

# *THE MORTON ARBORETUM*

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*Quarterly*





COVER: Hop hornbeam or ironwood, *Ostrya virginiana*  
From Charles S. Sargent, *The Silva of North America*  
(Boston: Houghton Mifflin Company, 1891-1902), IX, Plate CCCCXLV  
Original drawing by Charles Edward Faxon

Hop hornbeam rarely exceeds thirty feet in our eastern forests where it is common in the understory. In general, its appearance is rather ordinary, and its simple, finely toothed leaves resemble those of elm. Two of its features are unmistakable: the bark and the fruit. The latter—pendulous cone-like clusters of flat, inflated sacs containing tiny nuts—look very much like hops and account for part of the tree's common name. The shreddy bark consists of small scales or plates which are arranged in narrow vertical strips about  $\frac{3}{8}$  inch wide, giving the trunk a distinctive lined appearance.

The wood is extremely hard, exceeded only by dogwood among our eastern trees. This hardness gives the tree its common names, ironwood and hornbeam. The name hornbeam refers to the hardness of the wood—"horn" for toughness and "beam", an old word for tree. An earlier variation was hard beam. The wood is especially useful for small articles which must withstand stress, such as axe handles, mallets, and levers. Because of its durability it has also been used for fenceposts.

Inasmuch as it is fairly free from insect problems and disease, hop hornbeam has merit for horticultural use. However, these advantages are offset by slow growth, some difficulty in transplanting, and a tendency of foliage on young trees to remain yellowish for a few years. Still, old specimens have a grandeur and elegance that make hop hornbeam worthy of greater attention from plantsmen.

### *The Morton Arboretum Quarterly*

VOLUME EIGHT, NUMBER THREE

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## *Openings in the Woods*

*By Alfred Etter*

As welcome as wooded areas are to those of us who find our escape from the city by walking in them, I have found the *openings* among trees even sweeter. Surrounded by shade, shut off from other worlds by graceful branches and a tapestry of leaves, a woods-opening is a place to rest and visit with the chipmunk or chickadee or—in a protected place like the Arboretum—with a deer, woodchuck, or wild turkey.

I remembered the openings in the woods of my past far better than the woods themselves. I recall especially a sun-filled lane bordered on one side by translucent green sugar maples and on the other by a grove of silvery beech with silver herons perched on nests far overhead. In California I spent a magic hour among iridescent shafts of light that fell on yellow skunk cabbages at the foot of dripping redwoods. One October while walking among the oaks of a Michigan moraine, I discovered a marshy opening rampant with red dogwood and white wind-blown grass. September memories include a vision of a tractor passing through a woods-opening leaving a little dust hanging in the sunbeams above beds of asters and rank goldenrod.

One of my earliest recollections is a gathering of old post oaks that allowed just enough light to filter down so that the trail I followed on my way to school was bordered with violets, spiderworts, and phlox. Many a titmouse whistled there on spring days as I laid plans for truancy.

Now that I am at the Arboretum, it is one of my delights to wander down woodland openings created by the former Director, Clarence Godshalk. Eight years ago his home was built in a woods on the western portion of the Arboretum. At one time the area had been pastured, but when the farm animals were removed, sprouts of ash, maple, ironwood, and cherry had moved in to form a solid understory beneath the older oaks, and the ground had grown barren from the shade. While the foundation was being excavated, unusual care was taken to protect the floor of the surrounding woods from compaction by heavy equipment and from other disturbance. As the walls were rising, Mr. Godshalk planned openings that would be seen when he and his wife looked out a window on winter days, or took a stroll in summer.

Once these vistas and trails were planned, enough young trees were cut so that the soil was only lightly shaded. Mr. Godshalk had confidence that nature, given time and a little assistance, would adjust its flora to the amount of light and fill the openings with the shining foliage of plants like Solomon's seal, bloodroot, phlox, Jacob's ladder, waterleaf, sensitive fern, nodding trillium, Jack-in-the-pulpit, green dragon, dogtooth violet, wood anemone, and bellwort. The trees were sawed close to the ground so the existing mulch was left intact, and then each autumn, just before the leaves fell, the openings were mowed at a three- or four-inch height with a rotary mower.



In a few years the weedier species began to fade. The woody plants sent up fewer new shoots from old stumps, and flowering plants began to appear and spread. Some that Mr. Godshalk had hoped for, like ginger and woods lily and shooting star, did not return, and these he introduced from other sites.

Thistles, both bull and Canada, were common at first, especially where burning piles of brush had removed the mat of litter and exposed the mineral soil to drifting seeds. Occasional cutting with a scythe before they headed out discouraged the older thistles, and the annual fall of leaves retarded new sprouts and seedlings. Grape, moonseed, and greenbrier came up near the woods edge where seeds were dropped by birds, chipmunks, or raccoons, but these vines were discouraged by mowing or pulling. Sprouts of black haw viburnum, blackberry, raspberry, cherry, or dogwood that so willingly decorate the edges of woods had to be sacrificed occasionally to protect the openings, and immigrant honeysuckles called for more frequent suppression. The total effort, nevertheless, was only a pleasant diversion from other concerns, and repaid the Godshalks with many discoveries about the ways of woodland plants.

Contrary to the expectations of skeptical observers, the lanes did not become rank growths of goldenrod, frostweed, snakeroot, ironweed, or eupatorium. Each year the woodland flowers were content with their few inches of gain. Now the open space is nearly filled from early spring to fall with a sequence of attractive flowers, fruits, and foliage.

Other openings in the Arboretum, cut about the same time for comparison, were more routinely treated. Mowing was more frequent and fallen leaves were ground up in the mowing process instead of remaining to shade out the mat of grass. As a result, bluegrass and orchard grass, which seem almost to smile at the sound of a power mower, have taken over. The graceful fronds of woodland plants, if they appear at all, never get tall enough to compete with the meadow species.

\* \* \*

In these days of rampant development, woodlands and groves of trees left over from old farming days entice well-meaning homebuilders to invade them with concrete, asphalt, and power equipment. The result is usually the death of the woods, and with it the disappearance of shade-loving flowers and foliage.

There is a better way. The few woodlands that remain deserve complete protection—or at the very least, the sympathetic hand of persons interested in the encouragement of beauty.

If you already live in a woods, or own a small tract of left-over land and want to preserve openings for wildflowers in views and paths, then it is possible—by controlling shade and mowing once yearly in the fall just before the leaves descend—to discourage woody and weedy plants. You will be rewarded by a ground cover of welcome flowers and bright leaves and berries. Wildlife that you might otherwise never see will help play a role in the propagation and maintenance of woodland species by spreading seeds, nipping off shoots, and tilling the compost of fallen vegetation. In November the green beginnings of next year's Jacob's ladders, anemones, hepaticas, dentarias, and other plants will be found among the leaves, benefiting from late fall sun, and when the snow is gone they will be the first things to benefit from the warmth that filters down through the tracery of spring trees.









### *Viburnum Portraits by Margaret Stones*

Six original plant portraits of *Viburnum* species, painted by the distinguished botanical artist, Margaret Stones, are now in the collection of the Sterling Morton Library. This set of watercolor drawings was commissioned in honor of the Arboretum's fiftieth anniversary.

Margaret Stones is well known as a regular contributor of illustrations in *Curtis's Botanical Magazine*, published by the Royal Horticultural Society, and as the artist of *The Endemic Flora of Tasmania*, a folio-sized work currently appearing in parts (London, Ariel Press, 1967- ). She is Australian by birth but has lived for more than twenty years in England. Her present home is in Surrey, close to Kew Gardens, and she has her own "little mad garden", as she calls it, in which are included a number of American plants. Miss Stones works independently, her whole output being commissioned either by private individuals or by institutions such as Kew or the Royal Horticultural Society. Her work is represented in a number of American collections, including the contemporary botanical art collection at the Hunt Botanical Library in Pittsburgh.

The idea of commissioning Margaret Stones to do some paintings for the Arboretum originated in 1969 when Mary Moulton, then Librarian of the Sterling Morton Library, returned from a visit to England and showed an exquisite watercolor drawing that she had pur-



chased from the artist to Suzette Morton Davidson, Arboretum Trustee Chairman. Mrs. Davidson suggested that Mrs. Moulton investigate the possibility of acquiring some original plant portraits by Margaret Stones to mark the fiftieth anniversary of the Arboretum.

Miss Stones' reply was enthusiastic, and she expressed a preference for plants which could be drawn from cultivated specimens from known sources, growing at Kew. One possibility mentioned was species roses, but it was decided that a genus of North Temperate Zone woody plants which were particularly notable here at the Arboretum would be more significant. The genus *Viburnum*, an important group of ornamental shrubs for our region and also one known to grow well at Kew, was chosen.

Miss Stones soon provided a list of the *Viburnum* species, varieties, and cultivars grown in the Arboretum at Kew, and Mrs. Moulton selected from it those that grow here, marking our preferences and alternatives. However, unforeseen problems were encountered in obtaining suitable specimens from which to draw, as Kew was in the process of renewing their *Viburnum* Collection and many of their plants were too young for flowers and fruits. Eventually six suitable species, displaying the great variety of flowers, fruits, and foliage found in this genus, were selected. Miss Stones remarked that the actual mechanics of securing the right plants at the right moments had probably taken more time than the drawings themselves! Portrait painters may have difficulties sometimes with temperamental sitters, but apparently plants can pose equally demanding problems to the artist.

Among the plants finally chosen, there is a representative from each of the six major groups of *Viburnum* which can be grown in our region, based on Alfred Rehder's classification. Three of the specimens were found growing at Kew Gardens: *Viburnum sargentii*, *V. farreri*, and *V. lantana*. Two had to be obtained from Wakehurst Place, Kew's country garden in Sussex: *V. wrightii* and *V. plicatum* 'Mariesii'. The sixth specimen, *V. cassinoides*, was obtained from Hilliers' nursery.

In autumn of 1970, Miss Stones was able to begin drawing the foliage and fruits of these plants, and the flowers were added the following spring. The finished plant portraits arrived at the Morton Arboretum in the summer of 1971, a delightful culmination of two years of planning and painting. When one sees these extraordinarily beautiful plants, it seems ironic that they are so little known in the average garden, where the lilac, the mock orange, the forsythia, and various honeysuckles occupy so much space. In a letter to Miss Stones, September 11, 1970, Mrs. Moulton wrote: "... it is best that these portraits show the viburnums that the ... good gardener can actually grow without much discouragement, and it is for their information and pleasure that I hope these portraits serve most."

The portraits themselves range in size from 8" x 13" to 12" x 16½" and show each plant in full color, both in spring flower and in fall fruit, usually showing some suggestion of autumn foliage color as well. It is only when one has the opportunity to see original paintings of this kind that one realizes how much is lost in reproduction, however fine the printing. Future occasions will be announced when these beautiful portraits will be on exhibit so that the public can see and enjoy them. Their addition to the Sterling Morton Library's botanical art collection is, indeed, an extraordinary "birthday present" for the Arboretum's fiftieth year. I. M.



## VIBURNUM SARGENTII

*Viburnum sargentii* was not among the six species originally proposed to be painted by Margaret Stones for the Arboretum's fiftieth year. Instead, it had been hoped that this particular group of viburnums could be represented by the more familiar *Viburnum trilobum*, the American cranberry bush, or *Viburnum opulus*, the European cranberry bush. When plants suitable for drawing could be obtained for neither of these, the similar though less common *V. sargentii* was substituted. Nevertheless, the selection is rather appropriate for this anniversary in one sense, for it is named for Charles Sprague Sargent.\* Dr. Sargent was Director of the Arnold Arboretum from its founding in 1872 until his death in 1927, and he was the man to whom Joy Morton turned for advice during the early years of planning and development of the Morton Arboretum. Sargent visited Lisle on occasion, and his influence on this arboretum is still evident.

The discovery of *V. sargentii* is quite interesting. Both *V. trilobum* and *V. opulus* had been known for some time and were described in early botanical literature — *V. trilobum* by Humphrey Marshall in Philadelphia in 1785, and *V. opulus* by Linnaeus in 1753. Thus it is not surprising that when Emil Bretschneider of St. Petersburg discovered plants of the same general appearance growing in the mountains near Peking, China, in 1882, he believed them to be *V. opulus*. Seeds collected from these plants were sent to Dr. Sargent that year, described as "*Viburnum opulus* from the mountains near Peking." These were planted at the Arnold Arboretum, and from there seeds or plants were distributed under the same name ten years later to a few gardens in Europe. Material received and grown at the Spaethe Nursery in Berlin soon caught the attention of Emil Koehne, a German botanist. After observing the plants for three years, Koehne became convinced that they were not *V. opulus* at all, but a distinct species. In 1899 his description was published in a German periodical, *Gartenflora*, where he named the species *V. sargentii*, for Dr. Sargent, who was given credit for introducing the plant into Europe.

Koehne stated that the differences between *V. sargentii* and *V. opulus* were actually more easily observed than the differences between *V. opulus* and the North American species, *V. trilobum*. All three species have leaves that are shaped like maple leaves. Alfred Rehder, writing in Sargent's two-volume work, *Trees and Shrubs*, points out that *V. sargentii* "differs from *Viburnum opulus* by its more upright and compact habit, its larger ray flowers and purple anthers. Fruits less brilliant and, at least on the plants cultivated at the [Arnold] Arboretum, are smaller and less abundant . . ." *Viburnum sargentii* is relatively uncommon in the nursery trade today, and *V. opulus* is more easily obtained.

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\*A recent book, *Charles Sprague Sargent and the Arnold Arboretum*, by S. B. Sutton, published by the Harvard University Press, 1971, is in the Sterling Morton Library.











## *The Preservation of Delight*

*By Alfred Etter*

A new challenge confronts us. We must develop among the inhabitants of the earth a concern for the future of the planet. We have recently embarked on intriguing studies of space, but in the meantime the world around us has grown less habitable. We can speak endlessly about life, liberty and the pursuit of happiness being inalienable rights, but they all depend upon the opportunity to occupy for a lifetime a healthful and attractive earth.

It is certain that concern for the earth's condition does not spring full-flowered from the human mold. Nor can it be transfused from one person having it to one not having it. Each individual must discover and acquire his own love and develop his own regard for the land and seas that sustain him, and for the sky which sustains us all. Each must experience his own delight with the wonders of earth.

Delight is the cornerstone of concern. Only through human delight with it can the earth be preserved and protected. We must therefore preserve the opportunity for delight. We must make it available to every child in every stage of childhood.

*Reprinted with permission from Defenders of Wildlife News, January, 1965.*



Delight leads to curiosity, and curiosity to understanding. Watch my daughter at play! She is quite satisfied that the best use of water from the garden hose is to flood her sandpile so that she can make lakes and oceans and then sail boats or go wading. I have decided that she is right. What better use for water than to teach more about water; especially its delightful aspects: how it sparkles, how it splashes, how it cools the sand, how it holds the sand grains together through some magic means, how it hides among the sand grains and reappears when she digs a hole?

Amid all this delight, she learns significant facts about the behavior of water: how it cuts down her mountain's sides, digs tunnels, becomes muddy, flows downhill, builds deltas and changes channels. She knows nothing about deltas or channels, but she sees them built and changed. When later she hears these words, she can slip them easily into her book of experience as she might bookmarks. Through these experiences with water, she will later have real curiosity about water words, and probably too, customs and methods of water use around the world and in her own community. Motivation in conservation begins with delight in the sandpile, the backyard, the playground, the street—not in the classroom on the morning when the lesson is about water.

My daughter also delights in sand. She discovers how strange it feels sifting out of her clenched fist, how it can be used to build dams, and when piled high, how it slides back downhill. She learns something of landslides and avalanches, and when the wind blows, something of miniature dust storms.

Day after day of play in the sandbox reveals new sensations and knowledge. Early in the morning the sand is cool. In the midday sun, it absorbs heat and burns her feet. Even when the shade of evening comes, the sand is still warm. She notes the movement of shadows and the position of the sun. In all this she is learning lessons in physics, geology and astronomy unconsciously, lessons for which she needs little more than proper nomenclature to make them complete.

A sandpile will tell a child something of passing seasons, too. Delight with the fallen honeysuckle flowers on the surface of the sand is succeeded later by delight with the scarlet fruit. When the autumn leaves come down, creating a mosaic on the sand, she awakens to the fact of change. The concept of a pattern of events establishes itself, and in subsequent years the predictability of natural events will occur to her. This knowledge or feeling for Earth's order and complexity can hardly fail to develop later into respect.

When the sandpile is abandoned for a few weeks, she may return to discover that little box-elder trees have sprouted as if by magic among the castle courtyards and battlements she built. When she digs them up, she learns something of roots, too. If by chance a bit of cookie falls, a party of ants soon collects, establishing a lane of traffic across a bridge and up the side of a mountain. In the sand outside the box little funnels, the traps of ant lions, have been dug. She watches a luckless ant slip in and get tugged below the sand, to disappear in a manner as strange as any fairy tale. So the world broadens to include other living things, other mysteries, and other purposes.

Perhaps one of the sandpile's most subtle delights is that it gives a child a chance to get to know a single place well. It provides a background for the realization of change and repetition. A sandpile gives a child a territory, a point of reference, a mirror in which to see the rest of the world. More than that, it provides a place to try for perfection and variety in the construction of new projects and new ideas.

If all "teaching machines" could be as effective as the combination of childish delight, the sandpile, and the garden hose, we could predict great things for the future of education. As a matter of fact, I very much fear that sandpiles have been eliminated from today's curricula because of the need to preserve the finish on the schoolroom floor, and I am afraid that hoses or even sprinkling



cans are seldom available even at home because of the mess they make. In the same way, asphalt and concrete have deprived the child of the thrilling touch of earth. Neon and smog have shouldered aside the sky. As a consequence, geography and geology and even astronomy and space become hard to visualize, hard to teach. The natural cycles of life, death, decay and rebirth, the magic qualities of the soil, and the total interdependence of living things remain unintelligible. Public understanding of responsibility for the environment we share becomes vestigial.

Television, tape recorders, and teaching machines cannot substitute for delight and discovery. They provide only vicarious experience. They may even take the edge off of childhood adventure. They may lead the child into an endless search for a world he cannot find.

Charles Montagu, in his book, *The Faculty of Delight*, has said that “. . . the right education, if we could only find it, would have at its very heart and core the working up of this creative faculty of delight into all its branching possibilities of knowledge and understanding, wisdom and love, ability and nobility.”

I am sure that Montagu would contend, as I do, that if Man is indeed to meet the new challenge of creating a population concerned with the health and beauty of the earth, he must work hard to preserve and increase the opportunity for delight. He must learn to look at the landscape more through the eyes of children and less through the eyes of convenience-hungry adults. It is all too evident that at a time when there is an urgent need for children to have opportunities to explore the world around them, the world under Man is assuming a sameness, even an ugliness.

Starting today, there must be concerted and spirited action to preserve and multiply gardens, wildernesses, glimpses of wild animals, clean streams and appealing landscapes, quaint villages, vignettes of history, and pure skies that build both appetite and joy. Corner lots and open space, parks and paths are needed everywhere to provide for play and contacts with the earth that are the right and need of every child.

George Eliot once said, “We could not love the earth half so well if we had had no childhood in it.” It would make her sad to see how many of our children today grow up physically and emotionally separated from the real earth and living things, distracted by activities and amused by many inventions. Their childhood gives them little reason to show affection, and indeed may lead them to have a contempt for both Nature and Man. Only by understanding what these children have missed can we lead them back through paths of delight to begin again their search for a planet they can love.

<i>Climatological Summary</i>			
<i>Data</i>	<i>May</i>	<i>June</i>	<i>July</i>
<i>Average mean temperature</i>	59.1° F	66.3° F	72.3° F
<i>Highest temperature</i>	90° F	94° F	94° F
<i>Lowest temperature</i>	33° F	32° F	43° F
<i>Days maximum above 90° F</i>	0	1	6
<i>Precipitation</i>	2.96"	5.79"	4.00"



54 FEET

55 FEET - 50 YEARS

50  
45  
40  
35  
30  
25  
20  
15  
10  
5  
0

21 FEET - 15 YEARS

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

0 INCHES





# American Linden, *Tilia americana*

Linden Family (*Tiliaceae*)

## *General Description:*

American linden is a symmetrical, broadly oval tree which may grow to one hundred feet in height and forty to fifty feet across at maturity. It grows rapidly. The main trunk, which is often three feet or more in diameter, frequently divides into two or more large main branches; numerous lateral branches ascend at the top, and the lower branches droop slightly. On old trees the dark gray bark is about an inch thick, deeply furrowed into firm, narrow, flat-topped ridges with horizontal cracks. On young trees and the branches of old trees the bark is smooth, gray, and thin, often reddish-brown on terminal twigs. The asymmetrically heart-shaped leaves are large, five or six inches long and almost as wide, and terminate in a slender point at the apex. They are firm textured—dark dull green on the upper surface and lighter beneath—and are coarsely toothed along the margins. A slight pubescence covering the young foliage soon disappears, leaving the foliage glabrous with the exceptions of tufts of rusty brown hairs in the axils of the principal veins below. In autumn the foliage turns pale yellow before falling. Fragrant, creamy-white, five-petaled flowers appear in June or early July after the leaves are fully developed. They hang in clusters from a stalk that is attached near the middle of a leafy bract. Hard gray-brown spherical fruits develop by September or early October, often remaining on the tree into winter. The buds are dark red or sometimes greenish, about  $\frac{1}{4}$  inch long and nearly as wide. Stout heavy scales cover them. The white to creamy-brown wood, soft and lightweight, is valued for its working qualities and is used for woodenware, boxes, veneer, paper pulp, and other small articles. The bast fibers of the tree's inner bark have long been used to make cord, fishnets, mats, and baskets.

## *Landscape Value:*

Linden's medium to coarse foliage texture and great potential size somewhat limit its usefulness to large sites. It harmonizes especially well with wood and stone structures. It is planted primarily as a shade tree and will tolerate difficult city conditions.

## *Origin and Hardiness:*

It is native to an area ranging from northern New Brunswick to eastern North Dakota, south to Texas, and east to Georgia. It is especially prominent in rich forests of Minnesota and western Wisconsin. It is hardy to Zone 2\*.

## *Soil and Site:*

Linden is best cultivated in rich, well-drained, loamy soil; in nature it survives but does not thrive in dry locations. In its natural habitat it does not form pure stands but grows in association with maple, red oak, walnut, and other hardwoods. The largest specimens are found on fertile floodplains.

## *Planting and Care:*

*Tilia americana* is available in most local nurseries. It has a shallow root system and is easy to transplant in spring or fall. Its leaves are subject to disfiguring by insects, especially the spring cankerworms, but the tree seldom succumbs to their attacks. Mulching to retain soil moisture is very beneficial; pruning should be confined to the removal of dead or broken branches.

## *Location in the Arboretum:*

Linden Collection; woods throughout the Arboretum.

\*Hardiness Zone based on Plant Hardiness Zone Map prepared jointly by the U.S. National Arboretum in cooperation with the American Horticultural Society. U.S.D.A. Misc. Pub. #814, May, 1960.



## Arboretum News and Notes

**MEMBERSHIP PROGRAM.** By the end of September, nearly nine hundred families had joined the Morton Arboretum's new membership program which was started in January. This program offers a number of mutual benefits: through it the Arboretum can become more fully understood by its public and can gain support for new programs directed at horticultural and ecological needs in the regional community, while the Arboretum's endowment continues to support the Arboretum's basic purposes — the collection of woody plants for research and education. Members can benefit from closer participation in Arboretum activities, enjoying unlimited admission and parking, special discounts for classes, field trips, and lectures, invitations to special events, and borrowing privileges in the library. Members can also become better acquainted with the Arboretum through its publications, the *Morton Arboretum Quarterly*, the *Program of Educational Activities*, and the *Newsletter*.

We are pleased with the enthusiastic response to this program and hope our members are equally pleased. New members will be welcomed; \$15 a year will provide a regular membership, and \$50 or more a contributing membership. For more information please call the Membership Secretary at 968-0074.

**HANDLIST PUBLISHED.** In October the Arboretum issued a 250-page book compiled by Walter Eickhorst, Ray Schulenberg, and Floyd Swink, entitled *Woody Plants of the Morton Arboretum; A Handlist of Plants Established or Tried in the Woody Plant Collections*. This book is the culmination of many years of work, and will be

useful to anyone who wants to know what kinds of plants are being grown in our cultivated collections, and where to locate them.

Basically, the handlist is an index which lists, alphabetically by genus and species, all the scientific names under which living woody plants are currently being grown here. Plants known to have been tried but which are not currently in the collections are also indicated. Common names appear as cross-references. Entries frequently include information as to approximate number of specimens, taxonomic determinations, literature citations, herbarium vouchers, and materials in propagation. The book contains a fold-out map of the woody plant collections, a map of the Shrub Collection, and a chart identifying plants in the Hedge Collection. Help in locating plants may be obtained by studying the descriptions of the grid system and the plant labeling system.

Copies of the handlist may be purchased from the Arboretum for three dollars.

**STAFF REASSIGNMENTS.** Carol Doty, Head of Public Information since 1969, was appointed to full-time work with publications on October 1. As Publications Coordinator she will have more time to devote to the *Quarterly*, which she has edited since 1966, and for work with the Arboretum staff in developing other publications as needed. She will also undertake the organization of the Arboretum archives.

Miss Doty's former responsibilities for general information services, public relations, visitor services, and conference facilities have been assigned to Thelma McComb, who became Public Relations Coordinator on October 1. Mrs.



McComb joined the Public Information Office in January, 1972, as Visitor Services Manager and Membership Secretary. Her capability and enthusiasm have contributed greatly to the public information program and will be an asset in the new Visitor Center which she will manage when it opens in 1973. Before coming to the Arboretum, Mrs. McComb was Executive Secretary to the Dean of North Central College in Naperville, Illinois. She and her husband reside in Naperville and have three grown children.

RECENT STAFF APPOINTMENTS. In June, Laura Parker was appointed Reference Librarian of the Sterling Morton Library. Mrs. Parker brings to her work an excellent background, holding a B.S. in Botany and Zoology from the University of California at Davis, received in 1970, and an M.S. in Horticulture from Colorado State University at Fort Collins, completed in 1972. Her Master's thesis was a study of the effect of ethylene, an air pollutant, on carnations. Mrs. Parker and her husband reside in West Chicago, and we welcome them to the Arboretum.

Peter Bristol joined the staff in September as Associate Curator of Cultivated Plants, filling a vacancy left when Joe Dolby returned to Purdue University in April. Mr. Bristol was graduated from the University of Vermont in 1967 with a B.S. in Horticulture, and he completed the M.S. degree in Plant and Soil Science at the University of Rhode Island in 1972. His varied experiences include work for a landscape contracting firm and a nursery, for an Agriculture Experiment Station Research Farm, and as an assistant to a Home Grounds Extension Specialist at the University of Rhode Island. We are pleased to welcome Mr. Bristol and his wife, also a graduate in Horticulture, to the Arboretum.

3RD INTERNATIONAL EXHIBITION OF BOTANICAL ART. Two artists from the Morton Arboretum, Nancy Hart and Anthony Tyznik, are represented in the 3rd International Exhibition of

Botanical Art & Illustration, to be held at the Hunt Botanical Library of Carnegie-Mellon University in Pittsburgh, beginning November 13 and continuing through March 1 or later. Mr. Tyznik's pen and ink drawings of trees have appeared regularly in the *Morton Arboretum Quarterly* since 1965, and Nancy Hart has served as artist for a variety of Arboretum publications and research papers. She has also made scientific illustrations for the Field Museum of Natural History and the Encyclopaedia Britannica.

This exhibition is drawn from the Hunt Library's permanent collection which attempts to represent every published contemporary botanical artist and illustrator. This collection was begun in 1962 when the Hunt Library discovered that no other center in America or Europe was seriously collecting original work in this category. The Hunt has established itself as an international repository for the collection and preservation of original examples of 20th century botanical art and illustration which meet these two requirements: The subjects must be sufficiently botanical to be identifiable as to genus; and the artist must have had work reproduced in one published form or another.

A catalogue of the 3rd International Exhibition has been published in book form and includes biographies and photographs of each artist, along with examples of their work. Inquiries about obtaining the catalogue should be directed to John Brindle, Curator of Prints and Exhibits at the Hunt Botanical Library. This notable botanical center, founded by Rachel McMasters Miller Hunt, has contributed importantly to botanical science and history through its ambitious program of acquisitions, bibliographical and taxonomic studies, and its publications. A visit to the Hunt Library to see this exhibition would be a stimulating experience for anyone interested in botany or botanical art. Catalogues from previous exhibitions may be seen at the Sterling Morton Library.





## The Lookout

ON JOY PATH; SOME AUTUMN THOUGHTS. *Legend has it that the Arboretum's founder was given to frequent strolls along the route we now call (for him) Joy Path, a gentle descent southward from the Thornhill residence. And I find myself wondering, as a follower in his footsteps, how many sights and sounds we may have shared—in the same season and place, but a half-century apart in time.\**

*Surely he knew that fallen-leaf mosaic of scarlet sumac, coppered pear, and walnut gold—co-conspirators allied to blot out summer's green. And two human generations ago, no doubt he saw some ancestral fox squirrel hanging head-down on the bur oak bole, forepaws fondling the fat fruit of an old tree still admired by today's squirrels and path-walkers alike. Common enough experiences, I suspect.*

*Some autumnal events, on the other hand, may be witnessed only once in many lifetimes—the timely convergence, for instance, of a ponderous frost and a precipitation of persimmon leaves. On a chill, still October morning I watched, transfixed, as leaf after ice-laden leaf clattered earthward, colliding with, dislodging others en route, and then bouncing among those already fallen. The flurry of thick-frosted leaves offered a brief crescendo of tiny tambourine sounds and then all was still again. I wondered if Joy Morton had ever heard a fall like that.*

\* \* \*

*Except, perhaps, as some vague allusion to our coal-fired furnace, I doubt if “ashes, ashes, all fall down” had any meaning to me in nursery school (save as a signal to flop vigorously on the floor—a redeeming finale to some otherwise dull proceedings). And I presume that Joy Morton's early boyhood in Nebraska City was punctuated by similar fun and games. But I also like to think that he, in maturity and on the path we share, may have witnessed a scenario that gives lively meaning to the old nursery rhyme: A white ash in fall color slowly accumulates a crownful of cedar waxwings (more precious than any jewels of the stony type); Enter a hawk (sharp-shinned, I think), promoting immediate evasive action on the part of waxwings, who, lifting as one bird from the ash's upper branches, trigger a sudden shower of regal purple and gold . . . “all fall down”.*

\* \* \*

*While other ties may be in doubt, it seems as sure as winter's coming that Mr. Morton shared with us that perennial thrill evoked by wild geese honking their way southward through an October sky. One hopes that those who walk Joy Path in years to come will never lack this living link that binds us all to our beginnings.*

*Richard Wason*

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*\*Mr. Wason lives in an Arboretum house at Thornhill, very close to the site of the former Joy Morton residence.*



## *The Morton Arboretum*

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Allan M. Storm, *Propagator*  
Floyd A. Swink, *Taxonomist*  
Anthony Tyznik, *Superintendent*  
George Ware, *Ecologist and Dendrologist*  
Richard R. Wason, *Head of Education*  
May Theilgaard Watts, *Naturalist Emeritus*



### *ILLUSTRATION SOURCES*

*Page 35: Photograph by Alfred Etter*

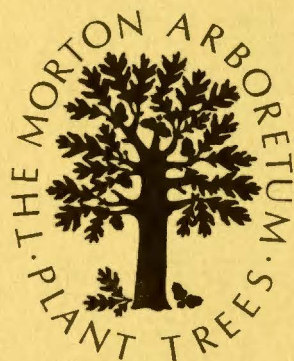
*Pages 36 and 39: Miss Stones' paintings photographed by Williams and Meyer*

*Page 40: Pen and ink drawing by Nancy Hart*

*Page 44: Pen and ink drawing by Anthony Tyznik*

*Inside back cover: Silphium laciniatum from Vilmorin-Andrieux, Les Fleurs de Plaine Terre, Paris, 1870*





## THE MORTON ARBORETUM

*LISLE, ILLINOIS*

*Founded by Joy Morton, 1922*

A PRIVATELY ENDOWED EDUCATIONAL FOUNDATION FOR PRACTICAL, SCIENTIFIC RESEARCH WORK IN HORTICULTURE AND AGRICULTURE, PARTICULARLY IN THE GROWTH AND CULTURE OF TREES, SHRUBS, AND VINES BY MEANS OF A GREAT OUTDOOR MUSEUM ARRANGED FOR CONVENIENT STUDY OF EVERY SPECIES, VARIETY, AND HYBRID OF THE WOODY PLANTS OF THE WORLD ABLE TO SUPPORT THE CLIMATE OF ILLINOIS . . . TO INCREASE THE GENERAL KNOWLEDGE AND LOVE OF TREES AND SHRUBS, AND TO BRING ABOUT AN INCREASE AND IMPROVEMENT IN THEIR GROWTH AND CULTURE.