plantings in an acid soil consisting of nine parts kalmia peat, by bulk, and one part clean sand, the plants in August, 1910, began to form their flowering buds. The larger plants then more than filled a five-inch pot. They were left outdoors during the winter, were brought into a cool greenhouse in March, and in a few days were in full flower. The plants were remarkably beautiful. The flowers had the characteristic color and fragrance of wild ones and were of unusual size, the largest corolla having a spread of seven eighths of an inch. The foliage was free from insect and other injuries to an extent seldom seen in wild plants.

Plants kept in a greenhouse all winter flowered only sparingly, but they furnished an opportunity for the observation of the fruit. The fruit of trailing arbutus is described in our standard works as a loculicidal capsule, but this description is incorrect, and must have been based on an erroneous deduction from immature specimens or imperfect remnants. The fully mature fruit is not a dry pod. It is as juicy as a strawberry. Its style of dehiscence is not loculicidal, but is that exactly if not melodiously described as "septicidally or rather marginicidally septifragal." In examples of perfect development the wall of the fruit while still green and herbaceous splits along the cell partitions into five valves, which spread backward into a five-pointed rosette, exposing the white, fleshy, succulent interior with the minute brown seeds dotted over its surface. The fleshy part, which looks like an unripe strawberry and is about a quarter of an inch in diameter, consists of the whole interior of the fruit, axis and dissepiments as well as placentæ. These observations as to the character of the fully developed fruit confirm the original observations made in New Hampshire in late July, 1909, at the very end of the fruiting season.

FREDERICK V. COVILLE

SOCIETIES AND ACADEMIES

THE TORREY BOTANICAL CLUB

THE meeting was held at the American Museum of Natural History. The meeting was called to order at 8:15 P.M., with Dr. E. B. Southwick in the chair. Twenty-eight persons were present.

The scientific program consisted of a lecture on "Orchids, Wild and Cultivated," by Mr. Geo. V. Nash. The lecture was illustrated by a large number of beautiful lantern slides. An abstract of the lecture prepared by the speaker follows:

By the general public any odd or strange flower was considered an orchid, and as an illustration of this common error nepenthes and bromeliads were cited. The large division of endogenous plants to which the orchids belong was illustrated with a slide of the lily, this being taken as typical. Especial attention was called to the stamens and pistil which are distinct in this flower. As an illustration of a typical orchid flower a slide of *Cattleya* was shown. The uniting of the stamens and pistil into one organ, known as the column, was pointed out as the distinctive character of the orchid.

Another interesting feature is the diversity of the lip form. The lip is one of the petals. In some forms, such as *Odontoglossum*, it much resembles the other petals. In *Oncidium* it is markedly different in size and color; in *Cattleya* it becomes more modified by the inrolling of the base into a tube which surrounds the column; in *Dendrobium* a still greater modification occurs in the inrolling of the margins of the lip into a saccate organ; and in *Cypripedium* this tendency is greatly magnified, giving us the "slipper."

The stem or leaves of orchids are frequently thickened, thus serving as storage organs for water. The water supply of many orchids, on account of the habitat on trees and rocks, is very uncertain, and those thickened leaves or stems carry the plants safely through periods of drought. When the thickened stems are short, and round or oval, they are known as pseudobulbs.

Some orchids grow in the ground and are known as terrestrial. These are commonly found in temperate regions, where dangers from frost exist. The majority, however, are epiphytic, that is, they grow on trees, and are found in warm temperate and tropical regions. The number of species is between 6,000 and 7,000, of which about 150 are found in the United States. The two great centers of their occurrence are: in the new world, in northern South America, northward into Central America, and in the west Indies; in the old world, in India and the Malay region. A series of slides was then exhibited illustrating some of the common wild and cultivated forms.

B. O. DODGE,
Secretary