live even longer than they do in a solution as the results of the following series of experiments show.

Early in the spring of 1910 ten eight-liter battery jars nearly full of solution containing numerous didinia were set aside in the laboratory. Eight of these jars were covered and two were left uncovered. The solution of one of these contained much débris, hay, etc., that of the other almost none. The solution in both evaporated gradually, so that on the last day of May there was only a trace of moisture left in either jar. When they were next examined early in August the debris was so dry that it could be readily crumbled between the fingers.

On January 14, 1911, one half of the solution in each of the eight jars was poured off and replaced by hay solution (1 gm. hay to 200 c.c. water boiled ten minutes), and the two empty jars were half filled with the same solution. All of the jars were then examined from time to time until February 10. Active didinia were found in only one of the jars, and this was one of the open jars, the one which contained much debris. Several active didinia were found in this jar January 17 and more later. Numerous colorless flagellates, some vorticellæ and also a few other forms appeared but no paramecia.

The results of these experiments, consequently, clearly indicate that the vitality of dried cysts is greater than that of wet cysts. The number of cultures tested was, however, so small that the siginficance of the results obtained is somewhat doubtful. The tests should be repeated and extended in connection with a study of the histological changes that may occur in the cysts.

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## SOCIETIES AND ACADEMIES

### THE BOTANICAL SOCIETY OF WASHINGTON

The 121st regular meeting of the Botanical Society of Washington was held in the Assembly Hall of the Cosmos Club at 8 P.M., May 1, 1917, with thirty-nine members present. Mr. Burt A. Rudolph, Mr. Glenn C. Hahn and Mr. Horace W. Truesdell were elected to membership.

The regular program was devoted to a symposium on the flora of the District of Columbia. Professor A. S. Hitchcock discussed "The plan of the flora" and traced briefly the history of the flora from Brereton's studies in 1831 to the present time. In 1906 a mimeograph list of the vascular plants was prepared by Mr. P. L. Ricker. The flora is now under the leadership of Professor A. S. Hitchcock and Mr. P. C. Standley. Twenty-five collaborators are now at work preparing the preliminary manuscript which is to be finished by June 1 and the manuscript completed by November 1, 1917.

Mr. Edgar T. Wherry, at the invitation of the society, furnished a paper on "Geological areas about Washington." The paper was read by Mr. Hitchcock. The prominent geological feature is the Fall Line which separates the Piedmont Plateau on the northwest from the Coastal Plain on the southeast. Above this line the valleys are steep-sided, and below broad and open. The Piedmont Plateau consists chiefly of crystalline gneisses of early periods, while the Coastal Plain is occupied by unconsolidated gravels, sands and clays. The soils on the Coastal Plain are acid for the most part while those on the Piedmont are not.

Mr. George E. Sudworth discussed "The distribution of trees in the floral area." Oaks predominate and constitute from one half to three fourths of the upland cover. There are about 140 species of native and naturalized trees of which the broad-leaved trees number about 122 species.

"Humus as a factor in plant distribution" was discussed by Mr. Frederick V. Coville. Mr. Coville exhibited two samples of organic matter—the one a raw, brown and leafy turf found in laurel thickets produced chiefly by the decay of the laurel leaves, and the other a black, fully-reduced, non-structural leafmold formed by leaves high in lime content such as the tulip poplar. The former is acid and the latter alkaline in reaction.

Mr. P. L. Ricker discussed briefly the subject of "Collecting and preparing specimens." Mr. Ricker exhibited several types of portfolios suitable for collecting plants and also suggested the use of corrugated driers and artificial heat, especially where large numbers of plants are being collected on field trips.

The program was followed by an informal discussion by Messrs. Safford, Beattie, Norton, Waite, Lewton, Shantz, Coville, Hitchcock, Sudworth and Ricker.

H. L. Shantz,
*Corresponding Secretary*