The Arboretum and the Commercial Nursery: *A Symbiosis*  
by William Flemer, III

The many services that an arboretum performs for the public at large are too well known to require elaboration. So also is the educational importance of an arboretum attached to a college or university. Less frequently appreciated are the services that an arboretum performs for the commercial nursery industry. And in exchange there are services that the nursery can perform for arboreta, so the relationship can be a two-way street; in short, a symbiotic one.

Perhaps the most important arboretum function of all, from the nurseryman's point of view, is to serve as a show case for the products that he grows and sells. Most nurseries, being relatively small commercial enterprises, must make every acre count from a production standpoint. In the case of plant markets unattached to field production, space is even more limited and the efficient manager tries to make every square yard count. Therefore, few nurseries indeed can find the room to grow to full size and display mature specimens of the many tree and shrub species that they offer for sale. This limitation is especially evident in the case of shade trees, many of which need a quarter of an acre or more of ground space at maturity. While it is true that many of the important nursery plants can be found in mature form and size in the average older residential town, they are almost never labeled for identification and similar species or clones are rarely if ever planted adjacent to each other so that meaningful comparisons can be made. Consequently, fortunate is the retail nurseryman whose establishment is near an arboretum. Not all customers wish to research very thoroughly the trees and shrubs that they propose to plant; but for those who want to see the differences and special qualities for themselves, a nearby arboretum or botanical garden offers the best answer to their many questions.

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The “show case” function of an Arboretum can be a valuable sales tool for a nursery too. Displays of mature plants in full bloom often serve as a strong stimulus to the public to seek out a nursery and buy some younger specimens for their home grounds. This is particularly true of collections of showy flowering shrubs like Azaleas, Lilacs, and Rhododendrons. I know of one retail nurseryman located near an arboretum famous for its lilac collection. He regularly stocks a container-grown selection of the best cultivars because he knows he will have a brisk demand for them each spring following “Lilac Sunday.”

Of equal importance to the nursery industry is the arboretum’s function as the only source of many authenticated true-to-name species and cultivars. If a grower wishes to add a rare plant to his production schedule, he frequently has nowhere else to turn for foundation stock. In the vicissitudes of human error, mistakes do occur in the propagation department and clones become mixed, to everybody’s chagrin. This is particularly true in the case of very similar appearing plants that are slow to come into bloom, like lilacs, cherries or crabapples. In such a plight, a request to an arboretum specializing in the group can provide a new supply of true-to-name scions or cuttings.
For a limited number of nurseries engaged in breeding programs arboreta are invaluable genetic "banks" for parent breeding material. It is impractical for a nursery to maintain in perpetuity, true-to-name plants of all the parent stock that might someday be wanted for a breeding program. Yet, taken as a whole, our North American arboreta do this as a matter of routine operation, and this resource is invaluable for the serious private or institutional plant breeder.

The nursery industry, particularly its mail order segment, thrives on new and improved plants. All arboreta that maintain a policy of adding new plants to their collections for testing and display are an important source of new plants for nurserymen. Those which have an active breeding program are even more important because they are actually producing new and improved clones themselves. The National Arboretum in Washington, with its many breeding programs and its plant exploration trips (in part financed by Longwood Gardens) is doing especially noteworthy work in this area at present. The new and unbelievably hardy Azaleas being produced by the University of Minnesota's Landscape Arboretum is another example, as is the imposing list of woody ornamentals introduced by the Arnold Arboretum in Massachusetts. It is difficult to appreciate the enormous contribution that arboreta and botanical gardens have made to our nursery industry and thence to the gardening public.

Arboreta have a new and growing role in the preservation and dissemination of rare native species and races of plants. Just as zoological gardens may end up as the sole hope for the survival of rare and endangered mammals and birds, so arboreta may become the sole hope for endangered plants. Suburbanization and other changes in land use patterns are taking an increasing toll of rare plants each year. When possible, the creation of sanctuaries for rare plants or biomes is the best solution, but all too often local indifference or even greed may militate against such a hope. In these cases the concern and skill of an arboretum can save the day for posterity. The case of the Franklinia is a well known illustration. One small private botanical garden literally saved this handsome small tree for the gardens of today. A unique natural population of Franklinia was extirpated by collecting and export to England where the climate was unsuited to it. The sole surviving parent tree in Philadelphia was the source of all the Franklinias that we enjoy today.
A final important Arboretum function is research in propagation techniques and the dissemination of the findings. This is particularly important in the area of rare or little-grown plants. The Arnold Arboretum's Alfred Fordham recently received the Award of Merit of the International Plant Propagators' Society for his lifetime of contributions to this field. Research in how to germinate seeds of rare plants, often with peculiar dormancy requirements, research in the rooting of cuttings and in finding and evaluating understocks for clones that must be reproduced by grafting, have made important contributions to the nursery industry. In the field of propagation, the last word has never been said, and the future will hold many happy surprises for the nursery propagator, as a result of arboretum research.

On the opposite side of the equation, there is much that the nursery community can and does do to further the work of the arboreta and botanical gardens. Especially important is the dissemination to the gardening public of the new plants that they create. An arboretum has neither the space and staff, nor the finances to distribute new plants to the public at large. The best that can be accomplished is to send new introductions to cooperating producing nurseries, the solution presently in effect. Not all new plants have commercial possibilities, and
there are bound to be some disappointments. Arboretum breeders are by no means immune to the temptation of commercial ones, that tendency to think that each creation is unique and valuable in itself. A fairly recent example was the flood of Glen Dale Azaleas, a group of hundreds of cultivars whose acceptance by the trade was buried under an avalanche of “look alike” clones. The harsh reality of commerce is necessary to separate the unique yet vigorous clones from the competing “also rans.”

Commercial nurseries also can provide, free or at a nominal cost, the understocks needed for routine arboretum propagation and research. Space and facilities are always at a premium, especially in the limitations imposed by an urban location, and nurseries that grow such understocks in enormous quantities can provide exactly the kinds and sizes wanted, thus relieving limited Arboretum propagation facilities of the burden. For establishments with a propagator on the staff, and many are

**Propagating unit in the Arboretum’s Dana Greenhouses.**
now in this situation, nurserymen can propagate the young plants needed for replacement or addition to the collection quickly and efficiently. Each year finds our firm engaged in such activity for arboreta that have no propagator or the specialized structures and techniques needed for certain unusual propagation practices; and many other nurseries regularly take on such special work for favored institutions.

Nurseries, as individuals and through their state and national associations, also can and do assist in financing arboretum work. Our firm and many others regularly make grants of funds and plant material; the latter especially useful for the establishment of the many new arboreta springing up across the country, especially teaching arboreta associated with the new community colleges. The assembly of “one of each” orders for arboretum planting is especially costly and time-consuming, but we think it a very valuable investment for future generations of plant lovers. More and more arboreta and botanical gardens are forming associations of “Friends of The XYZ Arboretum.” Such groups, properly led and encouraged, can provide financial assistance, tour guides to relieve pressure on the Arboretum Staff, and volunteer teachers for classes and children’s activities. “Friends” associations are an invaluable first line of defense when condemnation proceedings arise, as they sometimes do. And a devoted group of wealthy “Friends” is almost the only source for bequests when death takes its toll. Such a valuable association, like any other, must be carefully cultivated to bear fruit. Nurserymen are more than glad to provide quantities of small rare or new plants to be distributed as gifts to members of such supportive groups. The scope of this kind of industry cooperation and support is bound to grow in the years to come.

Symbiosis is an association of living organisms from which both derive benefits they could not have alone. It is a term that can truly characterize the fruitful relationship between the members of the AABGA and the nursery community.

Mr. Flemer is President of Princeton Nurseries, Princeton, New Jersey.