



Connections

NEWSLETTER OF THE

CONNECT TO PROTECT NETWORK

September 2011 Issue 4

CONNECTING MEMBERS

One of the main goals of the Connect to Protect Network is to develop an active network of members that assist each other with garden maintenance, plantings, and advice. We want to see the network flourish! To facilitate network exchange, we created *Connections*. Learn about upcoming events and recent developments through *Connections*. If you have information that you would like us to distribute through the newsletter, please contact Devon Powell (dpowell@fairchildgarden.org).

CTPN MEETING

Earlier this year we held our first meeting of the Connect to Protect Network. Attendees requested we hold meetings twice per year. We will hold our next meeting on October 22nd from 9:30-2pm at the Center for Tropical Plant Conservation, Fairchild Tropical Botanic Garden, 11935 Old Cutler Road.

If you are interested in attending, please RSVP to Devon Powell dpowell@fairchildgarden.org

MEETING HIGHLIGHTS

On January 15, 2011, The Connect to Protect Network met at CasaLin dos, Home of Dr. Lin Lou Loughheed, Fairchild Trustee and CTPN member, to exchange information and discuss ideas.



Joyce Maschinski reviewed the intention of the CTPN and the progress that has been made thus far. Our vision was that CTPN would grow to become a supportive interactive network of public and private landowners protecting, planting, and encouraging native pine rockland plant species use in landscapes of Miami-Dade County. The network has grown to 42 homeowners, 37 schools, and four businesses or non-profit organizations.

The CTPN will help native plant populations expand and maintain their genetic diversity such that no plant species is at risk of extinction. As part of the Fairchild Challenge, middle and high school students have helped restore pine rocklands where the endangered crenulate lead plant (*Amorpha herbacea* var. *crenulata*) grows. In this past year, while we noted declines in many rare plant populations, these restored populations have had seedling establishment, which supports our goal to reduce the extinction risk of this species.

We strive for the community to recognize the importance of pine rocklands and global recognition for sound urban planning.

Our corporate member Assurant with collaborators Institute for Regional Conservation have removed invasives and prepared their pine rockland for burning. They hope to do so when conditions are appropriate. In addition, Fairchild staff has met with several landscape architects to consult about using pine rockland plants in public landscapes.

Lisset Perez-Munoz, a science teacher from West Miami Middle School, shared her experience with Project P.R.I.D.E. (Pineland Restoration in Dade Environments). Project PRIDE is a program she started after receiving a grant from the Toyota Tapestry Fund. The purpose of this program is to utilize school grounds as an opportunity to restore pine rockland habitat, while educating children about the importance of preserving the globally imperiled pine rockland ecosystem. Today the school has three pine rockland gardens, which Lisset uses as part of her science curriculum.

Lisset offered several tips for teachers. She found that giving each student the responsibility to care for one personal plant helped to engage them in the success of its survival. She advised to have students grow the plant from seed, plant it, and take care of it throughout the school year. She also learned to avoid manhandling weeds in August, but suggested leaving them alone in the summer and letting students get involved in garden maintenance in the fall. Her students are responsible for identifying and removing one weed species. In the future, she would like to increase the number of native grasses in the gardens and called on the group to assist with this goal. To learn more about Project P.R.I.D.E., please visit: <http://www.freewebs.com/wmmspride/sponsors.htm>.

Joy Klein, Natural Resources Manager for Miami-Dade County Department of Environmental Resource Management (DERM) spoke about landscaping with pine rockland species. Joy shared tips and experiences with establishing and growing south Florida native plants. She reported that less soil disturbance will give a better chance for natives to seed and will reduce weed establishment. Pine trees should have no irrigation, but should be hand watered when first planted. If they become yellow or chlorotic, use a slow release palm fertilizer with chelated iron. Use native soils without amendments. Mulch with pine needles or pine bark and realize that it is sometimes better to have no mulch. She suggested that some existing pine rocklands could benefit from having pine needles harvested and that these could be used in CTPN sites.

She is also seeking volunteers to plant seeds for DERM for restoration purposes. This may be a good opportunity for school teachers.

Steve Woodmansee, native plant expert and owner of Pro Native Consulting brought examples and spoke about a suite of less common native plant species that are important to the restoration and ecology of the pine rockland ecosystem. Steve agreed with Joy that mulch should be minimized to encourage native seed germination.

CTPN should be a network of people, as well as pinelands.

Several opportunities to learn from one another and about pine rockland native plants are available. The Dade Chapter of the Native Plant Society holds a Native Plant day each spring. There are also plant identification workshops held at Miami Dade College on the third Tuesday of each month. Fairchild's Center for Tropical Plant Conservation holds plant identification workshops from 1 p.m. to 4 p.m. on the first Friday of every month.

Plant availability has been a difficulty for some CTPN members. There are native plant nurseries growing pine rockland plants (see our website). As demand grows, more plants will become available. However, having a great volume of plants available for a large restoration projects is still not a reality. Contractors would need to plan ahead and have large quantities grown for a project.

Several suggestions for accomplishing large-scale plant production emerged from discussions. One member suggested working with the vocational agriculture or agribusiness program(s) in local public schools to get pine rockland plants grown. There are USDA Secondary Agriculture Education Challenge Grants available. In addition, the Florida Native Plant Society has science fair awards for student projects conducted with native plants. Fairchild has previously worked with students to propagate pine rockland or other native plants. Similarly, students could contribute community service to collecting pine rockland seeds for restoration work. It is possible that CTPN can help coordinate member activities to encourage participation of students in restoration projects.

Because many publicly owned pine rocklands may have covenants preventing collection of seeds or plants for commercial purposes, obtaining pine rockland seeds may be a challenge. CTPN members can help with this problem if they would be willing to have seeds collected on their property. Anyone knowing private pine rockland landowners willing to have seeds collected from their properties is encouraged to contact Devon Powell (dpowell@fairchildgarden.org). Fairchild will post on the website any group opportunities that may arise for seed collections on pine rocklands.

CTPN members voiced that there are some tips for keeping your neighbors happy with your pine rockland landscaping. Have a border at the edge and post your Connect to Protect sign. One of our newest members saw a neighbor's sign and contacted us. Some suggestions followed to include a statement such as "This is our rainforest" to link the endangerment of the pine rocklands to an ecosystem with which our neighbors may be familiar. Spanish language signs would also be useful. Another concern was to increase the connectivity between existing pine rocklands. Several members are working on plans for connections in their own neighborhoods. We look forward to hearing about those!

GARDEN IN FOCUS

Located in West Dade, just a mile from one of our largest remaining pine rockland fragments, is Arvida Middle School. Arvida is part of the Connect to Protect Network and the recent winner of the school garden option (middle school) of the Fairchild Challenge. Arvida has an established afterschool gardening club known as the Green Team. Led by three science teachers, the GreenTeam is dedicated to gardening, environmental projects such as recycling, healthy eating,

and engaging in Fairchild Challenge activities. Four garden areas have been developed in the last four years, and they include a variety of native and edible plant species.

Last year Arvida joined the Connect to Protect Network and created their pine rockland garden. Over the course of the year they planted about 25 species. This year they hope to expand the garden to increase plant diversity.



Pine rockland garden at Arvida

School gardens in the Connect to Protect Network serve not only to connect existing pine rockland fragments, but they are an excellent teaching tool regardless of subject or grade. This summer I was in touch Mrs. Penalosa-Kirby, a science teacher and GreenTeam advisor, to ask how she uses the school gardens with her students and if she had any advice to offer teachers excited about planting this year.

Below are brief descriptions of just a few ways Arvida teachers use their school gardens with their students.

Seed Germination

Students grew sunflowers from seed and collected data on germination and growth. The seedlings were then planted in the garden. Sunflowers are an excellent species for an activity like this because they germinate quickly.



Learn about **The Great Sunflower Project**, a national citizen science project. <http://www.greatsunflower.org/>

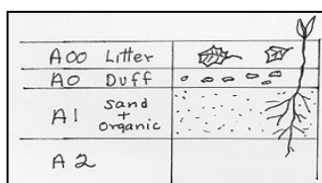
Plant Adaptations



To study adaptations students were asked to walk around the garden observing differences between plant species, such as leaf shapes and textures. Students were then assigned an individual species to research. They had to document scientific name, describe

adaptations of the plant, the seed dispersal mechanism, and if the species contained any known medicinal properties.

Soil Layers



Students observed soil layers while planting new plants in their garden. While students dug holes for the plants they were able to see the different

soil layers. They were asked to draw and label the soil layers. Mrs. PK commented that this was a nice hands on activity that accomplished two things at once: a science lesson and getting new plants in the ground.

ADVICE FOR TEACHERS

Mrs. Penalosa-Kirby

Arvida Science Teacher & GreenTeam Advisor

1. Have a goal.

Last year our goal was to create the pine rockland garden. I attended the school garden workshop at Fairchild and was able to solidify that goal by making a plan on paper and learning about the Connect to Protect Network. The Network really helped make our pine rockland garden happen. Having an army of motivated students is very helpful. The Fairchild connection is a huge motivator.

2. Work with other teachers.

Mr. Canfield, Mr. Corzo and I worked really well together and made it happen. We also had help from other teachers who provided support and donated plants.

3. Get the school community involved.

Involving the school community makes for richer ideas and a better garden. Bringing your classes to the garden and making a connection with the curriculum is very important.

HOW TO SPOT POLLINATORS?

Jason Downing FTBG/FIU Graduate student

Observing your local pollinators can be a very rewarding, and for many, a very different way to enjoy your native plants. Pollinators are essential to environmental and human well being and are responsible for 90% of all flowering plant reproduction and 33% of all food crops. As early as the 1500's, people have been interested in pollination and have been watching the diverse array of animals that facilitate these essential interactions. But spotting pollinators can be a tricky and often time consuming effort. This can be especially true in residential and garden settings where suitable habitat for the pollinators is far away and the overall abundance of flowering plants can be low.



Atala butterfly on Cordia globosa

Flowering plants can attract pollinators by floral color, structure, scent, independently or in combination with floral rewards. These attractants are closely linked to the sensory capacities, diet, and behavior of the pollinators. Increasing the pollinator attractants (amount, color, and diversity of native plants) in your garden will attract more pollinators and can also serve as larval host plants for native pollinators.

Although it is not guaranteed that pollinators will visit your plants, there are some other easy tips and strategies that can help increase your chances for spotting your local pollinators.

Helpful Tips:

1. Research your plants- A little research into the life histories of your plants goes along way. Be sure to determine the flowering period/season. Are the flowers open during the day or night? What are the floral attractants?

2. Understand your pollinators- What are the potential pollinators of your plants?

Diurnal pollinators- most commonly bees, wasps, butterflies, and humming birds which often attracted by floral color and scents. They tend to be most active in the mornings around brightly colored or fragrant flowers.

Nocturnal pollinators- most commonly moths and bats which are most attracted to white and strongly fragrant flowers which helps attract the pollinators in the dark.

Orchid pollinators- New world orchids are usually pollinated by solitary bees, moths, and butterflies, which are tricked through deception or other floral rewards. Pollinator visitations to orchids are notoriously infrequent and observing these very specialized insects requires great patience or luck.

ADAPTIVE MANAGEMENT IN MIAMI-DADE COUNTY PRESERVES

Jennifer Possley, Field Biologist FTBG

Fairchild's South Florida Conservation Team has just completed another round of sampling for a long-term study of the health of pine rockland preserves in Miami-Dade County's EEL system of Environmentally Endangered Lands.



Globally endangered pine rockland ecosystem

This marked the fourth year of the study, which was developed in cooperation with Miami-Dade County EEL and NAM (Natural Areas Management division).

The study is an example of "adaptive management," whereby the data Fairchild collects helps to answer questions that County land managers have about trends in rare species populations, invasion by non-native plant species, and the vegetative structure of their preserves.

The feedback that Fairchild provides to Miami-Dade County land managers helps to guide management decisions and change management methods as needed.

3. Determine the visitation schedule of your pollinators-

During the peak of the flowering period, watch your day blooming plants for at least one hour between 600A-900A and the night blooming plants from 600-900P. Repeat this schedule for at least three days. Be sure to record the time the pollinators arrive and leave the plants. Initially this step requires a time commitment, but once you determine the visitation schedule you can schedule your observation time during the peak of pollinator activity.

4. Record or photograph pollinator visits: Try to take pictures and notes on the size, color, body shape, and behavior of the pollinators observed. Magnifying glasses can be used for closer inspection. These notes can aid in identifying the unknown pollinators at a later time. Remember, not all animals that visit flowers are pollinators so notes and pictures can be extremely useful.

5. Try to answer a few key questions: These questions are very similar to the questions researchers ask, so you too can be at the cutting edge of research. What type of pollinators visited your flowers? Do they attract more than one type of pollinator? What reward(s) do the visitors collect? Do the visitors actually touch the stamens and stigma? Do pollinators switch flower species or do they stay constant to one kind?

These few tips should greatly improve your chances of spotting you local pollinators while increasing your knowledge on pollination.

Native plant gardens and pollinator watches are a great way to experience the wonders of your local ecosystem hands on, while promoting the conservation of native plants and their pollinators. Growing native plants is an integral part of the conservation practices that can enhance local pollinator populations. Citizens can easily install a garden as part of a larger local conservation plan. Remember, in the immortal words of Yogi the bear, "You can observe a lot while watching."

NATIVE PLANT PROFILES

Corkystem passionflower (*Passiflora suberosa*)

Corkystem passionflower is a common vine, native to the Americas and parts of the Caribbean. *Passiflora suberosa* is a larval host for the gulf fritillary, Julia, and zebra longwing butterflies.



This species is available at native nurseries and Fairchild plant sales.

Cabbage Palm (*Sabal palmetto*)



Sabal palmetto is a native palm species found in nearly every ecosystem in Florida. Many insects and animals use this plant for food and shelter, including humans. Once you have permission to collect seeds, you can easily grow this palm, but like most palms they can take several weeks, even months to germinate.

Havana skullcap (*Scutellaria havanensis*)



Havana skullcap is a small, rhizomatous herb in the mint family. Native to Miami-Dade and Monroe counties, this state endangered species can be grown from seed or division, and is an excellent species for habitat restoration.

PLANTS TO SHARE

Fairchild has extra seeds and whole plants to share. If you're interested in obtaining any of the species listed below, please contact Devon Powell dpowell@fairchildgarden.org

SEEDS

Senna mexicana var. *chapmanii*

Tephrosia angustissima var. *corallicola*

*Both of the above species are greats for schools as they are easy to germinate and grow rather quickly.

PLANTS

Angadenia berteroi

Echites umbellata

Guettarda scabra

Pinus elliotii

Randia aculeata

Tetrazygia bicolor

*We also have an assortment of native grasses available. Once your garden is established the biggest challenge will be controlling weeds. Native grasses are an effective tool for suppressing weeds.

To learn more about the plant species mentioned in *Connections*, please visit **Natives for Your Neighborhood**. <http://www.regionalconservation.org/beta/nfyn/default.asp>

VOLUNTEER WORKDAYS

The South Florida Rare Plant Conservation Team has posted a calendar of workdays for 2011-2012. Participants can receive service hours for participation.

To view the calendar and learn more about our scheduled workdays, please visit:

http://www.fairchildgarden.org/uploads/docs/Center_for_Tropic_al_Plant_Conservation/2011-2012_FairchildWorkdays_v4.pdf