

I have not yet made observations with a view to decide if the above description of the development of the stomata agree with all cases, or whether in other plants it presents essential modifications in the process of this operation; but it is probable enough that the first method of development indicated by Mirbel in no case presents itself in an isolated manner, but that it is only the commencement of the second mode; that there is no absorption of the central cell; and that this, in the *Marchantia*, divides into four, as it separates into two in the *Hyacinthus orientalis*.

## BIBLIOGRAPHICAL NOTICES.

*The Natural History of South Devon.* By J. C. Bellamy, Surgeon. Plymouth, 1839. 8vo. pp. 456.

It is only by collecting diligently facts from every part of a country, that we can expect to arrive at those general principles which regulate the distribution of plants and animals over its surface. In this respect every work that contributes to the information we already possess ought to be hailed as the omen of progress in our knowledge of the natural history of the earth. We have already had many able attempts at giving complete views of the distribution of animals and plants in many districts of our own island, and we have now to add another to the list. Mr. Bellamy has produced an interesting volume with regard to the delightful county in which he dwells, which will not only be read with pleasure by those who reside on the spot, but will be welcomed by the naturalist as an accession to British natural history.

Mr. Bellamy's work is divided into three parts. The first part is divided into five chapters, and treats of the geological character of South Devon and the nature of its climate. The structure of the strata in this district is minutely described, and several new and interesting fossils are described and figured. The second part is occupied with lists of the vertebrate and invertebrate animals of the district, with the exception of the insects, and with various observations of the author on the animals of South Devon. The third part is devoted to "Remarks on numerous subjects of Natural History, but more particularly on Birds." A great number of these remarks are original, and are made in such a manner as cannot fail to interest the general reader.

In this volume Mr. Bellamy has introduced to our notice four additions to the British Fauna. These are respectively named *Arvicola hirta*, *Mus intermedius*, *Sylvia neglecta* and *Helix subvirescens*. We cannot however pronounce upon the accuracy of the descriptions, nor the value that ought to be attached to them, because we have not the specimens before us. We hope, however, that the approaching meeting of the British Association will enable some of our eminent



zoologists to examine Mr. Bellamy's specimens, and report upon their title to be recorded as new species.

The name of the volume might lead some of our readers to suppose that every branch of the natural history of South Devon was treated on; but we think it only right to state, that the author has not given any lists of the plants or insects of the district. In a second edition we should advise that this hiatus be filled up; and we think that the author, on reconsidering some parts of the work, would find that this might be done without at all increasing the size of the volume.

*Memorie della Reale Accademia delle Scienze di Torino.* Second Series. Vol. I. 1839.

The following are the papers relating to Natural History in the last two volumes of the Turin Transactions:—

Programma di Botanica,—with Prize offered for the best Monograph of a tribe of Italian Cryptogamous Plants.—Geological and Mineralogical Observations on the Mountains lying between the Valleys of Aosta and Susa in Piedmont; by Prof. A. Sismonda.—De quibusdam Insectis Sardiniae novis aut minus cognitis; Fasc. II.; auctore Jos. Gené.—Notices of two Fossils found in the Hills of St. Stefano Roero; by Prof. A. Sismonda.—Memoir on six new Species of Cephalopods found in the Mediterranean at Nice; by J. B. Verant.—On the structure and position of the organs of Hearing and Sight in the principal Genera of Mammifera; by C. F. Bellingeri, M.D.—Description of a new Cetaceous Fossil; by G. D. Bruno, of the Zoological Museum of the University.—Investigations respecting some variations observable in univalve freshwater and land Mollusca; by C. Porro.—Synopsis Reptilium Sardiniae indigenorum; auctore J. Gené.—Primitiae Hepaticologiae Italicae; auctore Jos. De Notaris.—Essay on the employment of Animal Charcoal for the extraction of the Bitter Principle of the Camepитеos, and on the action of the same upon the Sulphate of Quinine and of Cinchonina; by V. Griseri.

VOL. II.

On the Earthquakes felt in the province of Maurienne from Dec. 1838 to March 1840; by Monseigneur Al. Billiet.—Mineralogical and Geological Observations made with a view to the formation of a Geological Map of Piedmont; by Prof. A. Sismonda.—Description of a new Sardinian Falcon, *Falco Eleonora*\*; by Prof. G. Gené.—Observations by Dr. P. Savi on the Structure and Existence of the Stomata in certain Plants, in a letter to Prof. Amici.—Florula Caprariae, sive Enumeratio Plantarum in insula Capraria vel sponte

\* So called in honour of Queen Eleonora, by whom was promulgated the very ancient code for the preservation of the Falcons for which Sardinia was celebrated, from which the following extract is given:—"Constituimus et ordinamus qui nexiunu homine non depiat bogare Astore neu Falcone dae nidu, et icussu qui lu det bogare siat obligadu lu Curadore de sa Curadoria (an officer of justice) d' unde det essere su homine, de tenerlu et batirelu a nois, cum pena de pagare su Curadore libras quimbe."—*Carta de logu*, c. 88.



nascentium vel ad utilitatem latius excultarum; auct. Jos. Moris et Jos. De Notaris.—Amphibia Europæa ad Systema nostrum Vertebratorium ordinata; auct. Car. L. Bonaparte, Muxiniani Principe.—Microscopic Observations on the Movements of Vegetable Globules suspended in a Menstruum; by Prof. J. D. Botto.

## PROCEEDINGS OF LEARNED SOCIETIES.

## MICROSCOPICAL SOCIETY.

Feb. 17.—A paper was read by Mr. Owen, "On the Microscopic Structure of certain Fossil Teeth from the Old Red Sandstone near Elgin."

The fossils were from the middle or cornstone division of that formation, and are interesting from the extreme rarity of organic remains referrible to vertebrated animals in such formation. The microscopic structure of these teeth, which Mr. Owen described in detail, is quite peculiar and characteristic of the teeth in question, so as to justify the indication of a distinct genus of animals, for which the name of *Dendrodus* was proposed.

Four species of these teeth were described, viz. *Dend. bifurcatus*, *D. strigatus*, *D. hastatus* and *D. sigmoideus*, and the modifications of the Dendritic structure pointed out in each.

Upon the whole, the characters of the microscopic structure resemble those of the teeth of certain fishes, as the Shark, *Sphyræna*, etc., but with modifications that approximate it to the peculiar structure of the teeth of the extinct Batrachian genus *Labyrinthodon*, from the new red sandstone.

Mr. Owen concludes, therefore, that the *Dendrodus* was a fish, but that it might have approached more nearly than the rest of the class to the Labyrinthodont group of *Batrachia*. The teeth resemble in external form and longitudinal striation those of the *Labyrinthodon*; and should other remains raise the *Dendrodus* to that order, it will be the first vertebrate animal higher than fish that has been found in the old red sandstone.

Sections of the teeth described and diagrams were exhibited in illustration of the paper.

Mr. Owen next proceeded to give an account of his examination of the microscopic structure of the teeth of the *Lepidosiren annectens*.

Although almost the whole organization of this species is known, there is as much doubt in the minds of many naturalists respecting the class of Vertebrata to which it really belongs, as may be entertained regarding the *Dendrodus*, of which only the teeth have been examined.

Mr. Owen referred to the grounds on which he had concluded the *Lepidosiren* to be essentially a fish (Linnæan Trans., xviii. p. 350), and to the subsequent anatomical description of the animal by Dr. Bischoff, who considers it to be a reptile; and he then proceeded to describe the microscopic structure of the teeth of the species from the Gambia, and to show, according to this additional test of its affi-





1841. "Bibliographical Notices." *The Annals and magazine of natural history; zoology, botany, and geology* 7, 209–211.

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