

Restoration Strategies

Native Plant Garden: Practices and Recommendations

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Abstract

Native plant gardening has a long and complex history closely tied to English "wild gardening" and other gardening traditions. Native U.S. plants, including N.W. natives are already used worldwide. The history and traditions of ecological restoration, on the other hand, are rooted in scientific thought and tradition. Restoration ecologists can build on public interest in growing native plants horticulturally to increase support for restoration issues.

Keywords

ecological restoration, garden history, nature philosophy, native plant societies

Introduction

"It is important that conservationists and restorationists do not fall into the trap of ecological elitism, i.e. proposing the exclusivity of their own view of nature. Ecologists are surely the experts on ecology, but on nature there are many more" (Swart et al 2001).

Gardening is a venerable tradition, making "ancient forests" seem a truly new concept. Many histories of gardening exist on the bookshelves of individuals and libraries, featuring gardening traditions from Egypt, Greece, Rome, and China up to modern day gardening throughout the world. Penelope Hobhouse (1992) says, "The very stuff of the history of gardening, from ancient Egypt to the present day consists largely of plants that have been displaced and transplanted to new situa-

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tions . . . often being 'improved' in some respect along the way."

Today, public gardens representing their own regional flora exist around the world and plants from many nations are used as garden ornamentals internationally, including northwest native plants. In a sense, "native to the planet earth" has become applicable as a gardening concept, following the trend in generally weedy species like dandelions. With this trend come concerns about exotic species and their invasive potential, and generalized concerns about interchange between germplasm of native plants in nature and native plants or their relatives in garden or cultivated settings.

My intent here is to provoke thought and share some perspectives to aid further discussion and communication.

History of Gardening in the Context of Gardening with Native Plants

Gardening is as old as civilization. The first gardens were most likely strictly utilitarian, such as growing food or medicinal plants close to home. The gardening traditions in the West (primarily Europe and its former colonies) originate at or before 2000 BC, perhaps in Egypt, where art objects from tombs show gardens and images of gardens (Hobhouse, 1992). Western gardening patterns can be traced to many countries, including not only Egypt,

but Greece, Rome, and the nations of Islam. Islamic gardens, for example, were developed in enclosed spaces in primarily desert climates, to be places of respite from the heat. They often included elaborate water "features" and shade trees to accomplish this goal. Our traditions of water in our garden spaces can be traced to Islamic gardens as reinterpreted in Europe.

Native plant gardening *per se* is easily traced to English gardens of the 19th and 20th Centuries, which themselves can be traced back to naturalistic gardens of the Greeks (Hobhouse 1992). "By the 1830's," says Hobhouse, "most identifiable garden styles had already been tried, including the 'wild or native garden'."

A critical historic event is the development of the "wild garden" as an antithesis to formal Victorian schemes (Hobhouse 1992). In essence, the style involves planting many perennials and shrubs in an existing landscape or trees and shrubs, creating a "naturalistic" whole. This trend is still evident not only in native plant gardens but in any gardens with shrub and perennial borders. Wild gardening was made popular by William Robinson when he published a small book called simply *The Wild Garden* (Robinson 1870). Today, a good representative of this style of garden can be found at Portland's Berry Botanic Garden. In the 1930's the creator of this garden in the hills south of Portland, Rae Selling Berry, had already corresponded heavily with English gardeners who introduced the concept to her.

Interest in native plant gardening in North America is evident early on. By the mid-1700's native plants were being incorporated as garden ornamentals on the East Coast (Hobhouse 1992). At Monticello, Thomas Jefferson was experimenting with native plants in traditional landscape settings. For example, he was using the native Osage orange (*Maclura pomifera*) in a traditional European-style hedge (Hobhouse 1992). John Bartram sent seeds of many plant materials to Europe, including gentians (*Gentiana* spp.), cardinal flower (*Lobelia cardinalis*), golden rod (*Solidago* spp.) Turk's cap lily (*Lilium superbum*) and various southeastern *Rhododendron*.

An interesting trend in today's world is the cultivars of northwest native plants that are being reintroduced to us from England. The history of this is also fascinating, beginning with the exportation of many plants of this region by David Douglas (Hobhouse 1992). Douglas, trained as a gardener and collector traveled widely in the Pacific Northwest in 1824-1827. He was engaged by the Horticultural Society in England to collect plants here of horticultural merit and take them home to England. He is responsible for introducing to England his namesake plant Douglas fir (*Pseudotsuga menziesii*) in 1827, the noble fir (*Abies procera*) in 1830, as well as madrone (*Arbutus menziesii*), silk tassel bush (*Garrya elliptica*), and Oregon grape (*Mahonia aquifolium*). These are all used extensively in European horticulture.

Perhaps Douglas' most striking introduction, however, was the red flowering

currant. "The flowering currant (*Ribes sanguineum*) was considered so important a find as to be itself worth the cost of the whole expedition (Hobhouse 1992). Many cultivars of *Ribes sanguineum* are now known in horticulture, most developed in England (See e.g., Phillips and Rix, 1989, which lists various varieties of *R. sanguineum*, including 'Atrorubens,' 'Brocklebankii,' 'King Edward VII,' and 'Pulborough Scarlet,' all of which were developed in England). Locally selected wild forms of *R. sanguineum* include a white form, reportedly collected in Oregon's Coast Range, and a form called "Elk River Red" a deep red form reportedly collected from southern Oregon (Jack Poff, personal comm.).

Today in the Pacific Northwest, native plant gardening has become increasingly common. As early as 1982, Arthur Kruckeberg (1982) in his *Gardening with Native Plants* book said, "Around the country, the urge to grow native plants in one's own garden or at the summer cabin is very much on the upswing." In the book's second edition published in 1996 he says, "Fifteen years later a minor garden cult has become a major focus of American gardening." He credits the interest to nationwide environmental concern, water-saving consciousness, intrinsic appeal of one's local flora, and the increasing activity and visibility of native plant societies nationwide.

In yet another more recent trend "gardening for wildlife" as a way to attract birds and other animals using gardens, native plants are highly recommended. See for example, Link (1999) who

says, "Over time, native plants have improved their ability to attract helpful animals such as pollinating insects and seed-dispersing birds. They have also become adept at repelling or surviving attacks from destructive organisms . . ."

One has only to type "native plant" into a worldwide web search to learn the overwhelming interest that exists both in the U.S. and abroad. One such search I undertook in October 2001 yielded more than 186,000 responses. When I checked the website for the North American Native Plant Society on October 16, 2001, it had recorded 12,609 "hits." The New England Wildflower Society, itself founded in 1990, lists 88 native plant societies and botanical clubs in North America and 13 botanical gardens featuring native plants prominently. Nearly all of these organizations, in turn, have their own web sites.

The New England Wildflower Society "promotes conservation . . . through horticulture, education, habitat preservation, and advocacy." Most other native plant societies, such as the one in Connecticut, actively promote gardening with natives as a conservation activity, although most also discourage wild collecting and some advocate local gene sources.

An interesting variant on the native plant society is that of specialty societies. The Society for Pacific Coast Native Iris is an example. The Society's web page features plentiful information about native iris, their biology, distribution maps, and gar-

dening potential.

In addition, government sites from federal to local promote native plant gardening for conservation. A site of the Environmental Protection Agency (EPA) features native plant landscaping in the Midwest to improve the environmental and "bring a taste of wilderness to urban, suburban and corporate settings." The North American Native Plant Alliance is made up of 13 federal agencies and 178 private organizations banded together to promote and conserve native plants. Their web site includes information on gardening with natives and features links to other sites as well. Close to home, the city of Portland, Oregon offers "resources for seeds and native plants," includes listings of nurseries, references, plant lists and places to visit to learn more.

In some ways the "frosting" is the combined effort of Western Carolina University's Cooperative Extension Program, the U.S. Fish and Wildlife Service, the North Carolina Arboretum and others to do regional education. One of their featured projects includes a demonstration garden at a McDonald's restaurant off 140 near Asheville, North Carolina.

*Intersection of
Gardening with
Restoration:
the Realm of Ideas*

The scientific literature is replete with references on restoration. Many of

these articles reflect their author's deep convictions about nature and restoration activities. Restoration is defined as "human intervention to recover nature's integrity which is considered to be threatened or even absent because of human activity . . ." (Swart, et al. 2001). Restoration ecologists often advocate a careful, stepwise approach, even while recognizing that this goal is sometimes impractical (e.g. van Diggelen et al. 2001). Societal involvement to maximum effect is also generally recognized.

Restorationists often express concern about seed sources, which leads them to be concerned that nearby garden plants might be "unwanted" source of germplasm. This can happen when seeds or pollen become dispersed by wind or animals a nearby wilder location. Such a view point is represented for example in Houseal and Smith (2000) who surmise that "large scale plantings of [cultivars] could negatively affect remnant plant communities through introduction of disease, contamination of local gene pool, or invasion of aggressive cultivars."

The other side of this "naturalistic" view is expressed by Schama (1996), who says, "Objectively, of course, the various ecosystems that sustain life on the planet proceed independently of human agency . . . But it is also true that it is difficult to think of a single such natural system that has not, for better or worse, been substantially modified by human culture . . . It has been happening since the days of an-

cient Mesopotamia . . . And it is this irreversibly modified world, from the polar caps to the equatorial forests, that is all the nature we have."

Obviously we have transcended science and have entered into the realm of philosophy, or ideas. Since restoration ecologists make up only a very small part of our society, their ability to influence others must compete within a very broad idea context. Restoration ecologists work from a scientific perspective, and have a unique set of values as applied to nature. According to Swart et al. (2001) those values involve the ecological perspective, which often values "presettlement" vegetation. Other views of nature are "ethical," implying the duty of stewardship, and "aesthetic." Depending on the aesthetic being expressed, this value and complement or contradict "natural" or "ethical" values.

Swart et al. (2001) are also responsible for the introductory quotation to this paper. In context, they outline several general views of or approaches to nature. The "wilderness approach" is the one most advocated by scientists and includes nature as valuable for ecosystem function and as part of the food web. The second, which the authors describe as "Arcadian," values semi-natural but extensively used landscapes—sort of a cooperation between humans and nature. The Arcadian view, for example, incorporates historic sites into its view of important landscapes. The third view they entitle "Functional." Nature is everywhere and can be very useful, and

adapts to how we use the land. In this view, even roadsides are valuable places and production-oriented forests, using principles of population dynamics, are perfect examples of how humans and nature "cooperate."

Landscape architect C. Baines (1995) takes a very broad functional view. Instead of seeing urban areas are concrete jungles, he sees urban grasslands in lawns and grassy areas, urban woodlands, urban forests, and wildflower meadows. He states that in Leicester, England, 25% of the city's land is in private gardens and another 25% in green space, including parks. He urges us not to forget the ecological value of this green space, and that the plants in urban areas and gardens also reflect our cultural heritage, a value that is in addition to ecological values.

If I were to characterize gardeners as a group, I would say that in general they are nonscientists, they enjoy whimsical plants and cultivars that capture their imagination of amaze their friends, their aesthetic is beauty, they love nature, they seek pleasure and serenity in their gardens, color is of high value, and they are motivated to garden as a hobby or for exercise. At the same time, I would characterize the restoration ecologist as someone who is serious, has a focus on species rather than cultivars, has a scientific outlook, whose aesthetic is the "natural," has a reverence (almost religious at times) for nature, whose favorite color is may be green, and who are motivated primarily by career goals and personal fulfillment. I would

observe that both groups "want to do the right thing," which is good common ground, as is the abject love of plants.

Opportunities for Working with Native Plant Gardeners

Our garden historian Penelope Hobhouse (1992) characterizes the 20th Century as the era of "Conservation in Gardening." She cites concerns about escaped exotics and the interest in gardening with natives, interest in conserving endangered plant species as well as vanishing cultivars as examples of this trend. This implies a receptive audience to conservation themes amongst gardeners. Already, we see this in the growing awareness of exotic invasive plants and their loss of desirability as garden ornamentals (personal observation). When English ivy can be listed as a noxious weed in Oregon, we have certainly made progress!

Baines (1995), quoted above in another context, adds, "The rhododendron walks, azalea days and daffodil festivals need to be celebrated as an integral part of urban woodland management, but there is a need to alert the captive rhododendron audience to the significance of native species too ... [Native plants] are a "fundamental platform of the diverse life-support system."

This new environmental awareness and attention to native plants provides an

opportunity to enlist gardeners in restoration efforts. In doing so, we should be aware of the characteristics of gardeners articulated here, and be genuinely supportive of their efforts to use native plants in garden settings.

1. Recognize that gardening is an ancient tradition with its own history and mystique that is heavily tied to cultural evolution and identity
2. Promote gardening with native plants to help people connect to the natural world, because by doing so they will become advocates for restoration efforts.
3. Promote native plant gardening as a way to combat planting exotic ornamentals, particularly those that may become invasive pests.
4. Recognize that gardeners are motivated primarily by beauty and experimentation, while restorationists are motivated primarily by science.
5. Appeal to native plant gardeners through their desire to produce positive ecological results.
- 6 Create any recommendations to gardeners in a positive way to encourage their involvement and creative activity.
7. Use the web and other modern methods to talk to gardeners. They do not read the scientific literature.

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North American Native Plant

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North American Native Plant

Society: <http://www.nanps.org>

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GoNativeFolder

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