

premolars, it is closely allied to the Xiphodont *Anoplotherium*, while in the true molars it is characteristically ruminant, and its position would therefore probably stand thus : *Dorcatherium*, *Poëbrotherium*, *Anoplotherium*.

*Measurements \* of the head.*

|  | In.  |
|--|------|
| Meatus auditorius externus to infra orbital foramen .....                            | 3·1  |
| From point of hook-like process of inferior maxilla to anterior mental foramen ..... | 4·35 |
| Greatest width of orbit .....  | 1·15 |
| Narrowest part of face, below ossa nasi .....  | ·2   |
| Width at the corono-condyloid depressions of inferior maxilla .....                  | 1·6  |
| Width at the coronoid processes .....  | 2·   |
| Greatest width at the ossa tympani .....   | 2·1  |
| Distance between ossa tympani .....  | ·375 |
| Width of os tympanum .....   | ·85  |
| Length of row formed by the posterior six superior molars ...                        | 2·5  |
| Notch between the first and second superior premolars .....                          | ·333 |
| Length of row formed by the posterior six inferior molars.....                       | 2·7  |
| Notch between the first and second inferior premolars .....                          | ·45  |

*Measurements of superior molar teeth.*

|                 | Length. | Breadth. | Thickness. |
|-----------------|---------|----------|------------|
| 7th molar ..... | ·375    | ·6       | ·2         |
| 6th — .....     | ·4      | ·55      | ·25        |
| 5th — .....     | ·333    | ·45      | ·275       |
| 4th — .....     | ·2      | ·375     | ·25        |
| 3rd — .....     | ·15     | ·4       | ·2         |
| 2nd — .....     | ·1      | ·35      | ·1         |
| 1st — .....     | ·15     | ·3       | ·075       |

*Measurements of inferior molar teeth.*

|                 | Length. | Breadth. |
|-----------------|---------|----------|
| 7th molar ..... | ·3      | ·35      |
| 6th — .....     | ·3      | ·5       |
| 5th — .....     | ·25     | ·4       |
| 4th — .....     | ·15     | ·45      |
| 3rd — .....     | ·1      | ·35      |
| 2nd — .....     | ·1      | ·35      |

*Measurements from bones of fore-leg.*

|   |     |
|---|-----|
| Transverse diameter of lower articular surface of os humeri .....                     | ·75 |
| Antero-posterior diameter in depressed portion of same .....                          | ·45 |
| Length of olecranon above the lowest part of the articular surface of the elbow ..... | ·95 |

*From Silliman's Journal for March 1848.*

*On two new genera of Siliceous-shelled Polygastrica from Patagonian Guano. By Prof. EHRENBERG.*

From the very large number of the typical generic forms of Polygastrica already described and arranged, new genera no longer occur so frequently; but when they do, the new forms have a greater scientific value. During his stay in England last summer Prof. Ehren-

\* The measurements are taken in English inches and parts of the same.

berg noticed a very interesting form among the microscopic preparations put up with great neatness by Mr. Topping for sale. It is found in a certain kind of guano from Patagonia, and is one of the largest forms. Prof. Ehrenberg has called it *Hemiptychus ornatus*. They are isolated, comparatively very large, thin, discoid siliceous plates, which exhibit radii upon their surface connected by a very delicate network, after the manner of the genus *Actinoptychus*. These radii are likewise in the present instance raised bands, but which, commencing at the margin, do not reach to the centre, but leave a broad central disc, in which these bands are continued in the form of finely punctated radial lines to the centre where a circle of teeth are visible: no marginal apertures were perceptible.

Another new genus of Polygastrica was found in some guano from Patagonia brought by the Danish ship Waldemar.

Like all the kinds of guano hitherto examined, this Patagonian kind contains a considerable number of siliceous-shelled Polygastrica, together with numerous siliceous spicula of sea-sponges.

The most interesting form is *Entopyla australis*, a new genus. Externally it has the greatest resemblance to *Tessella*, but in its internal structure it more resembles the genus *Biblarium*. It forms quadrangular plates, which seen from the side are rounded off above and below. These quadrate tablets or boxes consist of several leaves like a book, which however are firmly connected. The leaves are parallel with the narrow sides and curved; the two external leaves are like the cover of a book, thicker and marked with thirty-two horizontal ribs. These two outer decorated leaves resemble each other in *Biblarium* but not in *Entopyla*, where one is outwardly concave and the other outwardly convex. The concave outer leaf is upon the ventral side, since it exhibits two large roundish apertures at the extremities; the opposite convex leaf has no aperture; all the intervening leaves have a large aperture in the centre, leaving only a thin margin, thus forming a large continuous space in the interior of these little boxes. The structure in *Biblarium* is similar.

This form is not quite new, a fragment of it having been brought from the Falkland Islands in the year 1843; it was then arranged as an imperfect but characteristic form with the genus *Surirella*, and called *Surirella? australis*. It was a part of the cover of the *Entopyla*, which very much resembles the shells of *Surirella*.

This new guano contained—

#### POLYGASTRICA.

|                           |                         |
|---------------------------|-------------------------|
| Actinoptychus octonarius. | Grammatophora oceanica. |
| Cocconeis oceanica.       | serpentina.             |
| Coscinodiscus subtilis.   | Tessella Catena.        |
| Entopyla australis.       | Synedra Gallionii?      |
| Gallionella sulcata.      | Zygcoceros Rhombus?     |
| Grammatophora angulosa.   |                         |

#### PHYTOLITHARIA.

|                        |                      |
|------------------------|----------------------|
| Lithodontium furcatum. | Spongolithis Clavus. |
| platyodon.             | cenocephala.         |
|                        | Fustis.              |

All the other forms are known sea organisms, excepting the *Lithodontia*.

*Novorum Generum Characteres succincti.*

HEMIPTYCHUS. Animal e Bacillariis Naviculaceis liberum. Lorica simplex æqualiter bivalvis silicea orbicularis (non concatenata?) intus sepimentis imperfectis ad dimidium fere radiorum partem in loculos radiantibus (nec alternos impressos) divisa, medio disco late vacuo, radiato nec septato, centro, denticulorum corona cincto, radiorum experte, extremi marginis aperturis non conspicuis.

Sepimentis abbreviatis, concamerationibus non alterne impressis, centro coronato et aperturis marginalibus obsoletis ab *Actinopycho* differt.

H. *ornatus* disco subtilissime granulato radiis 29 æqualibus, cellularum apparatu interposito concentrico. Diameter  $\frac{1}{10}'''$ .

ENTOPYLA. Animal e Bacillariis Naviculaceis (an *Échinelleis*?). Lorica prismatica compressa multivalvis (libera, an concatenata?). Valvis in serie simplici recta, libri foliorum instar, contiguas, internis apertura maxima media perviis, externis inæqualibus transverse striatis, altera integerrima (non perforata), altera ad utrumque apicem poro magno insigni.

Forma arcuata ad *Achnanthem* accedit, tabellari forma *Tessellæ* affinium est, maxime *Biblaris* propinquior est.

E. *australis*, foliolis linearibus utroque fine rotundato, foliolis mediis in adultis numero fere 16, costis foliolorum lateralium in adultis ultra 40 iisque (*Surirellæ* more) linea media flexuosa divisus. Longit.  $\frac{1}{20}'''$ .

Vidi juniora specimina  $\frac{1}{60}'''$  longa, foliolis intermediis tribus, costis inter aperturas 6.

Syn. *Surirella*? *australis*, 1843, Abhandl. d. Akad.—*Proceedings of the Berlin Academy*.

EXTENSIBILITY OF MEMBRANE AND MUSCLE IN THE SERPENT TRIBE.

The following facts, as illustrative of the great extensibility of membrane and muscle in the Serpent tribe, may prove interesting to some of your readers.

On the 14th ultimo a Boa constrictor was sent for my inspection, which had that morning swallowed a pig belonging to some Chinese at Sungi Kranjie. It would appear that the snake had been seen lking about the sty several days previous to his last meal which cost him so dear; he artfully however escaped the owner of the swine, who had ineffectually attempted his capture or destruction on these occasions; but on the morning in question, the Boa succeeded in getting entrance into the sty, and having helped himself to a porker, found himself in the dilemma of the weasel in the barn,—he could not get out again. The owner came upon him in this state of helplessness, and having called comrades to his assistance, secured the victim, torpid from his voracious exertions, and brought him in triumph into town.

Now you will say there is nothing novel in all this; nevertheless the disparity of size between the carcass of the pig and the jaws

and body of the snake struck me so forcibly, and appeared so extraordinary, that I forthwith proceeded to ascertain the exact relative proportions, and found them as follow. The snake was twelve feet nine inches long, transverse diameter of jaw inside three and a half inches, neck round nine inches, greatest girth of body at thickest part, when pig was out, eleven and a half inches. The pig weighed thirty-seven catties and a half, or rather more than fifty pounds, was a good three-fourths-grown young sow, and lay apparently without a mark of violence upon its body—not a hair ruffled, legs unbroken; indeed old Isaac Walton never dealt more tenderly with his frog than the Boa had seemingly done with young piggy. Upon closer examination it was however discovered that the ribs were broken; but as the animal remained in its place of sepulture some hours, sufficient gases had been generated to rectify the effects of the crushing and restore piggy to her pristine comeliness of shape; the contrast therefore was the more striking; but still it is quite inconceivable how the animal was ever swallowed: how the head of the pig passed the jaws of the snake, would I think puzzle a conjuror to determine; and how the snake felt I leave to the consideration of some hopeless dyspeptic. So distended were the walls of the abdomen by the unusual meal, that the whole pig could be seen plainly through them; they became diaphanous and thin as gold-beater's skin. The vitality of the monster equalled his voracity, for, despite the numberless blows of clubs on its head, two hours after the pig had been cut out of the abdomen, I saw the tail firmly coil itself around a stake. Boa met with poetical justice, for, the same evening, he descended into the very little less ravenous maws of some Chinese, who looked upon the flesh as something exceedingly piquant and appetizing, and eagerly they strove amongst themselves who should possess the largest share of it.—*From the Journal of the Indian Archipelago and Eastern Asia for Feb. 1848.*

*Observations on the Nummulites.* By MESSRS. JOLIE and LEYMERIE.

In this note the authors have presented the principal results of their researches upon the Nummulites, and which it is intended shall form the subject of a detailed memoir in connexion with some researches upon the *Bryozoa*, Ehrenberg, *Foraminifera*, D'Orbigny, contained in the fossiliferous deposits of the subpyrenean basin.

The fossils under consideration are arranged by all naturalists among animal productions, and are looked upon as a kind of chamber analogous to shells, but a variety of opinions prevail with respect to the form and organization of the animal of Nummulites, and the position which it occupied in relation to these paradoxical shells. Linnæus first arranged this animal among the Madreporæ, subsequently he made a Medusa of it, and finally classified it among the cephalopodous Mollusca having a polythalamian outer shell. While referring the animal of the Nummulite to this order of Mollusca, Deluc, Lamarck and Cuvier considered that its shell was internal\*, while Bruguière considered it to be partly contained in the last chamber

\* It was impossible for G. Cuvier to adopt any other opinion, since he defined the Nummulites as shells exhibiting outwardly a lenticular form