

cases this passage corresponded to the underground gallery of the worm.

At the close of the rainy period of September all the passages were perfectly free; but after a few dry days they were found to be obstructed by recent castings, no doubt owing to the worm being prevented, by the hardening of the summit of the tower, from pushing through it to deposit the castings outside. A period of rain is therefore necessary for the production of regular towers, which probably serve principally to protect the subterranean galleries from the influx of rain-water, but may also enable the worms to come up and respire, sheltered from wet and at the same time concealed from birds.

As to the species of worm which formed the towers observed by him, M. Trouessart states that at first he supposed that it might also belong to the genus *Perichaeta*, several eastern-Asiatic species of which have been naturalized in the south of France and in Algeria. Great numbers of worms were collected near the spots where the turriform castings were abundant; they all proved to be species of *Lumbricus*, principally *L. agricola*, Hoffm., with a few examples of *L. communis*, Hoffm. On two or three occasions the worm was caught in his tower by suddenly pinching the latter when soft. The worms thus captured always belonged to *Lumbricus agricola*; and it was the anterior part of the body that was lodged in the tower.—*Comptes Rendus*, October 23, 1882, p. 739.

On a Fish from the Abysses of the Atlantic (Eurypharynx pelecanoïdes). By M. L. VAILLANT.

In the last expedition of the 'Travailleur' we found off the coast of Morocco, at a depth of 2300 metres, a fish which may be regarded as one of the most singular creatures with which deep-sea dredgings have made us acquainted.

This animal, about 0·47 metre long and 0·02 metre high at the most elevated part, is of an intense deep black colour. The body, the form of which is masked in front by the abnormal mouth, which will be mentioned further on, resembles that of *Macrurus*; it becomes regularly attenuated from about the anterior fourth, the point at which the external branchial orifice is seen, and terminates in a point at the caudal extremity; the anus is situated at the junction of the anterior third with the posterior two thirds of the body.

What gives this fish a very peculiar physiognomy is the arrangement of the jaws and the structure of the mouth, which are even an exaggeration of what Mr. Ayres has described in *Malacosteus niger*. Although the head is short, scarcely 0·03 metre, the jaws and the suspensorium are excessively elongated; the latter did not measure less than 0·095 metre; and from this it results that the articular angle is carried very far back, to a distance from the end of the

muzzle equal to about three and a half times the length of the cephalic portion. This suspensorium, so far as we can ascertain, is composed of only two pieces—a basal piece, the analogue of the temporal, and an external piece, no doubt representing a tympano-jugal. A long slender style constitutes the upper jaw, the situation of which must make us regard it as the intermaxillary, the maxillary being absent, unless we suppose that the two bones are amalgamated. On both jaws one can feel faint dentary granulations; at the extremity of the mandible there are two hooked teeth, 0.002 metre long.

The buccal aperture, in consequence of this arrangement, is enormous, and it leads into a cavity the dimensions of which are still more astonishing. In fact the upper jaw is united to the sides of the head and of the anterior portions of the body by an extensible cutaneous fold, which allows of a considerable separation; further, between the rami of the mandible is stretched an analogous cutaneous membrane, but much more extensible, and which histological examination shows to contain a great quantity of elastic fibres in bundles; it cannot be compared to any thing better than to the well-known pouch of the pelican. In consequence of this separation of the jaws and the extensibility of the membranes, the mouth, with the pharynx, forms in the fresh animal a vast funnel, of which the body of the fish seems to be the narrow continuation. It is presumable that the food collects in this pouch, and is perhaps partly digested there, a fact comparable to what has been indicated in *Chiasmodus niger*, Johnson.

The respiratory apparatus presents a constitution which is at present unique in osseous fishes. We find six pairs of interior branchial clefts, and consequently five branchiæ. Each of the latter is formed by a double series of free lamellæ. The escape of the water takes place on each side through a very small orifice, forming a simple rounded cutaneous perforation situated towards the level of the termination of the bucco-pharyngeal funnel. We find neither hyoidean apparatus nor opercular pieces.

Without entering into the description of the organs contained in the abdominal cavity, it is important to indicate the complete absence of the swimming-bladder.

I propose to designate this fish by the name of *Eurypharynx pelecانoides*. What place is it to occupy in the ichthyological series? This is a very difficult point to settle in the absence of more complete information as to its anatomy, and especially as to the skeleton, which it is impossible to examine in all its details upon a unique individual.

We may say that the fish presents relations with the Anacanthini, with certain Physostomi, such as the Scopelidæ and Stomiidæ, and also with the Apodes. While it resembles these last in the want of ventral fins and the imperfection of the opercular apparatus, it differs from them too much in its well-developed and absolutely free intermaxillaries to allow it to be placed in the same group. As regards the Scopelidæ and Stomiidæ, all the known genera in those

families have a very widely open branchial orifice: in the former the intermaxillary alone forms the free border of the upper jaw; in the latter the maxillary forms part of it; and thus it would be the Scopelidæ that *Eurypharynx* would approach, especially as it does not present the hyoidean barbel which has hitherto been indicated as characteristic of the Stomiatidæ. However, of all fishes it is to *Malacosteus niger*, Ayres, placed in the latter family by zoologists, that we are tempted to approximate the animal here under consideration; they alone present the simple arrangement of the suspensorium indicated above. But, finally, it is perhaps with the Anacanthini that its relations seem to be most real, whether we consider the form of the body, which greatly resembles that of *Macrurus*, or the absence of ventral fins, which is usual in certain animals of the group; thus several Ophidiidæ and all the Lycodidæ (the latter even having their branchial orifice reduced, although not to the degree that occurs in our animal) increase the probability attaching to this view. However, the characters of *Eurypharynx* are so strongly marked that in any case it is necessary to regard it as the type of a new family; and of this it would be the sole representative, unless subsequent investigations show that we must unite with it the genus *Malacosteus*.—*Comptes Rendus*, December 11, 1882, p. 1226.

The Suctociliata, a new Group of Infusoria, intermediate between the Ciliata and the Acinetina. By M. C. DE MERESCHKOWSKY.

Constant and very well-marked characters separate the ciliated Infusoria from the Acinetina; the former are clearly distinguished by the presence of vibratile cilia from the latter, which never present them, at any rate in the adult state, and which, on the other hand, always possess special organs known by the name of *suckers*.

Hitherto no intermediate form has been indicated as forming the passage between these two very distinct and well-marked groups. The sole character that approximates the ciliated Infusoria to the Acinetina and establishes a relationship between the two groups consists in the fact that the Acinetina in certain stages of their development, like the Infusoria Ciliata, present cilia, which, however, soon disappear.

While studying the Protozoan fauna of the Bay of Naples during last summer, I met with a form intermediate between the two groups, presenting at the same time the cilia of the ciliated Infusoria and the suckers of the Acinetina. This new type comes in luckily to fill up the gap existing between the two groups already recognized, and serve, in its quality of an intermediate form, to establish their genealogy.

The Infusorian that I desire to make known is one of the commonest in the Bay. At the first glance it might be taken for a Halterine, to which it presents some resemblances in organization.



Vaillant, Léon. 1883. "On a fish from the abysses of the atlantic (Eurypharynx pelecánoides)." *The Annals and magazine of natural history; zoology, botany, and geology* 11, 67–69. <https://doi.org/10.1080/00222938309459099>.

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