

cially when thus in motion, it appeared most brilliantly phosphorescent; the light flashing progressively but very rapidly along the body, especially from all the branchial tufts and the edges of the veil and crest. At other times it remained quiescently adhering to the sides of the glass, or moving slowly up and down as if in search of food; seeming to use the veil as a feeler, but with the tentacles reflexed. Sometimes it crawled in the usual inverted posture along the surface of the water. It is by no means a shy or timid animal.

After five or six days, it deposited in the night-time a pale orange-coloured long and narrow riband of eggs, resembling a tape-worm, and loosely coiled up spirally on the side of the glass, to which it was partially attached by one edge. This egg-band was about three inches and a half long and two lines broad, narrowing a little towards one end. On two subsequent occasions, at intervals of ten days or a fortnight, it again deposited two similar but smaller bands; after which, though apparently remaining in full vigour, it retained not more than two-thirds of its former bulk.

Its mode of swimming perfectly resembles that of the larva of the gnat so common in our English cisterns of rain-water.

The next paper read was from W. J. Broderip, Esq. In this paper the author proceeds with his descriptions of Shells brought to this country by H. Cuming, Esq.

In the second volume of the 'Zoological Journal' will be found my notice of the *Voluta aulica* of Solander, a shell which formed one of the principal ornaments of the Portland Museum, of that of M. de Calonne (in the catalogues of which it is noted as unique), of the Tankerville collection (in the catalogue of which Mr. Sowerby speaks of it as "an extremely scarce and fine shell; the only specimen we have seen"), and of my own cabinet, which is now in the British Museum.

Mr. Cuming has laid before me some *Volutes* which he brought from the Philippine Islands, and which, after a careful examination, I think must be referred to this scarce species. Not one of them, however, is identical with the variety in the British Museum (var. *a.*), which is still, as far as I know, unique.

Voluta aulica.

Var. *a.* Without nodules or bands, spotted with large red flakes: Mus. Brit. Figured in the Tankerville catalogue (G. B. Sowerby).

Var. *b.* Flesh-colour, subnodulous, girt with two broad rich red bands mottled with white; spire mottled with red and white, apex coral-red. Length nearly 4 inches, breadth $1\frac{6}{8}$.

Var. *c.* Flesh-colour, nodulous, lineated longitudinally with close-set, red, somewhat undulated lines, mottled here and there with white, girt by two interrupted rich red bands; spire mottled with red and white, apex coral-red. Length $4\frac{1}{2}$, breadth $2\frac{1}{8}$ th inches.

Var. *d.* Nodulous, whitish, lineated with very close-set, delicate, pale yellowish undulated lines; body whorl girt with two broad yellowish red bands mottled finely with the ground-colour. The upper

band is bordered above with a row of rich dark brown spots approaching closely to black, each spot being placed upon a nodule: the lower edge of this band is serrated as it were, and each of the teeth is marked with a spot immediately under the upper spots, but more dashed and somewhat less intense. The upper edge of the lower band is marked in a similar manner, but the spots are less defined. Above the shoulder of the body whorl is a band of similar colour, with its lower edge dashed with markings of the same colour as those which ornament the other bands, and at similar intervals. Two similarly coloured spots appear below the third and fourth nodule of the spire just above the suture of the body whorl, which suture almost hides one below the second of those nodules, counting from the edge of the lip. Upper part of the spiral whorls coloured after the same pattern, and brought out by the pale ground-colour of the lower part. Apex yellowish red. Length $3\frac{1}{2}$ inches, breadth $1\frac{1}{2}$.

This description will convey a very faint notion of one of the most beautiful shells I ever saw.

Var. *e.* Sharply nodulous. Dull red, blotched with flesh-colour; a faint band, palest in the middle at intervals, girds the body whorl below the middle. The tips of the nodules are of the same colour as the blotches. Length $4\frac{1}{4}$ inches, breadth $2\frac{1}{8}$.

Var. *f.* Very sharply nodulous, the muricated nodules becoming high ridges extending almost half-way down the body whorl. Dull coral-red, with here and there a dash of whitish between the nodules. A very faint band may be traced below the middle of the body whorl, and on its darker upper and lower borders a few white spots appear at intervals as they approach the lip. Length $4\frac{2}{8}$ ths, breadth $2\frac{1}{8}$ th inches.

Var. *g.* Bluntly but highly nodulous on the back, the nodules on the lower side rather sharper. Whitish, lineated longitudinally with close-set undulated livid lines blotched with clouds and dashes of livid red. A broad pale band girds the body whorl below the middle. Apex reddish white. Length $5\frac{1}{8}$; breadth 3 inches.

All these varieties, with the exception of var. *a.*, are in the museum of Mr. Cuming.

CONUS VICTOR. *Con. testá subcylindræo-conicá, flavá, maculis albis inspersá, fasciis 2 moniliformibus latis, nigro-brunneis vel brunneo-castaneis, latis concinnè ornatá; spiræ mediocris, pyramidalis, anfractibus excavatis longitudinaliter striatis, subcancelatis, apice subacuto.*

Long. $1\frac{2}{8}$; lat. $\frac{5}{8}$ poll.

Mus. Cuming, Harford.

Hab. ?

This brilliant Cone strikes the eye at once. The bright star-like spots with which the dark necklace-bands are interrupted and relieved, and the yellow ground-colour which takes the form of three alternating bands, render it attractive, and the more minutely it is examined the more it gains on the attention. The necklaces forming the moniliform bands, when looked at with a lens, present the

appearance of some of the flattened platted chains executed in gold and silver, and the shell altogether is a choice piece of workmanship.

The species to which *Conus Victor* bears most resemblance are *Coni nobilis* and *Ammiralis*; but it comes much nearer to the last in shape and general character, differing, however, from it in the deeper excavation and sculpture of the spire, to say nothing of the discrepancy in the arrangement of the colouring, which in the only two specimens that I have seen is identical. Of these, the richest in colour is in the fine collection of Mr. Cuming, and the younger, but very perfect specimen, in the choice cabinet of the Rev. A. Harford.

A paper by Mr. Lovell Reeve, entitled "Descriptions of four new species of *Achatina*, a genus of Pulmobranchiate mollusks of the family *Colimacea*," was then read.

ACHATINA LACTEA. *Ach. testá oblongo-ovatá, solidá, intùs extùsque quasi fossili, lacteá, epidermide levidensi sparsim indutá; spirá regulari, anfractibus longitudinaliter striatis, lineisque minutis circumdatis; aperturá suboblongá, labro solidiusculo.*

Reeve, Conch. Syst. vol. ii. pl. 177. fig. 6.

Long. $4\frac{1}{10}$; lat. $2\frac{1}{10}$ poll. Mus. Cuming, Stainforth.

Hab. Zanzibar.

This beautiful shell, which is in a perfectly live state, and covered with a slight scattered epidermis, is of a rich uniform cream-colour, without the least indication of any pattern; the whorls are very fully striated longitudinally, the striæ rather irregularly following the growth of the shell; and they are again characterized by having a number of fine lines running around the upper half of them in an opposite direction. The columella, the aperture, indeed the entire shell, both inside and out, is of rich cream-colour, and by this alone it cannot fail to be recognised.

ACHATINA TINCTA. *Ach. testá oblongo-ovatá, tenuiculá, albicante, maculis grandibus longitudinalibus vividè tinctá, epidermide flavidá indutá; spirá parùm elatá, apice obtuso, rosaceo; aperturá oblongá, albá.*

Reeve, Conch. Syst. vol. ii. pl. 179. fig. 18.

Long. $3\frac{5}{10}$; lat. $1\frac{1}{2}$ poll. Mus. Cuming, Stainforth.

Hab. —? probably some part of Africa.

The *Achatina tinctoria* has a white shell covered with a yellowish epidermis, and it is singularly stained in a longitudinal direction with a deep morone colour. The stains take almost the form of bands in some places, but exhibit no degree of regularity.

ACHATINA KRANSII. *Ach. testá ovatá, vix ventricosá, rufocastaneá, epidermide durá, nitente, indutá; anfractibus, ultimo excipiente, longitudinaliter strigatis, strigis albis, nunc rectis, nunc sinuosis, distantibus, de suturis, longitudine variabili, porrectis; spirá breviusculá, apice obtuso; aperturá ovatá, albá.*

Reeve, Conch. Syst. vol. ii. pl. 179. fig. 19.

Long. $2\frac{3}{4}$; lat. $1\frac{1}{2}$ poll. Mus. Cuming.

Hab. Cape Natal, coast of Africa.

I have named this species, at the request of Mr. Cuming, in honour of Dr. Krans who presented it to him on his arrival from Cape Natal, where he had formed a very interesting collection of shells. It is of a dark chestnut colour, and the last and penultimate whorls are marked with small zigzag stripes running from the sutures about half-way down them; they are distant and somewhat irregular.

ACHATINA PICTA. *Ach. testá ovato-conicá, lævi, luteá, maculis, quasi fasciis, viridibus, conspersim ornata; anfractibus planiusculis, suturis maculis castaneis, transversis, vividè pictis; spirá subelata, apice minuto, rosaceo; aperturá orbiculari, flavida.*

Reeve, Conch. Syst. vol. ii. pl. 178. fig. 10.

Long. $1\frac{1}{2}$; lat. $\frac{3}{4}$ poll. Mus. Stainforth.

Hab. ad insulam Cuba, Indiarum Occidentalium.

This elegantly painted shell is allied to the *Achatina fasciata* in form, though it is certainly of lighter texture. The ground-colour is a bright yellow; there are a few bright green bands crossing the whorls at intervals; and the sutures of the whorls are ornamented throughout with a banded row of stained chestnut-coloured spots, for the most part touching each other. I only know of one specimen, and it exhibits as distinct an assemblage of characters as can well be imagined.