

## 9. Descriptions of twelve new Species of Shells.

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(Plate LIX.)

## 1. CYCLOSTOMA BALTEATUM, sp. nov. (Plate LIX. fig. 1.)

*C. testa globoso-conica, modice umbilicata, griseo-alba, ferrugineo tincta, purpureo-fusco spiraliter lineata et infra peripheriam unizonata; anfractibus subrotundatis, undique decussatim striatis, spiraliter superne et inferne liratis; apertura circulari, intus fusco fasciata; labro albicante, latere externo vix expanso, latere ventrali tenuiter expanso; operculo calcareo spirali, planulato, anfractibus tribus.*

*Hab.* Madagascar.

A globosely conical shell, moderately umbilicated, greyish white, tinged with rust-brown, spirally banded with purplish-brown lines, and a brown zone just below the middle of the last whorl; whorls somewhat rounded, decussately striated throughout, above and below spirally corded; aperture circular, interior showing the brown bands; lip whitish, the outer side scarcely expanded; ventral side broad and thin.

## 2. CYCLOSTOMA FILO-STRIATUM, sp. nov. (Plate LIX. fig. 2.)

*C. testa globoso-conica, solidiuscula, modice umbilicata, albida, ferrugineo tincta, castaneo spiraliter zonata; anfractibus rotundatis, malleatis, spiraliter obsolete liratis, concentricè conspicue filo striatis, striis ad suturas subplicatis; apertura oblique circulari, intus castaneo-fusca; labro albo rotunde reflexo.*

*Hab.* Madagascar.

A globosely conical shell, rather solid, moderately umbilicated, rusty white, banded with chestnut-brown zones; whorls rounded, with a malleated surface, spirally obsolete ridged, concentrically conspicuously thread-striated, the striæ somewhat puckered at the sutures; aperture rather oblique, interior dark brown; lip white, rounded.

*Obs.* Of much the same form and general appearance as the preceding, but with obvious differences, being a shell of more solid growth, with a thickened roundly reflexed lip; in sculpture, the concentric thread-like striæ taking the place of the spiral ridges, which are predominant in *C. balteatum*.

## 3. CYCLOSTOMA CONSANGUINEUM, sp. nov. (Plate LIX. fig. 3.)

*C. testa depresso turbinata, ample umbilicata, griseo-albida, purpureo-griseo spiraliter fasciata, et infra peripheriam purpureo fusco unizonata, transverse luteo flammea; spira subacuta; anfractibus rotundatis, concentricè subtiliter striatis, spiraliter*

*supra peripheriam lirato-striatis; umbilico valide lirato; apertura oblique circulari, intus atro-fusca, labro reflexo.*

*Hab.* Madagascar.

A depressedly turbinated shell, widely umbilicated, greyish white, spirally banded with purplish brown, transversely streaked with pale yellow; spire rather acute; whorls rounded, concentrically finely striated, and above the periphery spirally ridged, strongly corded in the umbilicus; aperture rather oblique, interior dark brown; lip reflected.

4. *TYPHIS EXPANSUS*, sp. nov. (Plate LIX. fig. 4.)

*T. testa subfusiformi, albida, pallide fusco tincta; spira breviuscula, acuminato-turrita; anfractibus transversim obscure liratis, superne angulatis, supra angulum concavis, quadrivari-cosis; varicibus tenuibus, ad angulum falcatis, varice ultimo late expanso reflexo; tubis inter varices brevibus, ultima elongata; canali breviusculo; apertura ovali.*

*Hab.* —? From the collection of the late Thomas Norris, Esq.

A whitish shell, tinged with pale brown; spire rather short, acuminately turreted; whorls transversely obscurely ridged, angulated at the upper part, concave above the angle, with four varices hooked at the angle, the last varix being broadly expanded and reflected; the tubes between the varices are short, with the exception of the last, which is prominent; the canal is rather short.

The expansion of the last varix gives this shell its broad appearance.

5. *EUTROCHUS ALTERNATUS*, sp. nov. (Plate LIX. fig. 5.)

*E. testa subacute conica, solidiuscula, rosaceo-albida, fusco-maculata et flammulata; anfractibus plano-declivibus, undique dense spiraliter granoso-liratis, liris alternatis, granis parvis; basi planata, regulariter granoso-lirata, incise umbilicata; umbilico plano, albo.*

*Hab.* Australia?

A rather acutely conical shell, pale rose-colour, flamed and spotted with brown; whorls flatly sloping, throughout closely spirally grain-ridged, ridges alternately smaller, grains small; base flat, regularly grain-ridged, with a deeply cut umbilicus, which is smooth and white.

*Obs.* Species of the genus *Eutrochus*, A. Adams, have been included in the group of Trochidæ, distinguished under the title of "*Ziziphinus*," from which they are separated principally on account of being umbilicated. To this genus or group belong the following species, which have been described under the generic names of *Trochus*, *Ziziphinus*, and *Eutrochus*, viz. :—*jujubinus*, Gmelin; *pulchellus*, Phil.; *gemmosus*, Reeve; *zonamestus*, Adams; *ticaonicus*, Adams; *perspectivus*, Adams; *scitulus*, Adams. All these come from Australia and the Eastern archipelago. Of the new species above described I have only seen one specimen, and have no certain knowledge of its locality; but it will probably prove an Australian

shell. Its nearest analogue is *E. jujubinus* from Swan River, from which, however, it is obviously distinct.

6. *TORNATELLA ALBA*, sp. nov. (Plate LIX. fig. 6.)

*T. testa oblongo-ovata, subpellucida, alba, undique transversim punctato-sulcata, spira subexserta, sutura impressa, apertura elongato-ovata; columella uniplicata.*

*Hab.* Port Elizabeth, Cape of Good Hope.

A pure white semitransparent species, regularly grooved, and beautifully punctured throughout.

7. *PYRAMIDELLA CANALICULATA*, sp. nov. (Plate LIX. fig. 7.)

*P. testa subulato-turrita, nitida, longitudinaliter irregulariter sulcata, fulvescente, griseo fuscoque zonata et punctata, eximie longitudinaliter albo lineata et punctata, strigis longitudinalibus albo et castaneo irregulariter sparsim ornata; anfractibus planulatis, supra suturam inciso sulcatis; apertura oblonga, ad basin canalifera; columella recta, triplicata.*

*Hab.* Sandwich Islands? (*M. Frick*).

Shell subulately turreted, shining, longitudinally irregularly grooved, of a yellowish colour, banded and spotted with greyish brown, with fine longitudinal white lines and dots, also ornamented at distant intervals with longitudinal streaks of white and dark brown; whorls flattened, with an incised groove just above the suture; aperture oblong, channelled at the base; columella straight, three-plaited.

8. *PLEUROTOMA (DRILLIA) BRUNNEOMACULATA*, sp. nov. (Plate LIX. fig. 8.)

*P. testa turrita subfusiformi, cæruleo-alba, fusco maculata et zonata; anfractibus circa 10, superne lævibus concavis, inferne convexis, transversim obscure sulcatis, medio valide tuberculatis; tuberculis albis, uniserialibus, maculis brunneis superne et inferne ornatis; canali brevi; labro simplici; sinu profundiusculo; operculo corneo, nucleo terminali acuminato.*

*Hab.* California? (*M. Frick*).

Shell somewhat fusiform, turreted, bluish white, spotted and banded with brown; whorls 10, smooth and concave above, convex and transversely obscurely grooved below, with a single row of prominent white tubercles in the middle, above and below which the brown blotches are arranged; canal short; lip simple; sinus rather deep; operculum horny, acuminated; nucleus terminal.

*Obs.* The white nodules or tubercles thrown into prominence by the brown blotches give this species a very striking and beautiful appearance.

9. *PLEUROTOMA (DRILLIA) STRIGATA*, sp. nov. (Plate LIX. fig. 9.)

*P. testa turrita, acuminata, undique transversim sulcata, flavescente, fusco strigata; anfractibus circa 9, angulatis, ad angulum*

*tuberculatis, tuberculis in costellas infra desinentibus, cum costellis interstitialibus ad basin confluentes; interstitiis fusco strigatis; apertura oblonga, subsinuata; columella superne callosa; labro tenui, sinuoso, serrato; sinu angusto, profundo; canali brevi subrecurso.*

*Hab.* — ?

Shell acuminately turreted, transversely grooved throughout, yellowish streaked with brown; whorls 9, angulated, tuberculated at the angle; tubercles running downwards in ribs which intersect the ribs that proceed upwards from the base; the brown streaks run between the ribs; aperture oblong, somewhat twisted; columella callous at the upper part; lip thin, twisted, serrated; sinus narrow and deep; canal short and slightly recurved.

10. *CARDIUM ARCUATULUM*, sp. nov. (Plate LIX. fig. 10.)

*C. testa parva, oblongo-subcordata, obliqua, postice concavo-depressa, arcuata; radiatim costata, costis adjacentibus, confertis, subtiliter crenulatis; albida, pallida, fulvescente tincta et maculata.*

*Hab.* — ?

A small species of the *fragum* group, with the posterior margin more arched than in others of that group.

11. *CONUS RACEMOSUS*, sp. nov. (Plate LIX. fig. 11.)

*C. testa cylindraco-turbinata, subventricosa, solidula, lævi, superne rotundata, spira convexa, apice subobtusum; fusco-aurantiaca, lineis obscuris sparsim albo articulatis, transverse cingulatis, et cumulis macularum albarum trigonarum in series tres distantes dispositis ornata.*

*Hab.* Sandwich Islands? (*Mus. Frick*).

Shell cylindrically turbinated, somewhat ventricose, rather solid, smooth, rounded at the upper part; spire convex; apex rather obtuse, of a brownish orange-colour, with obscure transverse lines sparingly articulated with white, and clusters of white triangular spots disposed in three distant rows.

*Obs.* At first sight this shell bears very much the aspect of *C. crocatus*; but it is of a more ventricose and obtuse form. The disposition of the triangular white spots in distinct distant clusters is a characteristic feature.

12. *CANCELLARIA TURRITA*, sp. nov. (Plate LIX. fig. 12.)

*C. testa acuminato-turrita, carnea; spira exserta, acuta; anfractibus circa 7, subplanato-convexis, superne angulatis, ad suturam subdepressis, transverse valide costatis, concentricè obscure plicatis; apertura oblongo-ovata, lævi, labio externo simplici, columella recta, tenuiter triplicata.*

A *Cancellaria* of an acuminated turret-form, flesh-colour; whorls 7 in number, rather flatly convex, angulated at the upper part, and somewhat depressed at the sutures, transversely strongly ribbed, and concentrically obscurely plicated; aperture oblong-oval, smooth; outer lip simple; columella straight, with three folds.

*Hab.* — ?

*Obs.* In the specimen before me, which is the only one I have seen, the plaits or folds on the columella appear to be six or seven, through the intersection of the transverse ribs passing into the interior.

DESCRIPTION OF PLATE LIX.

- Fig. 1. *Cyclostoma balteatum*, p. 718.  
 2. — *filo-striatum*, p. 718.  
 3. — *consanguineum*, p. 718.  
 4. *Typhis expansus*, p. 719.  
 5. *Eutrochus alternatus*, p. 719.  
 6. *Tornatella alba*, p. 720.  
 7. *Pyramidella canaliculata*, p. 720.  
 8. *Pleurotoma (Drillia) brunneomaculata*, p. 720.  
 9. — (*Drillia*) *strigata*, p. 720.  
 10. *Cardium arcuatulum*, p. 721.  
 11. *Conus racemosus*, p. 721.  
 12. *Cancellaria turrata*, p. 721.

P.S. The *Pleurotomæ*, Cone, and *Pyramidella* above described were from the collection of the late M. Frick (French Consul at Honolulu), who collected in the Sandwich Islands and also in California. It is probable that the Cone and *Pyramidella* were collected by him in the former, and the *Pleurotomæ (Drillia)* in the latter locality.

The *Typhis* was found in the collection of the late Thomas Norris without any information as to locality.

The *Eutrochus* is, I think, in all probability an Australian shell.

Of the habitat of the *Cancellaria* I have no information. If I might be permitted to prophesy, I should say it would be discovered some day in the north of China.

10. On the Skulls and Alveolar Surfaces of Land-Tortoises  
 (*Testudinata*). By Dr. J. E. GRAY, F.R.S. &c.

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(Plate LX.)

Zoologists have generally been satisfied with regarding the Land-Tortoises as a single genus—except in separating the species that have only a rudimentary and clawless fifth toe on the front foot, as in *Testudinella* and *Homopus*, or where the front lobe of the sternum is mobile, as in *Pyxis*, or the hinder lobe of the back more or less movable, as in *Kinixys*. I ventured to separate *Scapia* on account of the peculiarity of the form of the skull, and long ago to separate the skull of *Testudo planiceps* from that of *T. indica*, although I had never seen the skulls, or at least did not then know that it was the skull of *Testudo elephantopus* from Galapagos.

The acquiring of the skeletons and skulls of additional species of Tortoises has shown the excellent characters which the skulls afford