
MEETING OF THE BIOLOGICAL CLUB.

ORTON HALL, March 6, 1905.

The Club was called to order by the Vice-President, Miss Riddle. The minutes of the previous meeting were read and approved. A letter from Prof. Hine in Guatemala was read. Prof. Hine reported his work there as successful for the most part. The party was enjoying the trip very much.

Mr. Surface was asked to take the chair. The first paper was by Miss Riddle on the "Embryology of *Staphylea* and of *Philotria*." The species studied were *Staphylea trifoliata* and *Philotria canadensis*. Before the work on *Philotria* was completed R. B. Wylie, of the University of Chicago published a paper on the same subject. In the discussion Prof. Schaffner called attention to the fact that in Gray's Manual *Philotria* and *Vallisneria* are placed near the Orchids while this kind of a relationship is evidently impossible from the detailed study thus shown.

Mr. York next presented a paper on *Hibernacula*. Mr. York spent his available time this summer at Sandusky studying the water plants in the coves of the bay. Most water plants live over winter by means of tubers, blubs, etc., but in some there is a modification of the tip of the stem. These stems are much shortened and form bud-like structures called *hibernacula*.

Mr. Morris next read a paper on "Great Climatic Changes." He dealt only with geological changes. By means of the fossil remains and vegetable deposits in different strata the climate of the various regions in past times can be determined. Below the Cambrian there are no fossils but glacial evidence gives some idea of the climate. Several theories with regard to causes of climatic changes were given, prominent among which was Dr. Chamberlain's theory of the varying amount of CO₂ in the atmosphere.

In the discussion, Mr. Gleason, Mr. Hyde, Mr. Metcalf, Prof. Schaffner and Prof. Landacre spoke.

The following were elected to membership: M. E. Hendriksen, W. C. Morse, C. A. Miner and E. P. Durrant.

The club then adjourned.

F. M. SURFACE, *Sec.*

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