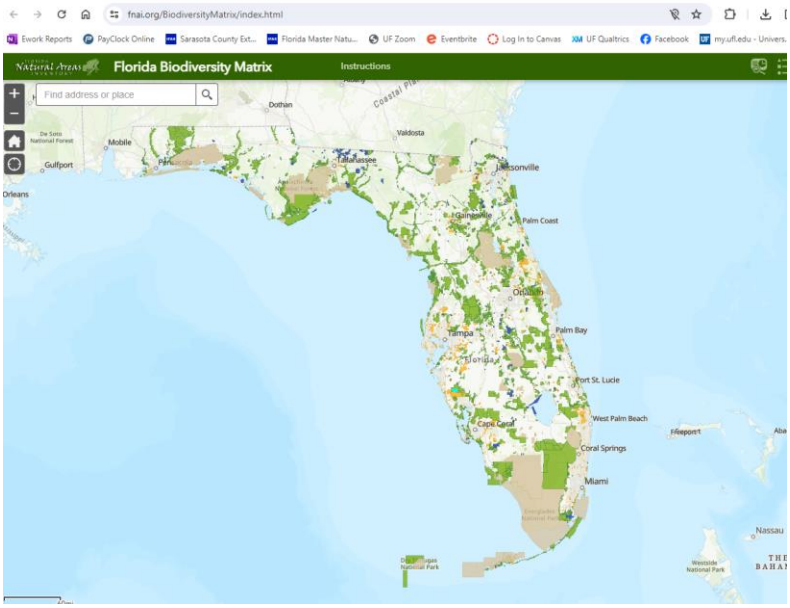
Connecting conservation of imperiled species and their habitats

Lesson plan authored by Katherine Clements, Ecology and Natural Resources Educator, UF/IFAS Extension Sarasota County

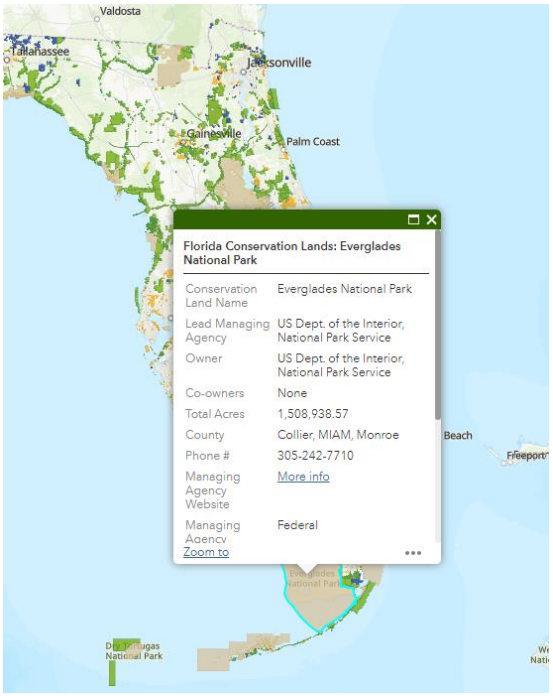
Rare and imperiled species are often dependent on specific habitats or specific needs within certain habitats. As these habitats are fragmented or lost due to human actions or natural forces (such as hurricanes, flooding, drought), this can lead to the species being listed as threatened or endangered as their population declines. Wildlife biologists study animals, their needs, the habitats they live in, and why species might be declining. Wildlife biologists also provide information about what these species need for the habitat they live in to be healthy and continue to support their survival. Land managers, like park rangers, use that information to help manage conservation lands to provide healthy and well-balanced natural communities for both wildlife and plants. This poster project will help you to understand the connections between rare and imperiled wildlife and conserving their habitats (or natural communities) where they live. Follow the directions below to start your journey towards understanding these connections.

1. Go to the Biodiversity Matrix tool portion (https://www.fnai.org/Biodiversity-Matrix-Intro) of the Florida Natural Areas Inventory website (www.fnai.org)

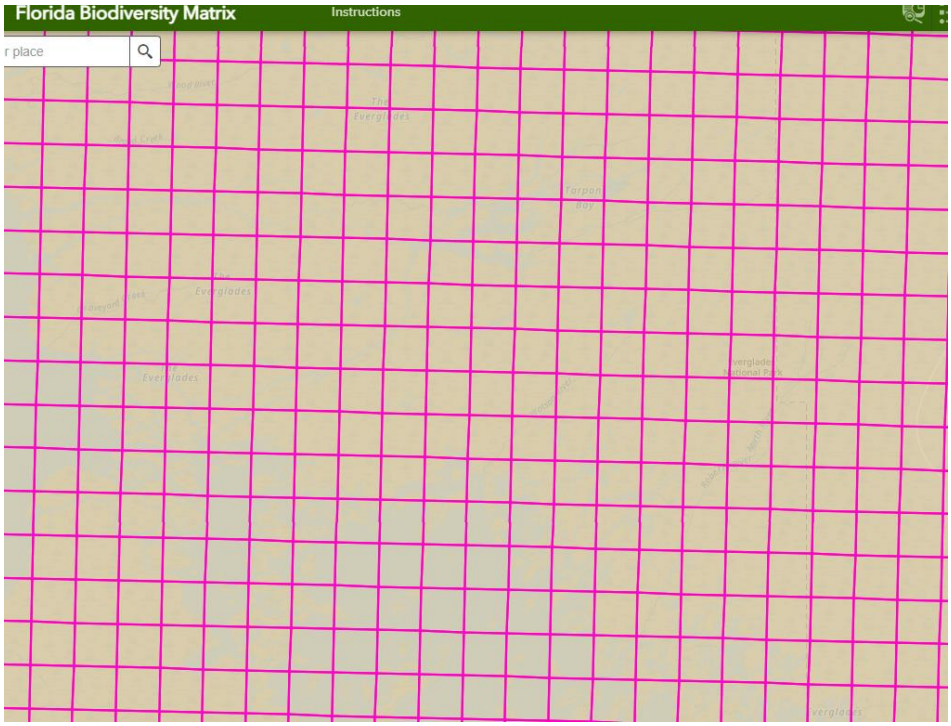



2. Move the map around and choose a conservation area of interest to you (conservation areas are the colored areas on the map, the color represents which type of agency manages that land- federal, state, county, private, etc.)

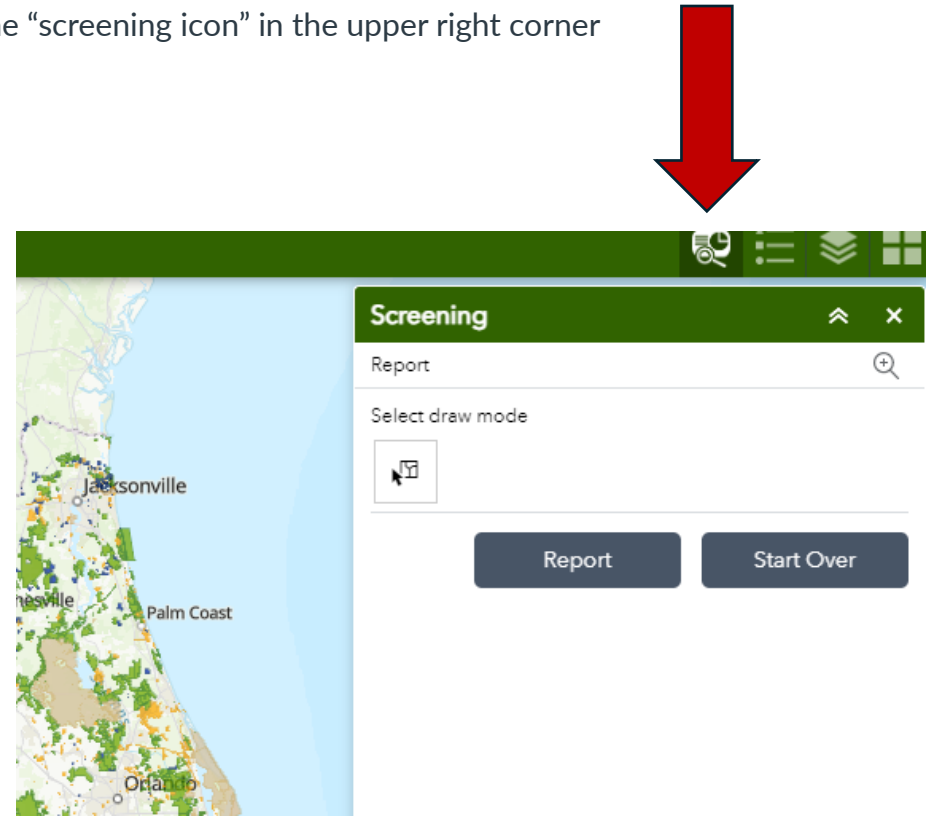
3. Click on the conservation area of your choice on the map to see some brief information, as you scroll down you will also see the type of plant communities found there.




4. Close the description window, and then zoom in to that area of interest until you see a grid of boxes over that area.

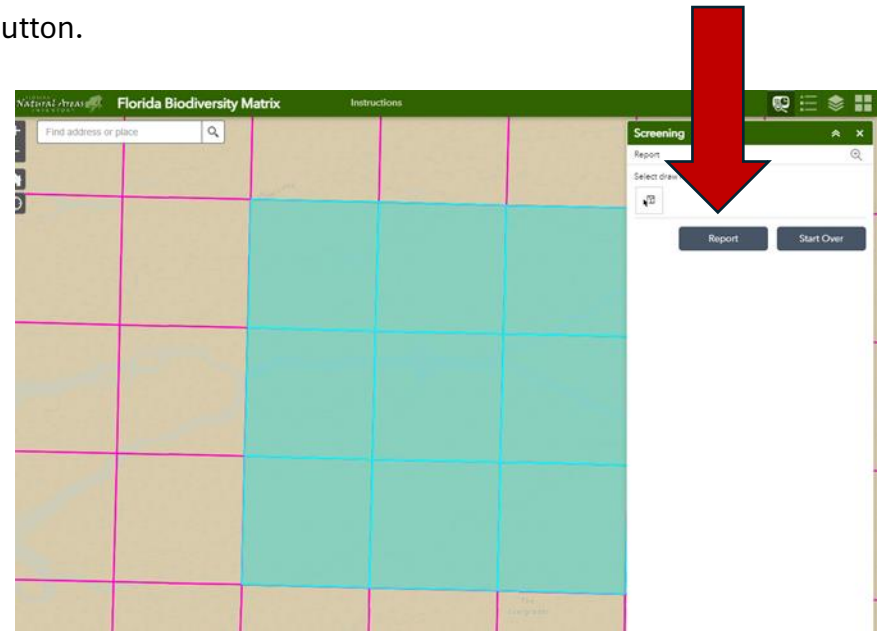


5. Click on the “screening icon” in the upper right corner

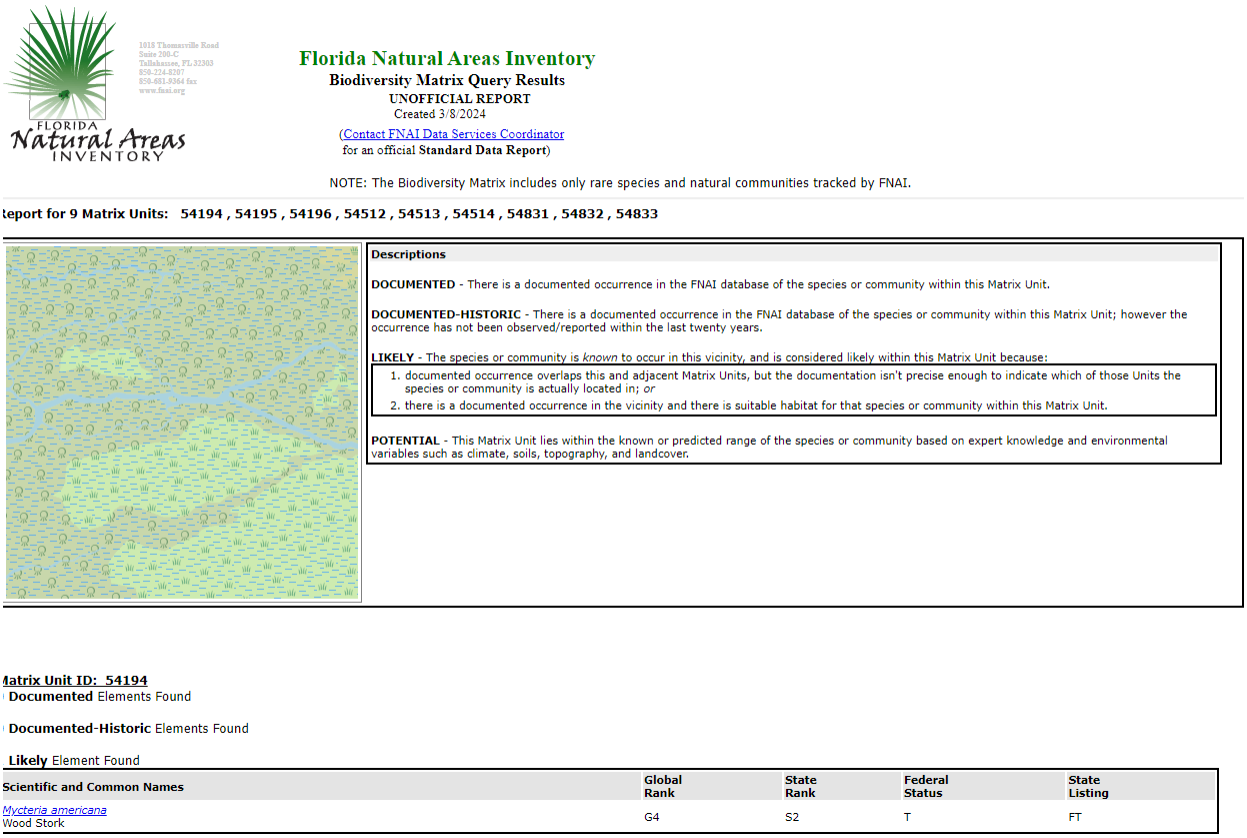



6. Then click on “select draw mode”. Using your mouse over your area of interest, right click to drag a rectangle over 4-10 squares in your area of interest (release once it has highlighted about 6 squares of the grid). These squares will now be highlighted.

7. Click on the “report” button.




8. You will then get a report that will include rare species (both animals and plants) that have been documented to occur in that area, as well as potential species that could or might have historically occurred there. Choose an animal of interest and click on that animal to learn more



Florida Natural Areas Inventory

Biodiversity Matrix Query Results

UNOFFICIAL REPORT

Created 3/8/2024

(Contact FNAI Data Services Coordinator for an official **Standard Data Report**)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

**Report for 9 Matrix Units: 54194 , 54195 , 54196 , 54512 , 54513 , 54514 , 54831 , 54832 , 54833**

**Descriptions**

**DOCUMENTED** - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

**DOCUMENTED-HISTORIC** - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

**LIKELY** - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

**POTENTIAL** - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

**Matrix Unit ID: 54194**

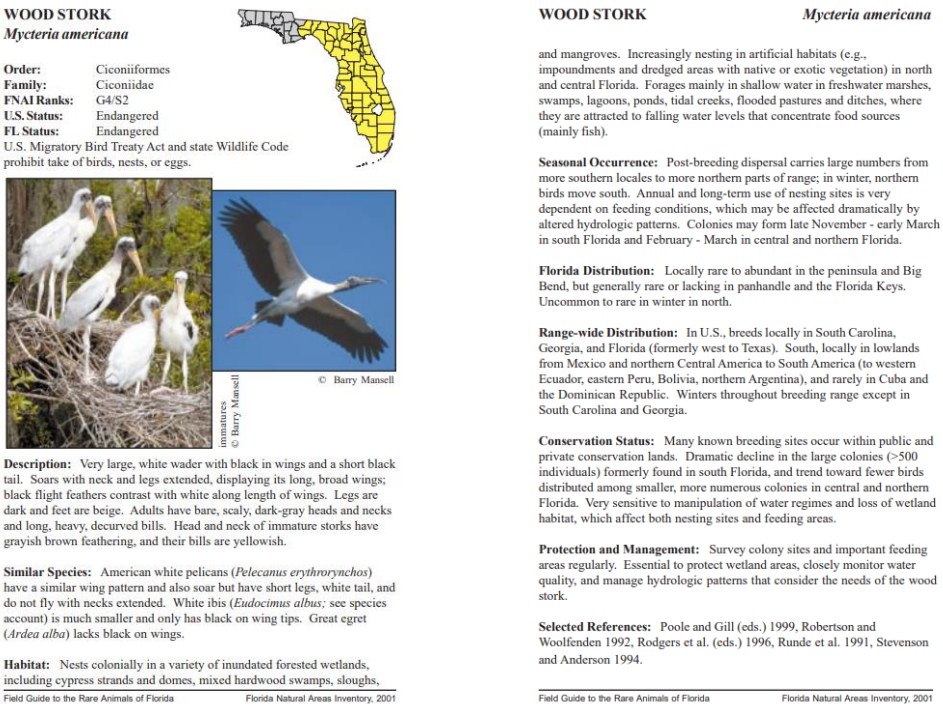
**Documented** Elements Found

**Documented-Historic** Elements Found

**Likely** Element Found

| Scientific and Common Names | Global Rank | State Rank | Federal Status | State Listing |
|---|---|---|---|---|
| *Mycteria americana* Wood Stork | G4 | S2 | T | FT |

9. This report will tell you more about the animal species, where it lives (habitat), its conservation status, and some ways to protect and manage this species.



**WOOD STORK**
***Mycteria americana***

**Order:** Ciconiiformes
**Family:** Ciconiidae
**FNAI Ranks:** G4/S2
**U.S. Status:** Endangered
**FL Status:** Endangered
U.S. Migratory Bird Treaty Act and state Wildlife Code prohibit take of birds, nests, or eggs.

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immatures © Barry Mansell

**Description:** Very large, white wader with black in wings and a short black tail. Soars with neck and legs extended, displaying its long, broad wings; black flight feathers contrast with white along length of wings. Legs are dark and feet are beige. Adults have bare, scaly, dark-gray heads and necks and long, heavy, decurved bills. Head and neck of immature storks have grayish brown feathering, and their bills are yellowish.

**Similar Species:** American white pelicans (*Pelecanus erythrorynchos*) have a similar wing pattern and also soar but have short legs, white tail, and do not fly with necks extended. White ibis (*Eudocimus albus;* see species account) is much smaller and only has black on wing tips. Great egret (*Ardea alba*) lacks black on wings.

**Habitat:** Nests colonially in a variety of inundated forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs,

Field Guide to the Rare Animals of Florida — Florida Natural Areas Inventory, 2001

**WOOD STORK** ***Mycteria americana***

and mangroves. Increasingly nesting in artificial habitats (e.g., impoundments and dredged areas with native or exotic vegetation) in north and central Florida. Forages mainly in shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures and ditches, where they are attracted to falling water levels that concentrate food sources (mainly fish).

**Seasonal Occurrence:** Post-breeding dispersal carries large numbers from more southern locales to more northern parts of range; in winter, northern birds move south. Annual and long-term use of nesting sites is very dependent on feeding conditions, which may be affected dramatically by altered hydrologic patterns. Colonies may form late November - early March in south Florida and February - March in central and northern Florida.

**Florida Distribution:** Locally rare to abundant in the peninsula and Big Bend, but generally rare or lacking in panhandle and the Florida Keys. Uncommon to rare in winter in north.

**Range-wide Distribution:** In U.S., breeds locally in South Carolina, Georgia, and Florida (formerly west to Texas). South, locally in lowlands from Mexico and northern Central America to South America (to western Ecuador, eastern Peru, Bolivia, northern Argentina), and rarely in Cuba and the Dominican Republic. Winters throughout breeding range except in South Carolina and Georgia.

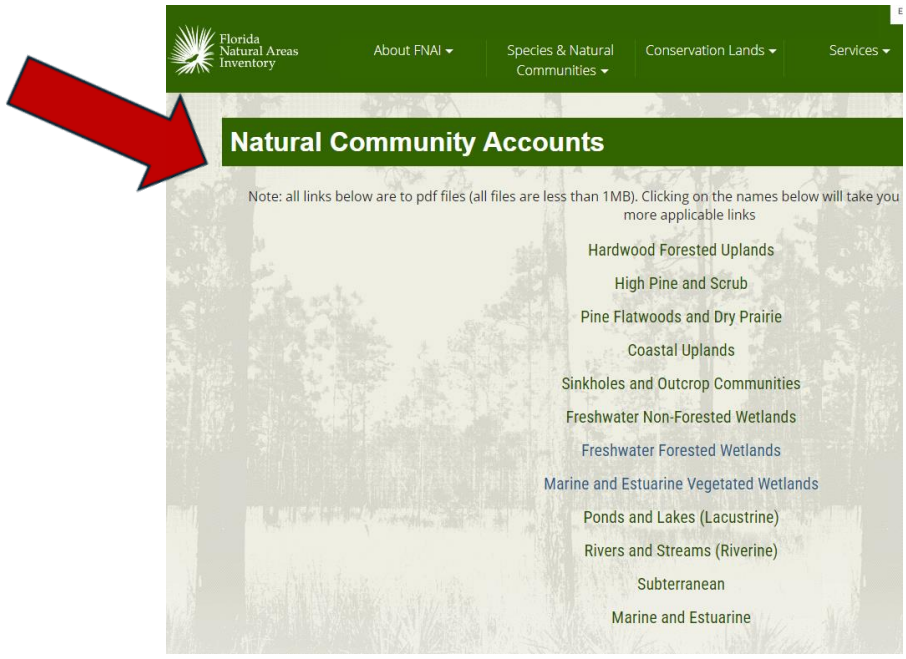
**Conservation Status:** Many known breeding sites occur within public and private conservation lands. Dramatic decline in the large colonies (>500 individuals) formerly found in south Florida, and trend toward fewer birds distributed among smaller, more numerous colonies in central and northern Florida. Very sensitive to manipulation of water regimes and loss of wetland habitat, which affect both nesting sites and feeding areas.

**Protection and Management:** Survey colony sites and important feeding areas regularly. Essential to protect wetland areas, closely monitor water quality, and manage hydrologic patterns that consider the needs of the wood stork.

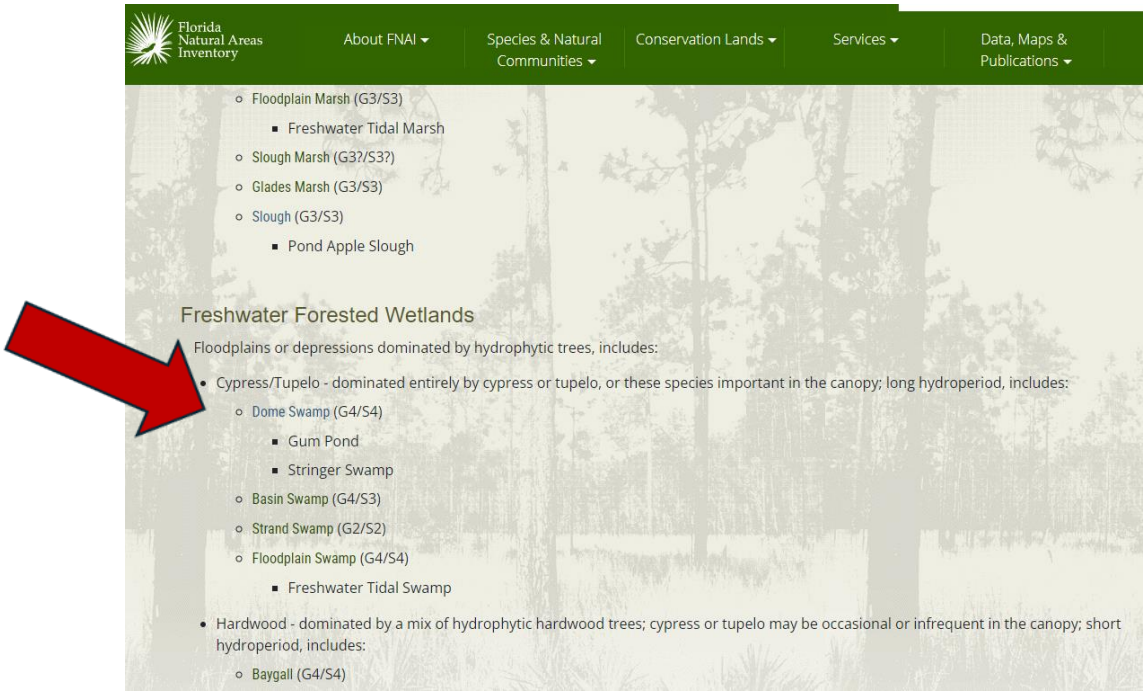
**Selected References:** Poole and Gill (eds.) 1999, Robertson and Woolfenden 1992, Rodgers et al. (eds.) 1996, Runde et al. 1991, Stevenson and Anderson 1994.

Field Guide to the Rare Animals of Florida — Florida Natural Areas Inventory, 2001

10. Under the habitat section of the species profile, look at the names of the habitats your species lives in (for example the wood stork lives in forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs, and mangroves).
    a. Choose one of these habitats to do further research, scroll through the list at https://www.fnai.org/species-communities/natcom-accounts and find the habitat you've chosen (or one similar).



i. For example, find cypress dome swamp in this list and click on it for a photo and an explanation of that natural community.




Other resources:

General wildlife information: https://myfwc.com/wildlifehabitats/profiles/

Management plans for endangered and threatened species in Florida:

https://myfwc.com/wildlifehabitats/wildlife/management-plans/

https://myfwc.com/wildlifehabitats/wildlife/species-action-plans/