

While collecting for the biological department of the Johns Hopkins university, I put a small quantity of *Euglena* in a bottle and kept it on my desk. In a few days I examined it and found amoeba in great numbers.

To those who are not acquainted with the *Euglena*, permit me to say that it is a small plant which passes its motile stage on the surface of ponds in most parts of this country. After remaining in this condition a few days—the surface of the pond being quite green with them—they pass into the resting stage and disappear, the surface of the pond becoming clear, but in a few days more the pond will be green with the motile forms. This seems to be a remarkably favorable habitat for the amoeba. They are near the surface so that they can secure plenty of oxygen, and the surroundings are such that the other conditions of life are exceedingly good.

When the above material was first examined they were multiplying very rapidly, but in a few weeks the conditions changed somewhat, so that there were more large ones.

This supply was secured in November, 1893, and was the source of supply for the university the remainder of the year. When I left, late in May, 1894, there were as many as ever and in good condition. They were so abundant that often two or three dozen could be found on a single slide.

On my return to Indiana, I found plenty of *Euglena*, and likewise a good supply of amoeba. In September I furnished my class with this material, and they met with practically no difficulty in finding them, for they were so numerous.

A little later I collected some of the *Euglena* from a pond of strong manure water in a barnyard, and the usual numbers were found.

A few days ago, on examining the same material, I found them more abundant than ever before.

By this method I feel sure that teachers can always obtain amoeba without any difficulty.

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THE VARIATIONS OF POLYPORUS LUCIDUS. By L. M. UNDERWOOD.

[ABSTRACT.]

The above species is common to both Europe and America, and as usually reported is a fungus that inhabits the dead portions of conifers, notably in our northern regions the hemlock. It is also in northern regions a stipitate species, having a lateral stem and is, moreover, annual. I find that in lower latitudes it departs from all these supposed characteristics. (1) It grows on the wood and at the roots of deciduous trees. (2) It is often sessile or has an irregular stem.

[3] It is perennial and even strato-se, *i. e.*, forms a succession of layers of pores. Specimens from South Carolina and Indiana exhibit the latter condition. The species has been regarded as the type of a distinct genus, *Gauoderma*. It is possible that the supposed variations represent incipient and, perhaps, distinct species, yet the group in which the species occurs thoroughly defies all exact classification, a single species often in its variations overreaching generic and even family limitations.

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THE PROPOSED NEW SYSTEMATIC BOTANY OF NORTH AMERICA. By L. M. UNDERWOOD.

[ABSTRACT.]

Announcement of a new flora of North America, to be the combined work of the leading botanists of the country. Each group is to be monographed by specialists. The work is to consist of seventeen volumes octavo, of about 500 pages each and to be issued in parts. Separate parts of the work will also be obtainable, but at an advanced price.

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CELL STRUCTURE OF CYANOPHYCEÆ. BY GEO. W. MARTIN.

Contributions on the *cell structure of alga plants* have by no means reached a considerable degree either in point of number or in scientific results. Research in this line is comparatively an untried field; especially does it obtain in reference to the class of alga known as the *Cyanophyceæ*.

During the past summer the writer had an opportunity of studying *marine* as well as *terrestrial* forms of a number of species. Work was undertaken, chiefly, to discover, if possible, by use of various reagents, any method that might lead to the identification of constituent and structural parts composing the cell. The following is a brief *resumé* of the results obtained:

*Chromatophore*. It appears to consist of colored bodies, so-called "grana," embedded in a homogeneous, colorless, ground substance. The grana are bound together by a connecting substance into a monilliform, or necklace-like fibrilla. These are denser near the surface and run more or less spirally around the cell. Just here may be mentioned the fact that the fibrillar arrangement of the grana is denied by Palla.

In all cases observed, the chromatophore is *parietal and continuous*, and is separated from the wall by a delicate layer of protoplasm. In several instances it appeared to be vacuolate.