi, pallidâ carneâ, carinatâ, subtilis striatâ; anfractibus quaternis, ultimo magno, angulato; umbilico parvo; aperturâ medioeri, columellâ subobliquâ, tenuisculâ.*

THE MODEST MARGARITA. Shell trochus-shaped, pale flesh-coloured, keeled, striated below. Whorls four, last large, angular; umbilicus small; aperture middle-sized, columella rather oblique, rather thin.

MIDDENDORF. — ? Ms. (Brit. Mus.)

Hab. — ?

Species 24. (Ms. — ? copied.)

MARGARITA MAXIMA. *Mar. testâ magna, trochoformi, fulvâ; spirâ omicâ; anfractibus senis, ultimo maximo, superè quinque-carinato, infrà striato, umbilico lato, margine carinato; aperturâ obliquè quadrilaterâ, columellâ arcuatâ, infrà crenatâ, crenulatâ.*

MARGARITA.—PLATE III.

THE VERY LARGE MARGARITA. Shell large, trochus-shaped, fulvous; spire conical, whorls six; last very large, five-keeled above, striated below; umbilicus broad, margin keeled; aperture obliquely four sided, columella arched, cuneate below, erenulated.

SOWERBY.

Hab. —?

The writer has not seen the specimen since first figuring it in the Conchological Illustrations, but is of opinion that it must be distinct from *M. striata*.

Species 25. (Mus. Brit.)

MARGARITA ASPECTA. *Mar. testâ conicâ, acuminatâ, fulvo-rubrescenti, spirâliter multi-carinatâ, inter carinas concentricè minutè liratâ, carinis moultiferis; anfractibus angulatis; umbilico lato.*

THE PRESENTABLE MARGARITA. Shell conical, acuminated, reddish fulvous, spirally, many-keeled, concentrically minutely ridged between the keels; keels beaded; whorls angular; umbilicus broad.

A. ADAMS. Proc. Zool. Soc. 1854, p. 40.

Hab. Australia.

A very beautifully sculptured, trochus-shaped shell.

Species 26. (Mus. Brit.)

MARGARITA TRIANGULOSA. *Mar. testâ crassi, subroseo-albidâ, fusco variegatâ; anfractibus subdepressis, angulatis, ultimo propè suturam et medio angulato; umbilico lato, margine carinato; aperturâ superne et medio angulata.*

THE TRIANGULAR MARGARITA. Shell thick, pinkish-white, variegated with brown; whorls somewhat depressed, angular, last angular near the suture, and in the middle; umbilicus broad, margin keeled; aperture angular above and in the middle.

A. ADAMS. Proc. Zool. Soc. 1854, p. 40.

Hab. Siam.

Species 27. (Fig. a, b, Mus. —? copied.)

MARGARITA SOLARIIFORMIS. *Mar. testâ purâ, depressâ, fulvâ, angulatâ; anfractibus trinis, ultimo depresso, medio angulato; umbilico angulato, margine carinato; aperturâ latâ, columellâ albâ, rectiusculâ.*

THE SOLARIUM-SHAPED MARGARITA. Shell small, depressed, angular; whorls three, last depressed, angular in the middle; umbilicus angular, margin keeled; columella white, rather straight.

SOWERBY. Mal. and Conch. Mag. p. 26. Con. III. f. 8.

Hab. —?

It has very much the appearance of a miniature solarium.

MONOGRAPH

OF THE GENUS

R O T E L L A .

To God, who all creation made,
The frequent hymn be duly paid.

Allchua, Allchua' — Nial.



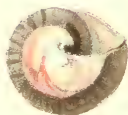
2^a



1



2^b



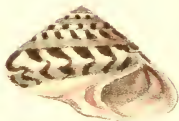
3^a



4^a



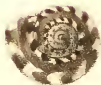
4^b



3^b



5^a



3^c



5^b

ROTELLA.

PLATE I.

Genus ROTELLA. *Latr. et Koch.*

Testâ triloculari, depressâ, orbiculari, solidâ, superius conicâ, infra lenticulari, intus mucroni: umbilico per callum oblecto; apertura subtriangulâ, transverse, operculum cornu, multispicula planiusculâ.

Shell trilocular, depressed, orbicular, solid, conical above, lenticular beneath, pearly within; umbilicus covered in by a callus; aperture rather trigonal, transverse, operculum horny, plan-orbicular.

SYN. Umbonum, Link.

The few species to be found towards the end of this monograph which are placed in the British Museum collection under the generic heading of *Ethalia*, do not so well agree with the above description as the more typical *R. costata*. Yet the passage is not very abrupt, and it seems hardly necessary to keep up a distinction upon characters of so little generic importance. The species alluded to are *R. japonensis*, and several others allied to it. The East Indies appear to be the home of the *R. vestitiaria*, although varieties of that species are quoted from the Mediterranean. *R. obliqua* is from the Philippines, and a variety from the Martinique. *R. gigantea* and other fine species are from Japan.

Species 1. (Mus. Brit.)

ROTELLA CONDA. *Rot. testâ fusco-purpurascenti, crassi, conicâ, callositateâ parva, fusco-fumoso, spiritaliter dispositâ, medio depresso, ultimo anfractu circa callum e centrali depresso.*

THE CONICAL ROTELLA. Shell purplish-brown, thick, conical; ventral callus small, smoky-brown, spirally deposited, depressed in the middle; last whorl depressed round the ventral callus.

ADAMS & REEVE. Voy. Samarang. Proc. Zool. Soc. 1854.

Hab. — ?

In this dark but richly-coloured shell the form of the callus is peculiar, being formed of semicircular layers placed spirally. It is small, defined, and does not quite occupy the central hollow of the shell.

Species 2. (Fig. a, b, c, in Plate II.) Mus. Brit.)

ROTELLA DEPRESSA. *Rot. utrinque lenticulari, depressâ, anfractibus rapidi crescentibus, ultimo ad marginem rotundo, superius medio latè fasciato, fasciæ margine regulariter punctato, et fossis palliatæ variegata; calla capasso, grisea, lenticulari.*

THE DEPRESSED ROTELLA. Shell lenticular on both sides, depressed; whorls rapidly increased, last rounded at the margin, with a broad band in the middle above, margin of band regularly spotted, or variegated with rayed bands; callus expanded, grey, lenticular.

A. ADAMS — ? MS. Cum. Coll.

Hab. — ?

Like *Rotella vestitiaria*, but with the last whorl more spread.

Species 3. (Fig. a, b, c, Mus. Brit. and Sowerby.)

ROTELLA GIGANTEA. *Rot. testâ altiusculâ, superius conicâ, infra subcomplanatâ; superius mediani tenuiter spiritaliter striatâ, griseâ, ventrali angulis obliquis nigrescentibus ad suturam et ad angulum ornata, aut griseâ immaculatâ; anfractibus prope suturam depressis, suturâ profundâ; calla irregulari, roseo, post columellam angulatum tumido; columella crassissimâ, latâ; labio externo superius protracto et depresso.*

THE GIGANTIC ROTELLA. Shell rather high, conical above, rather flattened below; above the middle, thinly spirally striated, grey, ornamented with large oblique black spots at the suture and at the angle, or grey without spots; whorls near the suture depressed, suture deep; callus irregular, pink, angularly tumid behind the columella; columella very thick, broad; outer lip produced and depressed above.

LESSON. Illust. Zool. Pl. 17.

Hab. Japan.

Species 4. (Fig. a, b, Mus. Brit.)

ROTELLA COSTATA. *Rot. testâ superius conicâ, altiusculâ, infra planiusculâ, anfractibus ad suturam leviter decatis tum subdepressis, sulcis spiritalibus*

ROTELLA.—PLATE I.

incisus sculptis fusco-griseo-anti fasciatim variegatus; infra angulam levigatus; callus rubescens, columellâ crassi.

THE RIBBED ROTELLA. Shell conical, rather high above, rather flat below: whorls slightly elevated at the suture, then rather depressed: sculptured with spiral incised grooves, variegated with greyish brown in bands; smooth beneath the angle, callus pink; columella thick.

VALENCIENNES. Kicher, Icon. Coq. Viv. Pl. II. f. 5.

Hab. Japan.

Species 5. (Fig. a, b. Mus. Brit.)

ROTELLA MONILIFERA. *Rot. testâ superâ conicâ altâ, anfractibus spirâliter costatis, ad suturam in costam moniliferam elevatis, griseis fusco variegatis; callis pleno, griseo-anti, columellâ obliquâ.*

THE BEADED ROTELLA. Shell conical above, high, whorls spirally ribbed, raised at the suture into a beaded rib, grey, varied with brown; callus full, greyish, columella oblique.

LAMARCK. Sowerby's Genera, No. 14.

Hab. —? 8



6a.



3c



6b



7



6c



6d



8



6e



9.



6f

ROTELLA.

PLATE II.

(Fig. 2, 3, Mus. Brit.)

ROTELLA DEPRESSA. Var. See Plate I.

Species 6. (Fig. a, b, c, d, Mus. Brit. & Sowerby.)

ROTELLA ELEGANS. *Rot. testâ supernè, altâ, conicâ; anfractibus obliquè planatis, variè fuscis maculisque pictis, subtus planiusculis; callo crasso, subæqualiter convexo.*

THE ELEGANT ROTELLA. Shell high, conical above; whorls obliquely flattened, variously painted with bands and spots, rather flat beneath; callus thick, rather equally convex.

BECK. KIEHN Icon. Coq. Viv. Pl. II. f. 5.

Hab. Philippines.

Most varieties of this species show a black spiral line on the edges of the whorls, and the whorls are slightly flattened. In *Rotella vestaria* the black line does not occur, and the whorls are fewer and a little convex.

Species 7. (Mus. Brit.)

ROTELLA SUTURALIS. *Rot. testâ depresso-conicâ, lincis striisque fasciis variegatâ, spirâliter sulcis numerosis sculptâ; anfractibus supernè planatis, ad suturam in costam elevatis; suturâ profundâ; callo lato, rubro.*

THE SUTURED ROTELLA. Shell depressed conical, variegated with brown lines and stripes, spirally sculptured with numerous grooves; whorls flattened above, raised in a rib at the suture; suture deep; callus broad, red.

LAMARCK. Chen. Conch. Cab. Pl. 19, f. 186 7.

Hab. Indian Seas.

More closely sculptured than *Rotella costata*, and with the whorls more raised at the suture.

Species 8. (Mus. Brit.)

ROTELLA JAVANICA. *Rot. testâ altâ, conicâ, ad suturam multiferâ; anfractibus supernè subcomplanatis, suprâ angulum lincis spirâliter ornatis, subtus angulum interruptim fuscatis; callo centrali crasso, griseo-fusco.*

THE JAVA ROTELLA. Shell high, conical, beaded at the suture; whorls rather flattened above, ornamented with spiral lines above the angle, and an interrupted band below the angle; ventral callus thick, greyish-brown.

LAMARCK. Anim. S. Vert.

Hab. Java.

Species 9. (Mus. Brit.)

ROTELLA SAGITTATA. *Rot. testâ subdepressâ, supernè conicâ, maculis sagittatis nigris in series spirâles dispositis ornâtâ, subtus vix convexâ; callo parvo, albo, circumscripto.*

THE ARROW-HEADED ROTELLA. Shell sub-depressed, conical above, ornamented with arrow-headed black spots placed in spiral rows, hardly convex below; callus small, white, circumscribed.

HINDS. Voy. Sulphur.

Hab. — ?

This pretty little shell differs from *R. elegans* chiefly in the arrow-headed markings and the circumscribed callus.



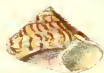
10 b.



10 a.



11 c.



11 a.



12 a.



11 b.



12 c.



12 d.



12 f.



12 e.

ROTELLA.

PLATE III.

Species 10. (Fig. 9, 10, 11. Mus. Sowerby.)

ROTELLA INFRAPLANATA. *Rot. testâ superne conicâ, albâ, infra subconicâ; anfractibus superne planatis, rarè pictis, infra angulum circâ callum centricalem griseo variegatâ; callo parvo, subconico; columellâ obliquâ, ad terminum angulatum.*

THE FLAT-BOTTOMED ROTELLA. Shell conical above, high, almost concave; whorls flattened above, variously painted, variegated with gray; callus small, rather concave; columella oblique, angular at the end.

SOWERBY.

Hab. —?

We have several varieties of this conical shell. The upper part is like *R. elegans*, with greater elevation, but the lower is much more flattened than that or any other species.

Species 11. (Mus. Brit.)

ROTELLA ZELANDICA. *Rot. testâ albâ, conicâ, rubescenti, fusco-rubescenti radiatim strigatâ, ad angulum spiraliter tri-liratâ; anfractibus infra suturam subconicis, subtis convexiusculis; callo ventrali griseo-rubescenti, purpureo circumscripto.*

THE NEW ZEALAND. Shell high, conical, reddish, radiately striped with reddish-brown, spirally three-ridged at the angle; whorls rather concave below the suture, rather convex underneath; ventral callus reddish-grey, circumscribed with purple.

A. ADAMS.

Hab. New Zealand.

Species 12. (Mus. Brit.)

ROTELLA VESTIARIA. *Rot. testâ depressâ, fasciis, strigis, maculisque rarè pictâ; anfractibus superne subconicis; callo centrali crasso, lenticulari.*

THE WARDROBE ROTELLA. Shell depressed, variously painted with bands, stripes, and spots; whorls rather concave above; ventral callus thick, lenticular.

SOWERBY. Genera of Shells.

Rotella lineolata (var.) Lamarck.

Rotella rosea, Chemnitz?

Hab. East Indies.

The upper part of the whorls are a little convex, while those of *R. elegans* are quite flattened.



14



13



15



18a



16



17



18b



19a



20



19b

ROTELLA.

PLATE IV.

Species 13. (Mus. Brit.)

ROTELLA SPINULATA. *Rot. testâ cinnamomeâ, fusco variegatâ, spirâliter striatâ, suprâ infrâque sub-angulâte convexâ; callo centrali angusto, trilobato.*

THE SPINATED ROTELLA. Shell cinnamon variegated with brown, spirally striated, nearly equally convex above and below; ventral callus narrow, trilobate.

A. ADAMS. (*Ethalia*), Proc. Zool. Soc. 1853.

Hab. — ?

The callus is in three parts, one rounded above, one spread circularly over the umbilicus, and the third forming a thickened margin to the columella.

Species 14. (Mus. Brit.)

ROTELLA CANDIDA. *Rot. testâ parvâ, subglobosâ, lævi, albâ, opacâ; callo centrali parvâ, rotundâ; columellâ latâ sessilâ; aperturâ magnâ.*

THE WHITE ROTELLA. Shell small, rather globose, smooth, white, opaque; ventral callus small, round; columella rather broad; aperture large.

A. ADAMS. (*Ethalia*), Proc. Zool. Soc. 1862, p. 296.

Hab. Gotto Islands, Japan.

This minute species is less like a *Robella* than other species of *Ethalia*.

Species 15. (Mus. Brit.)

ROTELLA PERSPICUA. *Rot. testâ minutâ, albâ, compressâ, lenticulari; aperturâ transversè ovatâ; callo centrali semilunari.*

THE PERSPICUOUS ROTELLA. Shell minute, white, compressed, lenticular; aperture transversely ovate; ventral callus semilunar.

A. ADAMS. (*Ethalia*), Annals of Natural History, 1861.

Hab. China.

Very simple in form and character.

Species 16. (Mus. Brit.)

ROTELLA BRAZIERI. *Rot. testâ transversè ovali, depressâ, minutâ, albâ, semipellucidâ; callo centrali parvâ, rotundâ, ad columellam continuâ; aperturâ magnâ.*

BRAZIERI'S ROTELLA. Shell transversely ovate, depressed, minute, white, semipellucid; ventral callus small, rounded, continued at the columella; aperture large.

ANGUS. (*Ethalia*), Proc. Zool. Soc. 1877, p. 39, Pl. 5, f. 17.

Hab. Sow and Pigs Reef, Port Jackson, Australia.

Species 17. (Mus. Brit.)

ROTELLA POLITA. *Rot. testâ subglobosâ, albâ, politâ; spirâ conicâ, anfractibus paucis; callo centrali ferè obsolete.*

THE POLISHED ROTELLA. Shell subglobose, white, polished; spire conical, whorls few; ventral callus almost obsolete.

A. ADAMS. (*Ethalia*), Annals of Nat. Hist. 1862, p. 296.

Hab. Gotto, Japan.

Species 18. (Fig. a, b, Mus. Brit.)

ROTELLA GUAMENSIS. *Rot. testâ altâ sessilâ, subglobosâ; curvâ plicâ, bispicatâ; anfractibus superâ versâ suturam tumidis; angulo centrali rotundâ, infra convexâ, callo reniformi, roseo; columellâ latâ callosâ.*

THE GUAM ROTELLA. Shell rather high, subglobose; variously painted, smooth; whorls above towards the suture tumid; central angle rounded, convex below, callus kidney-shaped, pinky; columella broadly callous.

QUOY. Voy. Astrolabe, Pl. 61, f. 32-33.

Hab. Isl. Guam. — Luxon; Philippines.

This is the type of the genus *Ethalia*, which, however little like *Robella* in general form, has the same essential characters.

ROTELLA.—PLATE IV.

Species 19. (Fig. a, b, Mus. Brit.)

ROTELLA SOBRIANA. *Rot. testâ minutâ, planorbulari, compressâ, albâ, opacâ; infrâ umbilicatâ, anfractibus rotundis.*

THE RELATED ROTELLA. Shell minute, planorbular, compressed, white, opaque; umbilicated below, whorls rounded.

A. ADAMS. (*Ethalia*), Ann. of Nat. Hist. 1861, Vol. VIII. 306.

Species 20. (Mus. Brit.)

ROTELLA TRILOBATA. *Rot. testâ pallidè griseo-olivaceâ, subdepressâ, maculis strigisque variè pictâ; anfractibus superne convexiusculis; umbilico infundi-*

buliformi; callo parvo in partes tres semicirculares diviso.

THE TRILOBATE ROTELLA. Shell pale grey-olive, subdepressed, variously painted with spots and stripes; whorls rather convex above; umbilicus funnel-shaped; callus small, divided into three semicircular parts.

SOWERBY.

Hab. —?

In this species, the form of the callus is very peculiar, resembling that of *R. striolata*, but more pronounced in character. In rotundity of whorls the species is midway between the latter and *R. Guamensis*.

MONOGRAPH
OF THE GENUS
STYLIFER.

Frank Nature, rather curious than in haste,
Hath well compos'd thee.—*Shakspeare.*



2



1a



3



4



5



6



7



8



9



1b

STYLIFER.

PLATE I.

Genus **STYLIFER.** *Broderip.*

Testis minutissima, plerumque pellucida aut semi-pellucida, laevis, polita, multispiralis, subulata vel subglobosa; apice obliquo, styliformi; labio externo sinuatum producta.

Shell very thin, generally pellucid or semi-pellucid, smooth, polished, multispiral, subulate or sub-globose; apex oblique, styliform; outer lip sinuously produced.

The mollusca secreting these glassy little shells are parasitic on star-fishes and Echini, burrowing under the skin, and forming tumours which appear externally. One species is found among the spines of our common Echini, and the first species described by Mr. Broderip infects a starfish of the shores of Galapagos islands.

Species 1. (Fig. a, b. Mus. Brit.)

STYLIFER TURTONI. *Sty. testis subglobosa, parva, spira acuminata, producta, anfractibus superne angulatis, apicalibus minutis papillois, ultimo magno, subcylindrici.*

TURTON'S STYLIFER. Shell subglobose, small, spire acuminated, produced, whorls angular above, apical minute papillose, last large, subrectilateral.

BRODERIP. Proc. Zool. Soc. 1832, p. 61.

Hab. On British Echini.

Species 2. (Mus. Brit.)

STYLIFER OVOIDEA. *Sty. testis subglobosa, spirâ moderate productâ, anfractibus subrotundis, apicalibus minutissimis; apertura pyriformi, labio externo superne subcompresso, sinuatum producta.*

THE EGG-SHAPED STYLIFER. Shell subglobose, spire moderately produced, whorls rather round, apical very minute; aperture pyriform, outer lip slightly compressed above, sinuously produced.

A. ADAMS. Proc. Zool. Soc.

Hab. —

Species 3. (Mus. Brit.)

STYLIFER ASTERICOLA. *Sty. testis ovato-globosa, spira brevi acuminata; anfractibus paucis, apicalibus minuto, apertura angustiusculâ, infri subannuata; labio externo superne sinuatum producta.*

THE STARFISH STYLIFER. Shell ovate-globose; spire short, acuminated, whorls few, apical minute; aperture rather narrow, slightly pointed below; outer lip sinuously produced above.

BRODERIP. Sowerby's Conchological Manual, f. 12-13: *Stylifer Broderipii.* Adams.

Hab. Galapagos.

Species 4. (Mus. — ?)

STYLIFER GUENTHERI. *Sty. testis majusculâ, torridâ, pyramidatâ; apice producto, acuminato, anfractibus gradatis, superne angulatis, ultimo magno, globoso, inflato; sinu columellari retrorsum extenso.*

GÜNTHER'S STYLIFER. Shell rather large, turreted pyramidal; apex produced, acuminated, whorls step-like, angular above; last large, globose, inflated; columellar sinus extended backwards.

ANGAS (Apicalia). Proc. Zool. Soc. 1877, Pl. V. f. 6

Hab. New South Wales.

A singularly formed shell, partaking the characters of the globose and subulate sections

Species 5. (Mus. Brit.)

STYLIFER CUMINGIANA. *Sty. testis pyramidatâ, spirâ altâ, acuminatâ; anfractibus numerosis, depressis, apicalibus trinis aut quaternis attenuatis, styliformibus, ultimo inflato, rotundo, apertura brevi, columellâ rectiusculâ.*

CUMING'S STYLIFER. Shell pyramidal, spire raised, acuminated; whorls numerous, depressed, three or four apical attenuated, styliform, last inflated, round, aperture short, columella rather straight.

ADAMS — ? MS. Cum. Coll.

Hab. — ?

STYLIFER.—PLATE I.

Species 6. (Mus. Brit.)

STYLIFER SOLIDA. *Sty. testâ subulatâ, solidiâsculâ, spirâ opacâ; spirâ altissimâ, anfractibus numerosis, apicalibus parvis; apice tortuo; aperturâ brevissculâ, infrâ acuminatâ.*

THE SOLID STYLIFER. Shell subulate, rather solid, opaque; spire very high, whorls numerous, apical small; apex tortuous; aperture rather short, acuminated below.

A. ADAMS. MS. Chm. Coll.

Hab. — ?

Species 7. (Mus. Brit.)

STYLIFER BARRONII. *Sty. testâ brevissculâ, spirâ acuminatâ, anfractibus ultimo et penultimo cylindricis, superâ angulatâ; aperturâ oblongâ, infrâ subexpansâ, columellâ crassiusculâ.*

BARRON'S STYLIFER. Shell rather short, spire acuminated, last whorl and last but one cylindrical, angular above; aperture oblong, slightly expanded below; columella rather thick.

A. ADAMS. Proc. Zool. Soc. 1854, p. 137.

Hab. — ?

Species 8. (Mus. Brit.)

STYLIFER DUBIA. *Sty. testâ globosâ, spirâ productâ, pyramidatâ, acuminatâ, anfractibus apicalibus attenuatis, penultimo subinflato, ultimo valdè inflato, rotundo; aperturâ pyriformi, labio externo flexuoso.*

THE DOUBTFUL STYLIFER. Shell globose, spire produced, pyramidal, acuminated, apical whorls attenuated, last but one slightly inflated, last much inflated, rounded; aperture pyriform, outer lip flexuous.

BAIRD. MS. Brit. Mus.

Hab. New Caledonia.

Species 9. (Mus. Brit.)

STYLIFER JAPONICA. *Sty. testâ solidiâsculâ, globosâ, brevi; spirâ productâ, attenuatâ, acuminatâ; ultimo anfractu globoso, aperturâ brevissculâ, infrâ acuminatâ, columellâ tortuâ, solidiâsculâ.*

THE JAPAN STYLIFER. Shell rather solid, globose, short; spire produced, attenuated, acuminated, last whorl globose, aperture rather short, acuminated below; columella tortuous, rather solid.

A. ADAMS (Amaarella), MS. Brit. Mus.

Hab. — ?



11



10



12



13



14



15



16



17



19



18



20

STYLIFER.

PLATE II.

Species 10. (Mus. — ?)

STYLIFER SPECIOSA. *Sty. testâ subulatâ hyalinâ, spirâ elevatâ, superne styliformi attenuatâ tortuâ; anfractibus inferioribus inflatis, subrectilateralibus; aperturâ brevi, columellâ rectiâsculâ.*

THE SPECIOUS STYLIFER. Shell subulate, hyaline; spire elevated, styliform attenuated, tortuous above; lower whorls inflated, rather straight-sided; aperture short, columella rather straight.

A. ADAMS. Proc. Zool. Soc. 1868.

Hab. Mauritius.

Species 11. (Mus. Brit.)

STYLIFER ATTENUATA. *Sty. testâ angustâ pyramidatâ, spirâ altissimâ, apice obliquè distorto, acutissimo; anfractibus numerosis, rectilateralibus, ultimo infra médium subangulato; aperturâ angustâ, infra acuminatâ.*

THE ATTENUATED STYLIFER. Shell narrowly pyramidal, spire very high, apex obliquely distorted, very sharp; whorls numerous, straight-sided, last rather angular below the middle; aperture narrow, acuminated below.

SOWERBY.

Hab. St. Thomas.

Species 12. (Mus. Brit.)

STYLIFER CORALLINA. *Sty. testâ pyramidatâ, angustâsculâ; apice acuminato, obliquè subinclinato; anfractibus quaterdecenis ad suturam subangulatis, aperturâ parvâ, infra subangulatâ.*

THE CORALLINE STYLIFER. Shell pyramidal, rather narrow; apex acuminated, slightly inclined obliquely; whorls fourteen, slightly angular at the suture; aperture small, slightly angular below.

CHEMNITZ — ?

Hab. — ?

Species 13. (Mus. Brit.)

STYLIFER SUBANGULATA. *Sty. testâ pyramidatâ, altissimâ; apice acuminato, lateraliter obliquè incli-*

nato; anfractibus quaterdecenis, apicalibus angustissimis, ultimo infra médium subangulato; aperturâ ovatâ, labio externo superne sinuatim producto.

THE SUBANGULAR STYLIFER. Shell pyramidal, very high, apex acuminated; laterally obliquely inclined; whorls fourteen, apical very narrow, last rather angular below the middle; aperture ovate, outer lip sinuously produced above.

A. ADAMS. Proc. Zool. Soc. 1855, p. 122.

Hab. — ?

Species 14. (Mus. Brit.)

STYLIFER EXARATA. *Sty. testâ solidâsculâ, altâ, attenuatâ, anfractibus altâsculâ, concavis, obscurè, rugatis ultimo elevato; aperturâ subquadratâ, parvâ columellâ rectiâsculâ.*

THE FLOUGHED STYLIFER. Shell rather solid, high, attenuated, whorls rather high, convex, obscurely wrinkled, last raised; aperture rather square, small; columella rather straight.

A. ADAMS — ?

Hab. — ?

Species 15. (Mus. Brit.)

STYLIFER THOMASIE. *Sty. testâ altissimâ, pyramidatâ, versus apicem subito contracto, attenuato; apice acuminato, rectiâsculo, anfractibus mollioribus altis, subcylindricis, ultimo obtusè angulato; aperturâ obliquè subquadratâ, columellâ rectiâsculâ, infra acuminatâ.*

THE ST. THOMAS STYLIFER. Shell very high, pyramidal, contracted suddenly towards the apex, attenuated; apex acuminated, rather straight, middle whorls high, rather cylindrical, last obtusely angular; aperture obliquely subquadratâ, columella rather straight, acuminated below.

SOWERBY.

Hab. Isl. St. Thomas.

Species 16. (Mus. Brit.)

STYLIFER FASTIGIATA. *Sty. testâ pyramidalâ, ventricosâ, subperforatâ, altâ; spirâ acuminatâ, apice attenuatâ, obliquè inclinâtâ; anfractibus numerosis, convexisculis, ultimo magno, rotundo; apertura angustâ, columellâ tenui, infrâ acuminatâ.*

THE SHARP-POINTED STYLIFER. Shell pyramidal, ventricose, slightly perforated, high; spire acuminated, apex attenuated, obliquely bent; whorls numerous, rather convex, last large, round; aperture narrow, columella thin, acuminated below.

A. ADAMS — ? MS. Cnm. Coll.

Hab. — ?

Species 17. (Mus. Brit.)

STYLIFER SUBULATA. *Sty. testâ tenuissimâ, pellucidâ, pyramidalâ, versis apicem subito in stylem contractâ et obliquè inclinâtâ; anfractibus convexisculis, ultimo magno, rotundo; apertura brevissimâ, labio externo suprâ medium flexuosè producto.*

THE SUBULATE STYLIFER. Shell very thin, pellucid, pyramidal, suddenly contracted to a style towards the apex, and obliquely bent; whorls rather convex, last large, rounded; aperture rather short, outer lip flexuously produced above the middle.

BRODERIP. Pro. Zool. Soc. 1832, p. 61.

Hab. W. Indies.

Species 18. (Mus. Brit.)

STYLIFER BULBIFORMIS. *Sty. testâ subopacâ, hercissculâ, spirâ pyramidalâ, apice attenuato, acuminato, obliquè distorto; ultimo anfractu magno, rotundo, inflato; apertura brevi, pyriformi; columellâ crassisculâ, labio externo flexuoso.*

THE BULB-SHAPED STYLIFER. Shell rather short, subopaque, spire pyramidal, apex attenuated, acuminated, obliquely distorted; last whorl large, round, inflated; aperture short, pyriform; columella rather thick, outer lip flexuous.

SOWERBY.

Hab. — Isl. St. Thomas.

Species 19. (Mus. Brit.)

STYLIFER GLABRATA. *Sty. testâ parvâ, albâ, politâ, ovato-oblongâ; apertura oblongâ longitudinè spiram æquantî; spirâ paucispiralî; ultimo anfractu subovato, elongato; columellâ rectisculâ.*

THE POLISHED STYLIFER. Shell small, white, polished, ovate-oblong; aperture oblong, equalling spire in length; spire with few whorls, last whorl subovate, elongated; columella rather straight.

A. ADAMS. (Amanella) MS. Brit. Mus.

Hab. Japan.

Species 20. (Mus. Brit.)

STYLIFER SEMISTRIATA. *Sty. testâ parvâ, ovatâ, albâ, partim tenuissimè striatâ; spirâ quam apertura longisculâ, anfractibus quaternis, ultimo ovato, oblongo; apertura ovatâ, brevissculâ.*

THE HALF-STRIATED STYLIFER. Shell small, ovate, white, partly very finely striated; spire rather longer than aperture; whorls four, last ovate, oblong; aperture ovate, rather short.

A. ADAMS. (Amaurella) MS. Brit. Mus.

Hab. Japan.

This and the previous species are of very doubtful generic attributes. Quite possibly they may be Stylifers, but on the other hand, they may belong to a different part of the system.

MONOGRAPH
OF THE GENUS
AURICULA.

Nothing we see, but means our good,
As our delight, or as our treasure;
The whole is either our cupboard of food,
Or cabinet of pleasure.—*George Herbert.*

AURICULA.

PLATE I.

Genus AURICULA. *Lamarck.*

Testa oblonga, breviter spiralis, epidermide fusca indurata, apertura elongata, margine infra integro, labio interno plicato et calloso; labio externo inflexo interno, interdum ad marginem plicato; operculum nullum.

Shell oblong, briefly spiral, covered with a brown epidermis: aperture elongated, margin entire below, inner lip plaited and callous; outer lip sometimes plaited internally, sometimes at the margin; operculum none.

Including *Ellobium*, *Bolton*; *Cassidula*, *Fer.*; *Pleocremna*, *Adams*; *Alexia*, *Leach*; *Tralica*, *Gray*; *Maelampus*, *Mouff.*; *Marinna*, *King*.

The Auricule are found in salt-marshes, on mud-banks, among the roots of mangrove-trees, and at the mouths of rivers, principally in tropical countries, particularly those of the eastern hemisphere. China, Borneo, Malacca, the Philippines, and the more southern parts of Australia produce many of the species. A few are found in W. Columbia and the South Sea Islands. The West India Islands produce several well-known species. With regard to the various genera into which the different forms have been divided, it is probable that some of them may be usefully retained, but they are difficult to define, and require entire revision.

Species 1. (Fig. *a, b*, Mus. Sowerby.)

AURICULA MIDE. *Aur. testâ oblongâ, cylindricâ, crassâ, epidermide fusca indurâ; spirâ conicâ, brevi; infractibus granosè sculptis; ultimo cylindrico, brevi, latralitè r. unicevoso, radè suprâ infrâque*

granosè; apertura elongatâ, auriforme, medio contracto, labio interno longitudinaliter calloso, infra biphicato, labio externo crasso, latè plaitato, cum columellâ confluenti.

MIDE'S AURICULA. Shell large, cylindrical, thick, covered with a brown epidermis; spire conical, short; whorls sculptured in grains; last cylindrical, smooth, with a lateral varix, coarsely granular above and below. Aperture elongated, ear-shaped, contracted in the middle, inner lip longitudinally callous, with two plaits, outer lip thick, broadly flattened, confluent with columella.

LAMARCK. Nat. Hist. An. s. Vert.

Voluta auris Mide. Linnaeus.

Hab. Indian Seas.

Figures *a* and *b* represent two prevailing forms of this familiar shell.

Species 2. (Fig. *a, b*, Mus. Brit.)

AURICULA MALCHI. *Aur. testâ oblongo-subovatâ, epidermide fusca indurâ, longitudinaliter rugatâ; spirâ productâ, infractibus supernè subangulatis, distanter nodosis, ad suturam marginatis et crenulatis; apertura breviusculâ, infra latiusculâ, columellâ biphicatâ; labio crasso, intus declivi.*

MALCHUS'S AURICULA. Shell oblong-subovate, covered with a brown epidermis, longitudinally wrinkled; spire produced, whorls somewhat angular above, distantly nodose, bordered and crenulated; aperture rather short, rather broad below; lip thick, sloped within.

MÜLLER. Chemn. Conch. Vol. IX. Pl. CXXI. f. 1637.

Hab. —?



4.



3.



5.



6.



7.



8.



9.



10.



11.



12.

AURICULA.

PLATE II.

Species 3. (Mus. Sowerby.)

AURICULA STAGNALIS. *Aur. testâ angustâ, elongatâ, tenui, epidermide pallidâ tenui indatâ; spirâ productâ, anfractibus quaternis, penultimo alto, convexo, superne granuloso, ultimo infra latiusculâ, columellâ triplicatâ, labio externo angusto, depresso.*

THE STILL-WATER AURICULA. Shell narrow, elongated, thin, covered with a pale, thin epidermis; spire produced, whorls four, last high, convex, granular above, last rather broad below, columella three-plaited, outer lip narrow, depressed.

D'ORBIGNY. Voy. Amér. Mérid. p. 325, Pl. XLIII. f. 7, 8.

Hab. S. America.

Species 4. (Mus. Brit.)

AURICULA GANGETICA. *Aur. testâ subcylindricâ, tenuiusculâ, epidermide stramineâ tenui indatâ; spirâ breviusculâ, anfractibus tenuibus, subdepressis, ultimo supra aperturam elevato; aperturâ infra subexpansâ; columellâ biplicatâ.*

THE GANGES AURICULA. Shell rather cylindrical, rather thin, covered with a thin straw-coloured epidermis; spire rather short, whorls tumid, slightly depressed, last raised above the aperture; aperture slightly expanded below; columella with two plaits.

BENSON. Ann. Mag. Nat. Hist.

Hab. Bombay.

Species 5. (Mus. Brit.)

AURICULA CEYLONICA. *Aur. testâ subcylindricâ, spirâ breviusculâ, infra subangulatâ, subpyramidatâ; ultimo anfractu superne latiusculâ, angulatâ; aperturâ elongatâ, angustiusculâ; columellâ biplicatâ, labio externo superne angulato.*

THE CEYLON AURICULA. Shell subcylindrical, spire rather short, rather angular below, subpyramidal; last whorl rather broad above, angular; aperture elongated, rather narrow; columella with two plaits; outer lip angular above.

A. ADAMS. Proc. Zool. Soc. 1854, p. 19.

Hab. Ceylon.

Species 6. (Mus. Brit.)

AURICULA TORNAPELLINIFORMIS. *Aur. testâ subcylindricâ, tenuiusculâ, epidermide tenui pallidâ indatâ; spirâ pyramidatâ, ultimo superne tumulo, infra subglobosâ; aperturâ breviusculâ, infra rotundâ, superne angulatâ; margine crassâ, planulatâ; columellâ biplicatâ.*

THE TORNAPELLA-LIKE AURICULA. Shell subcylindrical, rather thin, covered with a thin, pale epidermis; spire pyramidal, last tumid above, rather gibbous below; aperture rather short, rounded below, slightly angular above; margin thick, flattened; columella two-plaited.

PETIT. Proc. Zool. Soc. 1854, p. 7.

Hab. — ?

A peculiar roundness at the confluence of the two sides of the aperture suggests the form of tornatella.

Species 7. (Mus. Brit.)

AURICULA HELVACEA. *Aur. testâ tenui, pallidâ rubrâ; spirâ brevi, obtusâ, ultimo anfractu cylindricâ, superne tenuiter liratâ; aperturâ infra latiusculâ, columellâ triplicatâ, labio externo angusto, planulato.*

THE PALE RED AURICULA. Shell thin, pale red; spire short, obtuse, last whorl cylindrical, finely ridged above; aperture rather broad below, columella three-plaited, outer lip narrow, flattened.

PHILIPPI. Proc. Zool. Soc. 1854, p. 8.

Hab. Malacca.

Shaped something like *Auriculae Jaber*, but without the same solidity of substance and epidermis, and broadness of outer lip.

Species 8. (Mus. Brit.)

AURICULA SEMISULCATA. *Aur. testâ oblongâ, angustâ, pallidâ, cylindricâ; spirâ brevi, anfractibus superne dense sigrinatis; aperturâ superne angustâ, infra latiusculâ, labio externo angusto, supra medium sinuatim contracto; plicis columellaribus duabus, prominentibus.*

THE HALF-SCULPTURED AURICULA. Shell oblong, narrow, pale, cylindrical; spire short, whorls closely

AURICULA.—PLATE II.

shagreened above; aperture narrow above, rather broad below, outer lip narrow, sinuously contracted above the middle; columellar plaits two, prominent.

A. ADAMS. — ?

Hab. Gambier's Island.

The sculpture on the upper part of the whorls is very beautiful, observed through a lens.

Species 9. (Mus. Brit.)

AURICULA DUNKER. *Aur. testā cylindricā, subpyramidatā, pallidē rubescenti; spirā productā, anfractibus subtruncatis, convexiusculis; aperturā breviusculā, subpyriformi, margine latissimē planatā, castaneā, columellā triplicitā.*

DUNKER'S AURICULA. Shell cylindrical, rather pyramidal, pale reddish; spire produced, whorls rather turreted, rather convex, aperture rather short, rather pyriform, margin very broadly flattened, chestnut, columella with three plaits.

PFEIFFER. — ?

Hab. — ?

Species 10. (Mus. Brit.)

AURICULA PALLESCENS. *Aur. testā cylindricā, tenui, pallidā; spirā acuminatā, productā; ultimo anfractu superius angulatā; aperturā breviusculā; columellā infra biphlicatā; labio externo superius angulato, medio et infra incrassato.*

THE PALE AURICULA. Shell cylindrical, thin, pale; spire acuminate, produced; last whorl angular above; aperture rather short; columella with

two plaits below, outside lip rather angular above, thickened at the middle and under.

PETIT. — ? Proc. Zool. Soc. 1854, p. 10.

Hab. — ?

Species 11. (Mus. Sowerby.)

AURICULA CHINENSIS. *Aur. testā elongatā, crassā; epidermide levi, crassā pallidē castaneā indurā; spirā productā, convexā, obtusā; aperturā breviusculā, columellā crassā, infra callosā, plicis duabus validis minutā; labio externo crasso, lato, supra medium tumido, suturam versus angulato et sinuato.*

THE CHINESE AURICULA. Shell elongated, thick; covered with a smooth, thick pale chestnut epidermis; spire produced, convex, obtuse; aperture rather short, columella thick, callous below, guarded with two strong plaits; outer lip thick, broad, tumid above the middle, angular and sinuated towards the suture.

PFEIFFER. Proc. Zool. 1854, p. 152.

Hab. Chinese Seas.

Species 12. (Mus. Sowerby.)

AURICULA SUBULA. *Aur. testā elongatā, angulatā, olivaceā, tenui; spirā elongatā, attenuatā; aperturā brevī, labio externo tenui, columellā infra subarcuatā, truncatā.*

THE AWL AURICULA. Shell elongated, narrow, olive, thin; spire elongated, attenuated; aperture short, outer lip thin, columella rather arched below, truncated.

GRUY. Voy. Astro. Pl. XIII. f. 39, 40.

Hab. Cuba.



14.



15.



16.



16a.



17.



18.



16b.



19.



20.



21.

AURICULA.

PLATE III.

Species 13. (Mus. Brit.)

AURICULA SACCATATA. *Aur. testâ cylindrica, angustâ, epidermide fuscâ, crassâ, leviter sulcatâ lobatâ; spirâ productâ, anfractibus rectilateralibus, ultimo oblongo; infriâ trunâdo, subtruncato; aperturâ brevissimâ, angustâ; margine carneo, labio externo supra medianam inflexo; columellâ infriâ crassâ, leviter bilobatâ, prope medianam acutè trilobatâ.*

THE BAGGED AURICULA. Shell cylindrical, narrow, covered with a brown, thick, slightly grooved epidermis; spire produced, whorls straight-sided, last oblong, swelled, rather truncated below; aperture rather short, narrow; margin flesh-coloured, outer lip bent inwards above the middle; columella thick below, with two slight teeth and one sharp near the middle.

PELHIEU. Proc. Zool Soc. 1854, p. 121.

Hab. Bay of Manilla.

Species 14. (Mus. Brit.)

AURICULA SIMPLICATA. *Aur. testâ tenui, angustâ, olivaceâ; spirâ attenuatâ, elongatâ; anfractibus supra suturam arcuatim latis, ultimo medio et infriâ longito; aperturâ brevissimâ, pyriformi, columellâ infriâ medianâ plicâ prominenti armatâ.*

THE HALF-PLATED AURICULA. Shell thin, narrow, olive; spire attenuated, elongated; whorls arch-ridged above the suture, last smooth at the middle and below; aperture rather short, pyriform, columella armed with a prominent plait below the middle.

H. and A. ADAMS. MS. Brit. Mus.

Auricula sculpta. — ?

Hab. Sandwich Islands, &c.

Distinguished by curved plaits or ridges on the upper part of the whorls.

Species 15. (Mus. Brit.)

AURICULA ELONGATA. *Aur. testâ subpyriformi, angustâ, nitenti; spirâ conicâ, subproductâ; aperturâ*

angustâ, labio externo truncâ, labio interno arcuato, infriâ medianâ unilobata, ad terminum truncato.

THE ELONGATED AURICULA. Shell rather fusiform, narrow, smooth; spire conical, rather produced; aperture narrow, outer lip thin, inner lip arched, with a single tooth below the middle, truncated at the end.

PARREYS. — ? MS. Mus. Brit.

Hab. Mediterranean.

Species 16. (Fig. a, b, Mus. Sowerby.)

AURICULA JUDEÆ. *Aur. testâ solidâ, oblongo-cylindricâ, epidermide fuscâ, densè liratâ lobatâ; spirâ productâ, obtusâ; aperturâ elongatâ, supra medianam subcontractâ; labio interno valido, medio et infriâ plicis duabus munito; labio externo lato, planato, supra medianam trunâdo, versus suturam angulatâ et sinuato.*

THE JEWESS'S AURICULA. Shell solid, oblong-cylindrical, covered with a brown, closely-ridged epidermis; spire produced, obtuse; aperture elongated, rather contracted above the middle; inner lip strong, guarded with two teeth above the middle and below; outer lip broad, flattened, swelled above the middle, sinuous and angular towards the suture.

LINNEËS. (*Voluta aris Judeæ*.)

Hab. India.

Species 17. (Mus. Brit.)

AURICULA INCRASSATA. *Aur. testâ crassâ, angustâ, spirâ attenuatâ, productâ, anfractibus subangulatis, ultimo cylindricâ; aperturâ auriformi, medio sinuatum contracto, margine crassissimo, columellâ biplicatâ.*

THE THICKENED AURICULA. Shell thick, spire attenuated, produced; whorls slightly angular, last cylindrical; aperture auriform, sinuously contracted in the middle, margin very thick, columella with two plaits.

A. and H. ADAMS. MS. Brit. Mus.

Hab. — ?

AURICULA.—PLATE III.

Species 18. (Mus. Brit.)

AURICULA HOOGLYENSIS. *Aur. testâ tenuissculâ, stramineâ, supernè conicâ, infrâ subrotundâ; spirâ subpyramidalâ, anfractibus quaternis, rectilaterali-bus, ultimo cylindrico, supernè angulato; columellâ arcuatâ, infrâ medium buplicatâ.*

THE HOOGLY AURICULA. Shell rather thin, straw-coloured, conical above, rather rounded; spire rather pyramidal, whorls four, straight-sided, last cylindrical, angular above; columella arched, with two plaits below the middle.

BLANFORD. —? MS. Brit. Mus.

Hab. Hoogly, India.

Species 19. (Mus. Brit.)

AURICULA LUTEA. *Aur. testâ ovatâ, pallidè fuleâ fusco-fasciatâ; spirâ brevi, conicâ, ultimo anfractu subcylindrico; aperturâ angustâ, labio eterno intùs platis numerosis munito; columellâ arcuatâ, triplicatâ.*

THE YELLOW AURICULA. Shell ovate, pale fawn banded with brown; spire short, conical, last whorl rather cylindrical; aperture narrow, outer lip provided with numerous plaits within; columella arched, with three plaits.

QUoy. Voy. Astro. Zoologie, Vol. II. p. 163.

Melampus pallescens. Sowerby.

Hab. —?

Species 20. (Mus. Brit.)

AURICULA OPARICA. *Aur. testâ tenui, angustâ, fusiformi, pallidè stramineâ; spirâ productâ, subacuminatâ, anfractibus elevatis, ultimo infrâ subtruncato; aperturâ brevi, columellâ arcuatâ, infrâ medium uniplicatâ, ad terminum truncatâ.*

THE OPARA AURICULA. Shell thin, narrow, fusiform, pale straw; spire produced, rather acuminated; whorls raised, last slightly truncated below; aperture short, columella arched, with a plait below the middle, truncated at the end.

H. and A. ADAMS. —? MS.

Hab. Opara Isl., S. Seas.

Species 21. (Mus. Brit.)

AURICULA PESILLA. *Aur. testâ parvâ, angustâ, albâ, spirâ acuminatâ, ultimo anfractu supra aperturam elevatâ, versus terminum subattenuatâ; aperturâ parvâ, columellâ buplicatâ.*

THE DWARF AURICULA. Shell small, narrow, white; spire acuminated, last whorl elevated above the aperture, slightly attenuated towards the end; aperture small, columella with two plaits.

H. and A. ADAMS. —? MS. Brit. Mus.

Hab. Philippines.



23.



22.



24.



25.



26.



27.



28.



29.



31.



30.

AURICULA.

PLATE IV.

Species 22. (Mus. Sowerby.)

AURICULA DOLIOLUM. *Aur. testâ parvâ, ovatâ, griseâ, fusco-fusciatâ; spirâliter tenuiter sulcatâ; spirâ fuscâ, brevî, mucronatâ; aperturâ elongatâ, intâs costatâ, columellâ infra medium prominenti, bîpliatâ; labio externo lato, albo, planulato, ad medium audentato.*

THE LITTLE TON AURICULA. Shell small, ovate, grey, banded with brown; spirally finely grooved; spire brown, short, mucronate; aperture lengthened, chestnut within; columella with two prominent plait below the middle; outer lip broad, white, flattened, with a tooth at the middle.

PETT. —? Proc. Zool. Soc. 1854, p. 31.

Hab. —? ————

Species 23. (Mus. Brit.)

AURICULA FRUMENTUM. *Aur. testâ fulvâ, subeylindricâ, solidiâsculâ; spirâ brevî, ultimo anfractu oblongâ; labio interno latè expanso, tridentato, columellâ brevî, uniplicatâ, labio externo parvè incrassato.*

THE COEN AURICULA. Shell fawn, rather cylindrical, rather solid; spire short, last whorl oblong; inner lip broadly spread, three-toothed, columella short, with one plait, outer lip a little thickened.

PETT. —? Proc. Zool. Soc. 1854, p. 11.

Hab. Lima. ————

Species 24. (Mus. Brit.)

AURICULA AVENA. *Aur. testâ parvâ, angustâ, pallidè fulvâ, leviter fuscâ; spirâ productâ, acuminatâ; aperturâ superne angustâ, labio interno infra medium triplicatâ, columellâ uniplicatâ, labio externo ad medium subsinuato.*

THE WHEAT AURICULA. Shell small, narrow, pale fulvous, slightly banded; spire produced, acuminate; aperture narrow above, inner lip three-plaited below the middle, columella single-plaited, outer lip rather sinuous at the middle.

PETT. —? Proc. Zool. Soc. 1854, p. 34.

Hab. —? ————

Species 25. (Mus. Brit.)

AURICULA FELIS. *Aur. testâ fuscâ, lavi, tenuissimè spirâliter striatâ; spirâ brevî, conicâ, ultimo*

anfractu infè obliquè attenuatâ, prope terminum spirâliter serratâ; aperturâ subovâtâ, margine inflexo; labio planulato; labio externo supra medium profundè sinuato, mediâ expanso, denticulato, labio interno bîplicato; columellâ plicâ bîfidâ armatâ.

THE CAT'S AURICULA. Shell brown, smooth, very finely spirally striated; spire short, conical, last whorl obliquely attenuated below, spirally keeled near the end; aperture subovate, margin bent inwards, broadly flattened, outer lip with a deep sinus above the middle, expanded and crenulated at the middle; inner lip with two plaits; columella armed with a bifid plait.

LAMARCK. Anim. s. Vert.

Bullinus aris-felis. Brugnière.

Hab. W. Indies. ————

Species 26. (Mus. Brit.)

AURICULA NUCLEUS. *Aur. testâ ovatâ, intensè fuscâ, tenuiter spirâliter sulcatâ; spirâ brevî, anfractibus concavis, ultimo brevissimâ, infra spirâliter carinatâ, angustâ, infra carinam concavâ, labio interno bîplicato, columellâ prominenti, uniplicatâ, labio externo coffeo, lato, planato, supra medium prominenter expanso.*

THE NUT AURICULA. Shell ovate, deep brown, finely spirally grooved; spire short, whorls convex; last rather short, spirally keeled below, narrow; concave below the keel; inner lip with two plaits; columella with a prominent plait, outer lip coffee-coloured, broad, flattened, prominently expanded above the middle.

Gmelin. Linn. Syst. Nat.

Cassidula Cunninghamiana. Adams.

Hab. Manilla. ————

Species 27. (Mus. Sowerby.)

AURICULA COFFEA. *Aur. testâ ovatâ, fusco latè fuscâ, tenuiter spirâliter striatâ; spirâ conicâ, brevî, ultimo anfractu angulato, infra angustâ, carinatâ; labio externo pallidè purpureo, supra medium prominenter lobato, columellâ bîplicatâ.*

THE COFFEE AURICULA. Shell ovate, broadly banded with brown, finely spirally striated; spire conical, short, last whorl angular, narrowed below.

AURICULA.—PLATE IV.

keeled; outer lip pale purple, prominently lobed above the middle, columella with two plaits.

CHEMNITZ. Conch. IX. t. 121, f. 5.

Hab. Mexico.

A shorter and more angular shell than *Auricula felis*.

Species 28. (Mus. Sowerby.)

AURICULA ANGULATA. *Aur. testâ conico-cylindricâ, griseo-fuscâ, ad angulum albo-fasciatâ; spirâ breviter conicâ, anfractibus acutè angulatis; labio externo pallidè carneo, planato; margine interno supra medium prominenter expanso; labio interno supra columellam buplicato, infra expanso, concavo, plicâ duplicatâ armato.*

THE ANGULAR AURICULA. Shell conico-cylindrical, grey-brown, with a white band on the angle; spire shortly conical, whorls sharply angular; outer lip pale flesh, flattened; inner margin prominently expanded above the middle; inner lip with two folds above the columella, expanded below, concave, armed with a double plait.

PETH. Proc. Zool. Soc. 1854, p. 31.

REEVE. Conch. Syst. Auricula, Pl. LXXXVII. f. 5.

Hab. —? —?

Species 29. (Mus. Sowerby.)

AURICULA DECUSATA. *Aur. testâ griseo-fuscâ, spirâ litér sulcatâ, sulcis decussatâ; spirâ productâ, sub-acuminatâ, ultimo anfractu superne rotundâ, infra carinato; aperturâ biangulatâ; labio interno buplicato; columellâ expansâ, uniplicatâ, labio externo superne angulatim sinuatâ, supra medium plicâ acutè angulatâ prominenti armato.*

THE DECUSATED AURICULA. Shell grey-brown, spirally grooved, grooves decussated; spire produced,

slightly acuminated, last whorl rounded above, keeled below; aperture biangular; inner lip with two plaits; columella expanded, with a single plait, outer lip with an angular sinus above, armed above the middle with a sharply angular, prominent plait.

H. and A. ADAMS. —? MS. Brit. Mus.

Hab. —? —?

Species 30. (Mus. Brit.)

AURICULA GRANIFERA. *Aur. testâ griseâ, conicâ, liris tenuissimis, striis decussatis, graniferâ; aperturâ angustâ, utrinque dentatâ.*

THE GRANULAR AURICULA. Shell grey, conical, grained by very fine ridges crossed by striae; aperture narrow, toothed on each side.

MOUSSON. —? MS. Brit. Mus.

Hab. Near Cape Bedford.

Species 31. (Mus. Brit.)

AURICULA TURRITA. *Aur. testâ elongatâ, turrîtâ, longitudinaliter tenuissimè plicatâ, epidermide stramineâ indatâ; spirâ elongatâ, anfractibus elevatis, superne subangulatis, ad suturam crenulatis; aperturâ pyriformi; labio interno prominenter triplicato, labio externo latè incrassato.*

THE TURRETED AURICULA. Shell elongated, turreted, longitudinally very finely plaited, covered with a straw-coloured epidermis; spire elongated, whorls raised, rather angular above, crenulated at the suture; aperture pyriform, inner lip with three prominent plaits, outer lip broadly thickened.

PEIFFER. Proc. Zool. Soc. 1854. p. 121.

Hab. Philippines.



32



33



34



35



36



37



38



39



41



40

AURICULA.

PLATE V.

Species 32. (Mus. Sowerby.)

AURICULA KEAUSSII. *Aur. testâ fusco-fumosâ, levi, superne tenuiter sulcatâ, ovali, spirâ pyramidalî; ultimo anfractu infâ carinato; aperturâ angustâ, superne subcompressâ, labio interno triplicato, labio externo lato, medio prominenter unidentato, supra medium angulatum sinuato.*

KEAUSS'S AURICULA. Shell smoky brown, smooth, finely grooved above, ovate, spire pyramidal; last whorl keeled below; aperture narrow, somewhat depressed above, inner lip with three plaits, columella with three plaits, outer lip broad, middle with a prominent tooth, angularly sinuous above the middle.

KÜSTER. Proc. Zool. Soc. 1854. p. 11.

Hab. — ?

Species 33. (Mus. Sowerby.)

AURICULA PEPITA. *Aur. testâ obliquè ovali, fuscâ; spicâ breviusculâ, anfractibus tribus, rapide crescentibus, ultimo magno; aperturâ patulâ, latâ, antice obliquè productâ, columellâ rectiusculâ, dentibus duobus prominentibus albis armatâ.*

THE PIP AURICULA. Shell obliquely ovate, brown; spire rather short, whorls three, quickly increased, last large; aperture patulous, broad, anteriorly obliquely produced, columella rather straight, armed with two prominent white teeth.

KING. (*Marrina*). Zool. Journ. Vol. V. p. 34.

Auricula nigra. Philippi.

Hab. — ?

Species 34. (Mus. — ? Copied.)

AURICULA AUSTRALIS. *Aur. testâ ovali, pallide olivaceâ, fusco longitudinaliter strigatâ, medio albounifasciatâ, infâ spirâli ter carinatâ; spirâ productâ, obtusâ; aperturâ brevi ovali, columellâ biplicatâ, labio externo tenuiusculâ.*

THE AUSTRALIAN. Shell ovate, pale olive, longitudinally striped with brown, with a single white band in the middle, spirally keeled below; spire produced, obtuse; aperture short, oval, columella with two plaits, outer lip rather thin.

QUOY. Voy. Astr. Vol. II. p. 169. Pl. XIII. f. 34-38.

Hab. Australia.

Species 35. (Mus. Sowerby.)

AURICULA SULCULOSA. *Aur. testâ ciffâ, tenuissimè striatâ; spirâ breviusculâ, obtusâ, anfractibus rotundis; labio externo planulato, medio angulatum unidentato, supra median sinuato, labio interno tenui, biplicato, columellâ latâ, concavâ, calidè unidentatâ.*

THE SULCATED AURICULA. Shell coffee-coloured, very finely striated; spire rather short, obtuse, whorls rounded; outer lip flattened, with angular tooth at the middle, sinuous above the middle, inner lip thin, two-plaited, columella broad, concave, with one strong tooth.

MOUSSON. Journ. Conch. Paris.

Hab. Port Natal.

Resembles *Auricula decussata*, less angular and with the folds of the outer lip much less produced.

Species 36. (Mus. Sowerby.)

AURICULA SANDWICHENSIS. *Aur. testâ intense fuscâ, medio albo ciagulatâ, levi, subcylindricâ, infâ leviter carinatâ, spicâ pyramidalî, aperturâ brevi, labio interno biplicato; columellâ inconspicuè uniplicatâ.*

THE SANDWICH ISLAND AURICULA. Shell deep brown, with a white band in the middle, smooth, subcylindrical, slightly keeled below, spire pyramidal, aperture short, inner lip with two plaits; columella with an inconspicuous plait.

EDYTOUX. — ? Proc. Zool. Soc. 1854. p. 34.

Auricula Browni. Philippi.

Hab. Sandwich Islands.

Species 37. (Mus. Brit.)

AURICULA BROTIANA. *Aur. testâ buliâ, griseo pallidè fasciatâ, oculosubglobosâ, utrinque acuminatâ; aperturâ angustâ, dentibus prominentibus acutis utrinque armatâ, columellâ infâ uniplicatâ.*

BROT'S AURICULA. Shell bay, banded with pale grey, oval-subglobose, acuminate at each end; aperture narrow, armed on both sides with sharp, prominent teeth, columella with one plait below.

PFEIFFER. — ? MS. Brit. Mus.

eylon.

AURICULA.—PLATE V.

Species 38. (Mus. Brit.)

AURICULA ZONATA. *Aur. testâ oblongâ, conicâ, luteâ, levi, fusco-fasciatâ; spirâ pyramidalî, breviusculâ, ultimo anfractu obtusè angulato; aperturâ elongatâ, columellâ biplicatâ, labio externo tenuiusculo, intus maculato, transversè plicato.*

THE BANDED AURICULA. Shell oblong, conical, yellowish, smooth, banded with brown; spire pyramidal; rather short, last whorl obtusely angular; aperture elongated, columella with two plaits, outer lip rather thin, spotted inside, with transverse plaits.

MÜHLFELDT.—? MS. Brit. Mus.

Auricula monile. Lamarck.

Auricula fasciata. Deshayes.

Voluta flava. Gmel.

Auricula mustellina. Deshayes.

Hab. West Indies.

Species 39. (Mus. Sowerby.)

AURICULA QUOYL. *Aur. testâ parvâ, fusco fasciatâ, ovatâ, superne acuminatâ; spirâ productâ, pyramidalî; aperturâ breviusculâ; columellâ biplicatâ, labio externo tenui.*

QUOY'S AURICULA. Shell small, banded with brown, ovate, acuminate above; spire produced, pyramidal; aperture rather short; columella with two plaits, outer lip thin.

A. ADAMS. (Laminodonta).

Hab. New Zealand.

Species 40. (Mus. Brit.)

AURICULA ORYZA. *Aur. testâ angustâ, fusiformi, levi, albâ; spirâ elatâ, pyramidalî; aperturâ parvâ, columellâ biplicatâ.*

THE RICE AURICULA. Shell narrow, fusiform, smooth, white; spire raised, pyramidal; aperture small, columella with two plaits.

H. & A. ADAMS.—? MS. Brit. Mus.

Hab. —? —?

Species 41. (Mus. Brit.)

AURICULA NITIDULA. *Aur. testâ parvâ, nitenti, castaneâ, fasciatâ, fusiformi, angustâ, spirâ elatâ, sub-acuminatâ, ultimo anfractu infrâ tumidiusculâ; aperturâ angustâ, labio externo tenui, labio interno biplicato, columellâ arcuatâ, infrâ truncatâ.*

THE NEAT LITTLE AURICULA. Shell small, shining, chestnut, banded, fusiform, narrow, spire raised, slightly acuminate, last whorl rather tumid below; aperture narrow, outer lip thin, inner lip with two plaits; columella arched, truncated below.

H. & A. ADAMS.—? MS. Brit. Mus.

Hab. —? —?



43.



42.



44.



45.



46.



47.



48.



49.



50.



51.

AURICULA.

PLATE VI.

Species 42. (Mus. Brit.)

AURICULA COSTELLARIS. *Aur. testâ alveolâ-fusâ, obliquè longitudinalitèr costatâ, latâ, brevî; spirâ conicâ, ultimo anfractu breviter cylindrico, infâ recurvato, infra carinam nubilicatâ; aperturâ angustâ, labio interno apertâ, triplicatâ.*

THE SMALL RIBBED AURICULA. Shell olive-brown, obliquely longitudinally ribbed, broad, short; spire conical; last whorl shortly cylindrical, keeled below, umbilicated below the keel; aperture narrow, inner lip arched, with three plaits.

H. & A. ADAMS. MS. Brit. Mus.

Hab. New Zealand

Species 43. (Mus. Brit.)

AURICULA GLOBULUS. *Aur. testâ brevi, ovato-globosâ, utrinque acuminatâ, alveolâ, fasciatâ; aperturâ angustissimâ, semilunari; columellâ bîplicatâ, labio externo truncatâ.*

THE GLOBE AURICULA. Shell short, ovate-globose, acuminate at each end, olive, banded; aperture very narrow, semilunar; columella with two plaits, outer lip rather thin.

D'ORBIGNY—? MS. Brit. Mus.

Hab. S. America.

Species 44. (Mus. Brit.)

AURICULA STRIATA. *Aur. testâ parvâ, conicâ, coffâ, spirâlibèr sulcatâ, superiôrè tenuiter longitudinalitèr plicatâ; spirâ brevissimâ; anfractibus ad suturam recumbentibus cristatis; ultimo infâ angustâ, truncatâ; aperturâ angustâ, labio interno tenui, inconspicuè plicatâ, columellâ validè multiplicatâ, labio externo incrassato, superiôrè angulatâ.*

THE STRIATED AURICULA. Shell small, conical, coffee-coloured, spirally grooved, finely longitudinally plaited above; spire very short; whorls with a recumbent crest at the suture; last narrow below, truncated; aperture narrow, inner lip thin, inconspicuously plaited, columella with a strong plait, outer lip thickened, angular above.

PEASE—? MS. Brit. Mus.

Hab. South Sea Islands.

Species 45. (Mus. Sowerby.)

AURICULA SULCATA. *Aur. testâ subcylindricâ, albâ, fusâ, alba angustè trifasciatâ, superiôrè spirâlibèr. Testâ, infâ costâ sulcatâ; spirâ pyramidatâ, ultimo anfractu infâ obtusè curvato; aperturâ scrobicatâ, labio interno bîplicatâ, labio externo eglèro, albo, subincrassato.*

THE GROOVED AURICULA. Shell rather cylindrical, deep brown, with three narrow white bands, spirally ridged above, closely grooved below; spire pyramidal, last whorl obtusely keeled below; aperture half-oval, inner lip with two plaits, outer lip reflected, white, rather thickened.

H. & A. ADAMS. MS. Brit. Mus.

Auricula Stutchboreyi. Pfeiffer.

Hab. New Zealand.

Species 46. (Mus. Brit.)

AURICULA CINGULATA. *Aur. testâ subcylindricâ, utrinque acuminatâ, angustâ, castaneo-fuscatâ, spirâ fusco-nigrescenti, elevatâ, lateralitèr convexiôrènti; ultimo anfractu cylindrico; aperturâ, intûs dentatâ; labio columellari infâ sinuato, conspicuè multiplicatâ.*

THE BANDED AURICULA. Shell subcylindrical, acuminate at each end, narrow, banded with chestnut, spire blackish brown, raised, rather convex laterally; last whorl cylindrical; aperture toothed within; columellar lip sinuous below, with a conspicuous plait.

PFEIFFER. MS. Brit. Mus.

Melampus variabilis. Gassies.

Hab. Culu, New Caledonia.

Species 47. (Mus. Brit.)

AURICULA TABOGENSIS. *Aur. testâ conicâ, fusâ, solidâ, ventricosâ, brevi; spirâ breviter conicâ; ultimo anfractu infâ angustato, acuminato, columellâ validè bîplicatâ, aperturâ angustâ, intûs transversè crebriplicatâ.*

THE TABOGIS AURICULA. Shell conical, brown, solid, ventricose, smooth; spire shortly conical; last whorl narrow below, acuminate, columella

with two strong plaits, aperture narrow, closely transversely plaited within.

C. B. ADAMS. Zool. Proc. 1854. p. 9.

Hab. Jamaica.

Species 48. (Mus. Brit.)

AURICULA UMLASSIANA. *Aur. testâ conicâ, latissimâ, olivaceâ, pallidè fusco-fasciatâ; spirâ brevissimâ, subplanulatâ, ultimo anfractu infrah angustissimâ; labio interno infrah uniplicato; columellâ uniplicatâ; labio externo intus multiplicato.*

THE UMLASSIAN AURICULA. Shell conical, very broad, olive, banded with pale brown; spire very short, rather flat, last whorl very narrow below: inner lip with one plait below, columella with one plait; outer lip numerously plaited within.

KRAUSS—? MS. Mus. Brit.

Hab. S. Africa.

Species 49. (Mus. Brit.)

AURICULA COSTATA. *Aur. testâ castaneâ, brevî, ovali, longitudinaliter costatâ, costis obliquis, undulatis, spirâ conicâ, anfractibus ad suturam cristatis; aperturâ semiovatâ, margine crassissimo, labio interno rectiusculo, margine quinque-plicato; labio externo superne angulatim subsinuato.*

THE RIBBED AURICULA. Shell chestnut, short, ovate, longitudinally ribbed, ribs oblique, undulated, spire conical, whorls crested at the suture: aperture half-oval, margin very thick, inner lip rather straight; margin with five plaits; outer lip rather angularly sinuous above.

QUOY. Voy. Astrolabe. Proc. Zool. Soc. 1854.

Hab. Isl. Masbate, Philippines.

Species 50. (Mus. Brit.)

AURICULA GUNDLACHI. *Aur. testâ subconicâ, obtusè angulatâ, pallidâ, fasciis castaneis interruptis pictâ; spirâ brevissimâ, ultimo anfractu infrah subtruncato; aperturâ angustâ, intus multiplicatâ; labio interno biplicato.*

GUNDLACH'S AURICULA. Shell rather conical, obtusely angular, pale, painted with interrupted chestnut bands; spire very short, last whorl slightly truncated below; aperture narrow, numerously plaited within; inner lip with two plaits.

PFEIFFER. MS. Brit. Mus.

Hab. Cuba.

Species 51. (Mus. Brit.)

AURICULA OLIVACEA. *Aur. testâ convexo-conicâ, olivaceâ, griseo-fasciatâ, fasciis strigatis; spirâ brevissimâ, ultimo anfractu ventricoso, superne angulato, infrah angustato; labio interno biplicato; labio externo intus multiplicato, ad marginem dense castaneo.*

THE OLIVE AURICULA. Shell convexly conical, olive, banded with grey, bands striped; spire very short, last whorl ventricose, angular above, narrow below: inner lip with two plaits; outer lip many-plaited within, deep chestnut at the margin.

CARPENTER. MS. Brit. Mus.

Hab. California.





53



52



54



55



56



57



58



59



61



63



62



60

AURICULA.

PLATE VII.

Species 52. (Mus. Brit.)

AURICULA REDFIELDI. *Aur. testâ juteâ, conicâ, obtusè angulatâ, infriè obliquè subtruncatâ, albâ, castaneo interruptim fasciatâ; aperturâ angustissimâ, intûs seriatim plicatâ; labio interno uniplicato; columellâ uniplicatâ.*

REDFIELD'S AURICULA. Shell small, conical, obtusely angular, obliquely subtruncated in front, whitish, with interrupted chestnut bands; aperture very narrow, plaited in rows within, inner lip single-plaited, columella single-plaited.

PFEIFFER. MS. Brit. Mus.

Hab. Bermuda.

Species 53. (Mus. Brit.)

AURICULA CAFFERA. *Aur. testâ ovato-conicâ, olivaceo-fuscâ, concolori vel fasciatâ; spirâ brevissimâ; ultimo anfractu ad suturam subristata, infriè post columellam concavo; columellâ uniplicatâ; aperturâ intûs valdè plicatâ.*

THE CAFFER AURICULA. Shell ovately-conical, olive-brown, uniform or banded; spire very short; last whorl somewhat crested at the suture, concave below, behind the columella; columella with one plait, aperture with strong plaits within.

KUSTER. *Conch.* p. 36, Pl. V. f. 6.

Auricula atr. Mühlfeldt.

Hab. S. Africa.

Species 54. (Mus. Brit.)

AURICULA BIDENTA. *Aur. testâ ovato-conicâ, obtusâ, olivaceâ, interruptim pallidè trifasciatâ; spirâ brevî, conicâ, ultimo anfractu superne obtusè angulato, infriè acuminato; aperturâ angustâ, intûs edentulâ, labio interno bidentato.*

THE DOUBLE-TOOTHED AURICULA. Shell ovate-conical, obtuse, olive, with three pale interrupted bands; spire short, conical; last whorl obtusely angular above; acuminate below; aperture narrow, without teeth inside, inner lip with two teeth.

SAY. Invertebrata of Massachusetts.

Auricula cornu. Deshayes.

Hab. N. America.

Species 55. (Mus. Brit.)

AURICULA CRISTATA. *Aur. testâ subcylindricâ, pallidè castaneâ; spirâ brevissimâ, ultimo anfractu ad suturam elevatâ, tumidâ, infriè spirâlièr tumidâ; aperturâ angustâ, labio interno triplicato, infriè concavo, ad terminum subtruncato.*

THE CRESTED AURICULA. Shell rather cylindrical, pale chestnut; spire very short, last whorl raised at the suture, tumid, spirally tumid below; aperture narrow, inner lip with three plaits, concave below, rather truncated at the end.

PFEIFFER. MS. Brit. Mus.

Hab. Philippines.

Species 56. (Mus. Brit.)

AURICULA BOREALIS. *Aur. testâ conicâ, lœvi, pallidè fulco fasciatâ; spirâ elevatâ, conicâ, ultimo anfractu obtusissimè angulatâ, prope terminum angustè carinato, labio interno prope medium uniplicato, columellâ infriè uniplicatâ; labio externo incrassato.*

THE BOREAL AURICULA. Shell conical, smooth, banded with pale brown; spire elevated, conical, last whorl very obtusely angular, narrowly keeled near the end, inner lip with a single plait near the middle, columella with a single plait below; outer lip thickened.

CONRAD. (Melampus.)

Hab. North America.

Species 57. (Mus. Sowerby.)

AURICULA CONIFORMIS. *Aur. testâ conicâ, luteâ, griseo-olivaceo latè fasciatâ; spirâ brevî, ultimo anfractu obtusè angulato, infriè acuminato, columellâ uniplicatâ; aperturâ intûs seriatim plicatâ, labio externo tenui, intûs fasciatâ.*

AURICULA.—PLATE VII.

THE CONE-SHAPED AURICULA. Shell conical, yellow, broadly banded with olive-grey; spire short, last whorl obtusely angular, acuminate below, columella with one fold; aperture with a row of teeth inside, outer lip thin, banded within.

LAMARCK. *Anim. s. Vert.*

Voluta minuta, Gmel.

Hab. Barbadoes.

Species 58. (Mus. Brit.)

AURICULA LIVIDA. *Aur. testâ obsâ, subconicâ, griseo-olivaceâ; spirâ brevissimâ, aufractibus maculatis, ultimo infrâ subtruncatâ, post columellam convexâ; aperturâ utrinque denticulatâ.*

THE LIVID AURICULA. Shell stout, rather conical, olive-grey, spire very short, whorls spotted, last subtruncated below, concave below the columella; aperture toothed on both sides.

LINNEUS. *Syst. Nat.*

Auricula Liberiana? Adams.

Hab. —?

Species 59. (Mus. Brit.)

AURICULA PANAMAENSIS. *Aur. testâ elongatâ, fusiformi, intensè fuscâ, levi, infrâ tumidissimâ; spirâ productâ, aufractibus quaternis, ultimo oblongo; aperturâ auriformi, infrâ subsessatâ, medio contractâ; labio externo ad medium sinuato; labio interno quadruplicato, columellâ infrâ rectissimâ.*

THE PANAMA AURICULA. Shell elongated, fusiform, deep brown, smooth, rather tumid below; spire produced, whorls four, last oblong; aperture auriform, rather expanded below, contracted in the middle; outer lip sinuous in the middle, inner lip with four plaits; columella rather straight.

C. B. ADAMS. *Shells of Jamaica.*

Hab. Jamaica.

Species 60. (Mus. Brit.)

AURICULA PRIFORMIS. *Aur. testâ conicâ, subattenuatâ, spirâ brevi, substansâ, ultimo aufractu olivaceo pallidè maculato, infrâ attenuato, acuminato, columellâ conspicuè buplicatâ.*

THE PRIFORM AURICULA. Shell conical, rather attenuated, spire short, rather rounded, last whorl

olive with pale spots, attenuated below, acuminate, with two conspicuous plaits.

PETIT. *Proc. Zool. Soc.* 1842, p. 202.

Hab. Tamaio, West Columbia.

Species 61. (Mus. Brit.)

AURICULA DENTICULATA. *Aur. testâ fulvâ, fusiformi; spirâ elongatâ, pyramidatâ, ultimo aufractu ventricosâ, ovato, labio columellari conspicuè triplicato, labio externo intus incrassato, obtusè bidentato.*

THE TOOTHED AURICULA. Shell fulvous, fusiform; spire elongated, pyramidal, last whorl ventricose, ovate; columellar lip conspicuously three-plaited, outer lip thickened within, with two conspicuous teeth.

D'ORRIGNY. *Voy. Amér. Mérid. Pl.* XLII. f. 4, 5.

Hab. Bermuda.

Species 62. (Mus. Brit.)

AURICULA SIAMENSIS. *Aur. testâ obtusè conicâ, castaneo quadrifasciatâ; spirâ brevissimâ, ultimo aufractu superne obtusè angulato, infrâ subtruncato; aperturâ intus fasciatâ, columellâ conspicuè buplicatâ; labio externo incrassato.*

THE SIAMESE AURICULA. Shell obtusely conical, with four chestnut bands; spire rather short; last whorl obtusely angular above, slightly truncated below; aperture banded within; columella conspicuously two-plaited; outer lip thickened.

MARTENS. *MS. Brit. Mus.*

Hab. Siam.

Species 63. (Mus. Brit.)

AURICULA MITRALIS. *Aur. testâ olivaceâ, angustâ, levi; spirâ elevatâ, obtusâ, convexissimâ; ultimo aufractu cylindrico, pallidè fusco, superne maculato; aperturâ pyriformi, infrâ rotundâ, columellâ brevi, rectâ, uniplicatâ.*

THE MITRE-LIKE AURICULA. Shell olive-shaped, narrow, smooth; spire raised, obtuse, rather convex, last whorl cylindrical, pale brown, spotted above; aperture pyriform, round below; columella short, straight, with one plait.

ADAMS. *MS. Brit. Mus.*

Hab. Mogadore.

AURICULA.

	Plate.	Species.		Plate.	Species.
angulata, <i>Petit</i>	IV.	28	lutea, <i>Quoy</i>	III.	19
ater, <i>Muhlfeildt</i>	VII.	53	malchi, <i>Müller</i>	I.	2
Australis, <i>Quoy</i>	V.	34	Mide, <i>Linnaeus</i>	I.	1
avena, <i>Petit</i>	IV.	24	minuta, <i>Gmelin</i>	VII.	57
bidentata, <i>Sag</i>	VII.	54	mitralis, <i>Adams</i>	VII.	63
borealis, <i>Conrad</i>	VII.	56	nigra, <i>Philippi</i>	V.	33
Bononi, <i>Philippi</i>	V.	36	nitidula, <i>H. & A. Adams</i>	V.	41
Brotiana, <i>Pfeiffer</i>	V.	37	nucleus, <i>Gmelin</i>	IV.	26
Caffra, <i>Kuster</i>	VII.	53	olivacea, <i>Carpenter</i>	VI.	51
Ceylonica, <i>A. Adams</i>	II.	5	oparica, <i>Adams</i>	III.	20
Chinensis, <i>Pfeiffer</i>	II.	11	oryza, <i>A. Adams</i>	V.	40
cingulata, <i>Pfeiffer</i>	VI.	46	pallidescens, <i>Petit</i>	II.	10
coffen, <i>Chemnitz</i>	IV.	27	Panamaensis, <i>C. B. Adams</i>	VII.	59
coniformis, <i>Latourck</i>	VII.	57	pellucens, <i>Sowerby</i>	III.	19
cornuta, <i>Deshayes</i>	VII.	54	pepita, <i>King</i>	V.	33
costata, <i>Quoy</i>	VI.	49	pusilla, <i>Adams</i>	III.	21
costellaris, <i>H. & A. Adams</i>	VI.	42	pyriformis, <i>Petit</i>	VII.	60
eristata, <i>Pfeiffer</i>	VII.	55	granifera, <i>Monsson</i>	IV.	30
Concungiana? <i>Adams</i>	IV.	26	Redfieldi, <i>Pfeiffer</i>	VII.	52
denticulata, <i>Adams</i>	IV.	29	saccata, <i>Pfeiffer</i>	III.	13
denticulata, <i>D'Orbigny</i>	VII.	61	Sandwichensis, <i>Edyours</i>	V.	36
doliolum, <i>Petit</i>	IV.	22	sculpta — ?,.....	III.	14
Dunkeri, <i>Pfeiffer</i>	II.	9	semiplicata, <i>H. & A. Adams</i>	III.	14
elongata, <i>Parsons</i>	III.	15	semisculpta, <i>A. Adams</i>	II.	8
felis, <i>Latourck</i>	IV.	25	Siamensis, <i>Morley</i>	VII.	62
fermentum, <i>Petit</i>	IV.	23	stagnalis, <i>D'Orbigny</i>	II.	3
Gauletica, <i>Benson</i>	II.	4	striata, <i>Pease</i>	VI.	44
globulus, <i>D'Orbigny</i>	VI.	43	subula, <i>Quoy</i>	II.	12
Gundlachi, <i>Pfeiffer</i>	VI.	50	sulcata, <i>H. & A. Adams</i>	VI.	45
Quoyi, <i>A. Adams</i>	V.	39	sulciosa, <i>Monsson</i>	V.	35
helvaca, <i>Philippi</i>	II.	7	Tabogensis, <i>C. B. Adams</i>	VI.	47
Hooglyensis, <i>Blaufors</i>	III.	18	toratelliniformis, <i>Petit</i>	II.	5
incrassata, <i>Adams</i>	III.	17	turrata, <i>Pfeiffer</i>	IV.	31
Jude, <i>Linnaeus</i>	III.	16	Umlassiana, <i>Krauss</i>	VI.	45
Kraussii, <i>Kuster</i>	V.	32	variabilis, <i>Gassies</i>	VI.	46
Libertiaca, <i>Adams</i>	VII.	58	zonata, <i>Muhlfeildt</i>	V.	32
livida, <i>Linnaeus</i>	VII.	58			



INDEX TO VOLUMES

SHOWING IN WHICH VOLUME EACH GENUS WILL BE FOUND.

The Genera marked * are Land Shells, those marked † are Freshwater, the remainder are Marine.

Genus	Plates Vol.	Genus	Plates Vol.	Genus	Plates Vol.	Genus	Plates Vol.
*AMPHATINA . . .	23 5	CARDITA . . .	9 1	CYPRICA . . .	27 3	HEPPODUS . . .	1 14
*AMPHINELLA . . .	6 6	CARDIUM . . .	22 2	CYPRICARDIA . . .	2 1	HYDATINA . . .	2 16
*AMPHINELLA . . .	2 14	CARINARIA . . .	1 15	CYPRINA . . .	1 19	†HYRIA . . .	5 17
ADDERIS . . .	2 19	CASSIDARIA . . .	1 5	†CYRINA . . .	19 20	†IANTHINA . . .	5 11
AKERA . . .	1 16	CASSIS . . .	12 5	CYTHERA . . .	10 14	†IO . . .	3 12
*ALYCEUS . . .	6 20	†CASTALLA . . .	3 17	DELPHINULA . . .	5 1	†IRIDINA . . .	2 16
AMPHIDESMA . . .	7 8	CERBERIA . . .	1 19	DENTALIUM . . .	7 18	ISOCARDIA . . .	1 2
†AMPELLARIA . . .	28 10	†CERITHIDEA . . .	4 15	PHONE . . .	12 14	KUPBUS . . .	1 20
*ANASTOMA . . .	1 14	CERITHIUM . . .	20 15	DOLABELLA . . .	2 16	LEDA . . .	9 18
ANATINA . . .	4 14	CHAMA . . .	9 4	DOLABRIFERA . . .	1 16	†LAMPAZIA . . .	2 15
ANALINELLA . . .	1 19	CHAMOSTROFA . . .	1 14	DOLIUM . . .	8 5	LATIA . . .	1 9
ANOLLARIA . . .	12 15	†CHILISA . . .	3 19	DONAX . . .	9 8	LEOSTRACA . . .	3 15
†ANCOLIOTIS . . .	6 12	CHITON . . .	33 4	ERUSA . . .	1 5	*LEPODOMA . . .	8 13
†ANCYLUS . . .	3 20	CHITONELLUS . . .	1 4	EGLISIA . . .	1 5	LIMA . . .	5 18
†ANODON . . .	37 17	*CHONDRODOMA . . .	11 14	EMARGINULA . . .	9 19	†LIMNÆA . . .	15 18
ANOMIA . . .	8 11	CIRCE . . .	10 14	ERATO . . .	3 15	LINSULA . . .	2 13
APLEUSTRUM . . .	1 16	*CLAUSILIA . . .	17 20	†ETHEREA . . .	2 18	LINTHIA . . .	1 18
APLYSIA . . .	10 17	CLAVAGELLA . . .	3 18	EULIMA . . .	6 15	LITIDODOMUS . . .	5 10
ARCA . . .	17 2	COLUMBELLA . . .	37 11	FASCIOLARIA . . .	7 4	LITIORINA . . .	18 10
ARAGONATA . . .	4 12	COSCHIOLETTAS . . .	2 14	FICTIA . . .	1 4	LUTINA . . .	11 6
ARTEMIS . . .	10 6	COSTUS . . .	36 1	FISIBRELLA . . .	16 6	LUTRARIA . . .	5 8
ASPERGILLUM . . .	4 12	CORRIS . . .	1 18	FISTULINA . . .	1 20	MUCINA . . .	21 8
ASTARTE . . .	3 19	CORFELLA . . .	5 2	FUSUS . . .	21 4	MAGLUS . . .	4 18
ATYS . . .	5 17	CRANIA . . .	1 13	†GALATEA . . .	6 16	MALLES . . .	3 11
†*AUCICULA . . .	7 20	CRANOPSIS AND ZEIDORA . . .	1 19	GALATOMMA . . .	1 19	MANGELIA . . .	8 3
AVICULA . . .	18 10	CRASSATELLA . . .	3 1	GASTROILENA . . .	4 20	MARGARIA . . .	3 20
†BARTELETTIA AND MULLERIA . . .	1 18	CERINATULA . . .	2 11	GRNA . . .	2 19	MARGINELLA . . .	27 15
BODIPIPIA . . .	1 19	CERIPICULA . . .	5 11	†GLAUCOSOME . . .	1 2	*MELASPIRA . . .	1 19
BUCCIUM . . .	14 3	CERITHIUM . . .	7 11	GLYCIMERIS . . .	1 19	†MELANTA . . .	50 12
*BELMUS . . .	89 5	CYRIBULUM . . .	7 11	GASTRODON . . .	1 19	†MELANOPSIS . . .	3 12
BELLA . . .	6 16	CUCULLA . . .	1 17	HALLA . . .	1 14	†MELATOMA . . .	3 12
BELLA . . .	4 3	CUCULLES . . .	7 19	HALLOTIS . . .	17 3	MEROE . . .	3 14
BELLINA . . .	1 18	CUMINGIA . . .	2 19	HAMINEA . . .	5 16	MESALLA AND EGLISIA . . .	1 5
CALYPTREA . . .	8 11	*CYCLOPHORUS . . .	20 13	HARPA . . .	4 1	MESODESMA . . .	4 8
CANCELLARIA . . .	18 10	*CYCLOSTOMA . . .	23 13	*HELIX . . .	31 19	META . . .	1 11
CAPSA . . .	1 19	CYCLOSTREMA . . .	3 19	†HELIX . . .	210 7	MITRA . . .	30 2
CAPSULA . . .	2 19	*CYCLOPS . . .	9 14	HEMIPETEN . . .	1 6	MODIOLA . . .	11 10
CARDILIA . . .	1 19	*CYLINDRELLA . . .	16 20	†HEMISINUS . . .	6 12	MONODOMUS . . .	4 2
		CYMBIUM . . .	26 13	HINNIES . . .	1 8		

INDEX TO THE VOLUMES.

Genera	Plates Vol.	Genera	Plates Vol.	Genera	Plates Vol.	Genera	Plates Vol.
†MILLEPEDIA	1 18	PIEROCOLA	3 19	ROSTELLARIA	3 6	TEREBRATULA AND	
MUREX	37 3	PIHARUS	1 19	ROTELLA	4 20	RHYNCHONELLA	11 13
MYA	3 20	PIHLANANELLA	6 13	RHYNCHONELLA	1 13	TEREDO	4 20
MYADORA	1 2	PHILINE	2 18	SANGUINOLARIA	1 10	TIRACIA	3 12
MYCETOPUS	4 16	PHOLADOMYA	1 18	SAXICAVA	2 20	TORSATELLA	4 15
MYOCAMA	1 12	PHOLAS	12 18	SCALARIA	16 19	TRICHOPTERIS	2 19
MYTELMERIA	1 20	PHORS	3 1	*SCARABUS	3 12	TRIDACNA	8 14
MYTILUS	11 10	†PHYSA	12 19	SCAPHANDER	1 18	TRIGONIA	1 12
NASSA	29 8	PINSA	34 11	SCINTILLA	6 19	TRITON	20 2
NATICA	30 9	+PIRENA	2 12	SCUTUS	2 17	TRICHITA	3 11
NAUTILUS	6 12	PLACUNA	5 18	SIGARETUS	5 15	TROCHUS	16 13
NATIA	1 20	PLACUNANOMIA	3 11	SILIGUARIA	4 20	TUGALIA	1 17
+NATICHELLA AND		PLANAXIS	5 20	SIMPLOPSIS	2 13	TUGONIA	1 14
LATIA	8 9	†PLANORBIS	14 20	SIPHONARIA	7 9	TURBINELLA	13 4
NEILO	1 18	†PLEIODON	1 16	SOLARICUM	3 15	TURBO	13 4
NERITA	19 9	*PLEUROBRANCHUS	1 17	SOLECRETUS	8 19	TURBITELLA	11 5
†NERITINA	37 9	PLEUROTOMA	40 1	SOLEMYA	1 20	*TYMPANOTONOS	2 15
NERITOPSIS	1 20	PLEUROTOMARIA	1 19	SOLEN	7 19	TYPHIS	3 19
NISO	1 15	PLECATULA	4 19	SOLENELLA AND		UMBRELLA	1 11
NUCULA	5 18	†POTAMIDES	1 15	NEILO	1 18	†UNIO	96 16
OLIVA	30 6	PSAMMOBIA	8 10	SOLETELLINA	4 10	UTRICULUS	1 18
ONISCIA	1 5	PSAMMOHELLA	1 10	SPILETHUM	5 20	VANIKORO AND	
ORBICULA	1 13	PIEROCERA	6 6	SPONDYLUS	18 9	NERITOPSIS	3 20
OSTREA	33 18	*PIEROCYCLUS	5 14	STOMATELLA	5 19	VELORITA	1 20
OSTREUM	14 15	PIERPODA	6 20	STOMATIA	2 19	VENERUPIS	4 19
+PALUDINA	11 14	*PUPA	20 20	STROMBUS	19 6	VENUS	26 14
†PALUDOMUS	3 4	*PUPINDE	10 20	STRUTHIOLARIA	1 6	*VERTAGUS	5 15
PANDORA	3 19	PUPPRA	13 3	STYLIFER	2 20	VITHINA	10 13
PANDORA	6 19	PYRAMIDELLA	6 15	†SUCCINA	12 18	VOLUTA	22 6
*PARIOLA	4 6	†PYRAZUS	1 15	TAPES	13 14	VULSELLA	2 11
PAVELLA	42 8	PYRULA	9 4	†TRINOSTOMA	1 19	YOLIDA	5 18
PECEN	35 8	RASELLA	8 2	†TELESCOPIUM	1 15	ZEPHORA	1 19
PELUNCULUS	9 1	RICINULA	6 3	TELLINA	58 17	ZEPHYRINUS	8 14
PERICLARIA	1 20	RIMULA	1 19	TEREBRA	27 12	ZILOPHAGA AND	
PERUM	1 11	RISSEA	13 20	TEREBELLUM	1 14	NAVEA	1 20
PERNA	6 11						







