and less routine maintenance than exotic plantings. This adds up to money saved. Native plants for landscaping, when used correctly, can be every bit as aesthetically pleasing as the exotic landscapes presently being designed, planted and maintained.

We, as public employees, can have an impact on the attitude among the public that exotic plants are more desirable than natives. Although those of us who work in non-instructional branches of the school system are not teachers in the strict sense of the word, all of us who work with the system are, by definition, contributors to the educational process.

As mentioned earlier, our efforts in using native plants on school grounds encompass several different methods of acquiring natives for the development of school sites. I will further detail our efforts in two areas: saving natives from the bulldozer to use on school property and developing native plant learning areas at school centers.

First, a brief summary of the amounts and types of natives we have moved from sites being developed: In the past year we have transplanted several hundred Sabal palms (the state tree), dozens of live oaks and laurel oaks, numerous dahoon holly, several hundred wax myrtle, and numerous assorted understory plants, including two species of wild coffee, two species of Lyonia (fetterbushes), myrsine, small slash pines, gallberry, wild lime, ferns, coco plum, and small cypress trees. These plants have been transplanted from development sites either directly to school centers or to our School Board Nursery.

One thing we have found to be very important in our efforts is to develop and maintain a network of contacts among native plant people, contractors, developers, nurserymen, landscapers, environmentalists, school system employees, and many other concerned citizens. We keep in close contact with our School Plant Planning Department and superintendents at the job sites of new school construction, from the time a piece of property is acquired until the time it is turned over to us for regular maintenance. These contacts, and the actions taken through them, have resulted in the acquisition of tens of thousands of dollars worth of native plants over the past several years for the school system.

A second area of major emphasis in our use of native plants on school grounds is our participation in the development of Environmental Study Areas at school centers. We aid administrators, teachers, and students in their efforts to develop native plant learning centers for use in teaching about natives. Native plant areas are currently in existence or are being planned or developed at more than 18 schools, including a trail at the School Board Nursery being developed with the cooperation of Hagen Road Elementary. This trail currently has over 160 species of native plants. We envision this as a model trail and center of information for all schools in the system.

The large geographical area, the diversity of natural habitats in Palm Beach County, and the large number of schools in the system, allow for the development of every major native plant community of southeast and south central Florida. These are used to teach students of all ages the importance of saving the “real” Florida from disappearing through well-intentioned, but uninformed, attempts at “improving” it.

Many of these Environmental Study Areas are started with Environmental Education Mini-Grants applied for and received through the State of Florida Department of Education’s educational education program. These grants are seed money provided for initial development of these study areas for the benefit of students and the community. Further development over the years is the responsibility of the school center and the community. The Department of Maintenance and Operations provides help with planning, design, and support services for these areas.

Any effort we make to get the study of native plants included in the curriculum is an important step in educating students about our natural environment. Nearly half of the tree species native to the continental United States are native to the State of Florida. Florida has 130 species of trees native to the state. Through teaching about native plants we can accomplish a turnaround in attitude among the general public regarding the value of natives in keeping Florida green for future generations and conserving our valuable and vanishing natural resources.

According to Dr. David Lee of Florida International University, in addressing the Florida Native Plant Conference recently, courses in native plants are non-existent in the State of Florida on the primary and secondary school level. We must encourage this information to be taught. Throughout this article and the presence of native plants on school grounds, we hope to arouse interest in learning more about native plants.

The State of Florida is a great state and Palm Beach County is a great place to live, but only by learning more about how we interrelate with and depend on our natural resources for our quality of life and that of our children can we assure a fair chance for this great natural heritage to survive.

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USING DESIGN PRINCIPLES WITH NATIVE PLANTS

by Peter F. Strelkow

Landscape Architect in South Florida and partner in Native Landscaping, contractors.

Landscape Architect

Before the invasion of man to South Florida, there existed a tremendous diversity of subtropical indigenous vegetation. Today, this is no longer true. After filling the wetlands and clearing the hardwood hammocks and pinelands, developers and even landscape architects have proceeded to ignore the native vegetation and have planted mostly exotic plant species which now dominate our landscape. The species Schinus terebinthifolius and Metaleuca quinquen-
design, one must be aware and appreciative of the subtleties of the plants. Color is not the key element for good design. Although color is available for use, like the firebush, Geiger tree, and gaillardia, it generally will not represent a major design force.

Good design reflects an understanding of form, color, accent, scale, and rhythm. All good planting design revolves around these concepts. Regardless of whether the plants in your plan are native or not, if you adhere to these concepts, a sound plan is certain to evolve.

The first and foremost principle of designing with natives is texture. By definition, texture is that surface quality of any material that can be seen or felt. I consider texture to be a method of comparison between objects in the design. I would consider the sweet acacia to have a fine lacy texture, especially when seen in comparison to the thick leaves of a seagrape. Wild tamarind has a more delicate texture than a clusia. Texture must also be qualified in terms of the distance at which it is viewed. The perceived size of the unit varies with a change in distance. When you touch an oak tree, you are able to see the form of the individual leaves and the texture of the bark surface. At several hundred yards, the oak becomes an entire mass of shadow and light reflection for planting design. Texture is described by its coarseness, fineness, roughness, heaviness, or lightness.

In application of texture, each part of the plant must be so related that it will be compatible to, and will blend with, its neighbor; if textures change, they must do so in a logical and graduated manner. Generally, fine, medium or coarse, or vice versa, is used. Although not a prominent feature in native plant design, color is perhaps the most striking of all the design elements. One must learn the many different shades of green and the colored species effectively. The bright colors tend to excite, while the subdued or cool colors are more conducive to restfulness.

I use two types of color in planting design. The first is background or basic color to harmonize the view. A dark green background enables me to highlight plants with brighter colors. With a light green base plane I can display species which spring forth out of these.

The second type of color utilized is accent color, which is the emphasizing color for a design. When designing with colors there are several things to remember. Man has psychological tendencies to lean toward light and vivid colors. Subdued cool and light colors are more conducive to reflection or thoughtfulness. When changing color, do it in sequence — light to dark, or vice versa. Red, yellows, oranges (i.e., warm colors), appear nearer. Blues, blue-greens, and green (i.e., cool colors), appear farther away.

As a general rule of thumb, the spacing order should be transitional, with the largest height in the rear.

The last and probably the most important aspect of planting design is the correct plant selection for a design. This is directly related to the maintenance program which will evolve. Plants should be chosen for a specific arrangement only after you have considered the total environment in which they live. Every plant has certain ideal conditions under which it will perform.

I usually do a thorough site analysis. The first thing I generally want to know is the soil type of the area. Southern Florida soils are generally shallow and geologically immature in comparison to similar soils found elsewhere in Florida. They have a weak profile and are infertile when cleared of vegetation. They are sandy and quick draining in most cases. The organic and nutrient content is usually weak and, therefore, many exotic plants like ixora and hibiscus become chlorotic and yellow due to lack of micronutrients. Another important aspect to consider is that the pH of the soils is almost always very alkaline. Many exotics require a higher pH. Gardenia, azalea, and magnolia won't grow unless soil amendments are made. With this in mind, it is only logical to plant indigenous species that grow on poor soils. Also, if you live near the beach, a special palette of wind, salt, and drought-tolerant species must be established.

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Accent planting must be considered. A good working definition would be a visual break in a sequence or pattern of ground materials. The idea of accent emphasis planting is to control the composition of a space or capture the attention of the viewer. Accent planting must be considered when using accent. On the other hand, strong accents. The idea is to capture attention. Too many accent points may cause visual confusion. The location of focal points in the plan should revolve around those areas of major importance. If possible, frame the accent space. A specimen plant with unusual form or texture will serve as an accent when placed in the midst of common plants. Abrupt color changes create accent. Sound is a very powerful accent. A fountain or pond creates sound by the movement of water. Some of the best intimate spaces are complemented by water.

The next design principle which can make or break a design is called rhythm or sequence. Rhythm gives unity to the garden and allows one to move along or within the space with a degree of order. Elements of sequence flow from one to another in an orderly manner.

Bear in mind these considerations:

- Texture should have order that is fine to coarse or vice versa, depending upon whether or not you want to create the illusion of depth.
- Color should have order, also. Working back and forth from light to dark greens in natives has a subtle, pleasing effect.
- Spacing is ever so important. By pre-determining the growing capacity of the different plants, you won't make the mistake of blocking out an important view, or even worse, planting a tree that grows much too large next to your home. This situation can only be remedied by costly pruning and/or ultimate removal.

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Evergreens or deciduous?

Overall size.
Will it overhang a neighbor's property or your house?
How will the tree react in high winds or hurricanes?
Is it brittle?
Where are the utilities? Overall lines must not be encroached. Underground lines
must not be disturbed.
Is salt tolerance necessary?
Does it bear objectionable seeds, fruit, or litter?
Are any special treatments such as water or fertilizer indicated?
Do you really need all that lawn and the accompanying high maintenance?
Can you use ground covers instead?
Do you need a sheared hedge?
Why not use a plant that matures at four to five feet?
Are you or your gardener capable of maintaining your property?

Even though I have touched only briefly on the many facets of planting design, I hope you can see that understanding design principles and proper application of them is what makes a professional job. Certainly, you can see the benefits and beauty of our native plants. I believe the re-establishment of them in our landscapes is of the utmost importance.

Mr. Bev Brown, an FNPS member of the Fort Pierce Chapter, has received a Merit Award from the American Society of Landscape Architects for his Dune Restoration Project at Sailfish Point on Hutchinson Island near Stuart. Since vehicles are forbidden on the fragile dunes, the entire project was "by hand and on foot."

Tons of debris and dozens of Australian pines were removed, an irrigation system installed (and operated by hand), and tasteful "Keep Off" signs were placed. The dune plants were fertilized from the air. Jury comments cited the dune restoration project as "a model for thousands of miles of coastline."

Citizens in Plano, Texas found that if they retained their clippings, they could save annually approximately $88,000 extra on plastic bags, $13,500 on fuel and $36,000 on labor for the trips and work hours required to remove the clippings.

**Wild Things — The Return of Native Plants**

by Georgia Tasker and Stephanie True Moss, describes the trees, shrubs, and ground covers that you can plant around your South Florida home. WILD THINGS tells you:

- what they look like: their leaves, flowers, and fruit
- where they grow
- how much space they need

By choosing native plants adapted to your own yard, you can nearly eliminate:

- watering
- spraying
- fertilizing
- replanting after a freeze

Recreate a natural area, invite birds and butterflies to your yard, replant with Florida native plants. WILD THINGS will tell you what, and where, and how! WILD THINGS will make you enthusiastic about native plants! WILD THINGS will inspire you to grow native!

This soft-cover book, published by the Florida Native Plant Society, is illustrated with 32 pages of full-color artwork, 25 pages of black-and-white. $5.00 plus $1.00 postage. Order from Florida Native Plant Society, 1203 Orange Avenue, Winter Park, Florida 32789.