WILLIAM L. HUTCHESON MEMORIAL FOREST

COUNTY: Somerset

MUNICIPALITY: Franklin Twp.

PHYSIOGRAPHIC PROVINCE: Piedmont

QUAD: Bound Brook, Monmouth Junction

COORDINATES: 40° 30' 00" lat., 75° 34' 00" long.

ACREAGE: The forest site consists of 65 acres. Surrounding the forest on three sides is a 117 acre buffer zone of fields and younger woods. Total acreage: 182.

OWNERSHIP: Rutgers, the State University of New Jersey, owns the forest tract and surrounding buffer areas. A "reverter clause" will automatically transfer the land to the Nature Conservancy should the integrity of the site become threatened.

LAND USE: Rutgers University is committed to protecting and preserving the ecological value of the area. The tract is primarily used for research by Rutgers University students and faculty. Research projects are limited to those which would cause no disturbance. Group tours are led by faculty members and graduate students at approximately biweekly intervals during the spring and fall semesters. The area is not open for public self-guided tours and hunting is prohibited. Access is obtained from Amwell Road. Supervision is provided by a caretaker who lives adjacent to the Forest on Rutgers property. Rutgers management of the site has resulted in an extensive body of scientific research over the last 30 years, making Hutcheson one of the most studied forest tracts in the world (Buell and Forman, 1982). To date, 123 published articles, 66 doctoral and master's theses, and 73 published abstracts have been produced from research on the forest and adjacent fields (Buell and Forman, 1982).

NATURAL RESOURCE ELEMENTS

1. Plant Community Types: Hutcheson Forest consists of a mature mixed oak forest which has no recorded history of cutting and has not experienced fire since 1711, ten years after the area was first settled (Buell, et al., 1954). Within the forest, which may attain a height of 95 feet, two community types are represented (Art, 1976; Robichaud and Buell, 1973). In the upland well-drained area the dominant trees are white, red, and black oak (Quercus alba, Q. rubra, and Q. velutina), with individuals of pignut hickkory (Carya glabra), white ash (Fraxinus americana), red maple (Acer rubrum), sweet cherry

(Prunus avium), and beach (Fagus grandifolia). The understory consists of an almost continuous layer of flowering dogwood (Cornus florida). Typical shrub species include the maple-leaved viburnum (Viburnum acerifolium), arrowwood (V. dentatum), and black haw (V. prunifolium). Vines common in the shrub layer are Japanese honeysuckle (Lonicera japonica), poison ivy (Rhus radicans), and Virginia creeper (Parthenocissus quinquefolia). Representative herbs are the mayapple (Podophyllum peltatum), spring beauty (Claytonia spp.), trout lily (Erythronium americanum), solomon's seal (Polygonatum pubescens), false solomon's seal (Smilacina racemosa), jack-in-the-pulpit (Arisaema triphyllum), false lily-of-the-valley (Maianthemum canadense), enchanter's nightshade (Circaea spp.) as well as various grasses and sedges.

The other community type, which makes up about 20 percent of the forest area, lies within the floodplain of a small unnamed stream and is more poorly drained. Typical overstory trees here are white oak, white ash, red maple, pin oak (Q. palustris), and some black gum (Nyssa sylvatica). Arrowwood and spicebush (Lindera benzoin) are important shrubs, while skunk cabbage (Symplocarpus foetidus) and jewelweed (Impatiens spp.) are common herbs.

Although the dominants are now oaks, many ecologists who have studied the area feel that the true climax will be sugar maple-mixed oak. While there are many sugar maple seedlings, reproduction by the oaks is poor (Robichaud and Buell, 1973). A long history of fires set by Indians of the area in the Seventeenth Century may have favored oaks and hickories because they regenerate more quickly after fire.

Adjacent to the forest are several acres of fields which buffer the forest and provide a unique classroom for the study of old-field succession on the New Jersey Piedmont. Fields of varying ages may be viewed in close proximity to one another, vividly displaying the process of secondary succession originally described by Bard (1952).

2. Wildlife: An annotated list of bird species at Hutcheson has been compiled by Swinebroad (1962). Of the 108 species observed, 40 were described as definitely breeding in the woods. Leck (1971) reported an additional seven species including the State endangered Cooper's hawk (Accipiter cooperii) which he descirbes as a rare vistor. With the exception of birds, wildlife has not been a focus of research within the forest area.

3. Rare Plants: No rare plant populations have been reported within the forest.

4. Rare Wildlife: With the exception of the State endangered Cooper's hawk (Accipiter cooperii), which is reported to be a

rare visitor (Leck, 1971), Hutcheson Forest is not known to support rare species of wildlife.

5. Geological/Topographic Features: The underlying bedrock at Hutcheson Forest is a soft red Triassic shale of the Brunswick Formation. Soil series include Penn silt loan, Reaville silt loan and Dunellen sandy loam. Lansdowne silt loan occupies soils adjacent to the small stream. Lying about 80 feet above sea level, the area is flat: slopes range from 0-6%. Hutcheson lies within the Millstone watershed. Drainage is into the Delaware and Raritan Canal (parallel to the Millstone River) which, in turn, drains into the Raritan River to the north.

REASONS FOR INCLUSION OF AREA ON NATURAL AREAS REGISTER:

Hutcheson Forest is considered the best example of the mixed oak forest type in northern New Jersey, enjoying over 300 years of protection from fire and disturbance. It is one of the few primeval forests remaining in the Eastern United States and is listed in the Society of American Foresters Register of Natural Areas (Buckman and Quintus, 1972). Hutcheson therefore represents a significant representative ecosystem in New Jersey. In addition, the large body of information published on Hutcheson greatly enhances the sites educational and scientific value.

REFERENCES CITED:

Art, W. 1976. Evaluation of William L. Hutcheson Memorial Forest, Somerset County, New Jersey for eligibility for Registered National Landmark designation.

Bard, G.E. 1952. Secondary succession on the Piedmont of New Jersey. Ecological Monographs 22:195-215.

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Buell, M.F., H.F. Buell and J.A. Small. 1954. Fire in the history of Mettler's Woods. Bulletin of the Torrey Botanical Club 81:253-255.

Buell, H.F. and R.T.T. Forman. 1982. Three decades of research at Hutcheson Memorial Forest, New Jersey (USA). William L. Hutcheson Memorial Forest Bulletin. 6:24-32.

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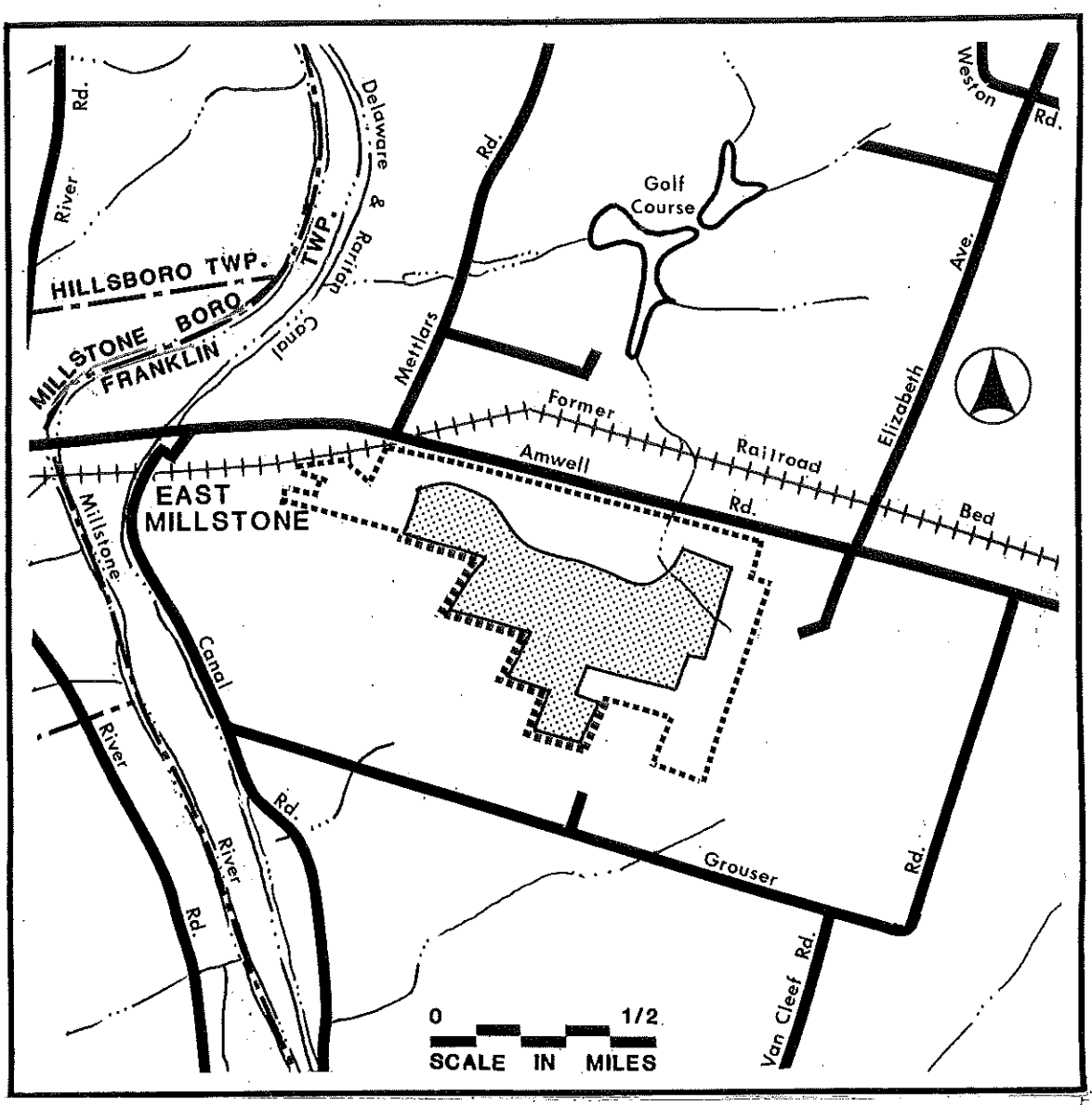

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MEMORIAL FOREST
SOMERSET COUNTY

▪▪▪▪▪▪▪▪▪▪ - Approximate boundary of Register site

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