The History of Ornamental Horticulture in America

Horticulture is the art or science of growing flowers, fruits and vegetables. At one time in the early history of this country it was not differentiated from agriculture, but now, as has been the tendency in many other areas, specialization in the study and use of plants has resulted in the field of horticulture itself being divided into several sub-divisions; namely, pomology, olericulture, floriculture, ornamental horticulture and viticulture. Today there is a fascinating potential for arboreta and botanical gardens in the field of ornamental horticulture.

Ever since colonial days, the economic phases of horticulture have been given prime attention. The early colonists had to grow the vegetables and fruit trees in order to provide food. As more and more plants were established, more interest was taken in new and higher yielding varieties, then in better ways to grow these varieties and to control pests which began to infest them. Near the end of the last century, public institutions supported by federal and state tax income took up intensified experimentation in pomology and olericulture, and later viticulture and floriculture. Many excellent local state and federal stations of experimentation were established, not only to better the quality of the food produced, but also to improve the methods of producing it.

Ornamental horticulture has been a late comer in all this experimentation, and until recently the emphasis has always been on the economic phases of growing plants. This is probably as it should be. At first large estate owners would collect a lengthy list of varieties of apples, or peaches, but usually the owner did not have suitable scientific background for gaining the most information from such collections. It was frequently a personal hobby, and when he lost interest, or finances became tight, the collection was removed. Great collections of apple, pear, grape and peach varieties have now been made at our state and federal experiment stations where there is impartial experimentation by trained scientific observers. In general, little

attention has been given to the ornamental plants that we now consider so essential to beautify the world within which we live. It is here that the arboreta and botanical gardens have their opportunities. They have the large collections of all kinds of plants, those of only botanical interest and those of purely ornamental interest. The experiment stations cannot give such collections space nor proper care. On the other hand, the arboreta and botanical gardens do not have space for large collections of economically important varieties of fruits and vegetables.

Hence as far as horticulture is concerned, our interest is best confined to the ornamental aspects of horticulture. Certainly we who have had to do with arboreta and botanical gardens are far better endowed to deal with the problems which this field presents and let the government experiment stations deal with the economic fruits and vegetables.

When the early settlers first came to America, they were primarily interested in hewing a home from the forest primeval. They brought many seeds and even plants of the fruits, vegetables, herbs and flowers that they were accustomed to in their European environment. The peach, for instance, was brought by the early Spanish explorers, and in the early history of Georgia and Alabama the Indians were known to have grown many different kinds of peaches (all seedlings) which they would use in barter.

Those settlers with large land grants in Virginia were first interested in growing and selling as much cotton, tobacco, or indigo as they could. It was not until this was accomplished that they began to have more leisure and take the time to plant flowers, trees and shrubs for ornament. The earliest writings about plants in America were those by physicians who were interested in herb collections, for medicinal purposes, or by naturalists who were interested in exploiting the plants of the New World.

Prior to 1750 there were the excellent plantings of the gardens of colonial Williamsburg, where living had reached a luxurious level. Many of the plants used here were American natives as well as those brought over from England. It was not until about 1770 that we have the first treatise on American flower gardens written by a Mrs. Martha Logan of Charleston, S.C. The first American book on gardening was by Robert Squibb, the *Gardener's Kalender* published in Charleston, S.C. in 1787.

However, things were happening elsewhere as people found more and more leisure to plant ornamentals. John Bartram's garden was established in Philadelphia in 1728 and although the economic side of horticulture was his prime motive, never-

theless his garden held great interest for land owners of estates who soon became his customers.

After the fighting of the Revolutionary War was over, George Washington himself set a splendid example by settling down at Mount Vernon and planting his gardens. Thomas Jefferson was also a garden enthusiast and made no bones about where his interests were. He is generally given credit for sowing seeds of *Cytisus scoparius* along the roadsides of Virginia whenever he had to take a trip somewhere, and it may well be that naturalized stands of this European plant now found in Virginia were the results of his efforts. Land owners in New England were becoming more and more interested in ornamental gardening, for here some who had large collections of apple or pear varieties soon took up a new interest in ornamentals. If any specific time can be designated as the period when horticulture began to emerge as distinct from agriculture, it might be in the early 1800's.

Grant Thoburn established the first seed store and florist shop in New York in 1802 while Bernard M'Mahon established his in Philadelphia in 1806. Joseph Breck established his in Boston in 1818. M'Mahon listed over 1000 different kinds of plants and seeds, many of them among the best of European importations. Interest was such in New England that the Cambridge Botanic Garden was established in 1808 and this naturally became a source of great interest to plantsmen of the area. Many nurserymen started into business at about this time — William Prince in 1837. The nursery eventually was to be owned by three generations of the family. William Prince was so interested in obtaining new plants for his customers that he wrote a form letter, in the 1820's, to sea captains asking their assistance in bringing back to him small amounts of seeds or bulbs of plants native about the ports they visited. Parson's Nursery was established in 1838 on Long Island, not far away from the Prince Nursery. Such nurseries, and many others did much to make it possible for home owners to obtain new ornamental plants.

The founding of the Massachusetts Horticultural Society in 1829, and of the Pennsylvania Horticultural Society in Philadelphia shortly before, were two events which gave ornamental horticulture a greater impetus than anything else. It was through the "exhibitions" produced by these Societies that many of the ornamental plants first became known to the public. Even at the first exhibition, staged by the Massachusetts Horticultural Society, prizes were given for the best American holly, *Magnolia*

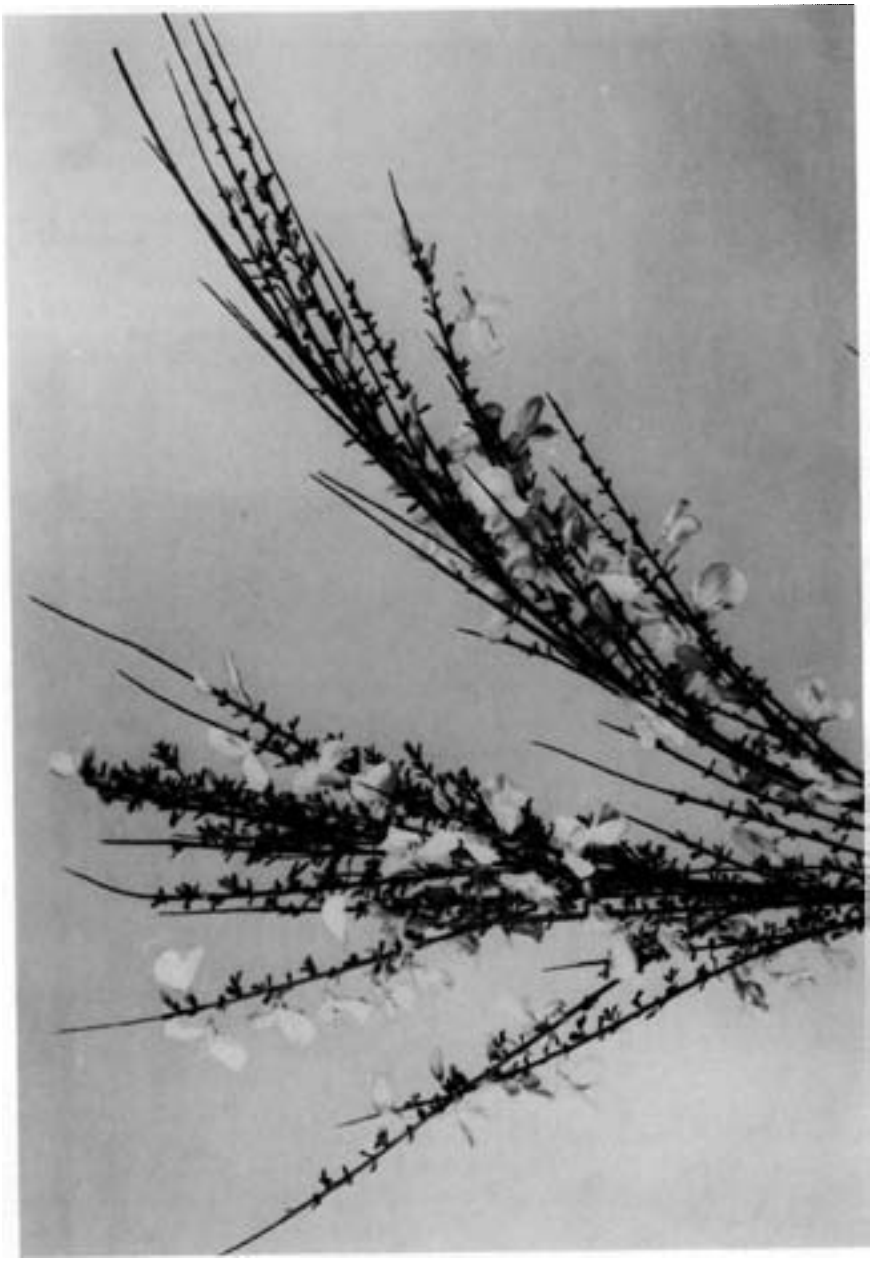
glauca, *Rhododendron maximum*, and *Kalmia latifolia*, all of which were native plants, as well as for tulips, Chinese chrysanthemums, hyacinths, carnations and roses. In 1830, there were 30 varieties of *Ranunculus asiaticus* displayed; a little later, large collections of dahlias, but the emphasis at those early exhibitions was always on fruits. The first exhibit of Indian azaleas was in 1835.

It is interesting to note in the history of the Society that even in 1841 ladies were not admitted to the dinners of the organization, for "if they were, wine could not be". In 1830 there was a great discussion against giving any lady horticultural honors for it was said that women in the garden had brought trouble since the time of Adam. No lady read a paper before the Society until 1880. However, there were indications of a change in perspective for one report read after the Committee on visiting gardens had found a Mrs. Fay at work in her garden — "what a pity that so few ladies of our land imitate her example, inhaling the fresh breath of the young day and the envigorating aroma of the freshly turned earth, planting the roses of health in their cheeks and nurturing the germs of health and strength and buoyancy of spirit".

In an exhibition staged in 1845 it was noted that there were 33 bouquets of flowers from 8 contributors, and later President Wilder of the Society was moved to note an improvement in the "arrangement" of the flowers exhibited. What would these "arrangers" have thought if they could have seen some of our modern flower shows?

By 1850 there were indications of greater interest in ornamentals than in fruits and vegetables, for in that year the Society allotted $650. in prizes for flowers, $450. for fruits and $150. for vegetables. Usually however the displays of fruits and vegetables eclipsed those of flowers. In 1856 there was a display of 40 varieties of fuchsias, underwriting the fact that by this time many a New England estate owner also had his own greenhouse. Andrew Faneuil built the first, on Tremont Street between Pemberton and Beacon, in 1715.

Mr. H. H. Hunnewell of Wellesley was a great grower of rhododendrons, and a staunch supporter of the Massachusetts Horticultural Society as well. He underwrote a large display of rhododendrons (under canvas) on the Boston Common in 1873 and this was the first time so many people had been able to see such magnificent plants in full bloom. This, and the Centennial Exhibition in Philadelphia (1876) where 1500 rhododendrons were exhibited by Waterer's Nursery of England were chiefly re-



Cytisus scoparius. *Photo: Heman Howard.*

Kalmia latifolia. *Photo: D. Wyman.*

sponsible for bringing these supposedly hard-to-grow shrubs to the attention of the general public.

There had been large collections of plants, privately owned, where the public was invited on occasion, like the collection owned by Pierre S. du Pont at Kennett Square, Pa., later to be opened and called Longwood Gardens in 1937. Then there was Shaw's Garden in St. Louis, Mo., later to be called the Missouri Botanical Garden, and the Hunnewell estate in Wellesley, Mass., later to be known as the Walter Hunnewell Arboretum. Among the first large truly public collections to be established were the Arnold Arboretum in Jamaica Plain, Mass., established in 1872; the Beal Garfield Botanic Garden on the campus of the Michigan State University in East Lansing, Michigan (1873); the Bayard Cutting Arboretum on Long Island, N.Y. (1887); Highland-Durand Eastman Park, Rochester, N.Y. (1890); and the New York Botanical Garden in New York City (1891). After these there were over a hundred others spread about the country, each one open to the public, each one displaying chiefly ornamental plants growing in the open. There is no question but what these have had a permanent effect in creating enthusiasm for ornamental horticulture by the general public. Most of these collections were started in a small way, but as funds became available more and more plants were added and the institutions concerned began using various means of presenting ornamental horticultural information to the public.

Another tremendous impetus given ornamental planting was the great influx of new plants from the Orient, chiefly as a result of exploration initiated by the Arnold Arboretum. These colorful introductions spread over nearly half a century have reached practically every garden in America. It is of interest to note that in gardens and landscape plantings of a general nature in the northern United States, half of the plants used are of oriental origin, a quarter are native to Europe and only a quarter are native to America. The colorful and exotic Japanese crab apples and cherries, tree peonies, azaleas and rhododendrons make any garden interesting.

It was during this same period that the nursery industry grew tremendously. New nurseries were formed in every state of the Union. Many an old established nursery found that it was more profitable to grow ornamental plants than it was to grow fruits. Vegetable sources were of course specialized seedsmen, but since 1920 there have been fewer and fewer nurserymen growing fruit trees.

Julius Sterling Morton (1832–1902) certainly should be men-

tioned as one individual who greatly aided ornamental horticulture. He conceived the idea of Arbor Day and was responsible for establishing the first one in 1872 in Nebraska, when over 1,000,000 trees were planted in that state alone. True it was at first that in the prairie states fruit trees were first thought of, but the idea quickly carried over to the planting of any ornamental tree, and now the day is celebrated nationwide with tree planting ceremonies, with ornamental trees far outnumbering the fruit trees planted.

It might be said that ornamental horticulture really came into its own at the start of the 20th century. By this time there were at least nine active state horticultural societies only two of which were in the mid-west, the others in the east. There were magazines featuring articles dealing with ornamental planting. Some of the great parks like Central Park in New York City (1858) and Durand Eastman Park in Rochester, New York (1890), had been popular places for visitors and this of course was bound to bring ornamental planting to the attention of the general public. Some state Experiment Stations were in operation; others were soon to follow.

The 20th century was a time for the rapid expansion of single plant societies, over 50 of them in all. These were national organizations with annual meetings, dues and usually a publication, devoted to the study, discussion and improvement of one special flower. The American Carnation Society (1902) and the American Peony Society (1904) were probably the first established. However, others have been coming into existence ever since and only last year the International Lilac Society was formed. Some are lacking in finances and general public interest at first, but their very formation shows that people are interested in these ornamental flowers and are willing to grow them and to take up their study and improvement as a special hobby.

By this time, the ladies have long been prominent in ornamental horticulture and in fact have actually taken over much of the garden planning and work. Their general interest in growing their own flowers, in color combinations and the exquisite effects they could obtain in the arranging of flowers have all been factors. The first garden clubs were probably a coming together of men and women interested in growing ornamentals in the garden. Soon however, the whole garden club idea was taken over by the ladies and it has been possibly the greatest factor in bringing interest in ornamental horticulture to what

it is today. One organization alone today has 387,700 members, mostly women. Their interests vary greatly from gardening, to flower arranging, to planting their communities, to conservation, to producing flower shows and awarding scholarships to deserving youngsters for college study.

The majority of the gardeners in America are now closely associated with the garden club movement. Either the garden owner is a member or certainly she has friends who are. When national movements are undertaken by these well organized and very well informed groups, the majority of the gardeners in America at least are cognizant of what is going on and many find they are participating, willy nilly!

More important is the fact that it is through these energetic people that advances in ornamental horticulture are quickly undertaken. With modern travel, radio, TV and newspapers what they are, new plants are soon heard about, new horticultural procedures are quickly passed along and enthusiasms for new and worthy projects are quickly publicized. A century ago such information was hard to come by. Today it might seem with all our horticultural publications that we are overwhelmed with too much information, but the growing of ornamental plants is a very popular project of every garden owner in America.

It should be pointed out that competition among the amateur growers is still as much an incentive as it always was — to grow the biggest or best or newest flower, then to be rewarded for it at some show or exhibition. The garden club movement naturally fosters this idea.

Ornamental horticulture has come a long way since the start of the nineteenth century. It is no longer an asset of the rich. It has become an important part of the lives of most Americans, even those apartment dwellers in the hearts of our large cities. Many individuals are now being trained to take a major part in this field.

There are at present over 60 national horticultural organizations devoted chiefly to the ornamental phases of horticulture, about 50 single flower societies, 41 libraries featuring information on ornamental horticulture and 78 institutions of higher learning offering bachelor's degrees in ornamental horticulture. There are nearly 500 gardens, experiment stations or institutions where special information can be obtained concerning the growing, care and propagation of ornamentals. Canada, because of its less populated areas, has not proceeded as fast as the United

States in these respects, but Ontario has set an excellent example with its government organized and subsidized horticultural societies, underlining the great importance of ornamental horticulture in this fast developing country.

The first gardens were of herbs because of necessity. Then the early settlers added a few plants popular in Europe, adding more of those native to America. Later there was a mixture of almost anything that was new or took a gardener's fancy. Methods of growing were passed around at first by word of mouth, then information was found in articles by experienced "growers" but not until the Hatch Act (1887) and the formation of state Experiment Stations, was there much scientific knowledge available to help amateur growers. Before this the best practices were those which apparently produced the best results.

Interests and needs changed. With the planting of great municipal public parks there was a great popularity among the rich growers for bedding plants. Only the city park systems, or those rich enough to have greenhouses and employ a gardener, could have a large geometric planting of bedding plants, for geometric designs in gardens were popular everywhere at the end of the last century.

Because of all the large estates and the fact that many Asiatic plants had not become commercially available, at the end of the last century there was a great demand for tall and fast growing trees. Some of these were *Aesculus hippocastanum, Catalpa bignonioides, Ailanthus altissima, Populus nigra italica, Picea abies, Salix babylonica* and two small weepers, *Ulmus glabra* 'Camperdownii' and *Morus alba* 'Pendula'. Now, although some of these are still grown, none of them is in the popular class. They are superseded by smaller trees such as the oriental flowering crab apples and cherries, as well as dogwoods and magnolias.

There have been times when "fads" seemed to capture the fancy of everyone. *Morus alba multicaulis* in 1824 was called the "silkworm" mulberry and everyone wanted to get in on the ground floor of a new industry. At the height of this craze, when thousands of trees were raised, seedling trees that normally would sell for fifty cents were bringing ten times this amount. The project as we know now proved futile, and now it is impossible to buy a single plant of this variety from a commercial nursery in the United States. *Morus alba* 'Pendula' which Hick's Nurseries of Long Island termed "the plant of the century' in the 1890's, soon became over-planted, and few are seen today.

Above: Aesculus hippocastanum

Right: Catalpa bignonioides

Photos: Heman Howard.

Salix babylonica. *Photo: D. Wyman.*

However, even the sophisticated gardeners of today are not immune. We are still "taken in" by the tubbed banana for the home with fruit advertised as "always available", with "tree tomatoes" producing crops "up to 40–60 pounds a year"; with a "new" rose bush (or a tree) that grows "to the roof of your home" in two years. To show how history can repeat itself, now 250 years after medicinal herb gardens were popular, it may well be that they will become so again. A new book will be published in England this summer by Maurice Messegue, *Of Men and Plants*, which is an autobiography of a famous "plant healer" who heals people, often miraculously, with the use of hand and foot baths (or poultices) in which certain of our common herbs are soaked. Undoubtedly this will start many gardeners scrounging around among the weeds and herbs in their gardens to find those recommended by the author as helpful when used for particular ailments, in the way he suggests.

There is still a great deal that the arboreta and botanical gardens can do for ornamental horticulture, being the youngest division of horticulture. With smaller houses, higher taxes and smaller home areas, there is now considerable interest in dwarf plants. Nurserymen formerly were not interested in many of these — they grew too slowly to make a display in time to bring a profit. Now such plants are in great demand. Many of the arboreta of the country with large collections of plants have their own propagating units where special studies can be initiated in finding better ways to propagate such plants. No experiment station has sufficient source material or funds to enter into work on this problem on the same scale as some of our large arboreta.

With large varietal collections of plants like lilacs, mock-oranges, weigelas, Japanese tree peonies and many other types, the arboretum is the best place in the country to compare the ornamental qualities of these varieties. Once their ornamental merits are established, the arboreta should publish lists of "the best" and those worthy of discarding. Arboreta across the country can combine their efforts to make such studies more valuable.

The arboretum is the best place to make accurate color chart notations of flower colors — very few such studies exist. Here the varieties are growing under similar conditions and presumably are all on an even basis environmentally for color comparison. Several of the large arboreta have their own publications and can initiate plant information by such means, but they

should also seek the cooperation of nationally circularized horticultural publications.

They should also initiate a "source list" of where rare but good plants are available. This is one of the most difficult things to do for it is never up to date, but it is the best means of making source information available to the public. Without such information of availability, varietal studies have little current value. The information, the availability of the plants, and the national publicity concerning this should all be carefully worked out and coordinated.

Arboreta with the space and the funds should have extensive breeding programs to provide better plants, with more colorful flowers and fruits, more resistant to pests, with better form or height or autumn color than those varieties available at present. New plants will continue to be found in cultivated areas and in the unexplored hinterlands, but the resources of the arboreta in their own collections are not to be ignored in this respect. We certainly do not need more plants but we can always use better plants and a widely publicized list of generally accepted (by other arboreta) discards which should be no longer grown commercially.

Ornamental horticulture has come a long way in the last 150 years. Just the production of ornamentals alone is big business. In 1950 there were 17,400 nurseries in the United States producing ornamental stock, employing 121,800 persons. The sales of ornamental stock alone amounted to $467,346,000 at wholesale prices. The number of ornamental woody plants sold (326,000,000) was three times what it had been 20 years before. Fruit trees (18,100,000) were down to half what they were two decades before and grape vines (302,000) were only one quarter of what they had been. It is obvious then that there is currently a great surge of active interest in ornamental planting.

In celebrating this Centennial of the Arnold Arboretum it is only fair to mention that the Arnold Arboretum has been vigorously promoting ornamental horticulture in many ways throughout its entire existence. It should not rest on its laurels.

The modern potential that arboreta and botanical gardens have in the field of ornamental horticulture is unlimited. People today have more leisure than they have ever had, and with more single homes in America than there have ever been, more gardens are being planted. More individuals are interested in flowers and trees and ornamental plants and their artistic arrangement. Consequently more individuals are looking for help

Morus alba *'Pendula'*. *Photo: Heman Howard.*

in growing and using ornamental plants than ever before. It should be a prime function of the arboreta and botanical gardens to recognize these facts and to produce better plants and better information about them so that all Americans can be active in making the world about them more beautiful.

DONALD WYMAN
Horticulturist *Emeritus*
of the Arnold Arboretum
Harvard University