

was apparent. The embryo is cylindrical, with the caudal extremity suddenly terminating in a point; its length is  $\frac{1}{4}$  millim.: its mouth does not show the three tubercles characteristic of the *Ascarides*. From the 7th of May to the 21st of June the embryos had continued living within the shell of the egg, and none of them had escaped.

The author placed the ova in the gastric juice of the rabbit and dog; but after staying in these fluids for three or four days, the shell remained perfectly intact. M. Richter, who placed the ova of this worm in water, found, after the lapse of eleven months, that they contained embryos; but he was unable to see them hatch.

The ova, like those of the *Trichocephalus*, are evacuated with the fæces; and before their evacuation they never show the least trace of development. In October last, ova kept for a fortnight at a nearly constant temperature of 86° F., acquired no development. The same ova, left in a room in which the temperature never exceeded 61° F., underwent segmentation in April. Ova collected in January underwent segmentation in June; whilst others collected in April presented no trace of development in June, notwithstanding the great heat of the season. Temperature therefore would seem to have little or no influence on the ova of *Ascaris lumbricoides*, which require to remain for a long time in a state of latent life.

Hence the author concludes—1. That the ova of these worms are developed out of the human body; and 2. That the appearance of the embryo does not take place until after the lapse of eight months in the one case and six months in the other. In this long interval, the ova may be transported by rains into brooks, rivers, and wells, the water of which is used for drinking and preparing food. In this way the fully-developed ova or the embryos may find their way into the human intestine.—*Comptes Rendus*, June 21, 1858, p. 1217.

#### Note on *Enteromorpha cornucopiæ*.

By Dr. J. E. GRAY, F.R.S. &c.

Professor Harvey admits this species with doubt, on the authority of the late Capt. Carmichael (*Phytologia Brit.* t. 304); but I think there can be no doubt that Lyngbye and Agardh are correct in regarding it as a variety of *Enteromorpha intestinalis*, or rather, a form of that species produced by the peculiar position in which it is found.

It is very abundant in one locality in Broadhaven, in St. Bride's Bay, South Wales, growing where some fresh water trickles down the side of a nearly perpendicular rock. The whole width of the trickle is covered with the green Alga as close as it can grow, side by side. The plants on the top of the higher and nearly horizontal ridges, which the water only trickles over, are all the bell-shaped *E. cornucopiæ*, f. 3, and the specimens on the perpendicular parts are the oblong tubular specimens of that plant, like f. 2 of Dr. Harvey's plate above quoted, while the specimens growing in the pools left in the small cavities of the rock are all more or less elongate normal *Enteromorpha intestinalis*.

The bell-shaped form in some instances appears to be produced by the withering-away of the upper part of the oblong specimens; in



other cases it seems to be the natural growth of the specimens. Capt. Carmichael, like some botanists, seems to consider species to depend on the "distinction of the character" that can be assigned for a species, rather than on the distinctness of the structure and economy of the species itself: for it must be well known to all practical naturalists that many species, which are very difficult to distinguish by characters, are nevertheless distinct, while specimens which offer, like *Enteromorpha cornucopiæ*, a striking peculiarity in external characters, easily expressed in words, are only accidental or local varieties, which can, by mere transplantation, be converted into the presumed species.

*On the Liability of Shells to Injury from the Growth of a Fungus.*

By the Rev. H. H. HIGGINS, M.A.

It has often been observed that shells kept for a considerable time in cabinets are apt to lose much of their original freshness and beauty of appearance. This kind of injury chiefly affects such specimens as have a bright enamelled surface, which at length becomes dull and less pleasant to the touch. Several suggestions have been made with reference to the probable cause of the change, which has often been attributed to the efflorescence of saline matter absorbed by the shell; but, so far as I have observed, the specimens most liable to injury from saline incrustation belong to genera in which the shells are without enamel, as *Littorina*, *Turritella*, &c.; and many collectors are in the habit of steeping their specimens in fresh water for some days, before placing them in their cabinets,—a process which is said to be an effectual preservative from injury by saline efflorescence. Mr. Dennison of Woolton attributed the loss of lustre in enamelled shells to the ravages of a minute insect, but had not been able to detect the depredator. Many of the shells in my own cabinet suffered such serious injury during last winter, that I was led to investigate the cause, which indeed became obvious enough by the use of a microscope. An ordinary lens showed the enamel of the shell to be beset with small bristly points; and when a portion of the surface was scraped off and submitted to a higher magnifying power, the forms of at least two species of Fungi became apparent,—one resembling a *Mucor* with a globose sporangium, the other, and much more common form, exhibiting both simple and moniliform filaments, with an abundance of minute spores, seemingly quite free. After having been carefully washed, the surface of the shell was found to be as it were engraved in some places with stellular marks, in others with striæ forming irregular reticulations—caused, no doubt, in each instance by the spreading mycelium of the Fungus. It is scarcely necessary to add that attacks of this nature need not be apprehended where shells are kept in a perfectly dry or well-ventilated place. A slight deposition of moisture does, however, frequently occur upon their surfaces whilst shells are undergoing examination, in which case it would be a safe precaution to allow them for a while to remain exposed to the air, before returning the drawer to the cabinet.—*Proc. Lit. and Phil. Soc. of Liverpool*, No. 12, 1858.



Gray, John Edward. 1858. "Note on Enteromorpha cornucopiæ." *The Annals and magazine of natural history; zoology, botany, and geology* 2, 492–493.

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