

PROCEEDINGS OF THE CLUB

MEETING OF OCTOBER 26, 1921.

The meeting of October 26, 1921, was held in the Museum of The New York Botanical Garden.

Mrs. Ruth H. Burritt, Yonkers, N. Y., and Miss Marie Maticotta, Elmhurst, N. Y., were elected to membership.

Dr. Arthur Hollick gave the "Notes on Introduced Plants of Staten Island" published in this number of *Torreya*.

Mrs. E. G. Britton spoke of "An African moss in Trinidad." She exhibited specimens of *Rhacopilopsis Pechuelii* (C. M.) Cardot from Africa and stated that no record exists of this genus as occurring anywhere except in Africa. Specimens of *Ectropothecium trinitense* (C. M.) Mitt. from Trinidad, collected by Cruger, on Mount Tocuche, were shown to belong to the genus *Rhacopilopsis*. Mrs. Britton stated that she had collected Mitten's *Ectropothecium trinitense* last winter at Morne Bleu, and had sent duplicates to Brotherus, who had confirmed her determination. Monsieur Thériot had been kind enough to send, in exchange, two specimens from French Guiana, which vary only slightly from the Trinidad species.

Dr. A. B. Stout spoke of "The Fringed Gentian at Pleasantville, New York." It appears that about fifteen years ago Dr. George F. Norton of Pleasantville, noting the absence or extreme scarcity of the fringed gentian in that locality, scattered seeds of it at several points, and that the plant is now moderately abundant in several places. A quantity of the minute seeds, recently collected, was exhibited and the form and peculiar appendages of the seed were shown under a microscope.

Under the title of "A rare *Polytrichum* in Oregon" Mr. R. S. Williams discussed *Polytrichum angustidens* H. Lindb. This species was first collected in Idaho by J. H. Sandberg in 1892, and it passed as *P. formosum* until H. Lindberg recognized its distinctive characters, the most important of which are found in the superficial cells of the lamellae of the leaf costa. Specimens obtained by J. C. Nelson, near Multnomah Falls, Oregon, constitute the second known collection of this species.

Dr. Marshall A. Howe remarked on "The Working of Long Lake, New York Botanical Garden." The murkiness of the waters of this pond during August and September appears to

have been due to the presence of numerous suspended filaments of a microscopic blue-green alga, *Oscillatoria prolifica* (Grev.) Gomont, previously known in America from Jamaica Pond near Boston and from Wisconsin. A more detailed account is published in the August number of the *Journal of the New York Botanical Garden*.

Dr. H. M. Denslow presented notes on some local orchids. In September, 1920, he collected in the adjacent towns of Bristol, Burlington, and Southington, in Hartford Co., Conn. More than 800 plants were counted, representing nine species of orchids. The most abundant was *Ibidium cernuum*, in pastures and along roadsides. *Ibidium gracile* was infrequent. A large colony of *Peramium pubescens* was found on a wooded hillside very near a popular resort in Southington and in one of the frequented parts of this grove a few plants were seen of each of the following species. *Galeopsis spectabilis*, *Corallorrhiza odontorrhiza*, *C. maculata*, and *Triphora trianthophora*. In the town of Burlington were found *Blephariglottis psycodes*, *Fissipes acaulis*, and *Peramium pubescens*. In a recent number of *Torreyia*, Dr. G. Clyde Fisher reports *Cypripedium arietinum* from near Westport, N. Y. There are in the Garden herbarium specimens of this orchid from two other towns in Essex County, Chesterfield and Willsboro.

MARSHALL A. HOWE
Secretary *pro tem*.

MEETING OF NOVEMBER 8, 1921

The constitutional date for the first meeting in November falling on Election Day, a legal holiday, the meeting for this date was omitted.

MEETING OF NOVEMBER 30, 1921

The meeting of this date was held in the Morphological Laboratory of The New York Botanical Garden.

The following persons were nominated for membership and afterwards elected:

Mr. John M. Arthur, Thompson Institute of Plant Research, Yonkers, N. Y.

Dr. A. H. Graves, Brooklyn Botanic Garden, Brooklyn, N. Y.

Miss Caroline G. Howe, East Orange, N. J.

Prof. W. D. Hoyt, Washington & Lee University, Lexington, Va.

Dr. Rudolph A. Konnerth, New York City.

Dr. L. O. Overholtz, Pennsylvania State College, State College, Pa.

Mr. Frank H. Rossiter, New York City.

Prof. T. G. Yuncker, De Pauw University, Greencastle, Ind.

The resignation of Mr. Arthur H. Thomas, Haverford, Pa., was read and accepted.

The first paper of the scientific program was a discussion of "Variation in *Pediastrum*" by Professor R. A. Harper. The speaker showed photomicrographs illustrating the range of variation in several species of *Pediastrum*. The form of the cell, though changing with age, is the most constant and dependable character in determining species. The number of cells in a colony is dependent on food and light conditions and colonies that look as if they belonged to different species or genera may be essentially the same when the characters of the individual cells are considered.

Dr. Marshall A. Howe, under the title of "Remarks on a Collection of Chinese Algae," reviewed previous contributions to the subject and reported upon a small collection of fifteen species made at Peitaiho by N. H. Cowdry in 1919. This collection includes what appears to be a new genus of red algae and besides extending the list of known Chinese algae is of interest on account of including several species that occur also on the Atlantic coast of the United States.

Dr. Arthur Hollick spoke of a "A New American Fossil Hepatic," showing the specimen, which came from Florissant, Colorado, and an enlarged photograph. The organism, evidently a bryophyte, was probably a member of the family Jungermaniaceae, the first member of this family to be reported from fossil remains in America. A new generic as well as a new specific name was suggested.

Dr. W. A. Murrill mentioned the fact that *Entoloma albidum*, a species originally described by him from Stockbridge, Mass., had been reported by Dr. H. D. House as the cause of violent illness when eaten by a family of five in Albany, N. Y., late in August, 1921. Specimens had been submitted to Dr. Murrill for identification. *Entoloma lividum*, of Europe, is dangerously

poisonous, and the American species of the genus are naturally under suspicion, though few of them have been actually tested.

MARSHALL A. HOWE
Secretary *pro tem*

MEETING OF DECEMBER 13, 1921

The scientific program of the evening consisted of an illustrated lecture on "Disease Resistance in Plants" by Professor L. R. Jones of the University of Wisconsin.

The speaker described studies on cabbage yellows caused by the soil parasite *Fusarium conglutinans*. A practical outcome has been the development through repeated selection of *Fusarium*-resistant strains of cabbages of several leading varieties, justifying the conclusion that resistant strains may be secured from any of the standard commercial varieties as may be necessary to meet regional needs. Of one of these, "Wisconsin All Seasons," some 5000 pounds of seed, sufficient to plant upwards of 25,000 acres, has been grown this year in a coöperative relation with the Bureau of Plant Industry and is being distributed by the National Kraut Packers' Association.

Similar results with other crop diseases illustrate the practical significance of disease resistance such as Orton's earlier work with cotton and cowpea, Bolley's wilt-resistant flax, Johnson's rootrot-resistant tobacco, and the recent results with disease-resistant tomatoes and beans. The fundamental problems forced upon the attention of phytopathologists concern the cause of such relative resistance or susceptibility and the influences of environment upon predisposition or disease development. Both aspects present complex problems, fundamentally physiological, and the results of the Wisconsin studies to date indicate an advantage in carrying them on in coördination. Chief attention thus far has been directed to examples of soil parasites. No single or simple explanation holds for disease resistance with these different types. In certain cases chemical contents may be the basis of resistance, in others the structure or composition of cell membranes. In either case environmental factors may influence the development of disease-resistant characters. Chief among these, as influencing metabolism, are temperature, moisture, light, and soil composition. Most attention has thus

far been directed to soil temperature as a factor with root parasites. It has been found, as would be expected, that modifications of soil temperature profoundly influence such disease developments.

MARSHALL A. HOWE
Secretary *pro tem.*

NEWS ITEMS

Dr. N. L. Britton was one of those who recently appeared before the joint Congressional Committee at Washington to urge the establishment of a National Botanic Garden and Arboretum in Washington. The plan is to use a tract of some 800 acres, over half of which already belongs to the government, in the northeast section of Washington. The land varies from swamp along the Anacostia River to the forested summit of "Mount Hamilton." A description of the plans can be found in the January number of *American Forestry*.

The newspapers a short time ago reported that the government was making efforts to exterminate poppies from Flanders that had been discovered on ballast in New Jersey. *Papaver Rhoeas* has been known as a weed on ballast and waste places, both in the east and west, for many years. It is listed in the standard manuals and elsewhere and has never given any indications of becoming troublesome.

In the copy of the *Literary Digest* for November 19, 1921, there is an abstract of an article by Roland M. Harper published in the *Engineering and Mining Journal* on *Relations between Vegetation and Mineral Deposits*. Dr. Harper says "Mineral springs, petroleum, and natural gas are found mostly in the hardwood or prairie area, gold and copper in the area of coniferous forests. Coal and iron are somewhat intermediate, but the former tends more towards the hardwood area and the latter to the pine."