JUSTIN S. MORRILL is best known as the founder of the land-grant university system in the United States, through his authorship in Congress of the Land Grant Act of 1862. The immense significance of this act, which laid the foundation for the growth of our state university system, has overshadowed many of his activities, among them adaptability trials of a variety of trees and shrubs at his home in Strafford, Vermont. The trials were very small by comparison with many present efforts, but were done before the establishment of any public arboretums in the United States, and at a time when relatively few private landholders in this country were doing this sort of thing. Because of this early information (however limited) that they provide about adaptability of certain species, and the light that they shed on Morrill’s personality and interests, the available facts on Morrill’s horticultural activities are presented here.

Justin Smith Morrill was born in Strafford, Vermont in 1810. Fifteen years later his formal education ended, for financial reasons, and he went to work as a clerk in the general store in Strafford. Biographers have suggested that his disappointment at having to leave school so early may have intensified his interest in books and education—a preoccupation, as it turned out, with great significance for the future of higher education in the United States. Nine years after starting to work in the store, he became part-owner of it. After 14 more years he had accumulated enough wealth to enable him to sell his interest in the store and retire from business. With the expanded leisure time now available to him, he was able to become more active in local affairs, including politics. This activity culminated in his being persuaded to run for election to the U.S. House of Representatives in 1854. He was elected and spent the next 44 years in Congress: 12 in the House of Representatives and 32 more in the Senate. Morrill’s activities while in Congress have been well documented in the Congressional Record, his own writings, a biographical address by George W. Atherton, entitled “The
Legislative Career of Justin S. Morrill"¹ and the biography *The Life and Public Services of Justin Smith Morrill* by William Belmont Parker (Houghton-Mifflin, Boston and New York, 1924).

At the time of his first "retirement" in 1848 he started to build his homestead in Strafford. Morrill was a serious student of architecture and landscape architecture, as evidenced by his collection of books on these subjects², and he personally prepared the plans for his house and supervised its construction. Upon its completion in 1851, he prepared a plan of the grounds surrounding it³ and assembled lists of plants for trial. Both the plan and the selection of plants appear to have been influenced strongly by the book *The Villa Gardener*, by J. C. Loudon (Wm. S. Orr & Co., London, 1850)—Morrill's copy bears notes in his handwriting.

From similar notes in another of his gardening books, *Cottage Residences* by A. J. Downing (Wiley and Putnam, New York and London, 1844), we can guess that his first plantings were made in the fall of 1852. In this same book is a list of plants that Morrill planned to obtain for planting in the spring of 1853. He also prepared a larger list of plants in the margins of the plan of his grounds and showed the locations of some of these plants on the property. Apparently this was a master list of plants that he planned to add to the grounds as he was able to. Unfortunately, we know which of the plants on this list were actually planted on his grounds only from the earlier-mentioned planting lists and by seeing those that remain there today. Morrill's election to the U.S. House of Representatives in 1854 apparently interrupted his planting program after only a year or two of activity, and it seems likely that it never was resumed. At least there was no evidence that it was continued in the systematic fashion in which it had been started.

**The Homestead and Plantings Today**

After Morrill's death in 1898, the homestead remained in the Morrill family for 40 years, then was owned by others for the next 24 years. In 1962, the centennial year after the signing of the Land Grant Act, the homestead was purchased by the Justin Smith Morrill Foundation, Inc. and was designated a Registered National Historic Landmark by the National Park Service, U.S. Department of the Interior. By that time both building and grounds had undergone considerable deterioration. Essential repairs to the roof and structural timbers ¹Delivered at New Haven, Connecticut, November 14, 1900, at the request of the Executive Committee of the American Association of Agricultural Colleges and Experiment Stations. Text published by J. Horace McFarland Co.

²This collection was presented by Morrill to the Justin Smith Morrill Memorial Library in Strafford, Vermont, and is now shelved there.

³Morrill's plan of his home grounds is now on loan to the Wilbur Library of the University of Vermont, and is displayed in its Special Collections Room.
PLATE XIV

The Justin S. Morrill home in Strafford, Vermont, as it appeared around 1920 (top), and in its immediate surroundings in 1967 (bottom).
were undertaken immediately, and further restoration is proceeding slowly as funds are available. It has not yet been possible to restore the grounds to anything resembling their original condition (Plates XIV, XV), and it may never be, but the few plant species apparently surviving from Morrill’s plantings are in no immediate danger. Some of the more interesting specimens presently on the grounds are:

_Magnolia kobus_ (Plate XVI). This one tree has been badly crowded by larger trees, was broken almost to the ground 30 or more years ago but has returned to a height of about 18 feet. It flowers and fruits only sparsely, because it is growing in the shade of much larger trees.

_Mahonia aquifolium_ (Plate XVII). This forms a low thicket some 15 feet across, apparently the result of spreading of a single plant. It flowers well and shows little sign of winter damage, probably because it is usually covered by snow during the winter and is growing in a partly-shaded site.

_Pinus nigra_ (Plate XV). This is a 60-foot tree, with a trunk 27 inches in diameter at eye-level. It has developed a picturesque habit with a tendency to be flat-topped.

_Syringa persica alba_. This is a graceful shrub, very old, yet not over 6 feet in height.

_Thuja occidentalis_. There are large specimens on the grounds, obviously planted. The largest was planted at one of four corners of a garden house, long since gone. This tree has five trunks averaging 12 inches in diameter at eye level. The bole, where all trunks have joined, measures between 8 and 4 feet in diameter. Even though this species is native to the area, specimens of this size are almost never seen in the wild.

All of these but the native _Thuja occidentalis_ are rarely cultivated in this part of Vermont, but all except _Magnolia kobus_ would have been available to Morrill in 1850. This species was introduced into the U.S. in 1865, so the tree must have been planted later in Morrill’s life or afterward. This explains its absence in Morrill’s planting lists.

In addition, several large specimens of native species of _Acer, Fraxinus, Larix, Picea_ and _Pinus_ remain on the grounds. Some were undoubtedly planted there by Morrill.

Without greater financial support than the Justin Smith Morrill Foundation has yet been able to muster (for all the dedication of its trustees and members) restoration of the house itself will proceed slowly. Any restoration of the grounds must come about more slowly still. If and when improvements on the grounds are possible, it will be most important that they are carried out with great care. The few remaining plant specimens that can (with reasonable confidence) be
PLATE XV

Barns and shops on the Morrill property as they appeared in 1967 (top). Overhanging branch against the sky at right is from a tree of *Pinus nigra*, probably planted by Morrill. This tree is shown (bottom, left) growing close to a large specimen of *Thuja occidentalis* beside the Morrill home.
traced back to Morrill could be lost or damaged in the process, breaking the last tangible links with this side of the Morrill personality.

Meanwhile these remaining specimens appear to be holding their own against nature, as they have done for many years. They await plant-interested visitors to the Justin Smith Morrill Homestead.

### Plants Listed by Justin S. Morrill on the Plan of His Estate Grounds

**KEY**

* Plants that appear to have been actually planted by Morrill (not necessarily to exclude others that may have been planted without record).

** Plants that can be found on the Morrill property today (not necessarily the same ones planted by Morrill but probably so, except for some of the native species).

<table>
<thead>
<tr>
<th>Trees and shrubs (probable identity)</th>
<th>Names as noted by J.S.M. on plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abies balsamea</strong></td>
<td>Fir Balsam – Abies balsamifera</td>
</tr>
<tr>
<td><em>Acer negundo</em></td>
<td>Ash-leaved Negundo</td>
</tr>
<tr>
<td><em>Acer platanoides</em></td>
<td>Norway Maple</td>
</tr>
<tr>
<td><strong>Acer saccharum or A. rubrum</strong></td>
<td>Maple</td>
</tr>
<tr>
<td><em>Aesculus hippocastanum</em></td>
<td>Horse Chestnut</td>
</tr>
<tr>
<td><em>Alnus glutinosa</em></td>
<td>European Alder</td>
</tr>
<tr>
<td><em>Artemisia abrotanum</em></td>
<td>Southern Wood</td>
</tr>
<tr>
<td><em>Berberis macrantha</em></td>
<td>Violet Fruited Barberry</td>
</tr>
<tr>
<td><em>Berberis vulgaris</em></td>
<td>Barberry – Berberis vulgaris</td>
</tr>
<tr>
<td>*Berberis vulgaris var. atropurpurea</td>
<td>Barberry, Purple Leaved – Berberis vulgaris</td>
</tr>
<tr>
<td>Boussingaultia sp.*</td>
<td>Madeira Vine</td>
</tr>
<tr>
<td>Calycanthus floridus</td>
<td>Sweet Scented Shrub – Calycanthus florida</td>
</tr>
<tr>
<td><em>Campsis radicans</em></td>
<td>Scarlet Trumpet Flower – Bignonia radicans</td>
</tr>
<tr>
<td>Caragana microphylla</td>
<td>Pea Tree, Altagana</td>
</tr>
<tr>
<td><em>Castanea sativa</em></td>
<td>Spanish Chestnut – Castanea visca</td>
</tr>
<tr>
<td><em>Chaenomeles japonica</em></td>
<td>Japan Quince – Pyrus japonica</td>
</tr>
<tr>
<td>Colutea arborescens</td>
<td>Yellow Bladder Senna – Colutea arborescens</td>
</tr>
<tr>
<td>Convolvulus japonicus</td>
<td>Calistegia pubescens</td>
</tr>
<tr>
<td>Cornus florida</td>
<td>Cornus florida</td>
</tr>
</tbody>
</table>
PLATE XVI

Tree of *Magnolia kobus* growing in the shade of larger trees on the Morrill property in Strafford, Vermont. It flowers and fruits only sparsely, for lack of adequate sunlight.
Cornus sanguinea
Cornus sanguinea - Bloody twig Dogwood

Cotinus coggyria
Venetian Fringe Tree – Rhus cotinus

Crataegus sp.
Crataegus rigidia

Crataegus chrysocarpa var. phoenicea
Crataegus coccinea

Crataegus crus-galli var. pyracanthifolia
Crataegus crus-galli pyracanthifolia

Crataegus eriocarpa
Crataegus eriocarpa

*Crataegus oxyacantha
Hawthorn – Crataegus oxyacantha

Crataegus oxyacantha var. aurea
Crataegus oxyacantha aurea

*Crataegus oxyacantha var. rosea-plena
Hawthorn – double pink

Crataegus oxyacantha cv.
Crataegus Double Scarlet

Crataegus oxyacantha cv.
Crataegus Double White

Crataegus prunifolia
Crataegus ovalifolia

Cytisus scoparius
Scotch Broom

Daphne mezereum
Pink Mezereum

Deutzia scabra
Deutzia scabra

 Euonymus americanus
Strawberry Tree – Euonymus americanus

*Euonymus americanus
Euonymus americana

*Fagus sylvatica ‘Atropunicea’
Purple Beech

 Forsythia viridissima
Forsythia viridissima

**Fraxinus americana
Ash – Fraxinus americana

 Fraxinus excelsior
European Ash

*Fraxinus excelsior ‘Pendula’
Weeping Ash

*Ginkgo biloba
Ginkgo Tree

 Gleditsia triacanthos
Three-thorned Acacia

*Halesia carolina
Silver Bell Tree – Halesia tetraplera

*Hibiscus syriacus or Althaea officinalis
Althea

Indigofera sp.
Indigo Shrub

Jasminum sp.
Jasmine

*Juniperus communis var. suecica
Swedish Juniper

Juniperus virginiana
Red Cedar

Kalma latifolia
Mountain Laurel – Kalmia latifolia

Kerria japonica
Japan Globe Flower – Kerria japonica

[ 48 ]
Mahonia aquifolium growing in a mass toward the front of the Morrill property. It appears to have grown from a single plant, likely planted there by Morrill himself.
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koelreuteria paniculata</td>
<td>Japan Koelreuteria - Koelreuteria paniculata</td>
</tr>
<tr>
<td>*Laburnum alpinum</td>
<td>Scotch Laburnum</td>
</tr>
<tr>
<td>*Larix decidua</td>
<td>European Larch</td>
</tr>
<tr>
<td>**Larix laricina</td>
<td>Larch - Pinus micro</td>
</tr>
<tr>
<td>Ligustrum lucidum or *L. japonicum</td>
<td>Privet, Evergreen</td>
</tr>
<tr>
<td>Ligustrum vulgare</td>
<td>Privet, Common</td>
</tr>
<tr>
<td>*Lonicera flava</td>
<td>Yellow Trumpet Honeysuckle - Lonicera flava var. fraseri</td>
</tr>
<tr>
<td>*Lonicera sempervirens</td>
<td>Evergreen Honeysuckle</td>
</tr>
<tr>
<td>Lonicera sp.</td>
<td>Honeysuckle</td>
</tr>
<tr>
<td>Lonicera tatarica</td>
<td>Upright Honeysuckle (red tart.)</td>
</tr>
<tr>
<td>Magnolia virginiana</td>
<td>Swamp Magnolia - Magnolia glauca</td>
</tr>
<tr>
<td>**Mahonia aquifolium</td>
<td>Holly-leaved Mahonia</td>
</tr>
<tr>
<td>*Mahonia pinnata</td>
<td>Mahonia fascicularis</td>
</tr>
<tr>
<td>Parthenocissus quinquefolia</td>
<td>Virginia Creeper</td>
</tr>
<tr>
<td>Parthenocissus tricuspidata</td>
<td>American Ivy</td>
</tr>
<tr>
<td>**Philadelphus coronarius</td>
<td>Syringa, Common - Philadelphus coronarius</td>
</tr>
<tr>
<td>*Philadelphus grandiflorus</td>
<td>Syringa, Large Flowering - Philadelphus grandiflora</td>
</tr>
<tr>
<td>**Picea abies</td>
<td>Norway Spruce</td>
</tr>
<tr>
<td>**Picea glauca or P. rubens</td>
<td>Spruce</td>
</tr>
<tr>
<td>**Pinus nigra</td>
<td>Austrian Pine</td>
</tr>
<tr>
<td>**Pinus strobus</td>
<td>Weymouth (White) Pine - Pinus strobus</td>
</tr>
<tr>
<td>*Pinus wallichiana (P. griffithii)</td>
<td>Bhutan (Lofty) Pine</td>
</tr>
<tr>
<td>*Platanus acerifolia</td>
<td>English Sycamore</td>
</tr>
<tr>
<td>*Populus alba</td>
<td>Silver Leaf Poplar (white) - Populus alba</td>
</tr>
<tr>
<td>Populus nigra italic</td>
<td>Lombardy Poplar</td>
</tr>
<tr>
<td>*Prunus glandulosa</td>
<td>Almond, Double Flowering - Amygdalus pumila</td>
</tr>
<tr>
<td>*Prunus serotina pendula</td>
<td>Weeping Cherry</td>
</tr>
<tr>
<td>*Prunus sp.</td>
<td>Double Flowering Cherry</td>
</tr>
<tr>
<td>Prunus sp.</td>
<td>Perfumed Cherry</td>
</tr>
<tr>
<td>*Quercus coccinea</td>
<td>Scarlet Oak</td>
</tr>
<tr>
<td>Quercus lyrata</td>
<td>Overcup Oak</td>
</tr>
</tbody>
</table>
*Quercus robur  
English Royal Oak

**Rhamnus cathartica  
Buckthorn (Hedge)

Rhododendron nudiflorum  
Pink Azalea – Azalea nudiflora

*Rhododendron viscosum  
Swamp Pink Azalea

*Rhus typhina  
Sumac – Rhus typhina

Ribes aureum  
Missouri Currant – Ribes aureum

Ribes gordonianum  
Beaton’s Currant – Ribes Beatonii

Ribes sanguineum  
Red Flowering Currant – Ribes sanguinea

Robinia hispida  
Rose Acacia

*Robinia pseudoacacia  
Honey Locust – Robinia pseudoacacia

Rosa moschata  
Musk Rose

*Salix sp.  
Comerville or Cornwall Willow? (not fully legible)

*Salix babylonica  
Napoleon Weeping Willow

*Salix repens rosmarinifolia  
Rose-mary Leaved Willow

Sophora japonica  
Sophora japonica

*Sorbus americana  
Mountain Ash – Pyrus aucuparia

*Sorbus aucuparia  
European Mountain Ash

Spiraea alba  
Spirea lanceolata

Spiraea sp. or cv.  
Spirea (Col. Bissell)

Spiraea cantoniensis  
Spirea reevesii

Spiraea media  
Spirea daurica

Spiraea prunifolia  
Spirea prunifolia plena

Spiraea salicifolia  
Spirea salicifolia

Spirea salicifolia or S. rubra  
Spirea salicifolia rubra

Spiraea sibiraea  
Spirea levigata

Spiraea tomentosa  
Spirea tomentosa

Symphoricarpos albus  
Snowdrop – Symphora racemosa

*Syringa ‘Charles X’  
Lilac, Charles X

*Syringa josikaea  
Lilac, Josikea

Syringa persica  
Lilac, Persian Purple – Syringa persica

**Syringa persica var. alba  
Lilac, Persian White – Syringa persica

Syringa sp. or cv.  
Lilac, Blue

[ 51 ]
**Syringa vulgaris** Lilac (common) – Syringa vulgaris

*Tamarix africans* African Tamarisk

*Taxus baccata* English Yew

*Taxus baccata ‘Fastigiata’* Irish Yew

**Thuja occidentalis** Arbor Vitae – Thuja occidentalis

*Thuja orientalis* Chinese Arborvitae

*Tilia sp.* European Linden

**Tsuga canadensis** Hemlock – Abies canadensis

**Ulmus americana** Elm – Ulmus americana

*Viburnum opulus* var. *roseum* Snow Ball – Viburnum opulus roseum

*Viburnum trilobum* or *V. opulus* Cranberry Tree

*Weigela rosea* Weigela rosea

*Wisteria sinensis* Wistaria (Chinese)

*Yucca filamentosa* Yucca filamentosa

**Garden roses**

49 cultivars: 40 hybrid perpetual, 5 hybrid damask, and 4 climbing roses.

**Miscellaneous ornamentals** (number of kinds)

| Amaryllis | 1 | Dictamnus | 1 | Lupinus | 1 | Phlox | 6 |
| Asparagus | 1 | Geranium | 1 | Lychnis | 1 | Primula | 2 |
| Aquilegia | 1 | Hibiscus | 1 | Ornithogalum | 1 | Tulipa | 12 |
| Convallaria | 1 | Hyacinth | 2 | Oxalis | 1 | Valeriana | 1 |
| Coreopsis | 1 | Iris | 4 | Paeonia | 7 | Verbena | 7 |
| Corylus | 1 | Lathyrus | 1 | Papaver | 1 | Viola | 3 |
| Delphinium | 3 | Lilium | 5 | Petunia | 2 |

**Fruits, berries, and nuts** (number of kinds)

| Apples | 18 | Blackberries | 3 |
| Cherries | 9 | Currants and gooseberries | 17 |
| Filbert | 1 | Raspberries | 5 |
| Pears | 15 | Rhubarb | 1 |
| Plums | 9 | Strawberries | 2 |
| Quince | 1 | |

HARRISON L. FLINT