

cimens taken from the *Galaxias* are from  $1\frac{1}{4}$  to 3 inches in length, and, as Rudolphi has described them, they are thickish in form, obtuse at both extremities; and the larger ones were of a blood-red colour, which, however, has disappeared since they were placed in spirits. It was interesting to discover whether this was a new species or not, and whether it had existed in the body of the fish before it left Australia. A comparison with the specimen of *Filaria sanguinea* in the collection of Entozoa in the British Museum, transmitted to us by Mr. Siebold, leaves no doubt on my mind of its identity with that species; and therefore in all probability these Worms have been developed in the cavity of the abdomen of this little *Galaxias* since it was placed in the tank at the Zoological Gardens, or during its passage from Australia to this country.

### MISCELLANEOUS.

*Observations on the Existence of various Mollusca and Zoophytes at very great Depths in the Mediterranean.* By Dr. ALPH. MILNE-EDWARDS.

IN this memoir the author, who appears to be ignorant or regardless of the still more striking observations of Dr. Wallich, published in this Journal, communicates some instances of the occurrence of animal life at great depths in the sea. Two examples were communicated to him by M. Valenciennes,—one of *Voluta junonia*, Sch., taken by Capt. Letourneur, in the Gulf of Mexico, at a depth of about 70 fathoms; the other of *Lima excavata*, Müll., dredged from a depth of 264 fathoms, by M. Hoeg, on the coast of Greenland.

The other instances cited by the author were obtained by the examination of portions of the submarine telegraphic cable formerly laid between Sardinia and Algeria, and removed in consequence of some defect causing the interruption of the communication. The fragments examined by Dr. Milne-Edwards were brought up from the broad submarine valley, measuring from 1000 to 1500 fathoms in depth, between Bône and Cagliari; and amongst the foreign bodies adhering to them the author found several polypidoms and shells which were still living when removed from the water. One of the mollusks was a species of Oyster (*Ostrea cochlear*) which is met with abundantly in various parts of the Mediterranean, and is known to inhabit deep water, as it is frequently brought up by the coral-fishers, whose operations are generally carried on at from 50 to 75 fathoms. The animal had evidently attached itself to the cable when very young, and here attained its adult condition; for its lower valve, about  $2\frac{2}{5}$  inches in diameter, had completely moulded itself upon the surface of the cable, and had become deformed in order to embrace one-half of its circumference. On another point there was also attached, although less firmly, a specimen of the common Mediterranean *Pecten opercularis*, Lamk., of the variety *P. Audouini*, Perrod. There was also another *Pecten* which is very rare in col-



lections—the *Pecten Testæ*, of which the valves are marked with very fine striæ and elegantly trellised. According to Filippi, this shell is only met with at depths of 25 to 30 fathoms. With these three Acephalous Mollusks were associated two Gasteropods, which are very rare in the localities usually explored by zoologists: one of these is *Monodonta limbata*, the other *Fusus lamellosus*. The latter shell, which is remarkable for the fine striæ traversing the whorls of the spire, is extremely fresh: both contained the soft parts of the animal, from which the author concludes that they must have lived where they were found.

The Corals found fixed at the great depth above mentioned are of still greater interest. There were fourteen individuals, belonging to three species of the family Turbinolidæ. One of them appeared to the author not to differ from *Caryophyllia arcuata*, a very rare species, found fossil in the Upper Tertiary strata of Piedmont at Castel-Arquato, and which has also been met with at Messina. Another species, nearly allied to *Caryophyllia clavus*, for which the author proposes the name of *C. electrica*, appears to be much more common in the submarine valley in which the telegraphic cable rested; for no less than ten individuals of it were found, all bearing evident traces of their having been developed upon it. This species does not appear to differ from a small fossil Coral, of Pliocene age, found by M. Deshayes at Douéra, in Algeria. A third species, of which the polypary is less than half an inch in height, does not enter into any established genus: the author places it between the genera *Ceratotrochus* and *Sphenotrochus*, and proposes to name it *Thalassiotrochus telegraphicus*.

Besides the above, the portion of the cable examined gave attachment to a small branch of *Salicornaria farciminioïdes*, to some Gorgonidæ, and to two *Serpulæ*, the large calcareous tubes of which were soldered to the iron wire for a considerable extent.

In his concluding remarks, the author dwells not only upon the fact that these animals, some of them of high organization, dwelling permanently at such great depths, are for the most part either rare in collections or quite unknown to naturalists, but also upon the circumstance that some of them are apparently identical with species found in a fossil state in the most recent strata surrounding the basin inhabited by them; and hence infers that, by the investigation of the deeper parts of the sea, we may probably add to the existing fauna many other species now regarded as extinct.—*Comptes Rendus*, July 15, 1861, p. 88.

#### *Transmutation of Grasses.*

In the beginning of last year (Gard. Chron., p. 4) we drew attention to some extraordinary results said to have been obtained by Prof. Buckman in his cultivation of Grasses. He believed that he had proved that in the course of cultivation *Poa aquatica* and *Glyceria fluitans*, two widely different species, lost their distinctions and became identical; that the same thing happened between the Fescues called





Milne-Edwards, Alphonse. 1861. "Observations on the existence of various Mollusca and zoophytes at very great depths in the Mediterranean." *The Annals and magazine of natural history; zoology, botany, and geology* 8, 270–271.

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