Key Biscayne's Citizen Scientist Project

NEWSLETTER

Volume 1, Issue 3, April 2014

EDITORIAL

The Citizen Scientist Project (CSP) has adopted an evolving agenda to maximize the information on the natural resources of the Key we provide you and to encourage your participation in CSP projects. When we started a year and a half ago we could be classified as an Information Service providing details on the many natural resources of the Key. As an Information Service we provided details on the Key's resources on the CSP portal, www.keyscience.org, through lectures and in the CSP Newsletters. For example, the keyscience.org has a Citizen Scientist Laboratory that includes a Learn component. Learn includes information on topics ranging from corals to beaches to sea grasses to many others.

The CSP has evolved, while continuing the lecture series, towards field trips led by experts during which participants visit important resources and often participate in activities at these sites. For instance, we have had a bicycle tour through Bill Baggs Park, a sea bird visit on Crandon Beach, a mangrove clean up off Mashta Island. These activities have been one-day field trips and will continue. The next step in our evolution is to conduct activities which include multiple visits to various sites to determine if the natural resources present are remaining stable, degrading or improving (obviously we're hoping for the last).

Our first such activity will be the restoration of a sea grass bed which falls in the Village's jurisdiction on Mashta flats. The restoration will include placing markers to prevent powerboats from entering the area (a major cause of damage to sea grass beds is bottom scarring by boat traffic across the site) and then installing poles to serve as places for birds to provide nutrients to the underlying sea floor. The Flats will be visited every three months to monitor the restoration. We will be looking for volunteers to participate in the monitoring, no experience needed, you will be trained. Other such activities will be developed so we can evaluate the health of the Key's natural resources. However, they can only be successful if you, the Key's residences, are willing to give up a few hours of your time by volunteering to participate.

— LATEST UPDATES —

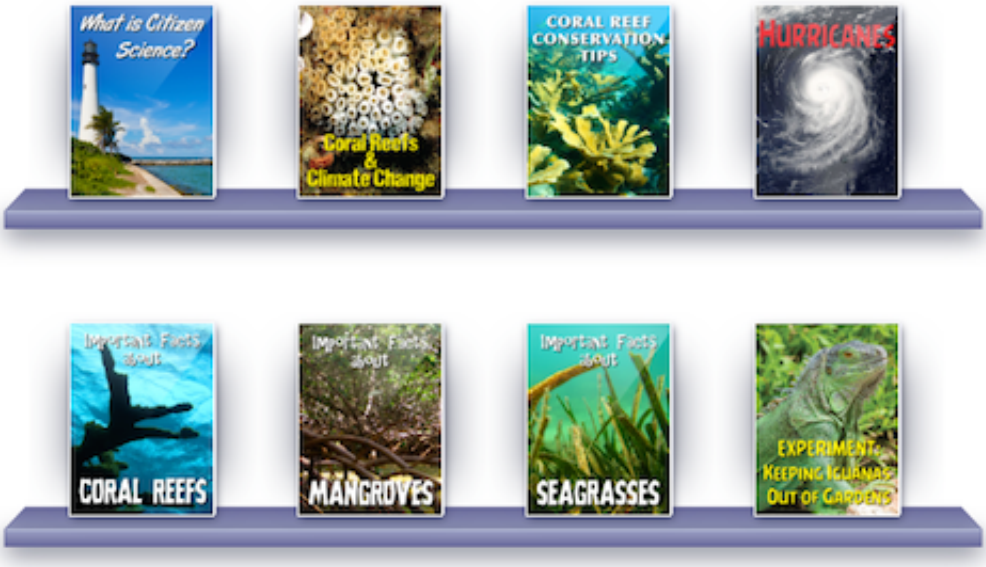
THE CITIZEN SCIENTIST LABORATORY: EYES ON THE KEY

The Citizen Scientist Laboratory (CSL) is located within the Citizen Scientist Project portal, www.keyscience.org. The Lab provides a place to learn more about the Key and to record and organize the information you have obtained as a Citizen Scientist about the natural resources of the Island. Participation has no limits with students, seniors, families, birders, beachcombers, fisherman, professional scientists, etc. encouraged to provide data. By connecting the different perceptions and expertise of a wide variety of participants, we hope to engage and educate the community in terms of awareness of local biodiversity and the impact of decisions made at the federal, state and local level on our habitat. The CSL also recognizes that the resources of the Key are not static features but change through human and natural actions. Only by collecting and recording data to define these changes can we hope to track detrimental changes to the environment and take appropriate remedial measures.

The CSL has 4 components, Learn, Map, Explore and Record each with a different function.

The Learn section provides information on the Citizen Scientist Project, natural resources of the Key and global phenomena. The attached figure shows the issues for which information is provided.

Learning Center



The Explore section provides the locations of the natural resources of Key Biscayne, Virginia Key and the surrounding areas. Explore uses maps created with our partner Google Earth Pro, which has visualized the GIS data (i.e., location of major Key natural resources such as beaches) supplied to the Lab by the University of Miami.

The Map section gives Citizen Scientists the opportunity to review and interact with data they provide. To date over 500 images have been uploaded with GPS locations, dates, titles, descriptions, etc. For continued success, Key residents obviously have to carry on inputting data such as photographs, written descriptions, etc.

The Record section provides online questionnaires about the Key's natural resources as well as the ability to upload photos to be instantly added to the Map section. For instance, questions include "Have you noticed changes in tidal heights", "Have you observed changes in the extent of the Key's beaches from the waterline", "Have you observed changes in the habitats of iguanas", etc. Responses will be combined in various categories to determine if Key resources are changing.

— CITIZEN SCIENTIST EVENTS —

Previous Events

November 16th, 2013: Bike tour of Bill Baggs Cape Florida State Park

On November 16, 2013, the Bill Baggs Cape Florida State Park and the Citizen Scientist Project co-sponsored a relaxing bike ride around Bill Baggs Park. The objectives of the ride were to provide participants information about the park history and visit several different ecosystems along the way. A total of 22 bikers participated ranging in age from youngsters to seniors. Park Ranger Melissa Milano and Park Services Specialist Art Levy led the tour. The tour commenced on the main road, and visited a paved trail through the hammock, and an off-road trail along Biscayne Bay with great views of the bay, Stiltsville and the historic lighthouse. We stopped in the wetlands. At each stop Melissa, Art or both provided excellent information on the sight visited. We are fortunate to have such a valuable resource, Bill Baggs Park, on the Key and the Park personnel to provide

information on the wonders of the area. The Park sponsors similar tours and you are strongly encouraged to take one. Contact the Park for information on the tour schedule. There is even the opportunity to rent bicycles in the Park should you not have one.

Saturday, 11 January: CSP Mashta Flats mangrove, sea grass clean up

The Citizen Scientist Project partnered with the Village of Key Biscayne to conduct a mangrove and sea grass clean up on Saturday, January 11th, 2014. The clean up area was centered on the Mashta flats and extended along the mangrove area located adjacent to the flats. The sea grass clean up was the first step in restoring the Mashta flats sea grass area. Approximately 40 volunteers participated in the event ranging in age from 5 years old to seniors. Large contingents from the MAST academy were hard working, enthusiastic and good-humored. The MAST group made the major contribution to the clean up. Trash in the mangroves ranged from wallets to bottles to large boat cushions to tires and much more. By the end of the approximately two-hour event, the group had collected enough trash to fill the bed of a pick-up truck one and a half times. Future clean up of the sea grass and mangrove area is planned and we encourage participation in this worthwhile activity.

Friday, March 7th and Saturday, March 8th

The Patricia and Phillip Frost Museum of Science and other partners, including components of the Miami-Dade government, are undertaking the restoration of a 17-acre coastal dune and hardwood hammock replanting on the northern side of Virginia Key. The guidelines for the restoration are specified in the Virginia Key Master Plan.

Citizen Scientist groups will perform the monitoring of the restoration and post-restoration effects. The Key Biscayne Citizen Scientist Project has become a partner in this activity.

The two-day workshop was designed both to develop the protocols for the restoration and the tasks to be undertaken by the participating Citizen Scientist groups. On the first morning of the workshop, the details of the project were exhibited during a walk-through the restoration area. That afternoon was directed at developing the protocols for the restoration.

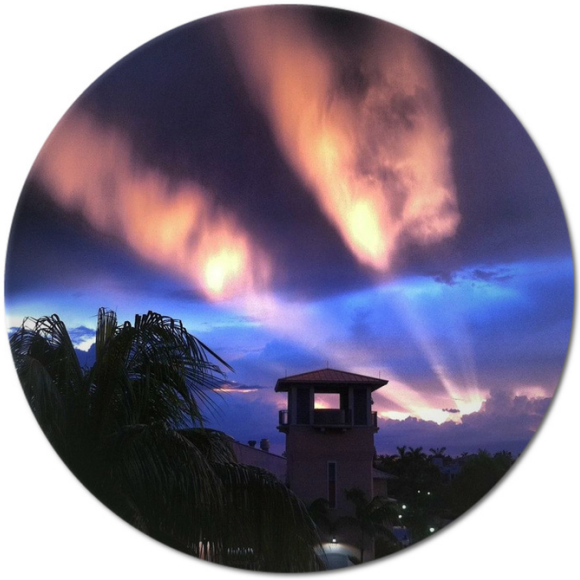
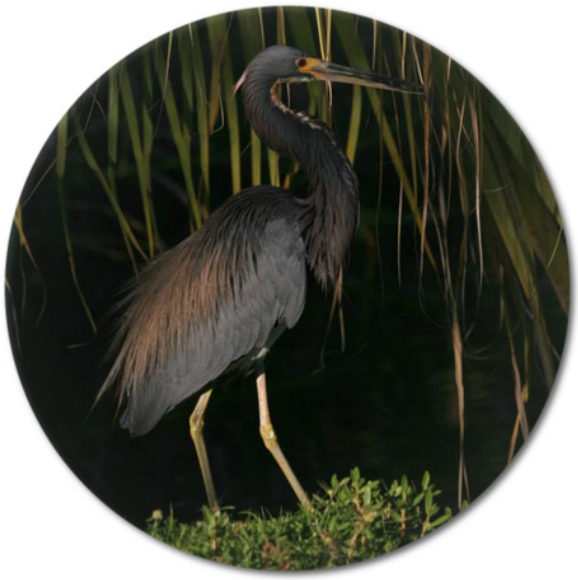
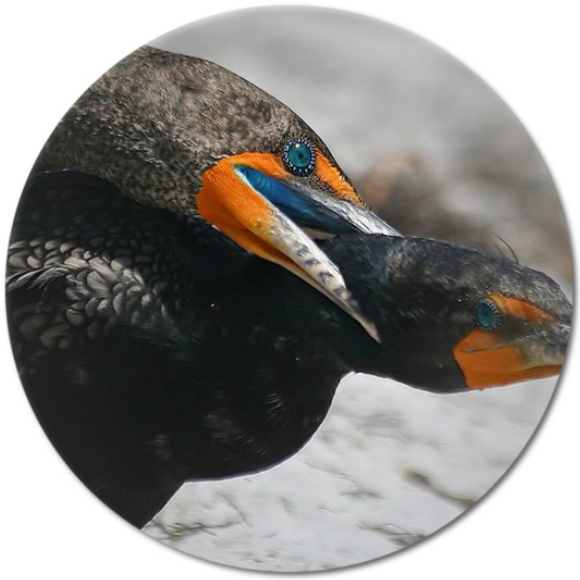
The second morning was led by Audubon Society experts from different parts of the country, identifying birds present in the restoration area. Of interest to non-experts, was the observation that the majority of birds were identified by their songs and not by sightings. Findings from this survey will provide the baseline for evaluating post-restoration changes.

During the second afternoon, the visiting scientists talked about the Citizen Scientist Projects they directed. Valuable information was provided on how to conduct a successful Citizen Scientist Project.

The Nature Photo Challenge

Under the direction of Ms. Audra Burchfield, a University of Miami GRADUATE student and CSP intern, the Citizen Scientist Project assisted in a Nature Photo Challenge. The objective of the Challenge was for residents to provide their vision of the Key by taking pictures of the nature surrounding us. Submitted photographs are available for viewing on the CSP portal keyscience.org.

Winning photographs are shown below.


Future Events

These events are described as volunteers will be required to ensure successful endeavors. If you are interested in participating in one or more of the events, please forward the name of the event along with an email address. As we get closer to the events, we will provide details on dates, times, locations, etc. The variety of tasks to be performed should provide numerous opportunities for volunteers.

Virginia Key Dune Restoration
Volunteers will be required to perform tasks such as planting, water quality testing, growth rates of planted specifies, etc. in cooperation with volunteers from the Museum of Science. The project is the restoration of the North Virginia Key Dune area described above.

BAYNANZA
BAYNANZA is an annual event directed at cleaning Biscayne Bay both from the coast and boats. This year's event will take place on Saturday, April 26th from 9 to noon. The Key Biscayne Citizen

Scientist Project wants to play a large role in this year's activity. For more information on the project check the BAYNN

Mashta Flats Restoration
The Mashta Flats restoration is directed at restoring the sea grass beds on the portion of the Flats that is under the jurisdiction of the Village. The evolution of the restoration will be evaluated through 3-monthly monitoring visits to the Flats. Once the monitoring schedule has been established registration details will be provided.

— CITIZEN SCIENTIST LECTURES —

Previous Lectures

Thursday, November 14th
Dr. Tom Jackson, Southeast Fisheries Science Center, NOAA. Lecture topic: Invasive Species **at 6:30 PM in the KB Council Chambers.**

Thursday, November 21st
Dr. Chris Landsea, Atlantic Oceanographic and Meteorological Laboratory, NOAA. Lecture topic: Hurricane Forecasting **at 6:30 PM in the KB Community Center.**

Wednesday, December 11th
Dr. Diego Lirman, Rosenstiel School of Marine and Atmospheric Science of the University of Miami. Lecture topic: Coral mitigation **at 6:30 PM in the KB Council Chambers.**

Thursday, January 9th
Dr. Lisa Krimsky, Miami-Dade County Extension Sea Grant Agent. Lecture topic: Mangrove Reclamation **at 6:30 PM in the KB Community Center.**

Future Lectures

Thursday, April 10th, 7 PM
Senior Lounge, Key Biscayne Community Center
Speaker: Dr. Theodora Long, Executive Director, Marjory Stoneman Douglas Biscayne Nature Center Inc.
Topic: Activities of the Nature Center

Thursday, May 8th, 7 PM
Senior Lounge, Key Biscayne Community Center
Speaker: Dr. T. Blankenship, Coastal, Systems International Inc.
Topic: Beach management; introduction and applications to Key Biscayne beaches

Contacting the Citizen Scientist Project

The KB CSP welcomes your input and strives to maintain open and clear lines of communication with Key Biscayne residents, visitors and anyone interested in becoming a Citizen Scientist.

Please use any of the following contact information to get in touch with us.

ADDRESS:
50 West Mashta Drive, Suite 3
Key Biscayne, Florida 33149

Phone: (305) 361-2770

Website: www.keyscience.org

Email: info@keyscience.org