

## SUMMARY

A floristic study was made of Hutcheson Memorial Forest, located one mile east of East Millstone, New Jersey. This Forest represents 63 acres of an original 400,000 square miles of virgin primeval forest which once covered the forested part of the United States.

The climate in the general area of the Forest consists of a rainfall of 44.03 inches and a temperature of 53.9°F while extremes on the Forest ranged from -3°F to 100°F. The recorded natural calamities which have occurred in the Forest include hurricanes, fire, drought, and electric storms.

The methods used to make the floristic study were observations on vascular plants in stations along the edge of the Forest and observations of vascular plants in stations within the Forest. The results of both these studies show there was a total of 311 species of vascular plants present. Seventy-seven per cent of these were found within the Forest, 57% were found along the edge, and there was an overlap of 34% (108 species).

These species comprise a total of 83 families in which the Asteraceae is best represented by the largest

number of species. Thirty-four of the families were represented by only one species. Of the total number of species, 13% (39) were trees, 13% (39) were shrubs, and the remaining 75% (232) was composed of herbaceous plants. Quercus, the best represented genus of trees, consisted of six species of which Q. alba and Q. rubra had the widest distribution in the Forest and were the most abundant of the oaks.

Along the edge the species first observed in flower was Viburnum prunifolium; the species with the widest distribution was Salix saralinense; and the species of greatest abundance in the stations along which it was found was Rhus radicans. In the section study the species first observed flowering was Symplocarpos foetida; the species with the widest distribution were Viburnum prunifolium, Polypodium biflorum, and Smilacina racemosa; and the species of greatest abundance in the sections in which they appeared were Cornus florida, Viburnum acerifolium, Lonicera japonica, and Rhus radicans.

Those species which were the greatest quantitatively in the number of flowers they produced both along the edge and within the Forest were: Podophyllum, Impatiens, Claytonia, Arisaema, Anemone, Solidago sp., Cornus florida, Brunna arvensis, Viburnum prunifolium, Sanicula integrifolia, and Smilacina racemosa. Those species which were

heavy fruiteders included Viburnum acerifolium, Podophyllum, Arisaema, Phytolacca, and Galium sp.

The Forest is a Piedmont community as it lies on the Piedmont Plain. In addition to its Piedmont flora, there are representatives of the Coastal Plain and species with either northern or southern affinities. Some species have both northern and southern affinities and others are alien in their geographical distribution.