

species today.

One thing going for conservation of species in the eastern portion of Collier County and the Fakahatchee Strand is government acquisition of that area as a water management area. The elimination of camps and homes over the area and subsequent limiting of human access will be a tremendous help in conservation of plant species found there.

The Division of Plant Industry may be criticized for not requesting a large budget and a small army to police the removal of plants from the wilds. Realistically, however, it would be impossible to police the entire state. It is necessary to utilize citizens such as yourselves and other interested persons. Your attention to the removal and destruction of the plants from the wilds and reporting of violations will help protect endangered plants. Very seldom is the policeman at the scene of the crime, but he responds when the crime is reported by the victim or other interested parties. You and your children are the victims of the plant rip-off and we need your help.



USING NATIVE PLANTS ON PUBLIC SCHOOL PROPERTY by Joseph T. Lawson

Dept. of Maintenance and Operations, Palm Beach County School Board.

There are many reasons for saving and utilizing native plants on land developed by public organizations — Federal, State and Local. Not only can we save our natural heritage for the future and aid in teaching about our environment, but we can realize significant cost savings in our grounds maintenance programs.

A native plant is one that occurs naturally in a geographical area and has not been introduced by man. An exotic, or non-native plant, is one that has been introduced to a geographical area by man. While many of our common exotic plants are attractive ornamentals that pose little threat to the environment except for a drain on energy resources, some exotics are undesirable pest plants that prevent the natural recovery of disturbed ecosystems and even invade native plant communities, disrupting natural function. Problem pest plants like Brazilian pepper, Australian pine, and melaleuca should never be planted and should be destroyed when possible.

The Department of Maintenance and Operations of the School Board of Palm Beach County is actively involved in using native plants for landscaping and educational purposes at county public schools. In addition to using and encouraging the use of natives in campus beautification projects and in landscaping new construction, we are involved with the development of Environmental Study Areas at county school centers.

These programs encompass the preservation and acquisition of native plants through several different methods. We work with other departments of the system to

design new school sites so as to incorporate as much of the existing native flora as possible into the landscape site plan and transplant others either on site or on to other school property. We transplant native plants from commercial and private development sites onto school property, with the cooperation of various developers and contractors. When funds are available, we purchase native plants for use in landscape improvements and development of native plant areas. We also propagate and grow natives in our School Board Nursery for use in landscape projects and native plant areas at schools.

For our nursery, we receive donations of native plants from local commercial nurseries and, in some instances, trade excess exotic and native nursery stock for natives which may be in short supply. We currently grow approximately 50% native plants and 50% exotic at the nursery. Our production goal in the next few years is to gradually increase the amount of natives grown to as much as 90%. We are currently growing thousands of native seedlings which will be available for landscape projects at school sites.

Although using native plants in landscape situations is not new to the horticultural industry, it has long taken a "back seat" to the use of exotic plant materials in the landscape development of Florida. In developing South Florida into a tropical "paradise," the use of exotics has been encouraged, often to the detriment of the rich diversity of native plant communities that existed. Although well-intentioned, this philosophy has caused problems for our public officials regarding water and energy usage, as well as strain on agency budgets, to maintain these "exotic plant systems." Today, this factor of landscape and maintenance management is leading government landscape and grounds managers to turn to native plants as a cost effective method to cope with large increases in the amount of acreage for which we are responsible. These increases in acreage are often negatively affected by budget and manpower cutbacks and definitely affected by increasing energy costs.

As mentioned, we encourage school planners and architects to design new school sites so as to preserve important native plant areas and tree buffers around the site, although we realize that many times the physical requirements of the school may conflict with this goal. Existing native areas and buffers worked into the design of a school center cut down on the amount of time and resources that must be expended to maintain the site. Areas planted in turfgrass and exotic plantings are much less cost effective from a maintenance point of view than areas left or planted in natives. With over 2000 acres currently maintained by the Department of Maintenance and Operations, and an in-house grounds, landscape, and nursery staff of less than 50 employees, it is imperative that we use our manpower and resources in the most cost effective manner. Native plants in general need much less water, little or no fertilizer or pesticides,

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, cocoplum, 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 environmental 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 native plants and their 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. Through 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.

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 *Melaleuca quinquen-*