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On the origin and increase of bacteria

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I also wish to place on record the capture, this summer, of two specimens (male and female) of the Striped or Cook Wrasse (*Labrus miatus* of Yarrell), which, from what I hear from the fishermen, is very rarely met with on this coast, though mentioned as an occasional visitor by Mrs. Merrifield in her 'Natural History of Brighton.' According to Couch, it is not uncommon on the Cornish coast, but appears to be rarely met with elsewhere. Both specimens were taken about the same spot, on a shoal about five miles off Eastbourne, the first in a lobster-pot, the other by a line. Of the male I have only seen the dried skin; but the female was brought to me soon after it was caught, and it has been preserved in glycerine, but has lost the brilliancy of colouring which makes it so resemble the wonderful productions of tropical seas in the intensity of the deep-blue stripes bordered by the brilliant orange and yellow tints that cover the mass of the body.

Your obedient Servant,

F. C. S. ROPER.

On the Origin and Increase of Bacteria. By Dr. A. POLOTEBNOW.

The author's investigations, made in Prof. Wiesner's laboratory, at the Polytechnic Institute of Vienna, have led him to the following results:—

1. That a perfect genetic connexion exists between *Bacterium*, *Vibrio*, and *Spirillum*, and that these present no other differences but those of size and direction.

2. None of the Vibriones (*Vibrio*, *Bacterium*, and *Spirillum*) are independent organisms, but only derivatives (delicate mycelia) from the spores of fungi, especially those of *Penicillium glaucum*.

3. The development of the Vibriones from the spores of *Penicillium* may be best followed when the spores are exposed to the action of a high temperature (140°–212° F.).

4. The notion that Vibriones are developed in the filaments of mycelium from the granules occurring in the cells proves to be quite erroneous, as also that of the conversion of Vibriones into other higher forms (yeast &c.).—*Anzeiger der k. k. Akad. der Wiss. in Wien*, April 29, 1869, pp. 87–88.

Experiments to show that the Fins of Fishes are Regenerated only when their Basal Portion at least is left. By M. J. M. PHILIPPEAUX.

The author's experiments on the regeneration of the spleen of the mammalia and the limbs of the newts and axolotl have been extended by him to the fins of fishes.

He cut off the left ventral fin of some gudgeons at the level of the abdominal surface. The fishes were then placed in a basin under favourable conditions, and in eight months the fins were completely reproduced.

In a second series of experiments upon the same species the author entirely extirpated the right ventral fin, including all the small bones which support it; the fishes having been put into the basin, some of them died from the effects of the operation, whilst those which survived showed a perfect cicatrix eight months after the