GARDENING

Planting for Energy Conservation
by Marc C. Dick

Florida continues to gain 800 to 900 new residents every day. Their presence increases the stress on water resources, increases land development, and taxes the capacity of the state's electricity generators. The native Florida vegetation has been overlooked as a potential solution to some of these problems. The proper application of energy conservation principles to the 'new' landscapes of Florida may offer some solutions. Vegetation can be integrated into land development to conserve electricity and water.

Residential use consumes the majority of the electricity available for air-conditioning (cooling and heating). Homeowners (and sometimes business owners) should be able to reduce their energy expense by modification of the "microclimate" around their home or business. A change in building design may be necessary for homeowners (and sometimes business owners) to reduce their energy needs by improving the efficiency of the electricity available for air-conditioning. Cooling and heating systems can be changed to benefit our local governments in Florida to conserve electricity and water.

Water is our world's life blood, not only in human bodies, but in all living things. The use of water-efficient landscaping is one approach to conservation of this precious resource. Xeriscape principles were introduced in the 1980s and legislation enacted in sections of the Florida Statutes and Florida Administrative Code in the last several years has required local governments in Florida to consider and implement "xeriscape ordinances" appropriate for their communities. Some communities simply modified the criteria outlined by the state laws.

The seven basic principles of water-efficient landscaping include: planning and design, soil analysis, appropriate plant selection, practical turf areas, efficient irrigation, mulches, and appropriate maintenance.

Native Florida plant materials can be utilized to accomplish energy conservation when used in the proper manner. Our pocketbooks and our future generations will be thankful for the insight gained and applied to our environment today. Spread the word that native plants can do more than just be something pretty to look at!

Marc Dick is a native Floridian. He grew up in the Panhandle and is currently living in Brevard County. He received his Bachelor of Landscape Architecture from the University of Florida, and his business provides professional landscape architecture services throughout Florida.

GARDENING

Wildlife Gardening and Plant Selection
by Craig Hiegel

Gardening for wildlife is not equivalent to "attracting" wildlife. The latter approach often relies on feeders and fails to consider habitat. Without habitat, we can hope to attract only those animals that live nearby and this will greatly limit our effectiveness. By using the habitat approach, we can design our landscapes for the wildlife that we most want to live near us. Our landscape will then support reproducing wildlife. Understanding the concepts of habitat can ensure that a diversity of wildlife will survive in developed areas of Florida.

Our plant selections and landscape design will be the major determining forces in the types and diversity of wildlife habitat needs. We will want to direct our landscapes to provide habitat conditions for the wildlife that we most desire. Plants differ in their ability to provide food and cover. Various factors need to be considered, including foliage and branch characteristics, and the size, timing and nature of fruit production. Plants need to be critically evaluated for their wildlife value, plant species need to be more diverse than are typically used, and our landscape designs need more creativity.

Craig Hiegel is the manager of Brooker Creek Preserve, Pinellas County. He was the Urban Wildlife Extension Specialist for the University of Florida from 1987-92. He is chair of the Education Committee for the FNPS, and author of Butterfly Gardening with Florida's Native Plants (published by FNPS) and of numerous articles on wildlife gardening. His new book, Florida Plants for Wildlife, will be published by FNPS in early 1995.

EDUCATION

Multimedia in Natural History Education
by Kerry B. Clark

Multimedia technology is rapidly evolving as a powerful and sophisticated system for information delivery, with capabilities especially suited for natural history education. Current technology allows development of highly structured, yet flexible, user-controlled information delivery, using video, advanced graphics, solid modeling, animation, sound, and other media.

Off-the-shelf data compression technology allows storage of vast amounts of sound and visual data on a CD-ROM disk. This is particularly appropriate for natural history presentations, and drastically lowers publication and distribution costs: a CD-ROM disk can contain thousands of detailed pictures, sounds, and video clips, at a publication cost of two dollars. This empowers self-publication by authors for smaller markets (e.g., field guides and taxon-centered atlases), as well as custom development of localized programs (such as reference guides for local parks and reserves). Such projects are often feasible in paper-based media because of high production costs, particularly for color illustrations. Powerful software also gives authors control over content development, including photorealistic modeling and easy video capture. Examples include Metazoa, a CD-ROM exploration of the invertebrate world.

Multimedia is effective because it mimics and exploits the functions of the human nervous system. For example, sound, text, and images are interpreted and stored as memories in different parts of the brain, and the "richer" an experience (the more kinds of information transmitted), the more firmly the information is retained, and the more likely to influence future thought, ideas, and behavior.

Though this technology is currently available and production costs are quite reasonable, presentation equipment costs are still high (though rapidly declining), both for individual use (e.g., microcomputers) and group use (LCD projection systems). However, individual system costs are reasonable for institutional use, and are offset by long product life, compact storage, and low media acquisition costs (computers are cheaper than the buildings needed to house vast numbers of books, buying the books, and replacing them periodically). Thus, institutions will rapidly begin acquisition of multimedia stations.

Kerry B. Clark earned his M.S. and Ph.D. in Invertebrate Zoology at the University of Connecticut in 1971. He is the founder of the Marine Biology Program at the Florida Institute of Technology, and is an expert in computer graphics and multimedia.

EDUCATION

Integration of Environmental Education with Ecological Research
by C. Ross Hinkle

Brevard County is in the process of obtaining a significant number of Environmentally Sensitive Lands as part of the Environmentally Endangered Lands Program (EEL). The network of areas obtained under this program will be excellent sites for ecological research and environmental education. It is expected that significant data will need to be collected at these sites for the development and implementation of management plans and