pervivunt, motu non duntaxat elastico, sed progressivo gaudentia.@@1” Sir John G. Dalyell has even proved, by actual experiment, that if this poor embowelled worm is sup­plied with fresh sea-water at proper intervals, it will live to replace all its viscera with new growths, reproduce new tentacule, new teeth, a new stomach and intestine, and all its complicated aquiferous system, so as to be in every re­spect as it was previous to its wonderful evomition. It is by such miracles that we are brought to exclaim with Pliny, “ mihi contuenti sese persuasit rerum natura, nihil incredibile existimare de ea.”

The Fistulides are natives of every sea. Blainville be­lieves them to be more numerous on the coasts of cold or temperate countries, than under or within the tropics ; but the data for such an opinion are unsatisfactory.@@2 They abound in the Mediterranean, and are scattered over the German Ocean. The more remarkable species live at con­siderable depths, and come rarely under the notice of the zoologist ; but some are littoral, lurking among sea-weed and in the crevices of rocks, while others burrow in the sand. They appear to be gregarious, and are evidently by their organization very limited in their powers of loco­motion. When they reluctantly remove from their sites, it is by the aid of their tentacular suckers ; thrusting these forward to the utmost, they fix them to the ground, and drag the body on at a pace slower than the shadow on the dial. By the same organs they retain themselves in their natural positions, and effect a safe anchorage when the sea is agitated to the bottom. Otho Fabricius says of Holo- thuria pentacles, that it can swim,@@3 a sort of exercise which the structure of the creature would not lead us to predi­cate ; but the fact appears to be confirmed by Bosc, who tells us that the Holothuriæ swim slowly, as much by a kind of vermicular motion as by that of their tentacula, and the faculty which they possess of inflating the body at will.@@4

We learn from Delle Chiaje, that some of the Holothuriæ are eaten by the poor inhabitants of the rich shores of Naples ; and the Sipunculus edulis (Lumbricus edulis, *Pallas)* serves as food for the Chinese who inhabit Java, and who search for it in the sand, with little bamboo sticks prepared for the purpose.@@5 Their appearance is to us loathly, and they breathe no Sabæan odour; yet the ce­lebrity of the *Trepang,* a species of Holothuria,@@6 must res­cue the family from contempt in the eye of every liberal epicure, who, rising above national prejudices, allows his Chinese brothers to extol unchecked their treasures of the stormy seas. “ This animal,” says Professor Jameson, “ is used very extensively by the Chinese for culinary purposes. They make of it a very rich and palatable soup, and dress it in different kinds of stews. There are various modes of curing it. It is first gutted and the water pressed out of it, and then laid in dry lime, called by the natives *chunam ;* afterwards, according to the circumstances of the fishing station, dried in the sun, or on stages by means of fires of wood under them. It is a most important article of com­merce, and is the most considerable article of the exports of the Indian islands to China, unless perhaps pepper. There are fisheries, as they are called, of trepang, in every country of the Indian Archipelago, from Sumatra to New Guinea. It has also within these last few years been dis­covered abundantly on the coasts of Ceylon and the Isle of

France, and is no doubt general throughout those seas. It has, as we are informed, already been sent from thence to China, where it finds a ready market, although, from its be­ing unskilfully prepared, it is classed with the lowest qua­lities of the archipelago. When the Chinese can be em­ployed in fishing and preparing it, there is little doubt that it will form an important article in the commerce of those countries with China, as it can be got in any quantities.” After some farther details relative to the mode of fishing and curing it, the professor adds, “ the whole quantity sent to China from Macassar, and other parts of India, may be estimated at 14,000 piculs. Taking this quantity at the low average of forty dollars a picul, and valuing the dollar at 4s. 3d., its entire value, in a commercial view, is L.119,000. Notwithstanding this enormous export to China, we do not understand that its value in the market has ever been materially affected by the quantity imported ; an evident proof that the demand of the market still ex­ceeds the supply. When we reflect that the opium, pep­per, birds’ nests, sharks’ fins, trepang, and various other ar­ticles, the products of the countries under our control, which are fully as indispensable to the Chinese as the teas of China are to Europe, the fear so much entertained of the Chinese interdicting our trade with that empire is quite preposte­rous. In short, these few articles of luxury give us the command of the Chinese tea market. The celestial em­pire cannot exist without its trepang and birds’ nests.”@@7

The systematic arrangement of the order has kept increasing in complexity with the discovery of new species, and their minuter examination. Linnæus found two genera sufficient in his time, viz. “ Siponculus—corpus teres, rostro cylindrico angustato and “ Holothuria—corpus ore antico, tentaculis camosis antice cinctum.”@@0 Pallas referred the latter to Actinia, of which they formed a section, distinguished by having two apertures to the alimentary canal ; for it was the opinion of this great naturalist, that differences of structure, which, in higher grades of animals, were justly reckoned to be of generic value, were in worms to be deemed not more than specific.@@9 The family, nearly as we view it, was first defined by Lamarck, who made it embrace five genera, that stood in three separate sections, thus :

\* 1. Actinia :

\* \* 2. Holothuria ;

3. Fistularia :

\* \* \* 4. Priapulus ;

5. Sipunculus.@@10

In the *Règne Animal,* the Echinodermata form two orders, the pedaneous and the apodous. The Holothuries are one of the families of the first, while the species which Lamarck would have referred to his third section constitute the entire second order. Cuvier throws the Holothuries into unnamed groups, from peculiarities in the distribution of the tentacular suckers ; and bis apodous genera are Molpadia, Minyas, Priapulus, Litho- dermes. Siponculus, Bonellia, and Thalassema.@@" The latter is now generally allowed to belong of right to the class Vermes.

Latreille’s arrangement is little other than the reduction of Cuvier’s to named divisions, as will appear from the following outline of it.

Class—HOLOTHURIDA.

Order I.—Apoda.

Fam. 1. *Lombriciformia.* Mouth unarmed. Genera—Boneilia, Siponculus, Miniada.

2. *Veretriformia.* Mouth armed with osseous pieces.—Pria­pulus, Molpadia.

*@@@*1 Bobadsch *ut supra cit.* p. 86. Also *Edin. New Phil. Journ.* viii. p. 47.

*@@@s Man. d'Actinologie,* p. 189.

*@@@*’ “ Alias etiam in libero mari trans littora nature conspicitur, tentacula sua extendendo et complectendo.” *Faun. Groenl.* p. 353.

*@@@4 Hint. Mat. dee Vers,* ii. p. 148.

*@@@*5 Griffith’s Cuvier, *Moll, and Rad.* p. 455, pl. 12, fig. 3.

*@@@*6 The species does not seem to have been ascertained. Mr Collier and Professor Jameson refer it to *Holothuria tubulosa ;* Professor Grant says that it is the *H. ananas (Outl. of Comp. Anat.* p. 332) ; while Lesson calls it *H. edulis,* which is the type of a new genus named *Trepang.* From Collier’s figure, it appears to be apodous, and also destitute of tentacula, so as much to resemble an Ascidia (See *Edin. New Phil. Journ.* viii. p. 47, pl. 1, fig. 1) ; but bis description corrects these iconographical defects.

*@@@, Edin. New Phil. Journ.* viii. pp. 50-2.

*@@@, Sgst. Nat.* edit. 12, p. 1072.

*@@@9 Miscell. Zoolog.* p. 72.

*@@@,0 Anim. sans Vertèbres,* ii. p. 528.

*@@@11 Règne Anim,* iii. p. 238 and p. 241