tant as bacteria in destroying cellulose. About seventy-five species of molds have been isolated, representing a large number of genera; species of *Penicillium*, *Aspergillus* and *Fusarium* are perhaps most numerous.

In the destruction of pure cellulose, either by bacteria or molds in synthetic media, the associative action of organisms which presumably have no cellulose-dissolving enzymes frequently stimulates the growth of the cellulose organism and increases its destructive power.

Some Phases of Microscopical Detection of Decomposition in Food Products: B. J. HOWARD.

W. W. STOCKBERGER,
Corresponding Secretary

THE TORREY BOTANICAL CLUB

THE meeting of November 14, 1911, was held at the American Museum of Natural History at 8:15 P.M., Vice-president Barnhart presiding. Forty-five persons were present.

The minutes of the meetings of October 10 and October 25 were read and approved.

Mrs. N. C. Nuris, 611 W. 177th St., New York City, and Dr. George F. Bovard, University of Southern California, Los Angeles, Cal., were proposed for membership. There being no further business to consider, Mrs. N. C. Nuris was then elected to membership in the club.

The announced scientific program of the evening consisted of a lecture on "Trees of New York City," by Professor C. C. Curtis. The lecture was illustrated by numerous lantern slides.

B. O. DODGE,
Secretary

THE meeting of November 29, 1911, was held in the laboratory of the New York Botanical Garden and was called to order at 3:40 P.M. by the acting secretary in the absence of other officers. The reading of minutes and the transaction of business were passed over and the meeting proceeded with the scientific program. The first announced paper was by Mr. Arlow Burdette Stout on "The Characteristics of the Fungus *Sclerotium rhizodes*, with special reference to its Action on the Cells of its Host," of which the following is an abstract:

Mr. A. B. Stout presented in part the results of his investigations of the fungus *Sclerotium rhizodes* Auersw., a complete report of which will soon appear in a research bulletin of the Wisconsin Agricultural Experiment Station.¹

Special mention was made of the behavior of the fungus in the different organs of the host plant and microscopical preparations were exhibited demonstrating the relations of the fungus to the cells of its principal host *Calamagrostis canadensis*.

The fungus is coexistent in leaves, buds, stems, rhizomes and roots of the infected plants. Filaments of the fungus also form a thin web on the exterior of the roots and extend out into the soil.

In the leaves the fungus is vigorously parasitic. In the culms fungal filaments are most abundant in the region of the nodes, but there is almost no destruction of tissues. In the underground parts of the culms, and in rhizomes the hyphæ completely digest the cell contents of cortical cells, but have no effect on the cell walls except at the points of actual penetration. In the older portions of roots the hyphæ are scattered through the cortex, where they occupy empty cells. In the younger lateral roots the filaments of the fungus are found penetrating living cells and exhibiting characteristics which have been ascribed to mycorrhizal fungi. Ultimately, however, the cell contents disappear while the fungus remains intact.

The fungus is perennial in the soil, and in the underground portions of the host. It is present in buds, but is unable to penetrate into the growing apex.

The fungus, therefore, exhibits a varying degree of parasitism in the different parts of the host.

The presentation of the second announced paper, "Studies on the Growth and Reproduction of certain Species of *Ascobolus*," by Mr. Bernard O. Dodge, was omitted on account of the illness and absence of Mr. Dodge.

Mrs. N. L. Britton exhibited drawings and microscopic preparations illustrating certain types of thickening in the cell walls of the leaves of mosses.

Dr. N. L. Britton discussed the characters of a new species of *Elæagia* from Cuba. This is a Rubiaceous shrub 8 or 10 feet high, with fruit imperfectly known. The hitherto known species of the genus *Elæagia* occur in the Andes of South America and this new plant from the mountains of Cuba forms another link in the chain of relationship between the flora of the higher altitudes of the West Indies and that of the mountains of South America.

MARSHALL A. HOWE,
Secretary pro tem.

¹A more complete abstract than is here given appeared in *Phytopathology*, I., 69.