arnoldia

Volume 48  Number 3  Summer 1988

Arnoldia [ISSN 0004–2633; USPS 866–100] is published quarterly, in winter, spring, summer, and fall, by the Arnold Arboretum of Harvard University.

Subscriptions are $12.00 per calendar year domestic, $15.00 per calendar year foreign, payable in advance. Single copies are $3.50. All remittances must be in U. S. dollars, by check drawn on a U. S. bank or by international money order. Send subscription orders, remittances, change-of-address notices, and all other subscription-related communications to: Helen G. Shea, Circulation Manager, Arnoldia, The Arnold Arboretum, Jamaica Plain, MA 02130–3519. Telephone (617) 524-1718.

Postmaster: Send address changes to:
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Arnoldia is printed by the Office of the University Publisher, Harvard University.

Front cover: The saucer magnolias (Magnolia x soulangiana) planted along Boston’s Commonwealth Avenue during the 1960s as the result of Laura Dwight’s efforts to beautify the avenue and arrest its decline. Dwight was able to marshal wide community support for her effort. Photographed by Peter Del Tredici. (An article by Judith Leet in the forthcoming Fall 1988 issue of Arnoldia will describe Dwight’s campaign.) • Inside front cover: Frederick Law Olmsted, the designer of Boston’s “Emerald Necklace” of parks and parkways. Photograph from the Archives of the Arnold Arboretum. Several of the articles in this and the Fall 1988 issue of Arnoldia will describe or refer to Olmsted’s pervasive influence upon Boston’s park system. • Inside back cover: A scene in the Boston Public Garden. Photograph copyright © 1988 by Doug Mindell. (See page 32.) • Back cover: An infrared aerial photograph of the Boston Public Garden. During the early 1970s, the Boston Parks Department used such infrared photography to assess the health of the Garden’s trees. Photograph by Mary M. B. Wakefield. (See page 32.)
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Aerial view of Boston and Boston Harbor, looking eastward. The Charles River and the Esplanade appear in the foreground. Boston Common and the Public Garden occupy the center foreground, and several of the Boston Harbor islands are scattered in the background. Copyright © 1988 by Alex S. MacLean/Landslides.
Restoring Boston’s “Emerald Isles”

Two special issues of Arnoldia on Boston's parks and open spaces

Boston rides the sea! Like Venus, she was born of seafoam and spindrift, of ebb and flow. Her existence, her very identity, she owes to the sea. Like Venice, Boston is as much sea as land; the sea still flows in her veins. Some newer parts of Boston—some neighborhoods, some parks, even entire sections of the city—arose, quite literally, from out of the sea a mere century or so ago. Even now they are borne upon the salty underground waters that diffuse inland from the sea: much of the Public Garden and all of the Commonwealth Avenue Mall, for example, were built upon what once were tidal flats in the Back Bay. Dwellings and other structures in the filled areas, built on wooden pilings during the nineteenth and early twentieth centuries, are sustained to this day by the subterranean seawater, which keeps them from decaying, keeps them, therefore, “afloat.” Where the seawater fails, checked perhaps by a massive modern building, the pilings rot, and older structures founder.

Boston may have turned her sights inland or elsewhere at times, but she has never been able to cut herself off entirely from the sea: her soul still flows from, is still sustained by, the sea; her heart of hearts beats yet to the systole, beats yet to the diastole of the tide.

In the late nineteenth century, after the Back Bay had been filled in, islands and peninsulas of another sort, anchored to the Common and Public Garden by way of the Commonwealth Avenue Mall, extended inland into Boston’s far-flung neighborhoods, at their outer limits arching inexorably back toward their source, the sea. The result was one of Frederick Law Olmsted’s crowning achievements, Boston’s famous “Emerald Necklace” of parks and parkways.

Boston’s bay and harbor are, like the land, studded with islands and islets of an emerald hue, only these are actual islands surrounded by water, not urbanized land. Olmsted had hoped to make them part of the Emerald Necklace. They once supported lush deciduous forests, but the forests were long since cut off. Lately, however, many of the islands in Boston Harbor have become parklands, and their forests are beginning to return. Lately, too, Boston’s landbound archipelago of parks—including the Emerald Necklace—has experienced a renaissance of sorts as a tide of prosperity has swept the region. Attitudes toward parks and other kinds of open space have undergone a sea change. There is optimism in the air. Individuals, citizens’ groups, private organizations, and government agencies, in diverse and ingenious ways, have set about polishing the gems of the Emerald Necklace, the islands in Boston Harbor, and other jewels in Greater Boston’s system of parks. A century after that superb system was created—a century during which Boston’s parklands have endured long periods of neglect—events have come full circle. The harbor islands have been secured as parkland, and Boston’s parure of emerald islands—terrestrial and marine alike—is at last complete. This little gray dowager by the sea is gray no more; she begins to glow in resplendent ornament.

This and the Fall issue of Arnoldia chronicle a few of the many selfless efforts Bostonians have made over the years to create, to salvage, to complete, and to rehabilitate some of their community’s most precious cultural assets—its parks and other public spaces. As the articles that follow show, today’s efforts build upon the devotion, hard work, selflessness, and genius of past generations.
An Overview of Boston's Park System

Boston's park system is one of the oldest and most comprehensive in the country—an extraordinary resource for its citizens and visitors. Its 2,500 acres range from the famous and beautiful 1,000-acre Emerald Necklace, stretching through the city its woodlands and vistas, to 185 neighborhood parks, playgrounds, and play areas, nearly half of them under an acre in size, offering pockets of open space and recreational opportunities in every part of the city. The system includes cemeteries, golf courses, pools, monuments, fountains, statues, foot bridges, and street trees.

The history of Boston's park system has been varied. Although the Boston Common has been common land since 1634, and the Public Garden was laid out in 1838 and deeded to the city in 1852, in 1875 Boston lagged far behind other American cities in the amount of land and attention it had paid to public parks. Only 115 acres had been designated as public open space. All this changed, however, during the last decades of the nineteenth century, which saw the birth and development of one of the country's great park systems. Public discussion about the need for urban parks began in the 1860s and, through public hearings, press debates, and political battles, culminated in the creation of the Boston Parks Commission in 1875. A year later the Commission published its first report; a public meeting, "Parks for People," urged immediate adoption of the plan. The following year, the city set aside $900,000 to acquire and develop land, and in 1878 Frederick Law Olmsted was hired to plan a park system for Boston.

Between 1878 and 1895, Olmsted designed, and the city eventually built, a city-wide parks and parkway system and five large neighborhood parks. His Emerald Necklace was designed primarily to create country parks and a continuous chain of green, but also to solve serious water pollution and health problems resulting from the flow of sewage out of the Stony Brook and Muddy River onto the tidal flats of the Charles River. The Emerald Necklace includes the Back Bay Fens, the Muddy River, Olmsted Park, Jamaica Pond, the Arnold Arboretum, and Franklin Park. As the Back Bay filling was completed, Commonwealth Avenue Mall became a link between the Emerald Necklace and the Public Garden and Common.

The Emerald Necklace parks and the parkways linking them—the Fenway, the Riverway, the Jamaica Way, and the Arborway—were designed as one system. Today the parks are managed by the city, the parkways by the Metropolitan District Commission. An exception is the Arnold Arboretum, which is owned by the city but operated by Harvard University. Prior to construction of the Arboretum, the city bought the Arboretum land from Harvard in 1882 and leased it back to Harvard for a thousand years. Under this agreement the city accepted responsibility for building and maintaining the roads and for policing the grounds. From this point to the present, the Arnold Arboretum has functioned as a horticultural museum and as a park. Its splendid 265 acres of rolling lawns and walkways through carefully groomed trees, flowering shrubs, and rare plants make the Arboretum an especially well used and appreciated park, serving immediate neighborhoods and the entire metropolitan area.

—Excerpted from The Greening of Boston: An Action Agenda

Opportunities—Past, Present, Future

Twenty-one years ago an article by Edward Weeks, editor of the Atlantic Monthly magazine, appeared in Arnoldia. It dealt with the state of Greater Boston's parks in particular and environment in general. Addressing many of the issues—problems to be solved, opportunities to be seized—with which the articles in the Summer and Fall 1988 issues of Arnoldia deal, it provides a revealing context for evaluating the current state of affairs. Thus, it is reprinted on the following pages. There follows an article by Mark Primack, executive director of the Boston GreenSpace Alliance. Written expressly for this issue of Arnoldia, it responds to Weeks' article and presents a picture of the situation today.
Ladies and Gentlemen:

I welcome the opportunity of being the first speaker in this Parkland Conference and my theme which I shall keep coming back to is this: that the character and beauty which we strive to preserve in this city and Commonwealth too often have disappeared before we citizens ever knew that it was threatened.

The American elm is a New England character. It used to shade the oldest house; its wine-glass silhouette is a landmark in any meadow; its branches make a summer cloister of famous streets in Salem, or Williamstown, and with the lilac bush it is the last guardian of the deserted farm. Rightly it is called the Patriot Tree, for under its boughs treaties were signed with the Indians, Washington took command of his Army; George Whitefield, the evangelist, preached to thousands on Boston Common; and under it came the rushing embrace of the home-comings after Appomattox. The sight of an old elm makes you feel younger and, for the moment, surer that good things last.

A century ago in the Atlantic the "Autocrat of the Breakfast Table," Dr. Oliver Wendell Holmes, sent out a call for someone to do the biography and the photographs of the oldest elms in New England, and in time the book appeared with superb plates by Henry Brooks, and the text by Lorin L. Dame. This big folio entitled Typical Elms and Other Trees of Massachusetts is a rarity today. Every tree in it was more than a century and a half old, and what beauties they were: elm, oak, ash, tupelo, and the great chestnuts which Thoreau used to measure with two-and-a-half spreads of his arms. Chief among them was the elm, known as the Great Tree; it was planted in the Common about 1640, and it suffered from its first major cavity a hundred years later; a tree dentist in 1740

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1 An address presented at the Parkland Conference, sponsored by the Trustees of Reservations, in Boston, May 24, 1967.
2 Boston: Little, Brown, and Company. 1890.
cleaned out the rot, filled the cavity with "clay, and other substances," and then bandaged it—yes, bandaged it—with canvas. The big beauty lived on until February 1876, for a total of 236 years, and when the winter gales finally destroyed it Bostonians rushed to the spot and took home slabs and cuttings for table-tops and chairs.

The Dutch elm disease was not man made, nor was the blight which exterminated our chestnuts, but the fact that one of these splendid species is now extinct and the other dangerously threatened should make us more intent to preserve the good trees we have. But has it? Not that I can see. The elms at the southern extremity of the Boston Common are diseased and dying; they should be cut down and healthy ones planted in their place. In the Public Garden we have lost many of the rare trees planted there by Frederick Law Olmsted; the replacements are commonplace willows. On Commonwealth Avenue we should have a second growth to preserve the magnificence of the Mall when the elms there go. Whose responsibility is it to care for the life of our trees?

The beauty of our heritage and the skill with which we are planning for tomorrow make Boston one of the four most visually-exciting cities in the U.S., the other three being San Francisco, New York, and Washington. Let me signalize the things which have made this so, beginning with the Park Street Church, the most beautiful single building in the center of town, and the one which continuously attracts the eye. Next, Saint-Gauden's monument in memory of Colonel Robert Gould Shaw, unquestionably the finest of all our city monuments. The Boston Common, the most vital and historic city Park in the nation, and across from it the Public Garden at this moment with its regiments of tulips and fruit trees in blossom in its prime. The Bulfinch State House, and close by the whole splendid monument of Beacon Hill. Then the North End, so different with a warmth and style all its own, as is well seen on North Square; it is the oldest part of our city to be in continual residence, and we must thank the Bostonians of Italian heritage for giving it the good restaurants, the friendliness, and safe streets, full of children, which are its character today.

Go to the Arnold Arboretum when the azaleas and lilacs are ready; go some late afternoon to the Fenway for the vitality of the gardens and the vista of the Museum; and if you love trees as I do, seek out those two giant elms on Branch Street which must have been planted when the Mt. Vernon proprietors were building Federalist Boston, and which are, I believe, the two oldest elms in the city today.

Finally, go at any time of night or day to the Charles River Basin, the most satisfying modern concept in our city and one that has not yet been destroyed by the automobile.

High rise of glass and concrete can be built anywhere; it is these things I speak of which rank Boston with the three other cities I cited. And how do we compare?

How are we keeping things up? Look at Park Street Church, for instance. Not long ago the ugly rumor reached me that the proprietors of the church were considering the possibility of an eight-floor office building erected so close to the church that it would cover the rear portion. This is one of those disappearing acts that could happen before any of us were the wiser, and what a shame it would be! Or consider the Shaw Monument directly facing the State House, the Monument which should have
such significance in our struggle for civil rights, the Monument which more tourists look at than any other in the city. For fourteen months it has remained in disgraceful condition, the figures streaked and defaced, the sword in Colonel Shaw's hand twisted and broken away by vandals. The same apes have torn the sword from Washington's monument in the Garden, and nobody gives a damn! I fail to understand why Boston takes such little pride in its best things—why it is not the responsibility of someone to restore our elegance. Our streets, whether in the Back Bay or on Beacon Hill, are so filthy with papers and beer cans that I should be ashamed to compare them with the residential streets Mayor John Lindsay has cleaned up in New York. As for the pollution of our nearest water, you only have to smell the Charles to know how foully we compare with Washington in that respect. The beauty of Boston Harbor was once known from here to Shanghai. If that shambles can be restored by Mr. Pei and Edward Logue, we shall be deeply in their debt.

But what about the canopy overhead? By any measurement our air ranks Boston as one of the ten dirtiest cities in the nation. Isn't it a luxury to talk about preserving the beauty and character of the city when the air we breathe, the milk and water we drink, the land we love is as polluted as it is in this Commonwealth? The problem of pollution nation-wide is appalling, and the worst thing about it is that it is all man-made, made right here in the U.S. We are all to blame. The pollution from our automobile exhausts and factory chimneys, the industrial waste which fouls up our streams, the accumulated lethal acids which run off the land into our ponds and lakes, for these we have only ourselves to blame.

It sometimes seems to me as if our scientists worked in hermetically sealed cells intent on one-half of an equation and never counting the cost. Having perfected pesticides which could be dusted on our crops and DDT sprays which might bring momentary protection to our trees, it seems never to have occurred to chemists that what they were pouring over the land and forest could not be dissolved in water and would grow more lethal in its poisoning as it passed through each living organism. One wonders if the sludge now accumulating in Lake Erie will grow to the point where even ice-breakers can no longer penetrate it.

The best we can do about pollution locally is to join up into teams of vigilantes with two objectives in mind: to clean up and protect the neighborhood for which we are responsible, and to set aside in our own domain more of the open places and wet lands, more of the woods, and what the English call the "green lungs" which our grandchildren must have in the future. This was the original and driving purpose of the Trustees of Reservations; it is something that the community can do better than the state, and indeed, better than Washington, unless of course the project proves to be as large as the Cape Cod National Seashore Park.

I think we should celebrate those communities which are taking the initiative. I think that in January the Governor ought to cite each community which has carried to completion a major project

\[\text{Respectively, Mr. I. M. Pei of I. M. Pei and Associates, Architects, and Mr. Edward J. Logue, Development Administrator, Boston Redevelopment Authority.}\]
in Conservation. High on any list as this moment would be the town of Dennis, which at a recent town meeting voted $625,000 with which to purchase 1700 acres adjoining the town; 1700 acres of beach, uplands, and salt marsh taken out of reach of hit-and-run contractors, to be enjoyed in perpetuity by the people. Where can you do better than that?

I think the towns of Lincoln and Concord should be cited for their vigilance in zoning, for protection of their trees, and taking such pride in the health of their marshes and wet lands. I think we should cite Bedford for the long, patient work they have done in cleaning up their share of the Concord River. Credit should go to Framingham for its unique Garden-in-the-Woods, and for those who have built up the quarter of a million dollars which will fortify it for the future. And to Salem great credit for preserving the glory of Chestnut Street.

Now coming back to Boston, wouldn't it be wonderful if the powers that be in the State House could be persuaded to invest in the depollution of just one famous Massachusetts river? It might be the Charles; it might be the Concord; it might be as ambitious an undertaking as the Merrimack. The Commonwealth of Pennsylvania was not afraid to clean up, to depollute miles and miles of the upper reaches of the Schuylkill. Why should we sit on our hands?

A famous Canadian and a bold conservationist, Roderick Haig-Brown, has proposed that all existing pollution of air, land, or water should be taxed in proportion to the demand it makes upon the resource. "All pollution," he says, "is the use of public property for private profit. It can be most accurately measured at its source and it should be taxed." Well, why not? Too often the attitude of the authorities is how much pollution can we get by with short of causing a disaster; how much of the cost of industry or settlement can we shove forward to be paid by the next generation. But if we had a pollution tax that could be graduated so as to insure the maximum elimination over a period of years, what a God-send it would be.

——EDWARD WEEKS, Editor
Atlantic Monthly Press
TWENTY YEARS AFTER: THE REVIVAL OF
BOSTON’S PARKS AND OPEN SPACES

Boston is in the midst of the greatest round of parkmaking and landscape restoration since the
Emerald Necklace was created a century ago. After decades of neglect, bad planning and design, and
a lack of capital and operating funds, both the Boston parks managed by the City of Boston and the
regional parks managed by the Metropolitan District Commission are being revitalized, from Boston
Common to the Blue Hills. Though we did not take many of the opportunities to create new parkland
and conserve natural areas that Edward Weeks prayed for in these pages in 1967, fears about the rapid
development of Boston in the last few years and the coming together of a strong open-space
constituency are finally creating movement. Major new public green spaces are coming on line, under
construction, or in the final stages of planning; other emerald visions are in the air. Boston in the year
2000 will be greener and even more livable than it is today.

We are emerging from an era when parks were seen as peripheral to the life of Boston; when park
agencies were seen as patronage dumping grounds; when the grass went unmowed and the barrels
unemptied; when fires, illegal dumping and land giveaways ravaged the forest reservations; and when
there appeared to be no political constituency for our parklands. Today we are experiencing an ex-
traordinary revival of attention to our parklands. This revival is the result of community initiative,
strong leadership from groups like Boston Urban Gardeners and the Boston Natural Areas Fund, as
well as from public officials, a growing number of public-private partnerships, and the realization that
public parks are of great—if often unconscious—importance to urban people, residents and commut-
ers, tourists and immigrants, young and old, rich and poor.

In 1886, Charles Eliot, landscape architect, apprentice of Frederick Law Olmsted, and instigator
of both the Trustees of Reservations (the oldest land trust in the world) and the Metropolitan Park
system, wrote, “For crowded populations to live in health and happiness, they must have space for air,
for light, for exercise, for rest, and for the enjoyment of that peaceful beauty of nature which, because
it is the opposite of the noisy ugliness of the city is so refreshing to the tired souls of townspeople.”

Now, a century later, some sixty-eight percent of the city’s population lives in public or subsidized
housing. Thirty-one percent of the city’s children live at or below the poverty line. We have again
come to the realization that for the many city residents who cannot afford a vacation home or a rental
on Cape Cod or in the mountains of New Hampshire, the public parks are a primary resource for
respite, relaxation, physical release, and contact with the natural world.

As well, the environmental movement, which gained such force in the 1960s, has finally turned
its attention to the quality of city living. This trend has been reinforced by such sports as jogging,
bicycling, and gardening, and by an expanding circle of birders and students of nature. Even
businesses have come to see that quality open space is an attraction for customers and workers. In sum,
as the recent report, The Greening of Boston, declared, “Parks and open spaces are fundamental to the
physical, social, and economic health of the city."

All the pieces are falling into place to translate this renewed comprehension of the meaning of urban open spaces into a real renaissance of Boston's existing open spaces and a second great decade of parkmaking a century after the first. Governor Dukakis and his administration have developed programs to restore and enlarge the urban open space inventory—with passage of a $600 million open-space bond issue last December by the legislature, the funds should be available to implement these programs. Mayor Flynn has exerted strong leadership on the park issue, allocating over $75 million for capital improvement of existing parklands, doubling the budget for the Parks and Recreation Department and placing a high priority on effective management of the city's parks. The Boston Parks and the MDC commissioners are dynamic leaders with vision and political savvy. In neighborhoods across Boston, residents have become stewards of the public realm, cleaning and programming the parks and demanding that public agencies fulfill their responsibilities.

At the Boston Redevelopment Authority, new open spaces are being negotiated from developers. The Mayor's Office of Capital Planning has completed the most comprehensive Open Space Plan in more than fifty years. After a lapse of decades, the Massachusetts Audubon and Horticultural societies have once again become active in Boston. And in the last three years, over one hundred community, civic, and environmental groups and public agencies have come together in the Boston GreenSpace Alliance to speak with one voice for all of Boston's parks and open spaces, existing and potential.

Though years of sustained public advocacy and support will be required, a brief review of the green-space projects, plans, and visions on our collective table shows that Boston can be known as the "City of Parks" in the year 2000.

**Belle Isle Marsh Reservation**
After years of citizen effort, this largest remaining saltmarsh in Boston was opened as an MDC reservation in 1986. With walking trails, boardwalk, viewing tower, and extensive educational programming, Belle Isle Marsh has become a key place for teaching city schoolchildren and adults about the ecology and value of saltmarshes. A favorite of birders, the Marsh is host to great blue herons, marsh hawks, and snowy owls.

**Southwest Corridor Park**
The greatest addition to Boston's park inventory since the Esplanade was created in the 1920s, this fifty-two-acre, linear parkland connect downtown Boston to the Arnold Arboretum and Franklin Park along the Orange Line transportation corridor. Completed this spring, the Southwest Corridor Park was planned and developed by the Massachusetts Bay Transportation Authority (MBTA) with much community involvement. It is managed by the Metropolitan District Commission (MDC). A dual-circulation system invites and separates bikers and joggers from slower-moving strollers. Planted with an extensive variety of trees, shrubs, vines, and flowers, the park includes twenty children's play areas.
community gardens, and numerous ball courts.

**Boston Common Renewal**

Boston Common, oldest public greenspace in the United States, is being restored to the people after years of decline and deferred maintenance. In the last year, the Parks and Recreation Department has pruned every tree, laid new turf, installed knee-high fencing, and removed dead elms. To prevent criminal activity on the Common, a complete lighting system, made possible by a grant from the Department of Environmental Management, now illuminates the Common's walkways. Improved maintenance procedures have given the Common a new luster. More improvements are planned.

**Restoration of Neighborhood Parks**

Work is well underway on the City's five-year plan to renew over one hundred neighborhood parks and playgrounds. Play and recreation equipment is being restored or replaced; new turf, benches, and sins installed; fencing and lighting repaired or replaced; and trees and shrubs pruned or planted. Over eighteen "tot-lots," so important to young children in the neighborhoods, are being rehabilitated this year alone.
Restoration of the Emerald Necklace

With $11.25 million in grants from the Department of Environmental Management's (DEM's) Olmsted Historic Landscape Preservation Program, the City is restoring five Olmsted-designed parks: Back Bay Fens, the Muddy River, Olmsted Park, Jamaica Pond, and Franklin Park. Long-term Master Plans are nearing completion for each park, and early-action moneys have already been spent on pruning and other desperately needed work. Among the proposed priorities for construction in these parks over the next year or two are: repair of historic bridges, steps, and park furniture; removal of invasive vegetation; re-creation of a dual-circulation with a bike path instead of a bridle trail; improved water quality and water edges; and extensive landscaping. There are hopes that the Arnold Arboretum will receive funding from a second round of grants and that the Sears department store parking lot will be returned to parkland. This program is a major step in restoring the Emerald Necklace to its rightful place as one of the foremost park designs in the world.

Re-creation of Copley Square

Work is underway to rebuild completely Copley Square, a keystone park that had been poorly designed and did not work. The Copley Square Centennial Committee, an alliance of corporate abutters, Back Bay activists, and park professionals operating in conjunction with the Boston Rede-
velopment Authority (BRA), has raised corporate, foundation, and public funds for this major initiative. Guided by an entirely new design commissioned by the Committee, Copley Square is being raised to street level, planted with many more trees, providing performance, concession, and farmer’s market spaces, and having its circulation improved. Top-quality materials are being used, and a maintenance endowment and management plan are under development. Work will be completed on construction by this fall and on landscaping by next spring.

New Post Office Square Park
Post Office Square, in the heart of the financial district, is about to receive a new park on the site of an old parking garage. Entirely financed by corporate abutters through the Friends of Post Office Square, the project calls for demolition of the garage and construction of another, underground garage decked over with a park. The design approach has been creative, calling for fountains, sculpture, much turf, extensive horticultural materials, intimate spaces, and even a small restaurant. The landscape architect for the project, the Halvorson Company, was chosen after a comprehensive competition. Work on this exciting new park, which probably will be the most intensely used park in the city, should begin by this coming October. A portion of the proceeds from the underground garage will be allotted to neighborhood parks.

Harbor Access
The BRA and Boston Environment Department are completing an extensive plan for public access to Boston’s waterfront. Negotiating amenities from waterfront developers, Harborwalk will follow walkways and open-space nodes from South Boston, through the downtown waterfront, to Charlestown and East Boston. Plans are nearing completion for 3.3 miles of public walkways and park frontage in Charlestown alone.

Dorchester Shores
Plans are moving rapidly forward at the MDC to extend the chain of linear shorefront parkland—which now runs from Castle Island to Carson Beach—along the entire Dorchester shorefront and up the Neponset River. Work should be completed within the year on two major links: Harborpoint, along the former Columbia Point Development, and Victory Road Park, the former Troy landfill beside the Boston Gas storage tanks. The old Neponset Drive-in Theater site and the adjacent dump have already been acquired, as have several other parcels and rights-of-way. The Department of Public Works has plans for a bikeway below the Southeast Expressway, linking Victory Road Park and Tenean Beach, and the MDC is negotiating an access with Boston Gas to extend the trail behind the storage tanks.

Brook Farm
The MDC is in the process of acquiring the 179-acre Brook Farm property in West Roxbury, site of the famous Transcendentalist utopian experiment of the 1840s. The site, which includes rich historic
Post Office Square, soon to be much enlarged. Photograph by Richard Howard. Courtesy of the Boston Foundation and the Boston GreenSpace Alliance.
and archaeological resources, abuts the Saw Mill Marsh and Charles River, with rolling hills, Boston puddingstone outcrops, and an old orchard with an abundance of birdlife. The property is slated to become a natural and cultural park.

**Boston Harbor Islands State Park Master Plan**
The Massachusetts Department of Environmental Management, in conjunction with the MDC, has recently completed a master plan for the Boston Harbor Islands that calls for preservation of the unique natural and historic character on most of the islands and for improved visitor services and public safety on more-intensively used islands. Fifteen million dollars have been allocated in the new State Open Space Bond issue to accomplish these improvements, as well as to increase access to the islands and rehabilitate components of the infrastructure. Funds will also be used to increase public access to Thompson Island, currently in private hands, and to begin development of Long Island as an addition to the island park.

![Image of the Boston Public Garden](image)
Central Artery
Increasingly, park advocates and public officials, including the MDC Commissioner and BRA Director, are discussing the open-space potential of the Central Artery once it is depressed and decked over. Ideas range from turning nearly the entire deck into open space, with a grand boulevard like the Commonwealth Avenue Mall, to having a mix of open space and new development that weaves separate neighborhoods back together.

Neighborhood Visions
If the grander visions of open space tend to the outskirts of the city and to the downtown, the real key to the environmental health of Boston lies in a vision of smaller neighborhood green spaces, for it is in the neighborhoods that Boston’s people live and play. In neighborhoods around the city, people are concerned about the loss of open space and about the need for decent play spaces close to home. Several neighborhoods are actively participating in BRA neighborhood rezoning initiatives utilizing the City’s new Open Space Zoning. In the South End, neighborhood activists want to preserve community gardens at the same time as affordable housing is created; in Brighton, the focus is on the neighborhoods extensive institutional lands; in Dorchester and Mattapan, residents want new tot-lots. In a number of communities, residents want to preserve urban wilds, sites of natural significance, as conservation lands. At public housing developments people want decent grounds and places for their children to play and grow. In Hyde Park, citizens want to add to the Stony Brook Reservation. As we pursue our big visions, we must acknowledge the needs and visions of these neighborhood people, for without their active support our dreams will fail or soon decay.

In conclusion, to quote from The Greening of Boston report:
A century ago citizens and professionals began planning for Boston’s future. They dreamed of a system of connected parks, the first such system in the country, and created the Emerald Necklace. They had as vision of forest reserves and public beaches, at the edge of the city and beyond, and created the Metropolitan Park system. They heard the need for recreation articulated in every neighborhood and responded by creating dozens of playgrounds. They had visions of the Charles River dammed and lined with recreational facilities; they created the Charles River Basin and the Esplanade.

Though our dreams today reflect real community needs and the best of planning intentions, their full implementation is far from assured. Creation of grand new open spaces; revitalization of the Emerald Necklace, community parks, and Boston Common; preservation of community gardens and urban wilds; and the provision of new green links throughout the city and region: our visions will require sustained advocacy, political will, institutional mission, interagency cooperation, community support and involvement, and the participation from business, foundation, and non-profit sectors. Most of all, these visions will require bold leadership from our elected officials, from agency heads, and professional staffs, and from the citizens of the region. The concerted effort of all is the only guarantee that we will have as proud a legacy to leave our children as the nineteenth century left to us.

—MARK PRIMACK, Executive Director
Boston GreenSpace Alliance
The Changing Flora of the Boston Harbor Islands

Dale F. Levering, Jr.

After more than three and one-half centuries of vicissitude, the deciduous forest that once covered the Boston Harbor islands may have begun to return.

Situated just to the north of the sandy, uplifted coastal plain of Cape Cod and just to the south of the rocky coastline of northern New England, the Boston Harbor islands constitute a unique maritime ecosystem. To the south of the Harbor, pines dominate the sandy, mineral-deficient soil where the land meets the sea; to the north, hemlock, white pine, spruce, and fir. Some twenty thousand years ago, when the Pleistocene ice sheet was at its maximum, the shoreline lay approximately thirty miles east of where it does now; when the glacier first began to recede, what are now the Boston Harbor islands were exposed as high spots on what was then the mainland. Alluvium from the Boston Basin deposited around the Boston Harbor islands by the Mystic, Charles, and Neponset rivers during this time created a mineral-rich sub-stratum that plants would readily colonize after the glacier had melted away.

In particular, the alluvium was colonized by species of the Eastern Deciduous Forest, a narrow, species-rich strip of forest stretching northeastward from the mountains of Kentucky and West Virginia, reaching the ocean along the Massachusetts shoreline between Ipswich and Plymouth. (It corresponds to Zone 5 of the Arnold Arboretum's cold-hardiness map and to Zone 6 of the United States Department of Agriculture's map). Once dominated by chestnuts and oaks, it has been devastated by chestnut blight and by the Europeans who settled in it, who have used it as a source of construction timber and fire-wood. With its complement of nut-consum-ing animals, the Eastern Deciduous Forest—which was dominated by broad-leaved, round-topped deciduous trees (as opposed to needle-leaved, spire-topped evergreens)—was a richer source of food for the colonists than the evergreen forests to the north and south. No doubt this was one reason the English settled northward, rather than southward, from Plymouth.

The present-day vegetation of Moswetuset Hummock, a small island situated at the northern end of Wollaston Beach in Quincy, is perhaps the closest indication we will ever have of what the Boston Harbor islands' vegetation looked like at the time of English settlement. Remains of dead American chestnut trees (Castanea americana) can still be seen on Thompson's Island, and young oak forest is reestablishing itself on Peddock's Island. For the most part, however, the Boston Harbor islands have been cut over, and the rich, climax deciduous forest that clothed them when the English arrived on these shores early in the seventeenth century is now in the early stages of biotic succession from old fields to climax forest.

The Islands' Early History
In 1585—thirty-five years before Plymouth was settled—David Thompson established a trading post on the Boston Harbor island that now bears his name. During summer of 1621 Captain John Smith, who had landed at Plymouth in 1620, sailed into Boston Harbor. In the ship's log he wrote of "the groves of trees, the fields of corn, and the well proportioned..."
Indians" standing on the shore. Captain Smith and the crew set foot on the mainland at what is now Squaw Rock in the Squantum section of Quincy. Although there has been speculation that the corn fields he mentions were in reality marsh grasses, fragmentary remains of corn have been found in archaeo-

logical digs on Calf Island. Evidence of cleared areas suggesting gardens has also been documented. Once the settlers had cleared them of trees, the islands became valuable pasture land free of predators. Some of them—Sheep, Calf, and Hog islands—reflect their use as livestock pasture.

By 1634 the English settlers had recognized the value of the Boston Harbor islands as strategic lookout points for protecting the development of Boston and had begun to construct fortifications on Castle Island. Between 1850 and 1865, George's Island was extensively altered by the construction of Fort Warren. The world wars also significantly altered the island ecosystem. Massive fortifications were built on Peddock's, Gallop's, Lovell's, Great Brewster, Middle Brewster, and Outer Brewster islands. Until recent times, perhaps

Map of the Boston Harbor Islands in 1711.
as much as any use, the construction of fortifications has led to the destruction of the islands' native plants and animals.

As Boston grew into a prominent port and as urbanization spread, the islands' value became increasingly evident. [Sweetser's history of the Boston Harbor islands gives an early insight into their unique nature.] Frederick Law Olmsted, while creating the Emerald Necklace, planned to extend his landscape through World's End in Hingham, into the Boston Harbor islands. Unfortunately, Olmsted's death brought to an end early realization of the special ecology of the Boston Harbor islands.

The Boston Harbor Islands State Park
Because they were being used by the military, the Boston Harbors islands were largely off
limits to the general public for nearly two-thirds of the twentieth century. With the advent of nuclear weapons, however, islands lying only a few miles off a coast lost much of their strategic significance, and the Commonwealth of Massachusetts began acquiring the islands in Boston Harbor; in 1974, the Boston Harbor Islands State Park was established. Public visitation has been encouraged since then, and public campgrounds have been established on Lovell's, Grape, Bumpkin, and Peddock's islands. Ferry service from Long Wharf, Boston, to George's Island makes it possible for people to take advantage of the free-of-charge water-taxi service provided by the Commonwealth from May until October to several of the Boston Harbor islands. Interpretation of the islands' natural history and ecology is now provided by island managers, who are coordinated through the Massachusetts Department of Environmental Management (DEM). Volunteer service in appreciation and interpretation of this unique state park has been provided by the Friends of the Boston Harbor Islands.

The Islands' Plants
The flora of the Boston Harbor islands reflects man's impact upon the landscape, and few undisturbed patches of native plants remain. The American Indians used to retreat to the


Boston Harbor Islands State Park

We want to create the best harbor park system in the world because it has the potential to be just that.

—Governor Michael S. Dukakis, George's Island, 1986

The Boston Harbor islands are a remarkable resource, permitting recreational and educational opportunities rarely found in an urban setting. Though the Boston skyline is rarely out of view, the islands have a wild character, providing a resting spot for migrating birds and city residents alike. People can camp on the islands or visit for the day, experiencing the forces of the sea and the wilds. Easily accessible via inexpensive ferry boats from Long Wharf, connected to each other by a free water taxi, the islands are destinations for residents of every Boston neighborhood and the region, as well as tourists who venture out for picnics, school outings, and discovery.

Thirty-one islands are presently owned by public agencies; seven are staffed during the summer months as Boston Harbor State Park. The park is jointly managed by the Metropolitan District Commission (MDC), which owns George's, Lovell's, and Peddock's islands; and by the Department of Environmental Management, which owns Grape, Bumpkin, Gallop's, Great Brewster islands and many of the smaller islands. The City of Boston owns three islands which have yet to be included in the park: Long, Spectacle, and Rainsford islands. Each island in the park has its own history and its own present and potential uses—in sum, the islands are a unique
resource of national-park quality.

The islands are drumlins (glacial hills) and rock outcroppings ranging in size from less than one acre to over two hundred acres. Seasonally occupied by Native Americans, who harvested an abundance of shellfish, the islands were used by Puritan colonists as wood lots and pasture lands. Over the years, the islands were used for quarantine and chronic disease hospitals, farm-lands and dumping sites, though it is military uses which have left the most visible traces on the islands. Starting before the Revolution and increasing before the Civil War and during the Spanish-American War, the islands became the site of a series of massive fortifications, leaving us such notable artifacts as forts Warren, Andrews, Strong, and Standish.

After World War II the islands were essentially abandoned by the military, but visionary citizens and legislators saw the possibilities for recreational, educational, and historic preservation activities. In 1958, the MDC acquired George's and Lovell's islands and began developing them as parks. In 1970 with the creation of the Boston Harbor Islands State Park, the Department of Natural Resources, now the Department of Environmental Management (DEM), also began acquiring and developing islands. Both agencies cleaned up their islands, repairing seawalls, building piers, cutting trails, and creating campsites, and both began providing staff during the summer months. Today the islands are visited by upwards of 200,000 people annually, and the season is expanding.

George's Island—ferry and water-taxi hub and site of Fort Warren, a national Historic landmark—is by far the most heavily visited island, with its picnic grounds, concession stand, and running water. In recent years an intensive educational program has been developed on George's Island, providing programs to some 15,000 school children, including 2,000 Boston school children, and to over 15,000 summer visitors. In spite of the much-lauded improvements, the island has pressing needs for safety and visitor service improvements and there is a growing desire to restore crumbling Fort Warren.

Lovell's, Gallop's, Bumpkin, and Grape Islands are all quieter than George's Island and are primarily used by campers and others seeking tranquility. Accessible by free water taxi, they have a primitive quality with no electricity or running water. Staff provide tours during the summer, focusing on the natural history of the islands and the surrounding harbor. Great Brewster Island, which is far out in the harbor and primarily accessible by private boats, is the wildest and quietest of the staffed islands, home to nesting birds and seasonal resort for lovers of solitude.

Peddock's Island, the largest of the islands now in the park, has forty-five private cottages on it and twenty-eight buildings of Fort Andrews, in various stages of disrepair. Though open to the public, much of the park is not accessible because of safety problems and the presence of the private cottagers. Yet even in its current state, Peddock's is a fascinating place to explore.

Long Island, the largest in the Harbor and the only one accessible by automobile, is the site of the Long Island Hospital and the remnants of Fort Strong. Summer work crews have begun to clean up the island and it figures prominently in the dreams of many Boston environmentalists and Harbor-lovers, though it is not in the park or open to the public yet. Spectacle Island, a former dump site, also remains outside the park and is closed to the public. Thompson Island, privately owned by the Thompson Island Educational Center, is undergoing a change in management, though its focus will continue to be on youth development.

Working with groups like the Friends of the Boston Harbor Islands, MDC and DEM continue to expand these unique resources. But many problems remain: balancing the preservation of natural and cultural resources with the need to provide for increasing numbers of visitors; the huge costs of developing and maintaining island sites; bringing in fresh water and disposing of sewage and solid waste; and the need for interagency cooperation as well as cooperation with the City of Boston. Yet everyone agrees: the islands are beautiful and deserve continued development as natural, cultural, and recreational resources for the benefit of Bostonians, residents of the Commonwealth, and visitors. They hold vast educational and recreational potential for the young people of Boston and for us all.

—Excerpted from The Greening of Boston: An Action Agenda, pages 60, 62.
islands during the summer to fish and collect shellfish, but they did not strip the islands of their vegetation. The European settlers, however, clear-cut the islands' forests for firewood and lumber. Land so cleared often was suitable for agriculture, and most of the fertile sites on the islands have, over the past three and one half centuries, been used for subsistence farming. These attempts at farming are reflected in the occurrence of apples, pears, grapes, blackberries, raspberries, chives, garlic, asparagus, and horseradish in the islands' flora. Private landowners often landscaped their property with ornamental, mostly European species of plants, and the large number of weeds and grasses of European origin testify to Boston's importance as an international port.

In addition to supporting a unique Eastern Deciduous Forest ecosystem situated at the land-sea interface, the Boston Harbor islands possess several other noteworthy features that make them worthwhile stopping-off sites for people who are interested in horticulture specifically and botany in general. Seabeach dock (Rumex pallidus)—a threatened species in the Commonwealth of Massachusetts—was found on Peddock's Island in 1976. A northern species native to Greenland, seabeach dock's southernmost East Coast station occurs on Peddock's Island. Seabeach dock has since been found on Grape, Bumpkin, and Thompson's islands. Another northern species, also found on Peddock's Island, is three-toothed cinquefoil (Potentilla tridentata), which has been described as a glacial-relict species.

Anagallis arvensis, the scarlet pimpernel, is found on Calf and George's islands. Drawing by Olga Pastuchiv.

Rumex pallidus, the seabeach dock. A threatened species in Massachusetts, it occurs on Peddock's, Thompson's, Grape, and Bumpkin islands. The drawing, by Olga Pastuchiv, is from An Illustrated Flora of the Boston Harbor Islands, by Dale F. Levering, Jr.

Two specimens of tamarisk, or salt cedar (Tamarix gallica), native to the Mediterranean region and the national tree of Israel, grow on Peddock's Island. On Gallop's
The Making of Boston Harbor

Irving B. Crosby

When the ice melted away from New England the land stood somewhat higher above the sea than it does now, and the sea was farther to the east. New rivers developed and eroded new valleys. Gradually the land sank and the sea came into the valleys, flooding them and forming long bays. Hills that were surrounded by the sea became islands, and ridges that projected our into the water-formed peninsulas. As there were many valleys, hills, and ridges along the New England coast, many bays, islands, and peninsulas were formed, making our coast very irregular.

The sea came into the valleys of the Charles, Neponset, and Mystic rivers and the other streams about Boston, thus making Boston Harbor and the other bays that indent our coast. These flooded river valleys are called drowned valleys. All the deep bays of the New England coast have been formed in this way. Drowned valleys are especially well developed on the coast of Maine.

Where the invading sea surrounded hills, islands were formed and the shape of the island depended on the shape of the hill. Drumlins have a regular outline and they produced islands of regular shape, but those formed from rock hills are usually very irregular and rugged. In this way the numerous islands of Boston Harbor were made. Most of them are drumlins and are quite different in appearance from the rugged rock islands of the coast of Maine.

The other islands of the New England coast have a similar origin, since they were formed by the sinking of the land and the surrounding of the hills by the sea. Drumlin islands are characteristic of Boston Harbor and rock islands of the coast of Maine.

When a hill was connected with higher land by a ridge and the sea came in about it, a peninsula was made. In this way Boston Neck, Charlestown Neck, Dorchester Neck, and the numerous peninsulas of the New England coast were given their present aspect.

After the sea flooded a shallow valley the streams deposited mud and partly filled it, making a salt water marsh. There was much shallow water about Boston in which mud collected, and salt marshes are a frequent feature of our shores. A coast like ours with its numerous deep bays, islands, and peninsulas is made by the sinking under the sea or submergence of land topography. This is known as a **shore line of submergence**. If you look at the country about you anywhere near the coast in New England and imagine what would happen if the sea were to rise a hundred feet, you will see that the new shore line would greatly resemble the present shore line. It would have deep bays, long peninsulas, and numerous islands.

The New England coast is a typical shore line of submergence, and is in strong contrast to the shore line produced by the raising of the land and the uplifting of the sea bottom to form new land. The bottom of the sea is fairly smooth and level and when it is uplifted to form land, a straight shore with long beaches and no deep bays is produced. The east coast of Florida is typical of this kind of shore. It is called a **shore line of emergence**, since it is caused by the emergence of the sea bottom to become new land.

If you look at a map and see a very irregular shore you can be certain that it is a shore line of submergence and was the result of the sinking of the land under the sea. But if the map shows a straight shore with long beaches and few bays, then you know that it is a shore line of emergence, and that the ocean bottom has been lifted up out of the water.

When you sail down Boston Harbor or cruise along the coast of Maine, it is interesting to know that you are sailing over a drowned land on which animals and Indians probably roamed at one time. We know that the Indians lived here before the sea rose to its present level. In digging for the [Boston] subway a fish weir was found far below the surface of [Boylston] street, eighteen feet below the level of the sea. This proves that men were living here several thousand years ago and that the shore was different then. The sea rose very slowly, so slowly that the Indians living here probably never knew that anything was happening.

Some think that the land is still slowly sinking, about a foot a century, and that eventually Boston will be covered by the sea. Geologists are not agreed as to whether it is sinking or not, and it is very difficult to prove because the movement is so extremely slow. If the city were several thousands of years old we could tell by noticing whether any old buildings had sunk under the water. At Pozzuoli in Italy is an old temple which was sunk thirteen feet under the sea, and has been raised up again in the last few centuries. On the New England coast are tree stumps which have sunk under the water, but we do not know how long they have been there.

Even if our land is sinking slowly there is no cause for alarm. It would be hundreds of years before we could notice any difference. Man is continually building up the land and, even if the sea is rising a foot a century, it will be a long time before there can be any serious trouble.

We have now traced the development of the Boston region up through the formation of the harbor, but some finishing touches were still to be applied before the white man appeared. Our beautiful beaches, Nantasket, Revere and Nahant, did not exist, and the harbor was partly open to storm waves because the protecting peninsulas of Nantasket and Point Shirley had not yet been formed.

Island, one small population of this species is spreading along the high-tide line. Great Brewster Island is inhabited by Concord grapes (*Vitis labruscana*) and cut-leaved blackberries (*Rubus laciniatus*) with luscious fruit. There are cut-leaved blackberries on Peddock's and Long islands as well, and Grape Island has several native ferns, including the royal (*Osmunda regalis*), cinnamon (*Osmunda cinnamomea*), hay-scented (*Dennstaedtia punctilobula*), and sensitive (*Onoclea sensibilis*) ferns. Langlee Island has two large European larches (*Larix decidua*). Calf Island has the scarlet pimpernel (*Anagallis arvensis*); Rainsford has English oak (*Quercus robur*), growing at the high-tide line, and oyster plant, or salsify (*Tragopogon porrifolius*). The southern end of Green Island is covered with horseradish (*Armoracea lapathifolia*). As noted earlier, some English and European cultivars were introduced to the islands.

While their terrestrial plant communities are slowly succeeding to the original Eastern Deciduous Forest—the Boston Harbor islands are host to a dynamic flora. The combination of ornamentals, “weeds,” trees, native species, and alien species has created a unique botanical showcase that is now accessible to anyone interested in visiting the islands. Given time and a measure of protection, most species of the islands’ original flora and fauna may become reestablished there.

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Reforesting the Boston Harbor Islands: A Proposal (1887)

Frederick Law Olmsted

A century ago, the great landscape architect proposed replanting the islands' forests to soften their bleakness and to check their deterioration.

One hundred years ago the Boston Harbor islands were largely unwooded. Frederick Law Olmsted, in a report to the Boston Park Commissioners, recommended their reforestation. They are "generally hard-featured, bare, bleak, and inhospitable," he wrote. "Let any one, passing through the harbor, imagine them clothed with foliage of any kind, and it will be felt how much more agreeable its character would be if they were generally wooded." Today, the original Eastern Deciduous Forest has begun to reestablish itself.

Between the wharves of Boston and the sea, outside of Boston Bay, there are seventy-five islands and islets, fifty notable projections of the mainland with bays between them, some of which are the mouths of streams, and a great many shoals and reefs which are exposed, or upon which the sea breaks, at low water. Between all these there are innumerable sub-channels more or less navigable, according to the stage of the tide and the depth of any object to be floated through them. The aggregate area of the islands is a little more than 1,300 acres. Of this the city owns 439 acres; the United States, 241 acres; and, of the remainder, 500 acres have but five owners.

The rise and fall of the tide varies from eight to sixteen feet, according to the age of the moon and the condition of the weather, and the tidal currents are liable to be strong and complicated. These circumstances not only make the harbor interesting because of what meets the eye of those passing through it or along its shores, but they give fleet, nimbly-turning boats a more marked advantage than they would otherwise have, and make close calculations and tact in trimming and steering them of more obvious importance than they are in harbors with fewer elements of picturesque character.

Add to this the further consideration that from the time of the first settlers the people in Boston have been much engaged in fishing ventures, not only on the deep sea, but of a class to be pursued with boats of light burden, and the fact will be accounted for that there has always been an unusual interest among them in modelling, building, rigging, and seamanship of small craft, both for commercial and for recreative use.

The city government has recognized this interest, and, in an exceptionally systematic way, wisely fostered it by the institution of an annual regatta with prizes to winners from the public purse. Latterly, at the suggestion of your Department, it has begun the building of a promenade pier, providing a fair outlook on the harbor, and of a large basin especially as a mooring-place for pleasure-boats. With a possible exception in Venice, it is believed that the people of no other city in the world make as much or as good use of their harbor, otherwise than commercially, as those of Boston have long been accustomed to do, and that none take as much or as justifiable pride in the character of their small craft, and their dexterity in handling them. . . .

In what, then, is it to be asked, other than the play of its large and lively fleet of fishing and pleasure craft, does the special attractiveness of the harbor consist? The special attractiveness of the harbor lies partly in the contrast of the intricate passages and vistas among these, with the unbroken expanse of the ocean upon which it opens, and partly in the varied forms of the bluffs, crags, bars, beaches, and fens that form its shores.

What are the drawbacks to these attractive circumstances?

Chief among them must be recognized the generally hard-featured, bare, bleak, and inhospitable aspect of the headlands and islands. Let anyone, passing through the harbor, imagine them clothed with foliage of any kind, and it will be felt how much more agreeable its character would be if they were generally wooded.

Stumps, that still remain upon the mostly exposed, the rockiest, and bleakest of the islands show that they formerly were wooded. Once cleared, a second growth has been prevented by cropping and pasturing. The land being then much more open than before to frost and drying heat, rains, gales, and salt spray, it has ever since been losing soil and the soil remaining has been losing fertility. Hence the scenery of the harbor has
been and is every year being de-
spoiled more and more of its original
beauty; its artificial features are be-
coming more and more disagreeably
conspicuous relative to its natural
features, and in these respects it is
becoming less and less attractive.

The question whether the waste
thus in progress can be arrested, and
whether what has been lost can be
recovered, is, happily, one to be an-
swered by reference to the result of
means used elsewhere for a similar
purpose.

The difficulties to be overcome lie
chiefly in the bleakness and dryness
of much of the land most desirable to
be planted; somewhat, also, at cer-
tain points, to its exposure to salt
taste. They are such that trees of the
sorts more commonly seen in the
lawns, parks, cemeteries, and road-
sides of the landward suburbs of the
city could not be wisely planted. The
suggestion offered by the Memorial
Association is that the original forest
may be restored. Should this be at-
ttempted no results are to be expected
that can be brought in comparison
with those which are, unfortunately,
associated in most minds with the
term landscape-gardening.

The beauty to be gained through
such an operation is not the beauty of
clusters, clumps, groups, or any art-
fully studied combination of trees,
much less is it that of trees admirable
for their beauty singly. It is the
beauty of large compositions as these
may be affected, to one looking in
any direction across the harbor, by
broad masses of foliage palpitating
over the rigid structure of the islands
and headlands, lifting their skylines,
giving them some additional, but not
excessive, variety of tint, greater play
of light and shade, and completely
overcoming the present hardness of
outline of their loamy parts, without
destroying the ruggedness of their
rocky parts.

Having such an end in view, the
trees to be planted will be of the same
kinds with those formerly growing
on the ground. That they may help
one another to overcome the difficul-
ties of the situation they will, when
planted, be small, plant and adap-
table, offering little for the wind to
tussle with; they will be low-
mailed, and will be set snugly
together. A large proportion of all,
intimately mingled with the others,
will be of species the growth of
which, like that of the little white
birk of our rural roadsides, is rapid
while young but not of long continu-
ance. These, after a few years, will be
overtopped and smothered by trees
of slower and larger growth, greater
constitutional vigor, and more last-
ing qualities. The former will have
served as nurses to the latter while
they are becoming established, and if
timely thinning should be neglected,
as it is so apt to be, they will gradu-
ally disappear by natural process
before the permanent stock will be
fatally injured by crowding.

Years must pass before the perma-
rent growth can acquire a full-grown
forest character, but almost at once
the sapling plantations will give a
pleasing softness and geniality to
those elements of the scenery that
are not contributive to its picur-
esque ruggedness. Three years after
the planting is finished the harbor, as
a whole, will have acquired a decid-
edly more good-natured, cheerful,
and inviting character.

An impression is common that at
most points of the harbor trees can-
not be got to grow satisfactorily, and
instances are referred to in which
they have failed or, at the best, have
grown very slowly and with dis-
torted forms. So far as it has been
practicable to ascertain, the trees, in
these cases, have been ill-chosen and
ill-planted, and the result has no
bearing upon the proposition favored
by the Memorial Association.

Reasons for confidence that, under
a course of management judiciously
adapted to the special difficulties of
the situation, an undertaking of the
kind that has been outlined would be
successful, are found in experiences
of which those of Mr. Joseph Story
Fay, at Wood's Holl, supply an ex-
ample.

The outer part of the sea-beaten
promontory of Wood's Holl, had
probably been devastated in the
same manner as the islands of Boston
Harbor. Thirty years ago it was even
more bare of trees, bleak and cheer-
less than they are. As the result of
operations which have been carried
on within that period by Mr. Fay,
about two hundred acres of it is now
covered with dense woods of well-
grown trees. Mr. Fay, visiting Boston
islands last summer with the Com-
missioners, could see no reason to
doubt that by similar operations
upon them equally satisfactory re-
results would be secured.

There is a large tract of barren land
in a most exposed situation on the
west coast of Lake Michigan which,
a few years ago, was covered with
driftin g sand. Because it was sup-
posed to be worthless, and that any
attempt to improve it would be re-
garded as a "Folly," Mr. Robert
Douglass chose to take it as a place to
demonstrate the practicability of
establishing forests under such spe-
cial difficulties as the situation pre-
sented. He has been entirely success-
ful, the sand is fixed and sheltered,
leaf mould is beginning to accumu-
late upon it, and the ground is be-
coming comparatively moist and
productive... .

—Excerpted from: Thirteenth An-
nual Report of the Board of Com-
missioners for the Year 1887.
Boston: Department of Parks, City
of Boston, 1888, pages 52 to 62.
Islands of Tension

Edgar Anderson

Recalling a visit he made to the Boston Harbor Islands one raw April day during the 1930s, a master observer realized some three decades later that, far from being the “Green Isles of Romance” people said they were, they were in fact “islands of tension” whose harshness challenged plants and people alike

―Islands of Tension,‖ an essay written by Professor Edgar Anderson, was published in Landscape magazine in 1966 (Volume 15, Number 3, pages 7 and 8) and again in Landscape Papers (Berkeley, California: Turtle Island Foundation, 1976), a collection of articles by Anderson.

A native of New York State, Edgar Anderson (1897-1969) grew up in Michigan, graduating from Michigan State College in 1918. He then came to Harvard University to work toward his master and doctor of science degrees, which he received in 1920 and 1922, respectively. From 1931 to 1935, he served as arborist on the staff of the Arnold Arboretum; thereafter, he was affiliated with the Missouri Botanical Garden and Washington University in Saint Louis, soon becoming the Engelmann Professor of Botany in the latter institution. While in Boston during the 1930s he helped found the Herb Society of America with—to use his phrase—“a small group of Boston Back Bay dowagers,” whom he called his “herb ladies.” In 1935 he became the Society’s president.

Known for his sharp eye and unconventional ways, Anderson was a prolific author and a most unorthodox but effective teacher. Much of his research dealt with the genetics and taxonomy of maize. Details of his long and productive career are given in the Annals of the Missouri Botanical Garden, Volume 59, Number 3 (1972).

―Islands of Tension" is reprinted with the kind permission of Landscape.
ries. He had recently published an attractive pamphlet, Islands of Boston Harbor, 1639–1932, Green Isles of Romance.

After winding in and out among the islands we landed on the largest, Long Island, to inspect tree plantings made in about 1910. They had not been well cared for and the choice of trees had evidently been made without technical advice. They were common European species, easy to grow in nurseries but not the most promising things for bare little islands swept by cold winter winds and salt spray. Some trees had died. Those that remained were English oaks, European white birches, Scots pines, and Austrian pines, of which only the latter were in fair health.

Although farther out in the Atlantic, other trials on Gallop’s Island looked more promising. As the most prominent island in the outer harbor it has been a quarantine station since pre-revolutionary times. A doctor at the Quarantine Hospital had been trying out likely trees and shrubs since about 1927 and some of these seemed to be doing well: Manchurian ash, Carolina poplar, privet, sorbaria, and Amur cork tree.

I was disappointed that apparently nowhere in the harbor had the Japanese seaside pine, Pinus thunbergii, been given a trial. By the time of this harbor tour it was beginning to look promising at exposed oceanside locations in southern New England. Since then it has done spectacularly well at Jones Beach, and its peculiar merits are widely known along the East Coast. Long Island had been a kind of dumping ground for the poor of Boston since 1885, and the plantings we inspected were near a cluster of hospitals, administrative buildings, and a fine new recreation center on a high bluff at its northern end. The schedule called for a tour of the whole island. Two of the officers led a half dozen of the more earnest and vigorous members by narrow paths along the low cliffs above the beaches.

This route gave us an almost continuous view of the fore-shore. I was immediately struck by the great number of orange crates and unsightly rubbish in the zone of driftwood. Immediately above the orange crates were occasional low rosettes of an unusual rose, one of the [Arnold] Arboretum’s Oriental introductions with which I was familiar, Rosa rugosa var. kamschatica. It differs from the ordinary rugosas of our gardens by being generally smaller with a more spreading habit of growth. It had certainly not been planted there intentionally but was already of some importance in lessening erosion on the upper margin of the fore-shores.* Its buoyant orange-red fruits had put down roots where they had been cast up by the high waves of winter storms. A month later I saw more of them along the magnificent beaches on the outer arm of Cape Cod, as well as a single specimen of the ordinary bushy Rosa rugosa.

From the technical literature I learn that the

*R Anderson seems to suggest that the Arnold Arboretum introduced Rosa rugosa var. kamschatica into cultivation, but the Arboretum’s records do not confirm this apparent claim. The first plants of that variety came into the Arboretum’s collections in 1900, from Paris. By 1905, the species—Rosa rugosa—had escaped from cultivation in New England, by the time of Anderson’s visit to the Boston Harbor islands (about 1932), it ranged from Nova Scotia to Cape Cod.
Kamchatca rose was originally native to the same upper beach zone in the northern Orient. Now and then from an intensive flora of some New England island or estuary, I have learned that it is apparently still spreading along the northern coast of New England.

These scattered bits of information have more significance now that the whole problem of evolution on beaches is being rigorously and comprehensively studied by my former student J. D. Sauer, jointly Professor of Botany and Professor of Geography at the University of Wisconsin. In his world-wide analysis of tropical beach vegetation he is demonstrating that life on beaches is so rigorous that precious few species of the world's flora can persist there. The few that can take it have little competition so, in general, on sea beaches many individuals of a few species are spread over wide areas. Furthermore, now that Sauer has pursued these studies in both the Old World and the New, he is demonstrating for an increasing number of beach plants that when they find their way from one hemisphere to the other they fit into the same kinds of situations in their new home as they left in the old.

Though it was the general problem of eroding sea cliffs and foreshores that had taken me to these islands, as our trip continued I became more and more impressed by the sociologically specialized environments of the human communities which shared these islands. The local and national needs the islands served fell in a few widely diverse categories. They regulated and effectively with city parkways.

On Long Island we came upon a beach with a protecting cliff above it, where some of the inmates had built themselves little "clubhouses" out of driftwood and other scraps. They varied from crude hovels to weather-tight structures with chimneys and windows. What other reactions to the harbor's peculiar environments would one find if he made a real study of the whole problem? There is a little to be gleaned from Mr. Connelly's eloquent compilation. Those living on these islands were under increasing and varied stringencies in the three hundred years covered by the booklet. The lighthouses, the quarantine stations, the military installations, the public parks, the institutions for unfortunate, the garbage disposal plants, had not only taken increasing space, they operated through different offices. It is bad enough to have your fate in the hands of a government bureau; it is worse to have it decided by bureaus which may be at odds with each other and whose certainty of public support varies with the times.

One of the changes I wonder about is the effect of mass-produced pleasure boats of all kinds. On other shores I have witnessed
their increasing effects not only upon human existence along water-fronts but the chemical and biological changes they bring to the beaches and the very water itself, as well as to the plant and animal communities within and near it. Since World War II speed boats must have brought complex problems to Boston Harbor and its islands.

The overall effect of such various and shifting pressures on human existence is even more violent than the stringencies reported for the plant communities of sea beaches by J. D. Sauer. The urgent and conflicting demands of national defense, protection and control of maritime traffic, waste disposal, recreational needs of a crowded city, isolation of contagious diseases and of social misfits are reflected in the human population of the islands.

A few details are reported in Connelly's booklet: after the old fort on Governor's Island had been abandoned a squatter made his home in the ruins and his body was found there after his death. During King Philip's War [1675–1676] whole villages of captured Indians were confined on Deer Island and hundreds died there from starvation and exposure. The boys' reform school on Rainsford Island was abandoned after the boys cornered the Keeper down on the beach and stoned him to death. During the Civil War a whole group of Southern generals were confined in the military prison on George's Island. For many years a hermit lived in a hut on the southern shore of Slate Island. Before modern hospitals were available, Bostonians ill with contagious diseases were buried in the little cemetery near the Quarantine Hospital.

Even the plant communities reflect the violence of these various tensions. Just as ordinary seaside beaches are limited to many individuals of a few species, so on these islands they may be restricted to even fewer. At the time of our visit, Governor's Island was covered by the most rampant thickets of poison ivy I have ever seen. The watchman's dog had died from repeated exposure to it. It seemed to be growing in practically pure stands. On two islands where summer homes or hospitals had been abandoned there were thickets of Staghorn Sumac. These were not accompanied by other woody plants as in ordinary beachside communities, but were solid masses of sumac.

Before our tour the islands of Boston Harbor had appealed to me, to use the phrase of Mr. Connelly's title, as "Isles of Romance." Since that day I have increasingly come to think of them as islands of tension, tensions so violent and so various that their interactions might profitably be studied in some detail.
The Boston Public Garden, Showcase of the City

Mary M. B. Wakefield

Since 1970 the Friends of the Public Garden has worked closely with Boston's Department of Parks and Recreation to rehabilitate a uniquely beautiful parcel of urban open space.

Every garden needs friends—in the case of a garden that is always open to the public, lots of friends—a cadre of knowledgeable, concerned people who understand its particular situation and character. For, once established, a garden begins to develop its own unique identity—its "Genius of Place," if you will—and becomes the kind of garden visitors remember. Its qualities are subtle and fragile and well worth preserving. For a garden that must serve ever increasing numbers of visitors, the challenge is to preserve its unique qualities for the sake of future generations.

The Boston Public Garden has long since developed its true spirit, possessing Genius of Place to a remarkable degree. It has endured extraordinary vicissitudes yet is still the Public Garden. That it has survived at all is a tribute to its early planners, its official caretakers, and those generations of citizens who have been its champions since 1838.

The Garden has had hair's-breadth escapes from complete obliteration by buildings and streets. Greenhouses, statues, and trees have come and gone. It has conformed to successive fashions in planting and has survived the onslaughts of vandals, blizzards, droughts, floods, and hurricanes; the sweep of winds down drafty, building-lined streets; and the disintegration of its perimeter fence. It has even survived invasion by an incline entrance to the first subway in the United States. Yet here is the Boston Public Garden in the morning sunshine, peaceful and welcoming to all, its swanboats floating languidly about the Lagoon. A bevy of happy ducks follows, begging for a bite of food as if nothing untoward had ever befallen this urban paradise.

How can this be? How has the Garden been able to reach this point intact? Generations of dedicated friends—professionals, politicians, volunteers, visitors, and viewers, all of them appreciative, all of them on call to help it survive almost daily vicissitudes—generations of dedicated friends have guided it to this point.

In a few words, I will recount for you the history of the Boston Public Garden.

The Garden's Origins and Antecedents

Unlike Boston Common, which the early settlers had established on existing dry land for the use of all the town's people, the Public Garden was created on made land that originally was part of Round Marsh. All but one section of the site (Fox Hill) was inundated at each tide.

In 1794, a large part of the area was granted to private citizens for six ropewalks, because
it would be a safer location for such a fire-prone but essential industry than one near buildings. In 1821, a great dam was built by the Boston and Roxbury Milldam Corporation. Extending from the corner of the present Charles and Beacon streets to the present Brookline, with a branch to what is now called Kenmore Square, its main purpose was to provide waterpower for the mills and factories separating Round Marsh from the Charles River. The result was that Round Marsh became a vast mudflat of decaying matter and refuse of all kinds. Even in this condition the value of the land for development was apparent.

In 1824, the city purchased the ropewalks. Business and political leaders wanted the land to be filled and sold for houselots, but citizens’ groups were opposed. To settle the matter, a citizens’ meeting was held in July 1824; it appointed a committee to prepare a report. The report stated that for the sake of citizens’ health it was public duty to keep the space open and clear of buildings, to allow for the free circulation of air from the west.

It took the city years to complete the filling of the entire area. Fox Hill itself was used for fill. Even land from as far away as Needham was used. (Along Beacon Street, a modern contractor encountered an unexpected problem: the old fence had been built on, not one sea wall, but on three resting one upon another. At the Commonwealth Avenue entrance to the Garden solid ground lay about eighteen feet beneath the present path.) The City Council made other attempts to sell the Public Garden, in 1842, 1843, 1849, and 1850, but all of them were defeated.

**The Proprietors Establish a Garden**

On February 1, 1838, seventeen Bostonians headed by Horace Gray (son of William Gray, one of the former owners of the ropewalks) obtained a lease from the city and became the Proprietors of the Botanic Garden in Boston. Each Proprietor paid one hundred dollars a year. Soon after they were granted the land by the city, the Proprietors appointed Trustees to act for them, though the Proprietors actually ran the Garden. Once a year the Proprietors met to hear the report of the Trustees.

Although the filling of the land was only partially complete, the Proprietors managed to lay out their garden along what is now Beacon Street (the level of the land was six feet below it). A fine, broad walk, bordered with ornamental trees, standard roses, shrubs, and herbaceous plants, led to the Charles Street entrance. Wherever the terrain allowed, there were beds of dahlias in excel-

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*A map of Boston showing the original extent of the Shawmut Peninsula (in black) superimposed upon the city's current area. The increase is due to the filling in of tidal flats and similar peripheral areas. As the map shows, the Boston Public Garden was established on filled-in tidal flats, as was the city's entire Back Bay neighborhood. The Commonwealth Avenue Mall, which will be the subject of Judith Leet's article in the next issue of Arnoldia, appears at the middle of the map's left-hand margin. Drawn by Russell H. Lenz, this map is used through the courtesy of The Christian Science Publishing Society and Mr. Lenz.*
lent varieties. They even imported a complete bed of prize tulips for fifteen hundred dollars. The Garden was popular with the public.

Across the street from the Garden was an old circus building, which the Proprietors made into a conservatory filled with tropical plants and rare singing birds. All of the plants were botanically arranged and catalogued. Admission for nonsubscribers cost twelve and a half cents per person; ten admissions cost a dollar. A magnificent collection of over one thousand camellias was a great attraction.

The Proprietors imported an excellent English gardener to take charge, held periodic flower shows, and awarded generous prizes to the winners. The prize for the best display of roses on June 20, 1839, was twelve dollars, for example, that for the second best, seven dollars. One year, Joseph Breck supplied seeds and plants to the Garden for one hundred dollars. The noted landscape architect Andrew Jackson Downing even prepared a plan (which, unfortunately, is lost) of an enlarged garden and bordering arboretum.

All this was accomplished despite great difficulties. The soil was poor, and there were occasional inroads of the tide, which did great damage to the plants. Hopes were high nonetheless, and for years the Proprietors’ efforts were unflagging—despite a fire that burned the Conservatory to the ground and the lack of a greenhouse.

The Years of Uncertainty and Transition
The Proprietors continued to operate the Botanical Garden until 1847, when Horace Gray went into bankruptcy; Gray’s friends felt they could no longer continue to carry on the Garden, but their achievements provided a wonderful beginning and inspiration for their successors.

For the next twelve years the future of the Garden was uncertain. One of the former Trustees, the Reverend Charles Barnard, built a greenhouse in the Garden, where he raised and sold flowers. He organized Fourth of July parades of children with bouquets of flowers, which became a popular Boston tradition. His writings kept the citizens accustomed to associating the area with flowers. Others worked, too. A small pond was created and a simple landscape treatment was maintained.

Finally, the State settled the matter. On April 6, 1859, the Governor signed the Public Garden Act establishing, among other things, the boundary line between Boston and Roxbury, authorizing the filling up of the Back Bay, and prohibiting the erection of buildings (other than a city hall or buildings used for horticultural purposes) between Arlington and Charles streets.

Until this time, private funds had sustained the Garden, while the City continued to fill in the land. Now, the press and the people wanted to have more of a Garden. The Committee on the Common and Public Squares was appointed by the Boston City Council to report on a plan for improving it. For this they held a blind contest, which was won by a young architect, George T. Meacham.

The Meacham Plan
Meacham’s plan included space for a city hall, a greenhouse, children’s playground, and geometrical flower beds, as well as statues, fountains, trees, shrubs, and grass. With its winding paths and irregular-shaped pond, it was said to resemble Birkenhead Park in England. It combined both formal and picturesque elements, but it was overcrowded with features. Under the superintendence of the City Engineer, James Slade, Meacham’s plan was modified, eliminating most of the formal flowerbeds Meacham had proposed. City Forester John Galvin laid out flowerbeds and paths and brought in quantities of loam to grade, so that the Garden would not look too obviously manmade but a natural continuation of the slope of Beacon Hill. The greenhouse was built on Charles Street, but the
pond and pathway system were retained with comparatively few changes until recent years, and changes were made only to conform.

One of the greatest perils facing a public garden or park is that interest in supporting it waxes and wanes according to the interest of political and municipal officials. In 1859, the special committee appointed by the Boston City Council included in its report on the Meacham Plan a description of the work in progress on Central Park, referred to Birkenhead and other European parks, and added:

While other cities are expending fabulous amounts in the improvements of parks, squares, gardens, and promenades, what should we do? To be behind in these matters would not only be discreditable to our city, but positively injurious to our commercial prosperity, and in direct opposition to the majority of our citizens. . . . The area of our city is too small to allow the laying out of large tracts of land for Public Parks, and it behooves us to improve the small portions that are left to us for such purposes.

Thoroughly interested, the city implemented the plan, filled in places that needed to be completed, excavated the pond, surrounded the Garden with a cast-iron fence, laid out acres of turf, and planted trees and shrubs. Gradually, the Garden took on a more established appearance.

From the first, newly established trees were identified and labelled by Dr. Augustus
Addison Gould, a famous botanical authority who had done the same on Boston Common. Every effort has been made to carry on the custom of labelling on a regular basis, insofar as it has been possible to do so.

The greenhouse called for in Meacham's plan was built along Charles Street instead of where he had indicated. For many years it supplied the Garden with plants, but when needs outgrew its capacity they were met by new greenhouses, first in Dorchester, then in Franklin Park. Not only were there regular greenhouses, but a high “Dome House” with curved roof designed expressly to house the palms and other tall tropical plants that graced the Garden each summer.

During the first years, John Galvin (the City Forester) and his crew faced enormous difficulties on account of the kind and amount of fill that had been used. Portions would not drain properly while others would sink suddenly, and the gardeners would fill in the resulting hollows as well as they could. In those days, the staff of the Garden numbered over fifty men, all of whom were kept busy caring for the plantings in the new fashion, sometimes using exotic materials in pots and planters and scattered small beds. The hotter the colors the better. The public liked them, as did William Doogue, who succeeded Galvin in 1872 and maintained the plantings in the “Gardenesque Style” of J. C. Loudon of England. Others, such as Charles Sprague Sargent of the Arnold Arboretum—whom Doogue termed “that Blockhead from Harvard”—did not like them. However, Doogue ran the Garden with an efficient hand, and his plantings remained enormously popular.
In those days, vandalism was far less of a problem than it is today, and there was more labor to restore what damage was done, making it practical to have many attractive features that would be impossible today. The little peninsula with its tiny gazebo, which offered an intriguing view of the Garden from the middle of the Lagoon, had to be removed. It was too popular with the young, and its place was taken by a spectacular rock garden that rose high above the water, its stones almost completely hidden by drifts of flowering plants whose reflections multiplied in the waters of the Lagoon, a quaint and colorful landmark. Early pictures of the bridge over the Lagoon show containers of plants, and vines running along the railings, connecting the flowerbeds on either end of the bridge with ribbons of green.

Enter The Swanboats
In 1870 the City Fathers granted Robert Paget, a boat builder from England, the first boat-for-hire concession on the Lagoon in the new Public Garden. The concession employed rowboats with professional oarsmen. By 1877, Paget had launched the first of his new “Swanboats,” which could carry four or eight passengers at a time. Designed after the Schwanboot in Wagner’s “Lohengrin” and propelled on the bicycle principle, they were an instant success. Now even longer and operated by Paget’s grandson, they continue to this day, a symbol of Boston and the Public Garden.

There was plenty of work for the Garden staff each spring, removing the boardwalks from all of the red-gravel paths, and each fall re-laying them. The swans of that day were
sent back to Franklin Park to winter and reappeared each spring, again to follow the swan-boats on their way.

At that time, there were four hundred beds of tulips (containing over four hundred thousand bulbs) underplanted with English daisies and pansies and forget-me-nots. The roses followed in June, with twenty thousand to thirty thousand plants. Rhododendrons occupied small beds with *Lilium longiflorum*, followed by hydrangeas, tropical and subtropical plants, and holly beds with *Lilium lancifolium* in red, rose, or white, blooming until frost, and the garden, greenhouse, and storage areas were prepared for the next season’s performance.

Nor was the collection of trees neglected. Six hundred trees of thirty kinds were carefully tended. Among them were two hundred elms (American, English, and Dutch), nearly one hundred maples, fifty magnolias and willows, fourteen crabs and catalpas, eleven horsechestnuts, and seven varnish trees, and specimens of Kentucky coffee tree, locust, beech, larch, tree-of-heaven, cherry, plum, peach, laburnum, oak, and ash. The ground was found to be too marshy for evergreens other than rhododendrons, so the other shrubs used were deciduous lilacs, quinces, mock oranges, viburnums, and so on.

**The Years of Decline**

The Public Garden Act of 1860 had stipulated that no buildings were to be erected in the Garden except for horticultural purposes, but no one dreamed that by 1897 the Garden would be host to an entrance of America’s first subway. This incursion cost the Garden its privacy, for part of its fence was removed, and many of its oldest trees were destroyed. When the subway was moved out to Boylston Street in 1914, a strip of the Garden forty feet

*Looking southwest across the Public Garden from Boston Common in 1869. The partially filled-in Back Bay, including Commonwealth Avenue, appears in the near background. Near the middle left of the photograph is the Arlington Street Church. Courtesy of the Boston Globe.*
Looking southwest across the Public Garden from Boston Common in 1975. The just completed John Hancock tower forms a dramatic backdrop for skaters on the Lagoon and dwarfs the historic Arlington Street Church, which can be seen just to the left of center. A light covering of snow contrasts with the dark pattern of the Garden's pathways. Commonwealth Avenue occupies the middle of the right edge of the photograph. Compare this view with that of 1869. Courtesy of the Boston Globe.
wide went with it, reducing the Garden from its original twenty-four acres to twenty-two.

When did the Garden begin to decline? The Great Depression of the 1930s changed many city activities. World War Two and its successors changed the public's attitude toward parks and gardens. Keep-off-the-grass signs were little heeded; indeed, of what avail were they when art shows were held in tents in the Garden, and the public was supposed to walk on grass lawns to view the pictures? The gardeners were expected to produce new grass in the worn places with seed and no water, unless it was carried from distant locations. Evidence of the neglected maintenance of years began to be evident in iron fences so rusty they could be pulled apart with ease so that the young could walk through the new openings and across the flowerbeds. Games of Frisbee were played, with disastrous effect on the tulips. Trees died, but no one seemed able to do anything to stop it.

The maintenance staff, which at the turn of the century had been fifty strong, had shrunk to twenty-five in 1940. By 1970, it was down to four. The wear and tear caused by hippies and others continued twenty-four hours a day. The bridge became known as a site for marijuana and other drugs. The Garden's irrigation system was out of order, seeding was not always funded, and the Tree Division was growing older and smaller. A helpful citizen-sponsored program allowed the planting of crabs, cherries, and maple trees, and many people responded, but the program's success resulted in trees being
scattered throughout the Garden with little concern for their ultimate sizes and positions. Even the magnificent pagoda tree, which spreads ninety feet, was obscured by young maples (there were twenty-eight Norway maples in all), and three young katsuras had invaded the Washington parterre. In short, the Boston Public Garden was rapidly becoming an overcrowded mixture of good intentions!

A survey plan for the Public Garden dated 1911 listed eight hundred twelve trees. By 1942, four hundred five of them had died, and thirty-five others were in poor condition. The reduced staff had such poor equipment it is remarkable that they were able to do as much as they did. For economy, paths were paved, the number of flowerbeds reduced. Palm trees no longer emerged for summers in the Garden (damage was feared). In addition, the bridge was unsafe, fountains broken and their figures stolen or falling into disrepair. It was these conditions, among others, that led to the formation late in 1970 of the Friends of the Public Garden.

The Friends of the Public Garden
The purpose of the new nonprofit organization was, and still is, to preserve and enhance the Public Garden (subsequently, Boston Common was included) and to assure its continuance as a place of quiet recreation, free from exploitation and encroachment. The Friends have joined with the Parks and Recreation Department in horticultural planning and capital improvements, have
provided a fund for the special planting of trees and shrubs, and have served as an important link between the public and responsible city agencies.

At first the Friends focused their efforts on assessing the situation and on determining what suggestions they could make toward its restoration and whether, and in what ways, the Friends could assist the Parks Department in accomplishing those goals. Among the Friends were people with many talents: architects, landscape architects, horticulturists, lawyers, financiers, writers—all ready to help the Park Commissioner in any way they could. Laura Dwight, who had coordinated the planting of magnolias along Commonwealth Avenue, was the first head of the Friends organization. She agreed to serve in that capacity “until the right man could be found” to take on the job. It was not long before he was found: the able and dedicated Henry Lee. As chairman, Lee has guided the Friends’ activities with skill and tact ever since.

It would be difficult for anyone to imagine what a discouraging prospect the Garden presented at that time and how each problem was tackled by the Friends and the Parks Department. Many solutions were found. The bridge over the Lagoon was made safe and restored, the fountains repaired and their basins renovated. New molds were made to duplicate the design of the perimeter fence, and it was recast, enclosing the Garden for the first time since 1897.

The installation of the underground irrigation system and new lighting required protection of the roots of individual trees. For months, the Garden was torn up in all directions, and many were the complaints that the rolled-out sod had no time to be watered before visitors to the Garden were sitting and lying upon it, so glad were they to return! Daffodils buried for months under bricks and mortar reappeared the following spring better than ever. Fifty-five new benches were installed and new frames and trash barrels were placed throughout the Garden, their plastic liners easily removed when full and transported in the Garden’s own Cushman vehicle to the newly constructed storage yard by Charles Street, there to await removal by the big city trash trucks, which are too wide for the paths in the Garden.

Representatives of the Friends joined those of other civic groups to attend hearings and oppose the plan for the nearby Park Plaza development, on the grounds that it would dangerously impair life in the Garden with sixty-mile-an-hour winds and shadows across the Garden at all seasons. Fortunately, the State rejected the environmental impact study for the project and required a more reasonable development. It is of vital importance to have a civic group such as the Friends always on the watch and prepared to defend the Garden from similar dangers.

The Boston Park Rangers are now a permanent addition to the city staff. They help to guide and monitor visitors to the Garden and provide those who are interested with information about the plants.

The Committee on Horticultural Planning

The Committee on Horticultural Planning for the Public Garden was formed in the late summer of 1971, other committees being formed as the need arose. The Horticultural Committee’s duties were (and still are) to serve as an advisory body for the Commissioner of Parks and Recreation, reviewing proposed changes and projects within the Garden and making proposals of its own. Its membership includes representatives of the Parks and Recreation Department and members appointed by the Friends of the Public Garden.

In its first report the Committee stated that “the successful restoration and maintenance of the Public Garden requires as a first step certain basic improvements, including a new perimeter fence, proper equipment, storage facilities, an adequate number of trained gardeners, an underground sprinkling sys-
tem, means of controlling circulation, preventing vandalism and providing safety during all the hours the Garden is open to the public"—ambitions that have yet to be fully realized!

In 1971, Professor Clifford S. Chater of the Waltham Field Station surveyed all of the Garden's trees and shrubs. As a result of his recommendations a comprehensive program of spraying, pruning, and guying was carried out. Trees with Dutch elm disease and those deemed highly hazardous were removed. The Committee surveyed the remaining trees and recommended the removal of others injured by years of neglect and traffic. A further survey was carried out by Professor Chater and Dr. Francis Holmes using infrared aerial photography. When interpreted by an expert, such films can tell more about the health of trees than on-the-ground inspection. The aerial survey showed that growing conditions in the Garden varied greatly, probably because of the fill that had been used there.

Chater's report on the aerial survey stated, in part, that

It is . . . known that much of the original fill contained muck and other kinds of organic matter which continually release carbon dioxide to the soil atmosphere in addition to the normal amount released by plant roots. Examination of the top soil reveals that it is extremely compacted, which in turn prevents the high concentration of carbon dioxide gas from escaping and also prevents the entrance of oxygen to the soil which the roots require.

Not all of the Committee's recommendations or of the expert advice could be implemented promptly; they were simply guidelines for what ought to be done when and if city funds or private financing was available to provide it.

In the 1970s, some crises loomed large and immediate. There was the Dutch elm disease and the need to treat its victims. Several conflicting methods were recommended and tried on individual trees, many of which died. The most beautiful of the surviving elms are still receiving regular annual injections of fungicide.

An unforeseen danger arose when the Boston City Council proposed giving up the city greenhouses at Franklin Park. The summer flowers are a spectacular and major feature of the Public Garden: for over a century people have visited the Garden expressly to see them, and the present display is so remarkable that people come from great distances. The skill and knowledge necessary to create such a display are found in few if any other public places. It requires having cli-
mate-controlled storage facilities and greenhouses available as needed, with experienced personnel to operate them, to produce not only herbaceous material but tropical and subtropical plants and summer and carpet bedding plants. They also plant the pansies and tulips in the Garden that exemplify spring to Bostonians.

At that time, members of the Horticultural Committee attended the hearing of the Budget Committee of the Boston City Council and explained it, and the greenhouses have continued to operate. Today, they are even more appreciated than they were before. Classes in horticulture have been given in them. New greenhouses, easier and more economical to run, are being built, and it is to be hoped that the picturesque Dome House will be reglazed and repaired some day.

One of the major programs of the Horticultural Planning Committee is the continuation of the Memorial Tree Planting Program initiated by its committee member Edward Weeks. The Committee chooses the variety of tree to be planted and selects the site for it. People tend to think that a horticultural committee's only job is to provide horticultural embellishment. That is the fun, of course, but first the committee must look to the design of the area. With this fact in mind, the Horticultural Planning Committee recommended that several paths be changed in the Public Garden and others eliminated to facilitate traffic circulation and ease of maintenance. Where turf was subject to constant traffic, as at the edges of the Lagoon near the swanboat landing and at the end where skaters change their skates, paving was more

Recent view along the main walk of the Public Garden showing the bedding plants (Impatiens and Browallia) and standards (Lantana) and the post-and-chain fence. Photograph by the author.
A swanboat plies the waters of the Lagoon in this idyllic view of the Public Garden. Photograph by Paul G. Paget.
practical than turf. The flagpole had for many years been lost in a sea of grass and trees; to pave its surrounding base and develop a path to it with seats off the main route seemed practical and pleasant for visitors and reminiscent of little paths the Garden had once had. Later, memorial seats were added around the flagpole itself.

Four beds of roses, topiary yews (the present-day version of the potted plants of long ago, when people longed for evergreens), and the changes in the Garden's paths and beds are all attempts to adapt the present design to new conditions and to the multitudes of visitors without altering the Garden's character.

Until fifty years ago, a third of the trees in the Public Garden were elms, as had been the case for many years. Among them were magnificent specimens that had been there well over a century and gave the Garden a special character. In planting today, the Horticultural Planning Committee tries to choose the best of the ornamental varieties of trees that are available so that the traditions of the past will be continued and the image of a beautiful garden will be perpetuated while at the same time the service and information of a city botanic garden will be available to an interested public.

The Challenge for the Future

When the Proprietors of the Boston Public Garden began their work one hundred fifty years ago, their hopes and dreams for an arboretum or botanic garden were impossible to attain, for the soil in the Garden was poor, there were occasional inundations by the sea, and the many varieties of plant material existing today were not even imagined. Nonetheless, the Proprietors made an inspiring beginning, and ever since it has been the task of succeeding generations to carry on their work according to the advances of their own times. The Garden still suffers from the effects of filled land in its soil characteristics, stability, and levels. These conditions are being taken care of as they appear, but they pose unexpected problems and expense.

The Garden is remarkable in that it successfully combines the concepts of botanic garden, park, and quiet retreat consistent with current use. Because it was originally conceived as a botanical collection, it is today a living demonstration of some of the varieties of trees and shrubs that will thrive in the heart of a city if only they are given suitable sites, care, protection, and all the space they will need to develop their ultimate sizes and mature characteristics. Generations of interested citizens have encouraged the planting of a broad variety of the best ornamental trees and shrubs available in their times, and the tradition has been carried on ever since. The image of a beautiful garden will be perpetuated while, at the same time, the service and information of a city botanic garden will be available to an interested public.

Until fifty years ago a third of the Garden's trees were elms. Among them were magnificent specimens that gave the Garden a special character, but Dutch elm disease, poor maintenance, and overuse have eliminated many of them. The palette of plants available to the present generation is far more extensive than it has ever been. Species of trees and shrubs have been imported from China, Japan, Korea, and other countries, and there are many new cultivars. Today, every effort is made to choose plants that are not only ornamental but well adapted to the existing growing conditions in the Garden. Harmony, not ostentation, is the predominant goal being sought.

Once the framework of trees is in place, companion shrubs, groundcovers, and permanent bulbs are planted wherever they are needed to add seasonal interest and color without materially increasing the need for maintenance. Wherever appropriate, special characteristics are developed in individual areas, among them the pinetum near Charles and Boylston streets, a group of deciduous
needle-leaved trees near Arlington Street, and a row of twenty-six hybrid shadblows (Amelanchier spp.) paralleling the Belgian elms.

The Public Garden is a showcase for the City of Boston, providing beauty for the casual visitor and broader knowledge for others. The biggest challenge is to assure that the Garden never again suffers the type of decline it did before the Friends of the Public Garden was formed. But there are other challenges.

A public garden is not static but alive and constantly in service, twenty-four hours a day. It is remarkable that this one has done so well for so long, but because it is now nearing its capacity, its protection and maintenance will have to be carefully coordinated with the type of use it will receive in the future. As more and more people visit the Garden, a balance must be struck between their activities and enjoyment, on the one hand, and the ability of the plants, which give the Garden its special appeal, to withstand their impact, on the other. Expert maintenance can only help to mitigate the damage, but not even that can cure it, and all the carefully chosen trees and shrubs in the present collection should be given every chance of reaching their full potentials. The time has come to decide on permanent ways to protect the Garden so that it will continue to be a green and flowering oasis in the heart of a big city.

Mary M. B. Wakefield, known to everyone as Polly, is a former trustee of the Massachusetts Horticultural Society. She has worked with the Friends of the Public Garden since its inception and for twelve years served on the Visiting Committee of the Arnold Arboretum. The recipient of numerous horticultural awards, she views the Boston Public Garden as a "showcase" where people can learn about the pleasures and benefits of plants.
TO BE CONTINUED

The Fall issue of *Arnoldia* will contain additional articles on parks and open space in the Boston area.
Volunteers in Children’s Program Help Young Botanists Sprout

Over the last five years, volunteers in the Arnold Arboretum’s School Programs have found the old saying, “One touch of nature makes the whole world kin,” is a pretty good observation. The volunteers say it seemed especially true for this year’s group of kids—nearly 3,000 of them—for the most part city dwellers, who participated in the Arboretum’s nature adventures and discovered a new green space.

Third through sixth graders come with their classes to explore the Arboretum in one of four field-study experiences. Even scrappiness, indifference, and sleepiness are overcome in these magic explorations, and the kids return from their tours of the Arboretum absolutely glowing with the excitement of their new discoveries.

Each field study—“Seeds and Leaves,” “Hemlock Hill,” “Around the World with Trees,” and “Flowers”—begins with a classroom-type period in the lecture hall. Then volunteers distribute hand lenses (inexpensive versions of those used by real botanists) and set out in small groups to discover that “nature passes art” in the Arboretum.

Volunteers help kids to see how well a flower advertises its presence, to swoop down on “helicopters” and “hitchhikers” (some names for travelling seeds), to explore for the (Benjamin) Franklin tree, or to be astonished by the cathedral-like world under the hemlocks.

The program is made possible, in part, by contributions from the Junior League of Boston and the Junior League Garden Club. Project chairwoman for the Junior League Garden Club is Ruth Wilson of Wellesley, who has worked as a volunteer in the Arboretum’s School Program for three years.

According to Diane Syverson, the Children’s Program Coordinator, the Junior League funded for many years the Embankment Gardens, where inner-city kids learned about vegetable gardening. Now the Arboretum is the lucky recipient of the League’s largesse. Mrs. Wilson says, “The program helps city kinds to explore aspects of nature—a whole new world right at their door.”

Recently, Mrs. Wilson reflected that her grandmother was responsible for introducing her to gardening and nature. As a young girl, she had been asked to keep a notebook on wildflowers, pressing them between its pages as she found them and learned their names. When Mrs. Wilson is not helping young botanists to bloom at the Arboretum she is tending her own garden in Wellesley, learning...
about desert plants in Arizona, or watching her own grandchildren sprout.

Even though she is a flower enthusiast, she enjoys teaching the autumn field-study experience. "It's then," she says, "the children learn about the changes autumn brings to plants and animals—how living things are interconnected."

Learning about nature and why it is important are compelling components of the Children's Program, not only for its students but also for its volunteers, according to Barbara Balasa of Newton and Jane Paquet-Whall of Dorchester. They have been with the Children's Program since its beginning.

In 1981, Mrs. Balasa began work on a horticultural degree at Massachusetts Bay Community College, just after she had been introduced to the Arboretum by Eleanor Trowbridge, one of the Arboretum's long-term supporters. Because Mrs. Balasa believed a children's program could be a very necessary and vital experience for kids, she decided, in addition to starting up her own landscaping business, to find extra time to give to this program and to children. She has been volunteering every week since then.

Although volunteers seem reluctant to say they have a favorite field study, after some urging she did confess that "Around the World with Trees" is a favorite. "And then there's 'Hemlock Hill,'" she said. "That's a favorite also."

Last summer, she took the responsibility for reworking the script of "Around the World," which the volunteers use as a guide in teaching the indoor segment of this field study. At that time, Diane Syverson also laid out new nature-adventure trails on Bussey Hill. This field-study experience introduces kids to plant hunting through their own explorations and to some of the fascinating personalities who have hunted plants for the Arboretum.

"There is a real need in the Boston Public Schools," Mrs. Balasa says, "for a resource like the Arboretum. When the students are here, we show them that this is a living tree museum and a wonderful resource in the city. Just think about Hemlock Hill, for instance. It's a natural woods, and it's right in the city. It's wonderful to see how enraptured the kids are when they first discover it."

Another "old" timer in the Children's Program (although she's a young mother with sons 5 1/2 and 2 1/2) is Jane Paquet-Whall. She also has been a volunteer in the program since its inception. Mrs. Paquet-Whall grew up in Jamaica Plain and remembers the grand old man in her neighborhood who'd bring all the kids on the block to the Arboretum. He would fill up his old Model-T with as many children and loaves of bread as it would hold and drive over to feed the ducks on the Arboretum's ponds. Mrs. Paquet-Whall has been coming to the Arboretum every week since.

Not only is she a loyal and devoted volunteer in the Children's Program, but she works with the Park Partners for the City of Boston rejuvenating Dorchester Park, a 26-acre park designed by Olmsted. Until she and a group of her neighbors began the project that breathed new life into it, the park was unkempt and sunk under tons of trash.

When youngsters come to the Arboretum, she believes it is not only a good time to teach them about nature and show them a beautiful urban green space, but to teach a little history.

She likes to tell students about the white pines and their history. "I used to wonder why there weren't any tall pines here, as there are on the West Coast. I found out it's because of King George. Learning that he sent his scouts here to cut down the white pines for his navy, to be used as masts on his ships, seems to intrigue the kids, too," she says.

Looking forward to a full-time career teaching science and nature, Mrs. Paquet-Whall has taken many of the adult courses offered by the Arboretum. Evidence not only of boundless curiosity but also of her ability to appreciate how children can be led to see the world of nature as wonder-working, is this short vignette: She explained that recently she has been learning sign language so that she will be able to sign to a deaf child. But she had been unhappy with all of the texts and manuals—until she found one that taught the sign for dreams.

"None of the others had the sign for dreams, and dreams are really important, aren't they?" she said. While the Children's Program is teaching children about botany, its beautiful trees and green spaces are also widening the horizons of many city kids and providing them dreams. As she says, dreams are "really important."

Mrs. Paquet-Whall became an Arboretum volunteer after she read an article in the Boston Globe about volunteer opportunities. Readers of Arnoldia who would like to participate in the Children's Program as volunteers should call Diane Syverson at (617)524-1718.

This is the second in a series of three articles on volunteers in the Children's Program.
Arboretum’s 1988 Lilac Poster Is Abloom

From more than 200 submitted artworks, a jury chose “Spring Lilacs” by Lincoln artist Shirley Mossman Nisbet for reproduction on the 1988 Lilac Poster.

Mrs. Nisbet, who has enjoyed tremendous success as an abstract artist, has only recently become interested in flowers as subjects for her work.

“Flowers began to emerge, unexpectedly, into my work,” she said, “during the summer and autumn of 1985 and 1986. I became fascinated by the brilliance and translucence of flowers and the power of their growth out of the dark soil, and I started to try to express those contradictory qualities in my paintings.”

“Spring Lilacs” is more than a pretty picture of a lilac. As critic Joanna Shaw-Engle of Kensington, Maryland, wrote, “Shirley Nisbet’s flowers literally explode from the canvas and paper holding them.” The 1988 Lilac Poster is vibrant—its lilacs made lively by striking color contrasts of purple, blue, and raspberry.

Proceeds from the sale of the posters go to support the restoration of the Arboretum’s famous Lilac Collection. The cost per poster is $23, which includes postage and handling.

To order, please call The Shop at the Arboretum at (617) 524-1718 or write to the Arboretum, Jamaica Plain, MA 02130. MasterCard, Visa, and American Express credit cards are accepted.

Arboretum’s Horticultural Training Program Attracts a World-Class Group

During the summer the Arnold Arboretum offers students the opportunity to learn horticulture through hands-on training. The horticultural trainees work in a variety of jobs, either in grounds maintenance, greenhouse and nursery operations, or mapping and labelling of the plant collections.

As part of the program, trainees also enroll in two courses, an eight-week intensive horticultural maintenance program and a six-week woody-plant identification laboratory.

This year’s trainees are:

- James Blauth
  Westford, MA

- Jodi Bottoms
  North Powder, OR

- Gerald Brown
  Boston, MA

- Hugh Chapin
  Cambridge, MA

- Brett Christianson-Haas
  Weston, MA

- Chris Dowling
  Chestnut Hill, MA

- Russell Forbes
  Balcownie, N.S.W., Australia

- Stefan Helleckes
  Neuenrade, West Germany

- Brian Muchow
  Charlottesville, VA

- Paul Pfeifer
  Sulphur Springs, TX

- Bruce Rivers
  South Hadley, MA

- Catherine Rosenberg
  Cambridge, MA

- Morgan Schmidt
  Belmont, MA

- Stephanie Shaprio
  Chicago, IL

- Jaqueline Veal
  New Cumberland, WV
Park Rangers Begin Fifth Year of Service at Arboretum

The Boston Park Rangers were formed in the nineteenth-century tradition of "park keepers" as conceived by Frederick Law Olmsted, the designer of the Boston Park System, and championed by Dr. Peter Ashton when he was director of the Arnold Arboretum. Along with some of Boston's downtown parks, the Arboretum was one of the original sites for the program.

Much of the impetus to make the Arboretum one of the pilot sites came from the Arboretum Committee, a nonprofit organization of loyal neighbors. As part of their effort to increase the overall safety in the Arboretum, they helped raise money for the Ranger Program. The Program began with 20 rangers, four of whom were assigned to the Arboretum.

With the Boston parks undergoing a broad renovation ($489 million has been committed for capital improvements), the Ranger Program has expanded to 40 rangers. Gene Survillo has been their executive director from the Program's inception.

During the summer months, the Rangers not only keep the Arboretum safe but offer educational tours and classes. They are also available for guest lectures, slide presentations, and classroom programs. On-site program including birdwatching, orienteering, and guided public tours.

For a schedule of activities or more information, call (617) 522-2639.

Got a Question? Arboretum's Plant Line Has the Answer

When Barbara Emeneau, of Winchester, asked about volunteer opportunities at the Arboretum in 1981, she said, "I really don't know what I can do for the Arboretum, but I'm willing to try. I'm pretty fair at pulling up ragweed, if that's useful to the staff." When you have a plant-related question, you'll find out that Barbara Emeneau is good at much more than pulling up ragweed!

She and C. J. Patterson, of Norwell, are the Arboretum's Answer-Women and Plant Doctors par excellence. They answer those questions that come in by phone or mail—such as, "What can I do about my hydrangea?" or "Can I grow an apple tree in Arizona?" or "I have a nice tree with red flowers. What is it?" From 1 to 3 p.m. on Mondays and Tuesdays, Mrs. Emeneau and Mrs. Patterson give sage advice to green thumbs and green horns alike.

Mrs. Patterson says, "It used to be quiet in the winter, and we could catch up on some of our filing, but business has gotten brisk even when gardens are under snow cover."

Now the two volunteers estimate they answer between 25 and 30 calls on a winter afternoon, but 40 percent of all calls come during May and June! They also handle mail inquiries, which come from around the world. Often, the inquiries are for historical information and come from libraries and arboreta.

The most interesting question lately came from the World Book Encyclopedia, which had recently discovered a piece of conflicting information. Someone in California was claiming to have been the first to introduce the dawn redwood (Metasequoia glyptostroboides) into cultivation in the West. With the assistance of Sheila Connor, horticultural librarian, and Jennifer Quigley, curatorial assistant, the story of the dawn redwood's introduction by the Arnold Arboretum was xeroxed and sent off to World Book.

Members who have plant-related questions may call the Plant Line at (617) 524-1718 between 1 and 3 p.m. on Mondays and Tuesdays. The Answer-Women will also be available at the Annual Plant Bonus, Sale, and Auction on Sunday, September 18, from 9 a.m. to 4 p.m., at the Case Estates in Weston.