Landscape Designs with Native Plants

by William Bissett

Over the last fifteen years, as a student of landscape architecture, apprentice landscape architect, and finally as a registered professional, I have held a belief that plants native to an area should be used to heal the wounds of land development.

The last 75 years or so, with plant imports to this country from all over the world captivating everyone's attention, our landscape has become the domain of botanical curiosity rather than environmental healing. Combining that with our desire for the eclectic European "estate" or "villa" aesthetic, we have what I call "construction by destruction"—i.e., the clearing of all natural plant material within the corner stakes, to replace it with high-maintenance and low-environmental-benefit turf grass and exotics.

My years as a professional have been spent trying to get native plants back into the disturbed landscape.

A few important things need to be considered when going back to native plants. First, of course, is that preservation of the existing ecosystem at all costs, on any site, is priority one. No removal of existing natural material means no habitat loss, no destruction of top soil or loss of mycorrhiza, no loss of erosion control, and no explosive weed growth.

For land that has been previously disturbed, however, I believe the replacement of native plant material is the best we can do.

Secondly, without a concept, theme, or goal, we may not accomplish a great deal. I put native plant use in three different landscape categories for the sake of definition: traditional, naturalized, and restorative. These categories make the design of a project a more understandable task.

Traditional

Native plants in a traditional landscape is the easiest to accomplish and the most commonly done, and sometimes without the knowledge of anyone involved. The obvious examples are the scores of pines, oaks, wax myrtles, and coonties that are planted every day. Believe it or not, there are times when the landscaper, landscape designer, and even the nurseryman that grew them didn't know they were working with native plants.

But besides the obvious species,
almost any native plant from the mesic range (neither wet or excessively dry) can be substituted for a commonly used exotic in a traditional landscape. For instance, blackhaw viburnum (Viburnum opulus) can be substituted for ligustrum as a large screen or hedge; Virginia willow (Itea virginica) or shiny lyonia (Lyonia lucida) for masses of pittosporum; or blue-eyed grass (Sisyrinchium atlanticum) for masses of liriope.

Whatever the species used, a traditional landscape will have some general characteristics, such as:
- more formal appearance,
- more repetition and less diversity,
- fewer species,
- more turf grass, and,
- most likely, extensive irrigation, and no reduction in maintenance or water use.

Native plants could be interchanged with exotics with no real ecosystem/species convergence.

The real benefits from using natives in a traditional landscape are the certainty of cold hardiness, the possible reintroduction of habitat elements, and the satisfaction of replacing lost genetic material to the site.

There is certainly nothing wrong with giving native plants traditional usages. They can make beautiful specimens, mass plantings, accent plantings, borders, and foundations. But we have to realize that we have not necessarily reduced maintenance or water demand, or improved the ecology of the area appreciably. To do that we must start thinking more naturally.

Naturalized

John Simons in his book, *Earthscape*, says, “Natural systems tend toward equilibrium or condition of least imbalance and minimum stress.” Landscaping a disturbed site in a more naturalized way can start to accomplish the dual role of built, people environment and natural habitat.

Here again, there are some general characteristics of this concept that should be understood, such as:
- less formal appearance,
- looser looking,
- more diversity and greater number of species,
- plants not used in traditional ways, i.e., specimen, hedge, border,
- mass plantings used as special definition,
- little or no turf grass,
- more ground cover or open mulch,
- irrigation and fertilizer not needed on regular basis after establishment,
- species used are indigenous to site ecosystem or those of similar characteristics,
- additional habitat and less maintenance, and
- may still contain compatible exotic species without loss of goals.

The most important things to remember when designing any landscape—but especially a naturalized one—is to use plant material where it will be able to attain maturity comfortably and will not have to be trimmed back to allow for circulation or other activity. Also remember that change in the landscape is normal and good. Self-seeding, colonization, and/or perennial movement of species should be allowed.

**Restorative**

The last category of native plant landscape use is the restorative. This concept is in more critical need as the site becomes more extremely hydric or xeric. It is a crime to drain or fill wetlands to a mesic level, and I feel it should be a crime to irrigate and/or amend the scrub ecosystems to make them supportive of mesic plant material. Even a mesic native plant becomes an exotic when used on a site that would make constant irrigation a necessity.

Here is a group of characteristics common in the restorative landscape:
- a very complex pattern (mimicked from an existing natural ecosystem, if possible),
- large number of species, all of which are indigenous to that site ecosystem,
- asymmetric balance of site elements,
- small changes in topography or hydrology reflected by species change,
- uneven or random spacing,
- no relationship of plantings to site structure, i.e., mass plantings to define space or circulation patterns, framing, etc.,
- must have dead material as well as natural ground litter,
- no exotic species allowed.
no irrigation at all after planting,
no soil amending at all, other than
cleanup of construction debris.

Any attempt at restorative land-
scaping takes not only a great deal of
understanding, but also a tremendous
amount of time and patience. As John
Simons says, "The natural ecosystem
is not only more complicated than
has been previously understood, it
is more complicated than we yet can
comprehend."

Unfortunately, we see landscape
architects and engineers designing
natural systems (restoration mitigation)
with sometimes no more than a single
phone call to a native plant nursery as
their background. This will change as
knowledge and experience replaces
speculation in the professional market.
While there will never be a true
restoration of ecosystem, the word
mitigation has become "dirty" in the
environmental vocabulary. There re-
mains a critical need for the best
attempts in repairing destroyed eco-
systems. This is true on any scale, from
regional mining to residential lots.

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LANDSCAPE NURSERY INC.
80 ACRES NURSERY MATERIAL

30 ACRES CONTAINERS
50 ACRES FIELD GROWN

Acer rubrum
Acoelorrhaphe wrightii
Annona glabra
Bumelia tenax
Byronima lucida
Callicarpa americana
Canella winterana
Capparis cynophallophora
Chrysobalanus icaco
Citharexylum fruticosum
Clusia rosea
Coccoloba uvifera
Conocarpus erectus
Conocarpus erectus var. sericea
Diospyros virginiana
Eugenia axillaris
Eugenia confusa
Eugenia foetida
Eugenia ladanifera
Eugenia regia
Fraxinusasp.
Gordonia lasianthus
Ilex cassine
Ilex glabra
Ilex vomitoria cv. "Schellings Dwarf"
Iris hexagona
Juniper silicicola
Krugiodendron ferrum
Magnolia grandiflora
Magnolia virginiana
Muhlenbergia capillaris
Myrica cerifera
Myrica fragrans
Nyssa sylvatica
Persea borbonia
Pinus elliott var. densa
Prunus caroliniana
Psidium longipes
Quercus laurifolia
Quercus virginiana
Randia aculeata
Roystona elata
Sabal palmetto
Serenoa repens
Spartina bakeri
Suriara maritima
Swietenia mahogani
Taxodium ascendens
Taxodium distichum
Tripsacum dactyloides
Tripsacum floridanum
Viburnum obovatum
Zamia pumila

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