

The Plant Evaluation Program at Bernheim — New Direction

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INTRODUCTION

The Bernheim Arboretum and Research Forest is located in north central Kentucky, approximately 35 km (Approx. 22 miles) south of Louisville. The arboretum itself consists of 200 ha (Approx. 500 acres), which is adjoined by an additional 5500 ha (Approx. 13,600 acres) natural forest. As a result of its close proximity to the Louisville metropolitan area, Bernheim provides a wide array of recreational and educational opportunities to approximately 185,000 visitors per year.

Historically, Bernheim was founded in 1929 by a German immigrant named, Issac W. Bernheim, who wanted to provide a unique natural area and arboretum to the citizens of Kentucky. Design of the arboretum grounds was laid out by the Frederic Law Olmstead landscape design firm, and the arboretum was opened to the public in 1949. Since those early years, the arboretum's collections have increased to over 5200 accessions.

EVALUATION PROGRAM

Bernheim is located in plant hardiness Zone 6a (37° 55' N 85° 40' W), and is in the unique geographic position of providing a site for the evaluation of landscape plants capable of growing in Zones 5, 6, and 7, that is also west of the Appalachian Mountains. Plans are being developed to establish a new, regional plant evaluation center at Bernheim by the year 2004. These plans include the construction of new greenhouses, laboratory, library, and propagation facilities, in addition to the development of new field and container nursery areas.

The following genera and/or species will be included in the plant evaluation program: *Acer*, *Aesculus*, *Carpinus*, *Cornus kousa*, *Fothergilla*, *Hamamelis*, *Hydrangea*, *Ilex*, and *Viburnum*. While we do not have adequate space available to evaluate all cultivars, or even species of some genera, we intend to assemble collections of source-documented and verified representatives of some of the larger genera such as *Magnolia*, *Quercus*, and *Syringa*.

At this point, our plan is to focus on genera that have traditionally been underutilized in Midwestern U.S. landscapes, i.e. *Fothergilla* and *Hamamelis*. The evaluation program will focus on the field performance of cultivated taxa for such characteristics as: flowering cold hardiness, frost susceptibility, heat tolerance, insect/disease resistance, fall coloration, and growth rates.

In addition to cultivated taxa, there will also be ample opportunities to propagate seedling populations of a number of species for which no selections have been made to date, such as within certain species of *Acer* and *Viburnum*.

OPPORTUNITIES FOR COLLABORATION

Since our plans to develop the plant evaluation center are still being formulated, it is premature to announce any formal, collaborative agreements with other botanic gardens and arboreta in the U.S.A. It is our intent to contact other institutions located in hardiness Zones 5, 6, and 7. We would especially like to focus on those institutions nearer the Atlantic coast that would provide us with a definitive contrast of results in comparison with the climatic effects of our more continental location. In addition, we would invite representatives of European institutes, who may have an interest in our plant evaluation program, to contact us to possibly exchange plant materials for these listed genera.