

# Notes on Restoring the Woody Plants of Fairsted

*Lauren Meier*

**The restoration of the Olmsted landscape at Fairsted is a complex undertaking, requiring extensive historical research and documentation, landscape analysis and planning, and finally, implementation and maintenance. In this article, the project manager reviews the part of the process that deals with woody plants.**

In 1991 the National Park Service began restoring the 1.74-acre landscape of Frederick Law Olmsted's home and office in Brookline, Massachusetts, with a view to creating a living exhibit of his design process and principles. This project has enabled us to study in a very detailed way Olmsted's use of woody plants in a small-scale residential landscape. The project has also served as a testing ground for methods and tech-

niques of vegetation management that may be applied at historic sites around the United States.

Olmsted incorporated many plants already on the site into his design, most notably a magnificent American elm, as well as a broad range of other woody plants, both natives and non-natives. The final design—a diverse landscape of undulating lawn (the south lawn), a rustic

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*Volunteer trees—predominantly Norway maples (*Acer platanoides*) with some Japanese maples (*A. palmatum*) and sweet birch (*Betula lenta*)—on the west slope of Fairsted as they appeared in the spring of 1994.*



dell (called the Hollow), a rocky outcropping (the rock garden), a bank of trees and shrubs (the west slope), a circular drive, and service areas—illustrates in miniature his own domestic landscape ideals. (For a plan of the property, see page 6.)

Rich documentation exists for both the original design of the landscape at the Frederick Law Olmsted National Historic Site and for changes

that occurred over time. Plans, photographs, and planting lists, when combined with the results of tree coring and archeology, reveal the history of most plants on the site. This wealth of documentation has been compiled into a two-volume cultural landscape report by landscape historian Cynthia Zaitzevsky and the staff of the National Park Service with technical assistance from the Arnold Arboretum. It is on the

basis of this documentation that the National Park Service is restoring the landscape to its appearance at the end of the 1920s, when the Olmsted Brothers firm was at the height of its activity and the landscape still retained the overall organization and design created by Olmsted Sr. before his death in 1903.

The documentation shows that the landscape changed after 1930 in ways that obscured some of its original qualities. Most notable was the reduction in diversity and numbers of shrubs. Volunteer trees, primarily Norway and Japanese maples (*Acer platanoides* and *A. palmatum*), altered the canopy and the site's spatial organization, while growth in all trees and shrubs altered sun and shade conditions and reduced available growing space. Where seven vines had been growing on the building walls and spruce pole fence in 1930, only two (*Wisteria sinensis* and *Actinidia arguta*) remained in 1991. Later additions, such as the 1960s plantings of rhododendrons, hemlock, and yew, had also altered the original design.

At the start of the renovation in 1994, all trees and shrubs not present in 1930—some two hundred plants—were removed, and many of the

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Restoration of the west slope began in October, 1994. On the property overall, some two hundred trees and shrubs not present in 1930 were removed.



remaining plants were pruned to greatly increase sunlight penetration. Organic compost was added to the soil to overcome years of nutrient depletion in a landscape dominated by exposed bedrock. An above-ground, seasonal irrigation system—a field pipe buried a few inches under leaf mulch with spigots at every fifty feet—was installed around the site periphery for watering new plantings.

Olmsted's planting designs were typically lush and diverse in species. The task now underway is to reestablish the plants present in the late 1920s but since lost. Rich though the documentation is, it is not definitive, and gaps have had to be filled by informed assumptions. Nor has it been possible to carry out an entirely pure restoration: alterations in planting designs have been required—especially in quantities of plants—to allow for plant growth and to create a sustainable design. Following is an overview of some of the types of problems confronted by the restoration team.

### Scale

Many of Fairsted's woody plants have grown dramatically since the landscape was developed between 1883 and 1930. Some of these plants, such as the cucumber magnolia (*Magnolia acuminata*), blend gracefully into the landscape, while others, especially certain shrubs, have outgrown their location. In the Hollow, which was both heavily planted and limited in space, this problem was especially acute at the start of the restoration. One solution was to lightly prune the rosebay rhododendrons (*Rhododendron maximum*) to encourage new, vigorous growth and to make space for other shrubs included in the original plans but now absent.

The existing yews proved more challenging, especially along the Dudley Street bank. The English yews (*Taxus baccata*) were heavily pruned to make way for rejuvenated growth within a much smaller area. The upright form of the Japanese yew (*T. cuspidata*), on the other hand, adapts less well to hard pruning. An especially large specimen (18-foot canopy) was removed and will be replaced with a smaller one. In the rock garden, where space is less constrained, another large Japanese yew was successfully pruned to make room for underplanting without sacrificing its picturesque form.

### Competition Between Old and New Plants

Over the years, root space had also become limited, and the numbers of plants to be reintroduced is so voluminous (66 trees, 632 shrubs, 129 vines, and 2,875 herbaceous plants), that careful analysis of available space and sunlight was required. In some instances, the restoration required either pruning or removing existing shrubs, such as the Japanese yew. In other locations, the design's intended effect was achieved by reducing the numbers of plants from that indicated on historic plans. This was the case with certain shrub massings, such as a group of English weeping yew (*Taxus baccata* 'Repandens') in the Hollow and a large collection of drooping leucothoë (*Leucothoë fontanesiana*) and mountain andromeda (*Pieris floribunda*) along the south lawn.

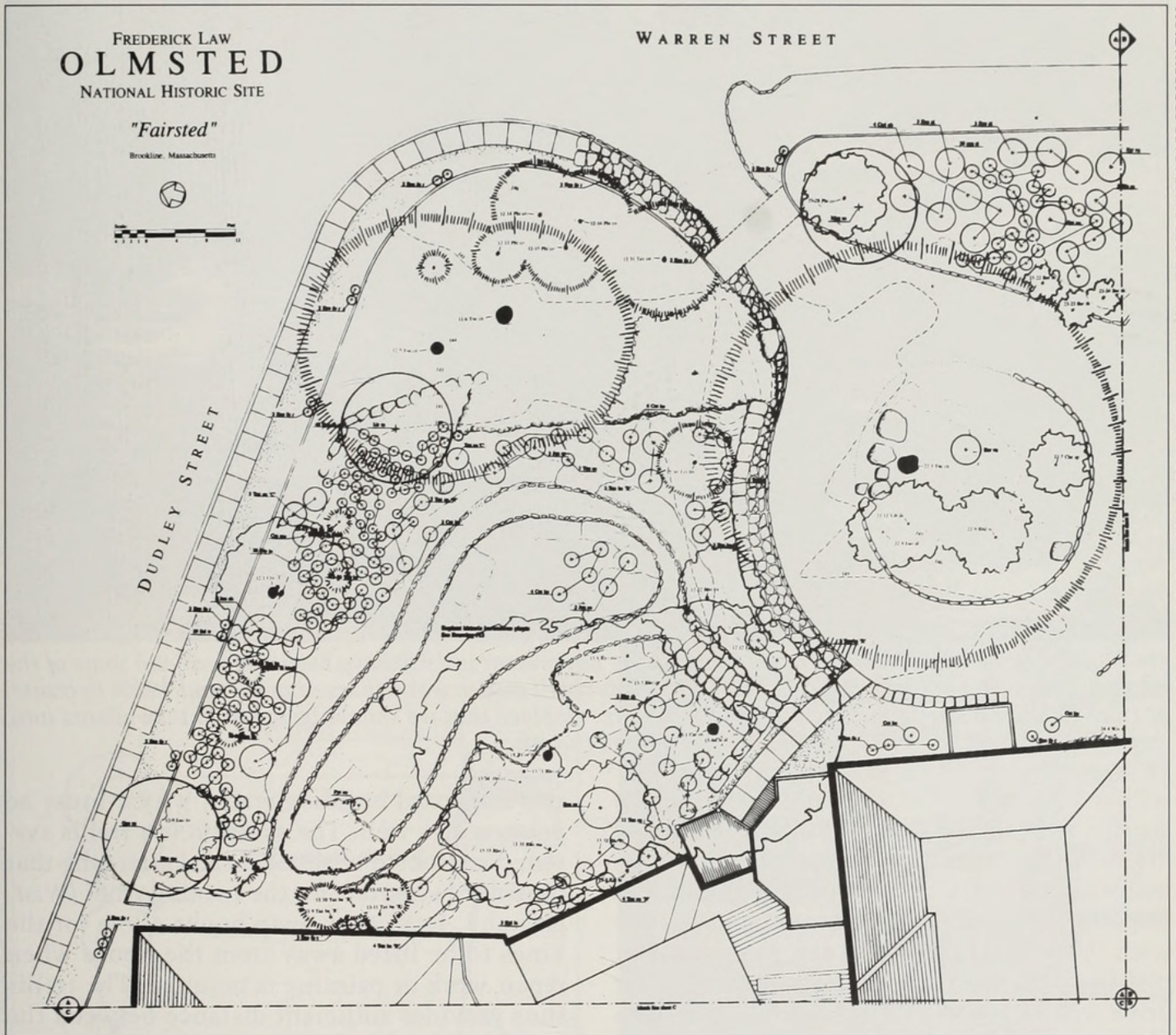
### Availability of Original Plants

The woody plant species at Fairsted include those native to the Northeast as well as exotic species in cultivation between 1883 and 1930. In any restoration project, locating the exact historic species or cultivar is a difficult task. For example, *Salix tristis* was identified on a 1923 plan and on the planting order for the Hollow, but the plants seen in historical photographs were not consistent with specimens currently available in commercial nurseries. Since willow species hybridize freely and are typically variable, it is possible that the *Salix tristis* of the mid-1920s was renamed. Consultation with staff of the Arnold Arboretum and research in published floras of the northeastern United States confirmed that it is now known as *Salix humilis* or *S. humilis* var. *tristis*, a shrub willow native to coastal shores in northern New England. However, it has not yet been located in commercial cultivation, so custom propagation of plants from the wild or from a botanic garden may be required.

### Susceptibility of Old Plants to Disease or Other Problems

The goal of the restoration of the Olmsted National Historic Site is to reestablish an example of Olmsted's rich planting design with a high degree of historical accuracy. Especially important are certain individual trees and shrubs that are crucial to the overall design. For this reason—and because the level of maintenance





DRAWN BY CATHERINE MORRIS, NPS, OLMSTED CENTER FOR LANDSCAPE PRESERVATION

The planting plan for the restoration of the Hollow and part of the front drive at Fairsted is based on many historic plans, planting lists, and photographs, as well as surviving plants. Plants and their quantities are:

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|---|--|
| Common boxwood ( <i>Buxus sempervirens</i> ) 1                              | Scarlet firethorn ( <i>Pyracantha coccinea</i> ) 1                   |
| Native barberry ( <i>Berberis vulgaris</i> ) 1                              | Red oak ( <i>Quercus rubra</i> ) 1                                   |
| Rock cotoneaster ( <i>Cotoneaster horizontalis</i> ) 14                     | Rosebay rhododendron ( <i>Rhododendron maximum</i> ) 1               |
| Common quince ( <i>Cydonia oblonga</i> ) 4                                  | Schlippenbach rhododendron ( <i>Rhododendron schlippenbachii</i> ) 2 |
| Downy hawthorn ( <i>Crataegus mollis</i> ) 1                                | Shrub willow ( <i>Salix tristis</i> ) 39                             |
| Dwarf bush honeysuckle ( <i>Diervilla lonicera</i> ) 26                     | Common lilac ( <i>Syringa vulgaris</i> ) 2                           |
| Bush honeysuckle ( <i>Diervilla sessifolia</i> ) 5                          | English yew ( <i>Taxus baccata</i> ) 5                               |
| Winged euonymus ( <i>Euonymus alata</i> ) 6                                 | English weeping yew ( <i>Taxus baccata</i> 'Repandens') 11           |
| Wintercreeper euonymus ( <i>Euonymus fortunei</i> var. <i>radicans</i> ) 74 | Canadian yew ( <i>Taxus canadensis</i> ) 16                          |
| Chinese juniper ( <i>Juniperus chinensis</i> ) 4                            | Japanese yew 'Capitata' ( <i>Taxus cuspidata</i> 'Capitata') 3       |
| Common juniper ( <i>Juniperus communis</i> ) 5                              | Japanese yew 'Nana' ( <i>Taxus cuspidata</i> 'Nana') 7               |
| Mountain laurel ( <i>Kalmia latifolia</i> ) 5                               | Yellowroot ( <i>Xanthorrhiza simplicissima</i> ) 25                  |
| Tulip tree ( <i>Liriodendron tulipifera</i> ) 1                             |  |
| Cucumber magnolia ( <i>Magnolia acuminata</i> ) 1                           |  |





*The Hollow in its present state of restoration. Plants not present in 1930 have been removed and some of the missing ones have been replaced. The planting in this small garden was enhanced in the mid-1920s to create, as Hans Koehler wrote to Frederick Law Olmsted, Jr., "a place that we should be proud to take clients into, and a place of interest to and for study by the men in the office."*

will be very high—the restoration will include species with higher susceptibility to pests and diseases than would be acceptable where the historical integrity of the woody plants is less important. For example, to ensure consistency with the original landscape, the American elm missing from the northern edge of the circular drive will be replaced with another American elm in spite of its susceptibility to Dutch elm disease. Similarly, the white ash (*Fraxinus americana*) that was originally located east of the rock garden will be replaced in kind despite the species' vulnerability to rust, borers, and ash yellows. Like the American elm, this tree will be carefully monitored; if the replacements do not prove viable, the decision to replace these individuals with the original species will be reevaluated.

### **Landscape vs Architecture**

Vines presented one of the most challenging aspects of the restoration. Olmsted covered all structures with a profusion of climbing plant material. This constitutes an essential feature of the site's historic character, but it also damages

the clapboard building walls, which must be preserved as well. The solution is a trellis system constructed of spiraled steel strapping that provides a substrate for the twining vines (*Wisteria* and *Actinidia*). Snap hooks allow for the vines to be lifted away from the house when repair work or painting is required. The trellis thus provides sufficient distance between the wood facade and plant material to allow for air circulation, thereby minimizing moisture damage. Other vines that will be replaced on the arch and fence as well as the buildings are wintercreeper euonymus (*Euonymus fortunei* var. *radicans*), Dutchman's pipe (*Aristolochia macrophylla*), Boston ivy (*Parthenocissus tricuspidata*), Virginia creeper (*Parthenocissus quinquefolia*), and English ivy (*Hedera helix*).

### **Planning for the Replacement of Significant Plants**

Several of the plants at Fairsted are character-defining features of great historical significance. First and foremost, because of its association with Olmsted as well as its great age, is the American elm on the south lawn. Already a



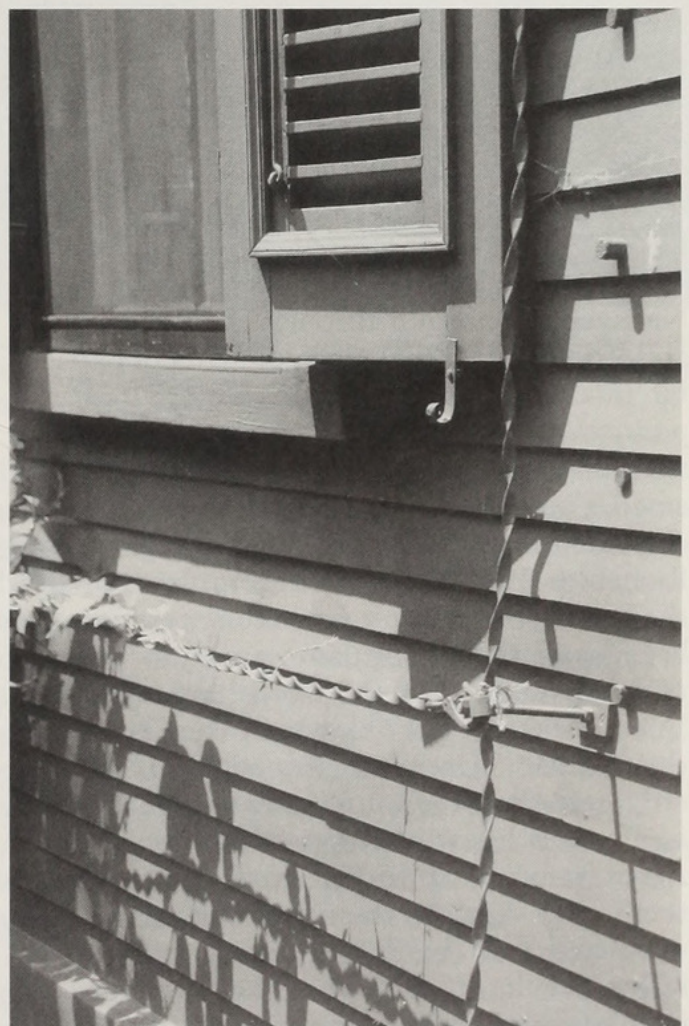
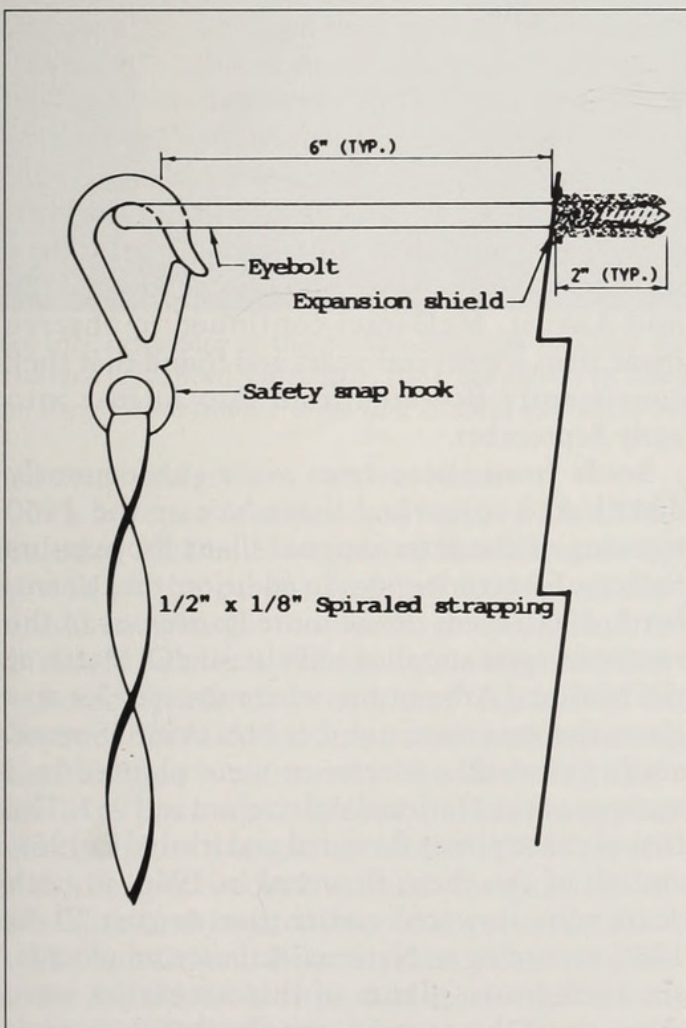
large tree when Olmsted acquired the property, he planned the entire landscape around it. Other plants on the site are significant for their horticultural characteristics. Plants such as these that are in decline or potentially unavailable for replacement are being vegetatively propagated at the Arnold Arboretum. Cuttings or grafts were propagated at the Dana Greenhouses and are kept in a special nursery to grow until a replacement is needed.

Restoring Fairsted's landscape with an exactitude that can communicate the design principles of the Olmsted firms has required the combined efforts of historians, landscape architects, taxonomists, horticulturists, and grounds staff. A wealth of historical documentation together with a very high level of technical expertise has permitted an attention to detail

that would be difficult to duplicate in most restoration projects. An important byproduct will be the reports published by the Olmsted Center for Landscape Preservation on the methods and techniques that have been developed for this project. But in the end, perhaps the most valuable result—for both interested professionals and casual visitors alike—will be the reestablishment of a living example of Olmsted's principles of planting design.

Lauren Meier is a historical landscape architect with the Olmsted Center for Landscape Preservation of the National Park Service, which is based at Fairsted. This article is adapted from her contribution to *A Forum on Vegetation Management for Historic Sites*, to be published in 1997 by the Arnold Arboretum and the Olmsted Center for Landscape Preservation of the National Park Service.

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The drawing and photograph illustrate the trellis system that was developed at Fairsted to support the twining vines *Wisteria sinensis* and *Actinidia arguta*. Constructed of spiraled steel strapping, snap hooks permit the vines to be lifted away from the house for maintenance.



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