South Coast Chapter
South Carolina Native Plant Society

Please join us for the

Annual Meeting at TCL Bluffton
http://www.tcl.edu/pdf/TCL_New_River_Map.pdf
Saturday, February 6th, 2010

9 am Chapter Business

10am **Working with Wildflowers**
Presented by Sara Edi of Sweetgrass Design

Focus on home gardening with wildflowers, their selections, and maintenance in a residential setting.

Sweetgrass Design
Sara Edi Simmons-Fife
p. 843-323-1995
www.SweetgrassDesign.net

Sweetgrass Partners
1156 Bowman Road, Suite 100
Mt. Pleasant, SC 29464
www.SweetgrassPartners.com

A Call to Arms—with a Shovel!!
Native Plant Restoration at
Fort Fremont Historic Park -
Saturday, February 13 10am to 2pm

Native Plant Society members are invited to participate in a native plant restoration project at Fort Fremont Historic Park sponsored by the LowCountry Master Naturalist Association (LMNA) and the Friends of Fort Fremont on February 13 from 10 a.m. to 2 p.m.

Beaufort County acquired Fort Fremont in 2004 through Beaufort County's Rural and Critical Lands Program and the Trust for Public Lands. This important land acquisition contains one of the few remaining intact fortifications from the Spanish American War era and preserves open space in an area that is experiencing environmental strains of rapid development. Located on St. Helena Island on the banks of the Beaufort River and Port Royal Sound, this 15-acre site is a prime example of a maritime forest unique to the coastal Sea Islands. The historic significance and natural setting of this property make it ideal for a community park and educational learning site.

LMNA has been working with the County to provide volunteer support to assist in planning and maintaining the site as a passive park. A key element of the master plan is to restore native plants to promote biodiversity, raise community awareness of plant conservation, and preserve the natural and historic legacy of the site. We worked with the Southcoast Chapter of the Native Plant Society and Daniel Payne of Naturescapes to select native and naturalized plants based on soil and light conditions and drought tolerance.

On February 13, LMNA and other community organizations will begin the restoration by installing plants, including wax myrtle, beautyberry, saw palmetto, sparkleberry, Carolina cherry laurel, inkberry holly, and yucca. If you have any plants that you would like to donate or if you would like to be involved contact Wendy Wilson via e-mail at wendywilson@hargray.com

Beaufort County Heritage Preserves
https://www.dnr.sc.gov/mlands/propertysearch?p_flag=3

Beaufort County is home to 10 Heritage Preserves. They offer a wonderful opportunity to see natives as these areas are protected from development. Granted there may be some non-natives growing there too. Make it a priorty to visit as many of these wonderful areas as you can in 2010!

- Altamaha Towne Heritage Preserve
- Bay Point Shoal Seabird Sanctuary
- Daws Island Heritage Preserve
- Fort Frederick Heritage Preserve
- Greens Shell Enclosure Heritage Preserve
- Joiner Bank Seabird Sanctuary
- Old Island Heritage Preserve
- South Bluff Heritage Preserve
- Stoney Creek Battery Heritage Preserve
- Victoria Bluff Heritage Preserve

A Holistic Approach to Gardening
By David V. Bateman and Daniel C. Payne

'Expand your knowledge of the plant and animal world. Knowledge will generate interest and interest will generate compassion' – Author unknown

INTRODUCTION

Surveys have consistently shown that gardeners are predominantly lovers of nature and would like to garden in an environmentally friendly way. We realize that gardening in a reckless manner can have serious health implications for future generations of humans and other animals. Gardeners who are constantly at war with nature will lose in the long run; they may win a battle or two but the war will be lost. Nature has devised a system over a period of hundreds of millions of years that works: the evolutionary paths of plants and animals are entwined to such a degree that, except for a relatively few plants, one cannot exist without the other. Eliminate a plant species and you eliminate an animal species; eliminate an animal species and you eliminate a plant species.

The constant meddling of humans can upset this balancing act between plants and animals, leading to disruptive events in the landscape. Animals that have evolved over 400 million years, such as the insects, can do very nicely without mankind; humans who have been around maybe 2 million years probably cannot exist without them. It is in our interest to learn to accommodate those insects, and native plants, that are not a direct threat to us.

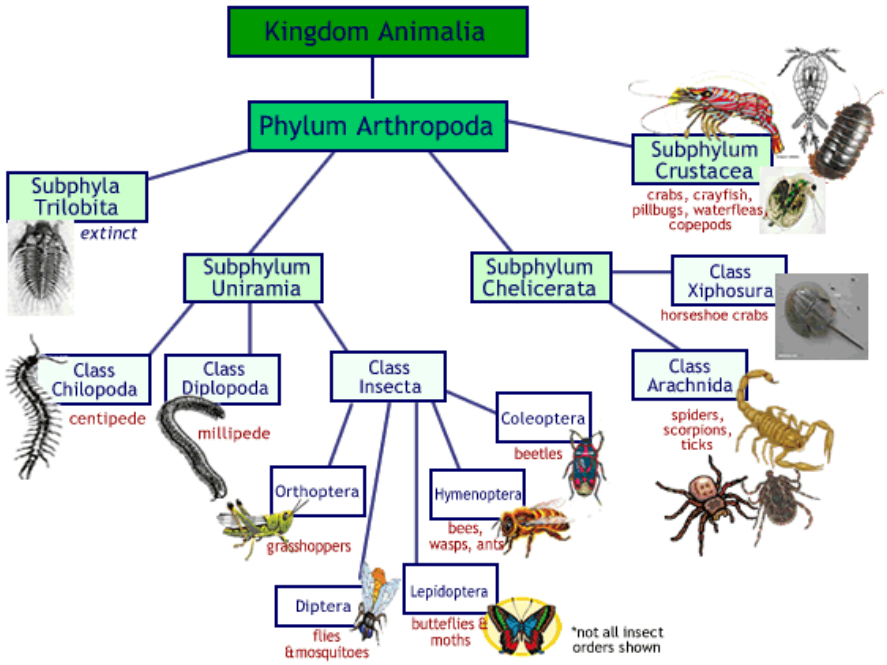
ARTHROPODS

The arthropods are those invertebrate animals comprising the phylum Arthropoda. They include the insects, crustaceans, arachnids (spiders and mites), myriapods (mainly the centipedes and millipedes), and a few other relatively small animal classes. It is estimated that at least 80% of all living animal species are arthropods and most of these are insects.

Unfortunately, we are observing a reduction in arthropod populations across North America without precedent. Unbridled development, habitat fragmentation, the importation of non-native ornamental plants, horticultural industry financial goals, agricultural practices, the constant use of pesticides and inorganic fertilizers, soil degradation, diminished consideration of scientific principles, human arrogance, and public apathy have all contributed to the problem. Most of the attention has been given to the decrease of insect pollinators and nectar feeders such as honey bees (colony collapse disorder); this problem has serious implications for human food production. However, the problem is much more insidious and widespread with studies indicating that population numbers for all insect species are down. This is especially true for the majority of insect herbivores who are able to feed only on native plants. Over a third of all insect species are plant herbivores and produce over 50% of all insect biomassas food for other invertebrates and vertebrates. Many of the plant pollinators such as hover (flower) flies and wasps depend on herbivores to feed their young. Thus the plant herbivores, as well as the pollinators, play a major roll in feeding humans as well as other vertebrates and certain invertebrates. No doubt, the decrease in insect populations lends support to the reasons for the alarming decrease in bird populations that depend on them for food.

All arthropods have their niche in how they obtain food and all these niches are necessary parts of the whole; it is presumptuous of man to claim that one group is more important than another. Our challenge, as gardeners, is to create an environment in our gardens whereby all these types of arthropods are kept in balance naturally. We should strive for a garden whereby disruptive animal infestations are minimized naturally with minimal interference from man. The vast majority of insects, along with the other arthropods, have the means to regulate their population numbers if we give them a chance.

http://www.biologycorner.com/resources/arthropod_chart.gif



PLANTS AND LANDSCAPES

Most insects go through their cycle of life in a few weeks. Thus, gardeners who have an inventory of diverse native plants that flower throughout the season will encourage a diversity of herbivore as well as pollen and nectar feeding insects. Insects seem to have relatively little problems with utilizing non-native plants for pollen and nectar; these substances in non-native plants are virtually chemically identical with the same substances in native plants. However, problems arise with the insect herbivores and to some extent the scavengers and omnivores. Approximately 90% of the insect herbivores have not been able to utilize non native plants as a food source. Researchers are finding that even centuries of familiarity are too short a time to adapt. A good example is the plant Fragmites australis; approximately 175 species of insects feed on this plant in Europe but only 5 of these species feed on it in North America. This plant was introduced to North America about 250 years ago. However, it hasbeen 80 million years since North America drifted away from Northern Europe. The period of adaptability is apparently staggeringly long for the herbivore insects.

Plant species in North America are generally considered native if they originated here before European settlement. However, the widespread replacement/hybridization of native plants by alien (non-native) plants across North America is not only having a detrimental effect on wildlife populations but it also is degrading terrestrial soil nutrients, water table quality, and aquatic habitats. Even pristine wilderness areas such as the Great Smoky Mountains National Park have been invaded by over 300 species of alien plants; endangered native plant residents no longer can be guaranteed sanctuary in these areas. In addition, the introduction of alien plants has brought pathogens with them that now threaten some of our most treasured native trees such as the Beeches, Oaks, Eastern Hemlocks, Dogwoods, and Redbays. Studies have indicated that non-native plants constitute approximately 25% of all plants planted in North America. However, there have been estimates that 75% of all plants being planted in our suburbn landscapes are non-native. This seems reasonable as these are the types of plants being marketed by the horticultural industry and being installed by developers. Plant catalogs consistently market these non-native plants as insect resistant. Well meaning people are unwittingly creating sterile ecosystems in our backyards on a massive scale. One should note that some native plants in North America can be considered to be non-native in other areas of North America. It is very important to plant native plants in areas in which they have evolved.

RECOMMENDATIONS

No gardening principles have been more destructive to wildlife then how we care for our lawns. Agricultural interests are constantly encouraging home owners to plant grass species that contribute little to creating a healthy environment. Grow your lawn on the long side and mow infrequently. Not only is it beneficial to the grass but it is extremely beneficial to the insects that live there. Let other native grass and broadleaf species such as *Andropogon glaucopsis* (chalky bluestem), *Sichanthelium sps*. (witch grass), *Chasmanthium latifolium* (river oats), and *Eragrostis spectabilis*) (purple lovegrass) grow in your lawn. Clump grasses will probably fit better in your landscape beds. Note the fall issue of the Journal of the South Carolina Native Plant Society (Volume 3 Issue 2) for native grass candidates in your lawn. Diversity in native plants in your lawn as well as in your ornamental landscape beds will further balance your property ecologically.

Purple Lovegrass:

http://plants.usda.gov/gallery/large/ersp_006_lvp.jpg

Purchase native plants from local nurseries. Native plants grown in these local nurseries have a much higher survivor rate then native plants that are harvested directly from the wild and usually are highly stressed.

Native plants usually require less fertilizers, pesticides and water to survive then non-native plants. Developers and household residents can thus save a great deal of money if they invest in native plants. Also, fewer fertilizers and pesticides can result in healthier water runoff into areas such as ponds, rivers, and creeks.

Listed below are some locally adapted natives and heirlooms that are ideal for birds, butterflies, and arthropods. They are excellent native plants that will do well in the coastal “low-country” area of South Carolina,

with many available in Daniel C. Paynes nursery http://naturescapesofbeaufort.com *:*

- *Aesculus pavia (*Red Buckeye*)*
- *Amelanchier grandiflora (*Serviceberry tree*)*
- *Ampelaster asper carolinianu (*Climbing Aster*)*
- *Andropogon virginicus var. decipiens (*Deceptive Bluestem*)*
- *Athryium asplenioides (*Southern lady fern*)*
- *Clethra alnifolia (*Sweet Pepper-bush*)*
- *Hibiscus collineus (*Scarlet Hibiscus*)*
- *Monarda punctata (*Eastern Horsemint*)*
- *Itea virginica (*Virginia Sweetspire*)*
- *Persea borbonia (*Redbay*)*
- *Physostegia virginiana (*Obedient Plant*)*
- *, Prunus serutini (*Wild Cherry tree*)*
- *Rhus copallinum (*Winged Sumac*)*
- *Rudbeckia hirta* (Black eyed Susans*)*
- *Ruellia carolinieusis* (Common Wild-petunia*)*
- *Sisyrinchuim augustifolium (*Blue eyed grass*)*
- *Soliago semprevirens (*Southern Seaside Goldenrod*)*
- *Schizachyrium scoparium (*Little Bluestem*)*
- *Sassafras albidum (*Sassafras tree/shrub*)*
- *Viburnum nudum (*Possumhaw Viburnum*)*
- *Viola sororia* (Dooryard violet).

If they so desire, those gardeners who are willing to consider a more holistic view of their garden can begin a journey that has no bounds of satisfaction; they will begin to see their garden as a naturalist would. The garden will no longer become just a collection of ornamental plants to please the eye and nose, but would include an added dimension of plants and animals that had previously been unnoticed. Your garden will become more balanced, as nature takes its course in your garden creating an environment amenable to all forms of life.

SUGGESTED READINGS

Here are few recommendations of published books that will help you develop your home garden natural landscapes:

Grissel, Eric. 2001. ***INSECTS and GARDENS*** *– In Pursuit of a Garden Ecology*. Photographs by Carll Goodpasture. Timber Press, Portland Oregon.

Jones, Samuel B. Jr., and Leonard E. Foote. 1990**.** ***Gardening with Native Wild Flowers*.** Timber Press, Portland Oregon.

Owen, Jennifer. First published in 1991. ***The ecology of a garden****- the first fifteen years.* Cambridge University Press, Cambridge U.K.

Spedding, Colin and Geoffrey. 2003**.** ***The Natural History of a Garden***. Timber Press, Portland/Cambridge.

Tallamy, Douglas W. 2003. ***Bringing Nature Home***. Timber Press, Portland/London.

David Bateman is a retired mathematical statistician with a love for the natural sciences; Daniel Payne is a professional horticulturalist and owner of Naturescapes of Beaufort nursery on Coosaw Island, SC. Both are members of our newest South Carolina Native Plant Society, the South Coast Chapter.

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January 2010 Newsletter

Gail Clark
Editor
southcoastscnps@yahoo.com