

## Historic Plant Material Sources

### INTRODUCTION

In a cultural landscape, a common landscape characteristic is the vegetation that is either associated with the historical development of the landscape or resulted from cultural activities on the land. Vegetation that can be linked to an established period of significance and that has remained relatively unchanged over time adds to the overall significance of the landscape. The features associated with vegetation include individual plants and aggregations of plants and plant communities. (See Figure 1.)

Identifying, documenting, and analyzing vegetation is a prerequisite to preparing a Cultural Landscape Report (CLR). Knowledge of the vegetation allows a site history to be developed, the existing conditions of a landscape to be understood, and a treatment plan to be developed. Plants are identified through a site survey or plant inventory and historic photographs of plants in the landscape. (See Figure 2.) Archaeological techniques, such as pollen, phytolith, and macroflora analyses, may be used to identify nonexistent plants that were integral to cultural activities in the landscape. Plant identification data may already be available as a result of a plant inventory conducted prior to a CLR. Historical research on cultivated plants may be necessary to accurately identify and date a particular plant. For example, a historic nursery catalog may contain a description of a plant variety or cultivar and a date of introduction into cultivation. In other cases it may be necessary to use horticulture or botany experts to identify particular plants.

To determine the significance of vegetation to the history of a landscape, other site investigation techniques can be used. Tree coring is a technique used to identify the age of trees to determine whether they date from a historic period. Historical and contemporary field and aerial photographs may be analyzed to understand how vegetation has



*Figure 1. This Ginkgo tree was planted in the early nineteenth century and is an individual plant feature. Vanderbilt Mansion National Historic Site. (NPS, 1995)*

changed. Existing conditions investigation data is integrated with historical research data to thoroughly understand the significance and integrity of the vegetation in a landscape.

Intrinsic to the dynamic quality of cultural landscapes is the concept that plants which once existed have died and those that still remain will eventually die. Therefore, in selecting a landscape treatment or describing treatment guidelines in a CLR, it is important to consider the replacement of significant plant material, including the method of replacement and plant availability. The following section addresses in-kind replacement of historic plant material and highlights sources of both historic plant material and historic plant expertise.

## IN-KIND REPLACEMENTS OF HISTORIC PLANTS

Depending on a plant's significance in a cultural landscape, it may be replaced with the following:

- Exact genetic clone of the original. This is appropriate for rare plant varieties having a significant association with an individual or event. (See Figures 3 and 4.)
- Exact taxonomic replacement. This is appropriate for plants with a significant cultural use or function in a landscape.
- Comparable substitute for the plant's form and character. This is appropriate to address known diseases or environmental changes in a landscape. (See Figure 5.)



**Figure 2.** Plant identification is a prerequisite to an analysis and evaluation of vegetation for a CLR and can be performed during a plant inventory. Longfellow National Historic Site. (NPS, 1993)

In-kind replacements of historic plants vary in availability within the nursery trade, from relatively common to rare. Availability depends in part on the particular species of plant being replaced; that is, whether the desired replacement is a straight species or a lower taxon, such as a cultivar (a cultivated variety or a naturally occurring variety). Straight species are identified only by a generic and specific binomial Latin name, whereas man-made cultivars are typically identified by the genus or species name followed by an English name in single quotation marks. Naturally occurring varieties are identified by the species name followed by a Latin name with no quotation marks.



**Figure 3.** These historic apple trees are associated with Presidents John Adams and John Quincy Adams. Therefore, in-kind, genetic replacement of these old varieties is an appropriate treatment. Adams National Historic Site. (NPS, 1995)



**Figure 4.** Apple fruit from old varieties of apple trees. Minuteman National Historic Site. (NPS, 1994)

## Cultivars

Many cultivated varieties of plants created historically by plant breeders have been rendered extinct either through hybridization (to create “improved” cultivars), or lack of perpetuation through vegetative propagation. Some cultivated plant varieties are highly ephemeral, existing in the nursery trade for several years or a decade and then being



*Figure 5. Due to the devastating effects of Dutch Elm Disease, the American Elm is often not replaced in-kind, but instead with a disease resistant cultivar, such as Princeton, or Liberty Bell. The young tree in the foreground is a Liberty Elm cultivar, which replaces a missing American Elm. A mature straight species American Elm can be seen to the left in the background. Longfellow National Historic Site. (NPS, 1989)*

superseded by another cultivar. Cultivars have come and gone like fashionable styles throughout the last several centuries of intensive ornamental plant breeding and nursery production. To some extent, the first plant species to be introduced into the United States or collected for cultivation have had the most cultivars created over time. Particularly popular and common genera or species of garden plants are most likely to have been “improved” horticulturally over time, and many cultivars have been created from them.

Cultivars are typically variants on the species of flower and fruit characteristics, plant size, form, and disease resistance. Many cultivars no longer exist,

while others are only found in cultivation in a few historic gardens. Some historic ornamental plant cultivars and species can be found in botanical gardens and cultural landscapes, while others are preserved as germplasm in seed banks. Of great concern to ecologists and plant experts is the reduction in plant genetic diversity that results from the extinction of cultivars, varieties, and species. Genetic diversity is viewed favorably in the health of ecosystems, promoting stability and the ability to resist natural and cultural disturbance. In edible plant breeding, thousands of varieties have been lost during the twentieth century in the standardization of crop plants, particularly for their suitability to mechanized production and for increased crop yield.

## Straight Species

Straight species of plants (nonhybridized plants) may be among the more difficult to find commercially. This is due to the emphasis on plant breeding in commercial horticulture to improve the visual characteristics of ornamental plants for sale. A nonhybridized American Ash (*Fraxinus americana*), for example, may not be available from tree nurseries, though numerous cultivars of the species can be found.

Depending on the relative cultural value or importance of a plant and its significance in a cultural landscape, the in-kind replacement of a particular straight species of plant may or may not be important. For straight species of plants that are native to the United States, native plant nurseries may be the best source. For rare and endangered native species, the Center for Plant Conservation (CPC) is a potential source of plant propagules. The CPC is a consortium of 25 United States botanical gardens and arboreta, which conserve listed rare and endangered native plant species. The CPC at Missouri Botanical Garden can be contacted at the following address:

**Center for Plant Conservation  
Missouri Botanical Garden**

P.O. Box 299  
St. Louis, MO 63166  
343-577-9450

## PLANT SOURCES AND PLANT EXPERTISE

The following list gives sources of both historic plant material and historic plant expertise. Scott Kunst, a landscape historian, is an expert on historic ornamental plant materials. Kunst has compiled a comprehensive list of commercial sources for historic ornamental plants throughout the United States. To obtain the complete *Source List for Historic Seeds and Plants*, contact Scott Kunst at:

**Old House Gardens**

536 Third Street  
Ann Arbor, MI 48103-4957  
313-995-1486

The following is an abbreviated list of commercial sources of historic plant material that Kunst recommends. (The focus of the list is on garden ornamentals and not on plants used in kitchen gardens, orchards, or agriculture.)

**Flower and Herb Exchange**

3076 North Winn  
Decorah, IA 52101  
319-382-5990

**Old Sturbridge Village**

1 Sturbridge Village Road  
Sturbridge, MA 01566  
508-347-3362

**Perennial Pleasures**

2 Brickhouse Road  
E. Hardwick, VT 05836  
802-472-5104

### **Select Seeds**

180 Stickney Road  
Union, CT 06076  
203-684-9310

### **Thomas Jefferson Center for Historic Plants—Monticello**

P.O. Box 316  
Charlottesville, VA 22902  
804-984-9816

If a particularly important or culturally valuable historic plant species or cultivar is difficult to identify, the services of a historic plant expert may be necessary. Historic plant experts exist within horticultural and historical societies, botanical gardens and arboreta, research institutions, herbaria, commercial horticulture, and the cultural landscape preservation field. In the National Park Service (NPS), the Olmsted Center for Landscape Preservation may have the botanical or horticultural expertise to identify historic ornamental plant species and cultivars. For more information, contact:

### **Olmsted Center for Landscape Preservation**

99 Warren Street  
Brookline, MA 02146  
617-566-1689

Straight species of historic plants may be the easiest to identify, while the most hybridized plants (in which the species lineage is so complex that the cultivar name is given immediately following the genus name) may be the most difficult. However, in

some cases old cultivars can be identified using “origination lists” and “cumulative checklists.” These lists describe the names, appearances, and commercial dates of old cultivars, and they typically contain all known cultivars of a plant species along with dates of introduction (or registration) and brief descriptions.

To replace a plant with a particular cultivar, it may be necessary to search specialized nurseries, collectors, botanical gardens, and other cultural landscapes. It is advisable to examine nursery plants to determine whether the historic cultivar is what the label claims it to be. Some cultivars have been inadvertently substituted over time and others are simply misidentified. A bibliography of origination lists and cumulative checklists of ornamental plants is included at the end of the text. The reference section is largely derived from an article by Scott Kunst and Arthur Tucker that appeared in the *APT Bulletin*, vol. xxi, no. 2, in “1989: Where Have All the Flowers Gone?”

*The Sourcebook of Cultivar Names*, an expanded list of cultivars and pertinent information, has been compiled by Scott Kunst. The Sourcebook can be obtained through Arnoldia of the Arnold Arboretum, at the following address:

### **Arnoldia**

#### **Arnold Arboretum**

125 Arborway  
Jamaica Plain, MA 02130  
617-524-1718

The following is a list of sources of further expertise and information on historical plants:

**Alliance for Historic  
Landscape Preservation**  
82 Wall Street, # 1105  
New York, NY 10005

**American Association of  
Botanical Gardens and Arboreta**  
786 Church Road  
Wayne, PA 19087  
610-688-1120

**American Daffodil Society  
Mary Lou Gripshover**  
1686 Grey Fox  
Milford, OH 45150

**Garden Conservancy**  
P.O. Box 219  
Cold Spring, NY 10516  
914-265-2029

**Heritage Rose Group  
Miriam Wilkins**  
925 Galvin Drive  
El Cerrito, CA 94530  
510-526-6960

**Historic Iris Preservation Society  
Ada Godfrey**  
9 Bradford Street  
Foxborough, MA 02035  
508-543-2711

**National Council for the Conservation of  
Plants and Gardens**

**The Pines—Wisley Garden**  
Woking, Surrey, GU23 6QB  
United Kingdom  
44-0483-211-465

**New England Garden Society**  
300 Massachusetts Avenue  
Boston, MA 02155  
617-536-9280

**Southern Garden History Society**  
Drawer F, Salem Station  
Winston-Salem, NC 27108

**Wakefield and North of  
England Tulip Society**  
70 Wrethorpe Lane  
Wrethorpe, Wakefield  
West Yorkshire, WF2 0PT  
United Kingdom

**HISTORIC PLANT REFERENCES  
(ORIGINATION LISTS AND  
CUMULATIVE CHECKLISTS)**

American Daffodil Society. Daffodil Data Bank. Unpublished list available from Ms. Leslie Anderson, A.D.S., Route 3, 2302 Byhalia Rd., Hernando, MS 38632.

American Hemerocallis Society. *Hemerocallis Checklist, 1893 to July 1, 1957*. A.M.S., Mrs. Geneva Archer, 1522 Nevada Street, Houston, TX 77006.

- Australian Geranium Society. *Checklist and Register of Pelargonium Cultivar Names*. Mrs. P. Sladek, Publication Sales Officer, 76 Jocelyn Street, Chester Hill, NSW, 2162 Australia.
- Bardorf, Lynn R. 1987. *Boxwood Bulletin* 26: 76-81.
- Beales, P. 1985. *Classic Roses*. New York: Holy, Rinehart and Winston.
- Boullemier, L.B. 1985. *A Check List of Species, Hybrids and Cultivars of the Genus Fuchsia*. England: Poole, Blandford.
- Conard, H.S. 1905. *The Waterlilies*. Washington, DC: Carnegie Institution of Washington.
- Coombs, R.E. 1981. *Violets*. Kent, England: Croom Helm.
- Cumming, R. 1964. *The Chrysanthemum Book*. New York: Van Nostrand.
- Delano McKelvey, S. 1928. *The Lilac*. New York: Macmillan.
- Den Ouden, P., and B.K. Boom. 1978. *Manual of Cultivated Conifers Hardy in the Cold- and Warm-Temperature Zone*. Netherlands: Martinus Nijhoff.
- Dobson, B.R. *Combined Rose List*. Updated yearly. Beverly R. Dobson, 215 Harriman road, Irvington, NY 10533.
- Durrant, Tom. 1982. *The Camellia Story*. New York: Heinemann.
- Eisenbeiss, G.K. 1973. *International Checklist of Cultivated Ilex, Part 1, Ilex opaca*. Contribution No. 3. New York: National Arboretum.
- Elliston Allen, David. 1969. *The Victorian Fern Craze*. London: Hutchinson & Co.
- Ewart, R. 1982. *The Fuchsia Lexicon*. New York: Van Nostrand Reinhold.
- Fairchild, Lee. 1953. *A Complete Book of the Gladiolus*. New York: Farrar, Straus and Young.
- Fenderson, G.K. 1986. *A Synoptic Guide to the Genus Primula*. Lawrence, KS: Allen Press.
- Galle, F.C. 1987. *Azaleas*. Portland, OR: Timber Press.
- Gelderen, D.M., and J.R.P. van Hoey Smith. 1986. *Conifers*. Portland, OR: Timber Press.
- Genders, R. 1959. *Primroses*. New York: St. Martins Press.
- Goudey, C.J. 1985. *Maidenhair Ferns in Cultivation*. Portland, OR: Lothian Publishing Co.
- Griffiths, T. 1983. *The Book of Old Roses*. London: Michael Joseph.
- \_\_\_\_\_. 1987. *The Book of Classic Old Roses*. New York: Viking Penguin.
- Haring, P.A. 1986. *Modern Roses 9*. Shreveport, LA: American Rose Society.

- Harrison, C.R. 1975. *Ornamental Conifers*. New York: Hafner Press.
- Hecker, W.R. 1971. *Auriculas and Primroses*. London: B.T. Batsford.
- Heieck, Ingobert. 1980. *Hedera Sorten*. Heidelberg, Germany: Gartneri der Abtei.
- Holly Society of America. 1953. *Bulletin No. 6, The Preliminary Holly Check List*. Holly Society of America.
- Holly Society of America. 1983. *Ilex Cultivar Registration List, 1958-1983*. Holly Society of America.
- Hu, Shiu-ying. Philadelphia. *Journal of the Arnold Arboretum*, 1954-1956 35: 275-333; 36: 52-109, 325-368; 37: 15-90.
- Jefferson, R.M. 1970. *History, Progeny and Locations of Crabapples of Documented Authentic Origin*. Contribution No. 2. New York: National Arboretum.
- Jefferson, R.M., and Kay Kazue Wain. 1982. *The Nomenclature of Cultivated Japanese Flowering Cherries (PRUNUS): The Sato-zakura Group*. Contribution No. 5. New York: National Arboretum.
- Kessenich, G.M. 1976. *Peonies: History of the Peonies and Their Origination*. American Peony Society.
- Krauss, H.K. 1955. *Geraniums for Home and Garden*. New York: Macmillan.
- Krussmann, Gerd. 1984. *Manual of Cultivated Broadleaved Trees and Shrubs*. 3 vols. Portland, OR: Timber Press.
- \_\_\_\_\_. 1985. *Manual of Cultivated Conifers*. Portland, OR: Timber Press.
- Leach, D.G. 1961. *Rhododendrons of the World and How to Grow Them*. New York: Charles Scribner's Sons.
- Lee, F.P. 1965. *The Azalea Book*. New York: Van Nostrand.
- Mastalerz, J.W. 1971. *Geraniums*. University Park, PA: Pennsylvania Flower Growers.
- North American Gladiolus Council. 1975. *Gladiolus Variety Percentages*. Vincent A. Sattler, 4919 Angola Road, Toledo, OH 43615.
- Peckham, S. 1939. *Alphabetical Iris Checklist*. Baltimore: American Iris Society.
- R.H.S. Enterprises Ltd. 1969. *Tentative Classified List and International Register of Dahlia Names*. England: R.H.S. Garden, Wisley, Woking, Surrey GU23 6QB.
- R.H.S. 1982. *The International Lily Register 1982*. England: R.H.S. Garden, Wisley, Woking, Surrey GU23 6QB.
- \_\_\_\_\_. 1983. *The International Dianthus Register*. 2nd ed. England: R.H.S. Garden, Wisley, Woking, Surrey GU23 6QB.

\_\_\_\_\_. 1985. *Handbook on Orchid Nomenclature*. 3rd ed. England: R.H.S. Garden, Wisley, Woking, Surrey GU23 6QB5.

\_\_\_\_\_. 1985. *Sanders Orchid Addenda 1961-1985*. England: R.H.S. Garden, Wisley, Woking, Surrey GU23 6QB.

\_\_\_\_\_. 1986. *The International Dianthus Register First to Third Supplements (1984-1986)*. England: R.H.S. Garden, Wisley, Woking, Surrey GU23 6QB.

Rogers, M.O. *Tentative International Register of Cultivar Names of the Genus Syringa*. The International Lilac Society.

Royal General Bulbgrowers' Association. *Classified List and International Register of Hyacinths and Other Bulbous and Tuberous-rooted Plants*. Koninklijke Algemeene Vereeniging voor Bloembollencultuur, Parklaan 5, Hillegom, Holland.

Royal General Bulbgrowers Association. 1981. *Classified List and International Register of Tulip Names*. Koninklijke Algemeene Vereeniging voor Bloembollencultuur.

Salley, H., and H. Greer. 1986. *Rhododendron Hybrids: A Guide to their Origins*. Portland, OR: Timber Press.

Schaepman, Henri K.E. *Preliminary Checklist of Cultivated Hedera. Part 1: Juvenile Varieties and Cultivars of Hedera Helix*. The American Ivy Society.

Stout, A.B. 1986. *Daylilies*. Reprint of 1934 edition. Millwood, NY: Sagapress.

Smith G.F, B. Burrow, and D.B. Lowe. 1984. *Primulas of Europe and America*. Birmingham, England: Alpine Garden Society.

Smith, W.W., G. Forrest, and H.R. Fletcher. 1977. *The Genus Primula*. Vadu, Liechtenstein: J. Cramer.

Swartley, J.C. 1984. *The Cultivated Hemlocks*. Portland, OR: Timber Press.

Tucker, A.O., and Karel J.W. Hensen, 1985. *Baileya 22*: 168-177.

Welch, H. 1978. *Manual of Dwarf Conifers*. Rhode Island: Little Compton, Theophrastus.

Wemyss-Cooke, Jack. *Primulas Old and New*. North Pomfret, Vermont: David and Charles.

Wister, J.C. 1962. *The Peonies*. Washington, DC: American Horticultural Society.

Wyman, D. 1974. *Shrubs and Vines for American Gardens*. New York: Macmillan.

## PLANT IDENTIFICATION REFERENCES

Bailey, Liberty Hyde. 1976. *Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada*. New York: Macmillan.

Bean, William Jackson. 1970. *Trees and Shrubs Hardy in the British Isles*. 8th ed., fully revised. London: J. Murray.

Dirr, Michael A. 1990. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. 4th ed. Illinois: Stipes Publishing.

Phillips, Roger. 1978. *Trees in Britain, Europe and North America*. London: Ward Lock.

Wyman, Donald. 1974. *Shrubs and Vines for American Gardens*. New York: Macmillan.

## OTHER USEFUL REFERENCES

Available from The Historical Gardener, 1910 N. 35th Place, MT. Vernon, WA 98273-8981, 206-424-3154.

McClelland, Kathleen, ed. *The Historical Gardener: Plants and Practices of the Past*. ISSN 1067-5973. Quarterly newsletter, includes sources of historic plant seed and nursery stock.

Olmsted Center for Landscape Preservation. 1997. *A Guide to Inventorying Plants at Historic Properties*. Massachusetts. Available in January 1997 from the Olmsted Center: 99 Warren Street, Brookline, MA 02146, 617-566-1689.

Tankard, Judith, K. ed. *Journal of the New England Garden History Society*. ISSN 1053 2617. A benefit of membership of the New England Garden History Society of the Massachusetts Historical Society, published annually. Membership and purchase address: Librarian, Massachusetts Horticultural Society, 300 Massachusetts Avenue, Boston, MA 02115, 617-536-9280.

Whealy, Kent, ed. *The Garden Seed Inventory*. Iowa: Seed Savers Exchange, Kent Whealy Director, P.O. Box 70, Decorah, Iowa, 52101, 1985. An inventory of all nonhybrid edible plant seed and sources in the United States between 1982 and 1984.

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