resembled the common *Solanum Dulcamara*, had pure white flowers instead of purple. I sent a specimen of the plant with flowers to Prof. J. M. Coulter as a variety which I had not previously seen described, and asked for information. He informed me in reply that it was merely an albino sport. Silenced, but not quite satisfied, I continued my observations and learned that from the seeds of this plant were produced plants bearing white flowers only. I also found several other specimens in DeKalb and Steuben counties. In 1890, I changed my home to Elkhart, and there along the banks of the St. Joseph river, I found *S. Dulcamara* growing commonly, and also discovered that at least thirty per cent. of the plants bore pure white flowers. I am not a botanist, but a mere layman with the habit of occasionally using my eyes and thinking at the same time, and now appeal to this learned body for information. If I am not mistaken in my facts, and if in several counties of the state a large per centage of the plants of *S. Dulcamara* are white instead of the commonly purple color, should not the white specimen be denominated a variety? also is not the white variety a new and hitherto undescribed variety of *S. Dulcamara?* What does it take to constitute a variety of a species? How may we be assured that we have discovered a distinct variety and not a mere sport?

Work of the botanical division of the natural history survey of Minnesota. By D. T. McDougal.

Notes on an embedding material. By John S. Wright.

[Abstract.]

A report was made of experiments upon a commercial "glycerine jelly," for embedding purposes. The jelly, a translucent glassy material, remains solid at temperatures below about 97° C. It is composed of glycerine, Na_2CO_3, and stearic acid, united at a temperature of 25° C. By adding alcohol in varying quantities four solutions were made which were used in infiltration of tissues. The experiments were not sufficiently extensive to establish the preparation as a valuable embedding material. All tissues used were vegetable.

NOTES ON SECTIONING WOODY TISSUES. By JOHN S. WRIGHT.

[ABSTRACT.]

The preparation of hard, woody tissues for sectioning is accomplished by heating the pieces to be sectioned a few minutes in a test tube containing a 75 per cent. or 50° glycerine solution. The woods may thus be quickly brought into condition for sectioning. In some instances the glycerine and heat distort the tissues, while in other cases, if carefully applied, they may restore cells, which have shrunken, to nearly their original outline. By this method, however, all starch grains of the cells are destroyed, and when it is desired to study cell contents fresh material must be secured.

CONCERNING THE EFFECT OF GLYCERINE ON PLANTS. By JOHN S. WRIGHT.

[ABSTRACT.]

Various potted plants were experimented with, particularly geraniums. Glycerine was administered to them in the water. 10, 20, 25 per cent. solutions were used. In some cases wilting was soon effected by the application of water containing glycerine. Some cases showed a temporary revival from the first noticed effects, again in other cases the plants died. Chemical tests were made of leaves of treated plants and of untreated ones (those of control experiments) and in nearly all instances treated plants were discovered to have contained glycerine in their tissues.

CONTRIBUTIONS TO THE HISTOLOGY OF THE PONTEDERIACEÆ. By E. W. OLIVE.

[ABSTRACT.]

Pontederia crassipes, a cultivated form, is taken as a representative of the order and its histological structure compared with the other species. It, however, is not typical, because of its higher differentiation. The diaphragm, of stellate tissue of these aquatic monocots furnish very interesting studies. These probably serve other more important functions than that of mere mechanical support. The active nuclei indicate a close connection with the vital processes of the plant.

The diaphragms in *Pontederia cordata* and *P. crassipes* are pierced by long spear-like crystals of calcium oxalate. Each of the latter are enclosed in a thick-walled sac. Also a secretion of a fatty-oil nature was abundant in all the partitions except those of *Pontederia crassipes*. Concentrated sulphuric acid placed on a section showed a beautiful example of continuity of protoplasm in the cells of the diaphragm.