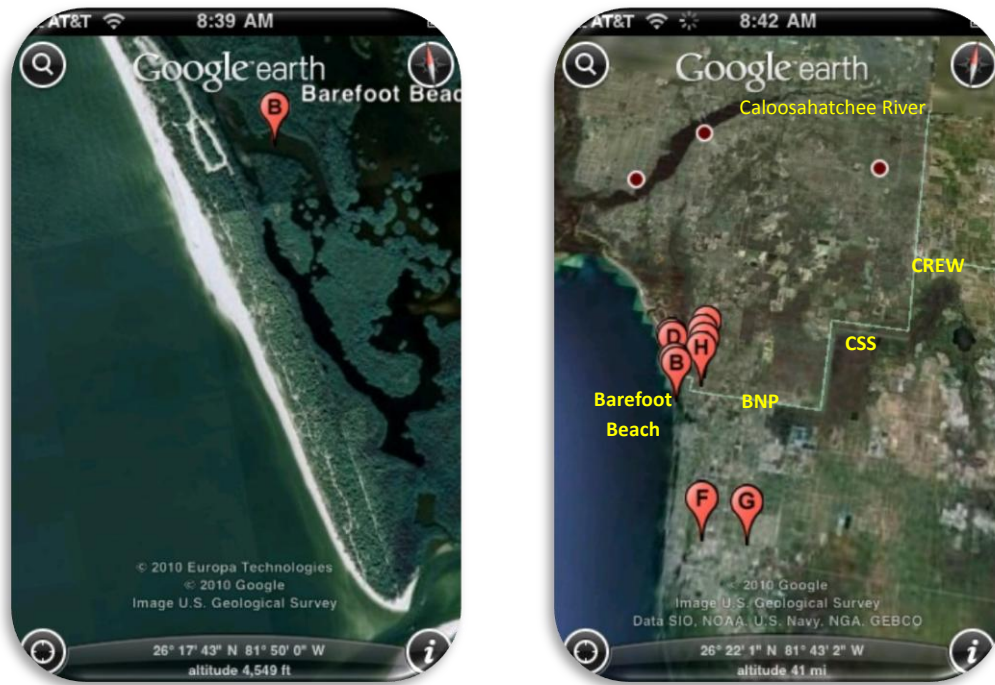


## Barefoot Beach Preserve Site Visit

**WEBPAGES OF INTEREST:** <http://www.colliergov.net/Index.aspx?page=455>  
<http://friendsofbarefootbeach.org/FOBB/index.htm>



**Figure 1. (a) The southern end of the barrier island, where we will visit coastal hardwood hammocks, mangroves, dunes, beaches, and intertidal zones. (b) The greater landscape showing the interconnectedness of and the urbanization surrounding the Corkscrew Watershed, CREW trails, Caloosahatchee River, and Barefoot Beach.**

Barefoot Beach Preserve is 342 acres of natural land, one of the last undeveloped barrier islands on Florida's southwest coast.



This beach park is an excellent example of the shifts in habitat that occur within a very narrow strip of land with only slight changes in elevation and moisture. 8,200 feet of beach and sand dunes support the growth of sea oats, providing nesting sites for sea turtles during the summer months. The park also maintains a tropical coastal hammock of sabal palm, gumbo-limbo and sea grape trees among many others. The site is also home to the protected gopher tortoise.

Barefoot Beach Preserve is popular for its gorgeous, plush surroundings and its opportunities for avid fisherman, who are able to enjoy many species of fish. The inland side of the island provides tidal creeks and mangrove swamps which serve as breeding areas and as a nursery for sport and commercial fish and shellfish.

**Tasks:** As you visit the location today, observe your surroundings. Remember that this completes our “Journey Down the Corkscrew Watershed” and we have finally reached the estuarine ecosystems! When you summarize the trip in your Nature Journal, answer the following questions *in detail*. Feel free to ask questions. Anything else you want to write about is encouraged.

- What is a coastal maritime hammock? How is this ecosystem different from other ecosystems we have visited previously in this course? How is it similar?
- What is scrub habitat?
- What special adaptations do some plants use to conserve water in these drier habitats?
- What is an estuary? Describe how the mangrove forest is different from the coastal maritime hardwood hammock.
- What natural service(s) does this area provide?
- What does the term “urbanization” refer to? Describe the effects from urbanization you observed today during your drive to the Barefoot Beach Preserve.
- Sketch a profile of the barrier island. Note the location of any berms, dunes, shell lines, breaker and surf zones, and other beach zones. Note the low tide and high tide marks in your sketch. Include descriptions of all vegetation zones, as well. **Be as detailed as possible!** (Complete the entire cross-sectional view of the barrier island by including the dune/scrub area, coastal hammock, mangrove zone, and protected lagoon!!!) ... use *Figure 8-10 on page 170 of your textbook for assistance.*
- Name 5 plant species you saw and list the distinguishing features for each one.
- Name 5 animal species you saw and list the distinguishing features for each one.
- Are you “better off” for having visited this area?
- Explain how you connected to nature today.

**SMALL GROUP EXERCISE: BEACH SAND EXAMINATION**

Press your hand against the sand. Now examine the layer of sand grains attached to your palm. The sparkly, clear grains are quartz sand. Weathered from mountain boulders of the Appalachian Mountains far to the north, this sand was carried out to sea by streams and then southward to Florida by **longshore drift**.

The colored, opaque grains are mostly shell fragments from organisms that live just offshore.

The size and texture of this sand mixture can have a significant impact on coastal environments and on organisms, particularly those living in or on the sand. Particle size is largely determined by wave and wind action. In the foreshore, waves with more energy are able to transport and deposit larger particles and carry away the finer grained sediments. Fine-grained sediments tend to accumulate in areas where the wave energy is not as great. High tides, large storm events and wind are all able to transport and deposit sediments to the backshore. Dune sediments are largely transported and deposited by wind.

**In Groups of Three:** Collect a small amount of sand from three locations: The foreshore (right next to the water), the backshore (between the wrackline and the dunes), and as close as you can get to dune **without walking into a vegetated area**. Record differences you observe in texture, particle size, and composition on the chart below.

	<b>Comparitive Size</b>	<b>Grain Shape</b>	<b>% Quartz</b>	<b>% Shell</b>
<b>Foreshore</b>				
<b>Backshore</b>				
<b>Dune</b>				

**NOTES AND OBSERVATIONS (Sketch a cross-sectional diagram of the beach here):**

## **SPECIES LIST**

### **Maritime hardwood hammock**

Gumbo limbo

Sable palm (cabbage palm – state tree of Florida)

Strangler fig

Love vine

Virginia creeper

Cocoplum

Nickerbean

Spanish bayonet

Heliotrope (scorpion flower)

Coastal goldenrod

Periwinkle

Sand cherry

Comb polypody (fern)

Ferns, lichens, bromeliads

### **Mangrove forest**

Red mangrove

Black mangrove

Saltwort

### **Dune**

Sea Oats

Sea Grapes

Seven-year apple

Prickly pear cactus

Ragweed

### **Beach**

Wrack line

Assorted shells

### **Birds**

Sandpipers, Sanderlings, Plovers, and Terns

White ibis

Osprey

Cardinal

Red-bellied Woodpecker

Pileated Woodpecker

Brown pelican

### **Other**

Gopher tortoise (keystone species)

Sea turtles