list of the Phanerogams of Franklin County. It does not appear in the catalogue of Indiana plants published in connection with the Botanical Gazette a few years ago, in 1882, I believe. But according to Dr. Collins it occurs in Dearborn County. Dr. Phinney places it among the forest trees of Delaware County. It has been reported, I know not by whom, from Jefferson County. Hence Rush County seems to be in the region inhabited by the Sweet Buckeye.

The comparative sizes of *Æsculus glabra* and *Æsculus flava*, as given by the authors, is good evidence that the tree in question was *Æsculus flava*, and not the common buckeye, *Æsculus glabra*. According to Gray, *glabra* is a large tree, and *flava* a large tree or shrub. According to Wood, *glabra* is a small, ill-scented tree, and *flava* a large tree, 30 to 70 feet high, common in the southern and western states. Then he adds by way of parenthesis: In Columbia County, Georgia, only 4 to 6 feet high. This seems to explain the shrub of Gray, and indicates that it is not only an extreme, but narrowly local variety. In Sargent's Forest Trees of North America, *glabra* is a small and medium-sized tree, and *flava* a tree sometimes 60 feet in height, with a trunk 2 to 3 feet in diameter. According to Apgar, *glabra* is a small to a large tree, sometimes only a shrub 6 to 7 feet high, and is found from Virginia to Indiana and southward.

If this big buckeye was *Æsculus flava*, and the evidence shows that it was, we have an example of a gigantic individual growing near the limits of the range of the species.

Embryo Sac of Jeffersonia Diphylla. By Frank M. Andrews.

Some Notes on the Amœba. By A. J. Bigney.

Students and teachers in biology usually have considerable difficulty in finding an abundant supply of this interesting little animal. The directions generally given in our text-books will enable one to find plenty in the course of time, but the teacher does not have very much time to devote to this part of the work, and in many cases the animal must be omitted because it can not be found when it is needed.

I hope that no member of this Academy has ever had any difficulty in this line, but I fear my wish can not be realized. It may be that the method of finding them here presented is not new to this Academy, but I have not as yet met with it after examining almost scores of texts and talking with many of the leading biologists of this country. If it be old to some, it will be new to others.

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 amœba 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 amœba. 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 amœba. 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 amœba without any difficulty.

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.