Arboretum news. Volume 1 1952

THE UNIVERSITY OF WISCONSIN

ARBORETUM NEWS

Vol. I. No. 1. Madison, Wisconsin

General Information

The first purchase of land for the University of Wisconsin Arboretum was made in 1932 with funds from the Madison Parks Foundation. In addition, the University Board of Regents provided further money for this purpose from the unpledged balance of the Tripp estate.

Development of the Arboretum began in the spring of 1933, when some 19,000 evergreens were planted. When the area was officially dedicated, June 14, 1934, the tract contained about 500 acres.

The Arboretum now includes something more than 1200 acres of rolling upland, lowland, and marsh bordering Lake Wingra, a small but beautiful, spring-fed body of water.

The Civilian Conservation Corps maintained a camp in the area from 1935 through 1940. They built roads, fences, walls, developed lagoons and nurseries, and planted trees, shrubs, and herbaceous plants.

The Arboretum is maintained by an annual budget, allotted by the Regents of the University. Further than this, substantial numbers of public-spirited groups and individuals have made, and are continuing to make, gifts of money for purchase of land and of planting stock for it.

The Arboretum is under the supervision of the Vice President in charge of Academic Affairs. It is administered by an Arboretum Committee, whose members are appointed by the President of the University. The executive officers of the Arboretum are the Chairman of the Committee, the Executive Director, and the Research Coordinator. These positions are filled by the University Regents, upon recommendation of the President.

The Arboretum staff at present consists of a resident supervisor, two foremen (one for the main area and one for Picnic Point), and a part time staff of ten men.

Objectives

The main objective of the Arboretum is to provide an outdoor demonstration and research area in which native plants, animals, and landscapes can be studied under natural, or nearly natural conditions.

The Arboretum is valuable for teaching and research in all phases of field biology, for demonstrations of the interactions and relationships of native flora and

fauna, and for investigations in the intelligent uses of land and water resources. As an observational area it impresses upon the non-technical students the intrinsic aesthetic and cultural values of native plant and animal communities flourishing in their characteristic physical settings. The Arboretum is further dedicated to the continuous, long-time preservation of these communities, the value and interest of which will increase as they become more completely integrated and developed with each passing year.

Educational Functions

The Arboretum area, with its diversity of topography, soils, and plant associations, provides essential and effective demonstrations for many university classes in field biology, horticulture, conservation, and soils. It provides a place where individual plant and animal species may be studied conveniently, under natural conditions, and where their life histories may be investigated in a habitat which will not be destroyed tomorrow, or the day thereafter, a guaranty now seriously lacking in most field studies.

The Arboretum will provide living models, or "dioramas" of the pre-settlement Wisconsin landscape for the study and inspiration of many students of art, literature, history, geography, hydrology, and others outside the scope of technical biological science.

The University of Wisconsin Arboretum is a place where the people of the state can observe plants and plant associations, and it is the hope that these things will stimulate an interest in home grounds beautification and in the preservation and improvement of local landscapes, with resultant benefits statewide is scope.

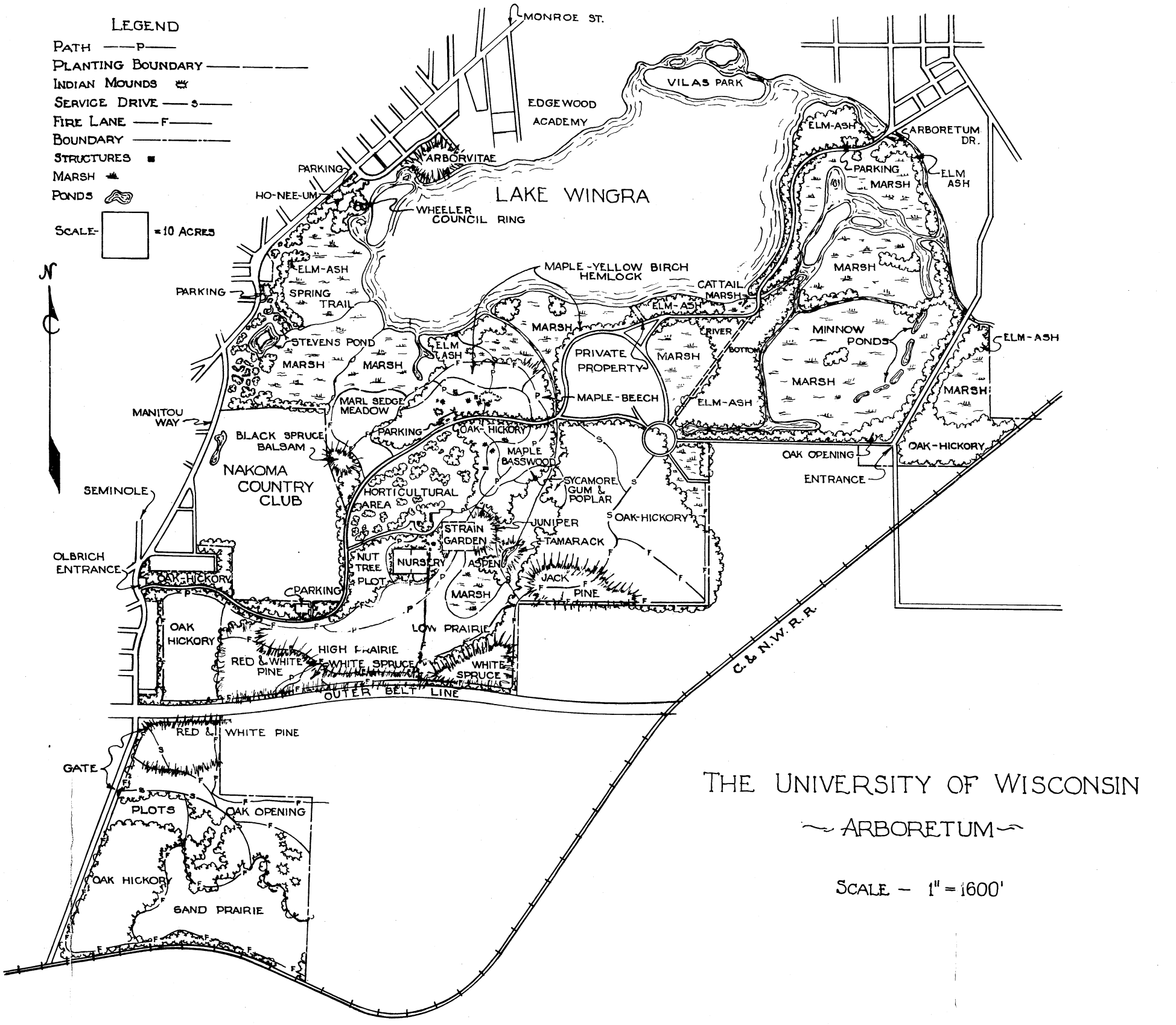
The Arboretum is an observational area for students and others who wish to escape the confines of city life and refresh themselves with a quiet walk in natural surroundings. The woods, prairies, marshes, and waters, with their wealth of trees and flowering plants, birds, animals and fish, provide an ideal setting for the constructive use of leisure time.

Features of Interest to the General Public

Spring Wildflowers	(April-June)
Prairie Wildflowers	(All season, largest display, July-Sept.)
Flowering Crabapples	(Flowers in mid-May, fruit in autumn)
Lilac Collection	(Late May-early June)
Kenneth Jensen Wheeler Memorial Council Ring	Designed by his grandfather, Jens Jensen
Spring Trail Pond (Duck Pond) and Stevens Pond.	Ducks and landscape plantings.
Various Ecological Plant Associations	(See map)
Arboretum Birds	(Excellent opportunities for observing migratory and nesting birds)

Executive Personnel

Vice President in Charge of Academic A..... I. L. Baldwin
Chairman of the Arboretum Committee..... A. F. Gallistel
Executive Director..... G. Wm. Longenecker
Research Coordinator..... J. T. Curtis
Resident Supervisor..... J. R. Jacobson



THE UNIVERSITY OF WISCONSIN

ARBORETUM

SCALE – 1" = 1600'

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Strain Garden and Living Herbarium

During 1952 a beginning was made on the construction of a garden in which labeled specimens of the herbaceous species of the main plant communities of our area will be grown. The garden is 300 feet square and is surrounded by a rock wall. The main divisions will consist of prairie, hardwood forest, and conifer forest. In each there will be a section in which individual plants of all species concerned will be established, with the species arranged by families in the order given by Gray's Manual of Botany. These living herbarium plants should be of considerable value as a teaching aid in plant identification, especially for learning the characteristics of plants at seasons when they are not in bloom. The prairie plots have already been set out by Mr. David Archbald, the Arboretum Botanist, with about 60 species introduced by October 1st.

Each division of the garden will also contain plots in which a number of morphologically and physiologically different strains of important species may be established. Field workers often discover plants which are in one way or another noteworthy and which differ significantly from the usual plants of the species. It is hoped that a collection of such variants may provide the basis for future work in horticulture and various branches of conservation.

PRAIRIE REESTABLISHMENT AT THE UNIVERSITY OF WISCONSIN ARBORETUM

By J. T. Curtis
Arboretum Research Coordinator

In 1835, the upland portions of the area, now included within the University of Wisconsin Arboretum, were largely covered with prairie. In succeeding years most of the area was put to the plow and for nearly a century produced agricultural crops. The founders of the Arboretum early

envisioned the return of part of the area to its original condition. In line with this view, they set aside two large tracts of open land on which prairie was to be reestablished. The first of these, south and east of the Nakoma Country Club, comprises 60 acres, while the second, along the southernmost boundery of the Arboretum, is 50 acres in extent.

A Pioneering Venture

When the efforts at reestablishment began in 1932, very little was known about how to proceed. It was a pioneering venture, with no backlog of experience elsewhere upon which to depend. Accordingly, much attention was paid to the development of suitable methods during the next decade. Various soil treatments, transplantation and seeding methods, weed control procedures, and fertilization practises were investigated. Over the years it became apparent that the final methods would need to be very inexpensive, because of the tremendous number of individual plants required to restore the prairie to its original condition.

Parallel studies of remnant prairies in southern Wisconsin had shown what species were needed and in what quantities. Many of the common species occurred at rates of over 2000 per acre, or more than 200,000 for the total prairie area. No possible nursery or transplantation procedures could be contemplated, because of prohibitive costs. Accordingly, the methods finally decided upon were dependent upon seeds as a source of plants, and they involved soil treatments for preparation of a suitable seed bed.

Current Planting Methods

The essential steps in the current methods are as follows: First, the land to be planted in any year is burned in early May. This treatment severely injures the blue grass sod which covers the abandoned fields and reduces its competitive abilities. Second, mixed prairie seeds, which had been collected the previous autumn and had been stratified in moist soil in the root cellar over winter, are planted on the newly burned area by broadcast seeding. Third, the ground is slightly scarified to cover the seed and to provide small areas of bare soil. Following this series of steps no further treatment is employed. If the seeds were good, the fire effective and the weather favorable, a good stand of prairie plants will result. Some species will bloom in the second year after planting, most in three to four years, and a few not until six or seven years later. Once the plants are well established they will produce annual crops of seeds which will fill in any gaps left by the original planting.

Six or seven separate portions of the prairies have received the above treatment long enough ago so that now in 1952 they are nearly completely restored. More and larger areas are in the process while still larger areas have still to be planted. Shortages of both seeds and labor have held the restoration to a slow pace, but sufficient progress has been obtained to give firm promise of eventual success.

Showy Prairie Flowers

The prairie presents attractive displays of showy wild flowers throughout the growing season, but late May and early June, with bird-foot violet, blue eyed grass, wild indigo, prairie phlox, black eyed susan, spiderwort and puccoon, and late July and August, with gayfeather, blazing star, purple cone flower, coreopsis, prairie dock, compass flower, prairie goldenrod and prairie aster are perhaps the best seasons. The late September and October scene, with the brilliant red and purple autumnal coloration of the prairie grasses and the sky blue of the prairie gentians, is also well worth a visit. *Reprinted from "Wisconsin Gardens" Aug.-Sept. 1952*

Seed Collections from woody plants in 1952

An idea of the range of our native tree and shrub planting program can be gained by inspecting the following seed list, compiled by Mr. Jacobson, the Arboretum Superintendent: Red, white, swamp white, black, bur and pin oak, basswood, black cherry, black walnut, pig nut hickory, sugar maple, hackberry, choke cherry, honey locust, black, white and blue ash, white birch, balsam fir, white spruce, nanny berry, black haw, hazel nut, gray dogwood, and hawthorn. Some of these will be stratified in soil over the winter, while others will be planted directly in a seed bed. Although quicker results can often be obtained with purchased nursery stock, plants which are developed from seed on the spot, and not subsequently transplanted, are not only much cheaper, but are usually healthier and much less subject to the manifold troubles that often beset nursery transplants.

A 6 x 18 foot cold frame has recently been constructed at the Arboretum. This will, for the present, be used primarily for the winter protection of some of the less hardy seedlings used in our plantings.

A new method for scalping heavy sod lands for purposes of tree planting is now in use at our Arboretum. The apparatus used consists of a 24-inch V-shaped sweep that is attached to the beam of a tractor plow. The cutting depth of the sweep may be regulated by the hydraulic lift on the tractor. A continuous horizontal cut about 4 inches deep and 24 inches wide is made by the sweep. This sod strip is cut through the center by a rotating steel disk, the colter, mounted on the plow beam. The side vertical cuts are made by two inch tongues that project upward at the ends of the sweep. The scalp is then completed by two men who cut the sod into the desired lengths with sharp shovels and turn over the two halves of the sod. With this preparation, a 24-inch square scalp can be made with ease in about a half a minute, a great saving in time and effort. The use of this device was suggested by Professor Fred Trenk, Extension Forester of the University of Wisconsin, who feels that it may ultimately find statewide use in tree planting programs where, for one reason or another, the continuous furrow method of planting is undesirable.

New equipment. A 10-inch tilting arbor bench saw was installed this summer in the Arboretum shop. This saw will be used extensively for making wooden markers, stakes, traps, flat, boxes, etc.

Mr. Jacobson, our Superintendent, has provided us with the following very interesting natural history note. While collecting seed cones from a balsam fir tree in the Arboretum, he came across the nest of a deer mouse situated snugly in the midst of a mass of cones twenty feet from the ground. The well-insulated nest was made of down from thistles and milkweeds. The mouse scurried from its nest, hesitated for a moment on a branch, and then went down the extension ladder on which "Jake" was standing. We are glad to report that the ingenious mouse was left in undisturbed possession of his premises.