

the mouth, but altogether through the nasal passages : an instinctive feeling prompting it to supply the loss of that substance by sucking the teat of the mother. Dr. Prout, who analysed a portion of this substance at the request of the author, finds it to be composed principally of coagulated albumen slightly modified. The author regards it as a secretion from the tongue of the foal.

3. "Journal of the Weather, kept at High Wycombe during the year 1831, with monthly Observations," by James G. Tatem, Esq. Communicated by William Allen, Esq. F.R.S.

These tables exhibit the greatest elevations and depressions of the barometer and thermometer for the year 1831, together with the means of the observations, which were made at 8 A.M., 3 P.M., and 10 P.M. ; the extremes of cold being given by a self-registering thermometer. The quantity of rain was measured every morning at 8 o'clock. The course of the wind is noted, and remarks subjoined, showing the results of a comparison with former years.

4. "Physical and Geological observations on the Lake of Oo near Bagneres de la Chou, in the year 1831," by M. Nerée Boubée, Professor of Geology at Paris. Communicated by P. M. Roget, M.D. Sec. R.S.

The author ascertained that the bottom of the lake, which is 230 French feet in depth, forms a level plane of great extent, and is covered with a stratum of mud composed of fine micaceous sand of a blue colour. The temperature of the bottom of the lake was 7° of the centigrade scale, at the middle 9°, at the surface 11°; that of the air varying from 14° to 15°. There was no indication of any current on the surface. A cascade 954 feet in height falls into the lake, carrying down the detritus of the surrounding rocks.

5. "Observations on the anatomy and habits of Marine Testaceous Mollusca, illustrative of their mode of feeding," by Edward Osler, Esq. Communicated by L. W. Dillwyn, Esq. F.R.S.

The author observes that in studying the physiology of the Mollusca, more satisfactory results may generally be obtained by tracing the organization connected with each important function, through different families, than by complete dissections of individual species ; and, by thus connecting the study of function with that of structure, the zoologist is led to more certain inferences relating to those habits, the knowledge of which the pelagic character of the animal, and the difficulty of direct observation, would otherwise have rendered unattainable. The present paper is devoted to the anatomical investigation of the organs by which the food is received into the bodies of certain Mollusca. The herbivorous Mollusca which the author has examined have three modes of feeding. Some, as the *Trochus crassus*, browse with opposite horizontal jaws : others, as the *Turbo littoreus*, rasp their food with an armed tongue stretched over an elastic and moveable support : while others again, as the *Patella vulgata*, gorge it entire. The author enters into a minute anatomical description of the organs of manducation and deglutition, and also of that part of the nervous system situated in the neighbourhood of these organs, in each of these respective Mollusca,—illustrated by numerous draw-

ings. He gives in each case a particular account of the mode of dissection, with a view to direct succeeding observers to obtain a distinct view of the parts he describes, and to verify the conclusions he has himself obtained.

He next notices a considerable modification in the structure of these organs which is presented in the *Chiton*. In this animal he finds a pair of simple lateral jaws, rather membranous than cartilaginous. Another variety of structure adapted for gorging food is met with in the *Patella mammillaris*, where there is simply a very muscular mouth and pharynx, but neither cartilage, tongue, nor hard part of any kind.

The apparatus by which the *Buccinum Lapillus* drills through shells in order to obtain its food, and the process it employs for that purpose, are next investigated; and that of the *Buccinum undatum* is particularly examined with the same view, the structure of the latter being very fully displayed.

The author hopes to be enabled to pursue these inquiries with respect to other tribes of Mollusca at some future period.

6. "On the Mammary Glands of the *Ornithorhynchus paradoxus*," by Richard Owen, Esq. Communicated by J. H. Green, Esq. F.R.S.

The author premises a history of the different opinions that have been entertained with respect to the anatomy and economy of this singular animal, which was first described and figured by Dr. Shaw in the year 1792. The name of *Ornithorhynchus*, which it at present bears, was given to it by Blumenbach; and some account of the structure of the head and beak was given in the Philosophical Transactions by Sir Everard Home in 1800; and in a subsequent paper he states his opinion that this animal differs considerably from the true mammalia in its mode of generation, an opinion which was adopted by Professor Geoffroy St. Hilaire, who accordingly placed it, together with the *Echidna*, in a separate order designated by the term *Monotrèmes*. He afterwards formed this group into a distinct class of animals, intermediate to mammalia, birds, and reptiles. Oken and De Blainville, on the other hand, condemned this separation; and maintained that the monotremata should be ranked among mammalia, and as being closely allied to the marsupialia; and hazarded the conjecture that they possessed mammary glands, which they expected would ere long be discovered. Professor Meckel has since described these glands as being largely developed in the female *Ornithorhynchus*. He considers this animal, however, in the mode of its generation, as making a still nearer approach to birds and reptiles, than the marsupial tribe. He was unable to inject these glands in consequence of the contracted state of the ducts arising from the action of the spirit in which the specimen was preserved, and from their being filled with a concrete matter. Geoffroy St. Hilaire, in a subsequent memoir, persists in denying that these bodies possess the characters of mammary glands; but regards them as a collection, not of acini, but of cæca, having only two excretory orifices, and presenting no trace of nipples.

The author of the present memoir, having examined with great