

Regional Landscapes of the United States and Canada

The Southern Coastlands: on the subtropical margin

Prof. Anthony Grande

©AFG 2013

EXAM TWO

- **Thursday, April 18**
- **Chapters 4-11.**
- Same format as Exam One.
- Take-home extra credit for exam 2 will be due on April 18.

2

The Southern Coastlands Region

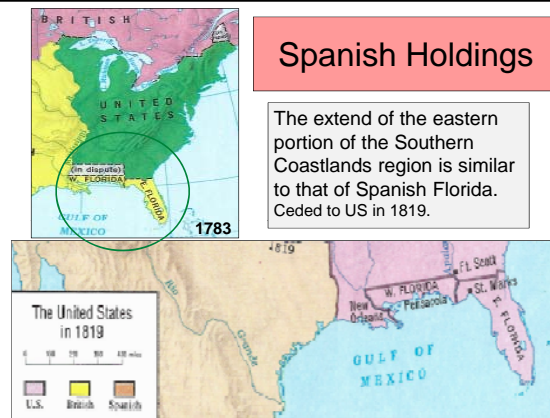
Stretches from the Outer Banks of North Carolina to South Texas and the Mexican border, including all of Florida.



3

Spanish Holdings

The extend of the eastern portion of the Southern Coastlands region is similar to that of Spanish Florida. Ceded to US in 1819.



OVERVIEW – physical geography

- **Low-lying coastal area** focused on the sea; **spacious natural harbors that become ports.**
- Relatively **flat terrain** with slow flowing rivers, **swamps** and **marshes**; **focused attention inland.**
- Sandy **barrier islands** and **lagoons** parallel the coastline; **creates the Intracoastal Waterway System.**
- **Warm, humid climate** with ample precipitation **except for the South Texas area.**
- Annual **hurricane** threat.
- **Global warming** with **rising sea levels** is a major concern.

5

Highest point in Florida!

near the Alabama border



The lowest highest point in any state!

6

OVERVIEW – human geography

Population

- High percentage of retirement-aged people
- Large number of people who are seasonal residents
- Greater mix of ethnic/cultural groups and lower percentage of African-Americans than the South

Economic Sub-regions

- **East:** recreation, agriculture, retirement communities
- **West:** resource extraction, industrial production, fishing, trade (break-of-bulk and transshipment)

7

Resources

Continental shelf

- Atlantic and Gulf of Mexico shelf areas are **wide**
- Prime areas for **ocean fishing** (commercial and sport)
- Contain extensive **oil and gas deposits**
- **Salt** – underground salt domes mined for rock salt.
- **Sulfur** – from cap rock over salt deposits (LA, TX)
- **Phosphorus** – from deposits in Florida

❖ **Political issues and environmental problems** related to the extraction and use of resources.

8

Varied Urban Areas

Charleston and **Savannah**: historic colonial cities.

Jacksonville: the largest U.S. city in area; it is a deep water port and industrial center

Miami: chief city of Florida and regional hub.

Fort Lauderdale, Orlando and Tampa: vacation destinations

Mobile: a deepwater port and aerospace center.

New Orleans: port in the Mississippi Delta; gateway to the interior of North America.

Houston: region's largest city; port and airline hub; an industrial, corporate and financial center.

Corpus Christi: an industrial/agricultural port city.

9

Climates

- **Cfa - Humid Subtropical** - throughout the region; hot humid summers, mild winters; year-round precip.
- South Florida is **Aw - Tropical Savanna** (winter dry).
- South Texas is **BSh - Subtropical Steppe** (semi-arid with hot summers).

❖ **Very long growing season** (over 270 days)



10

Bayou

Defined as either:

- body of water or wetland found in flat, low-lying areas
- an extremely slow moving stream with a poorly defined shoreline.



Probably comes from the Choctaw word **bayuk**, meaning a small stream, and applied by French Acadian immigrants to any waterway.

11

The Everglades

The Everglades of South Florida is a **unique ecological region**.

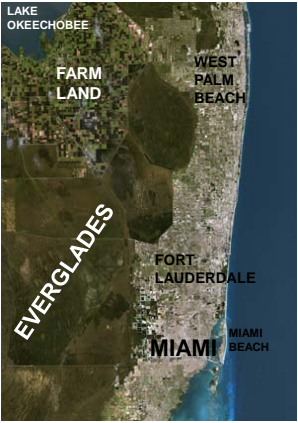
❖ It is in danger because of fresh water diversion to Miami and farmland and because of east-west road construction.



12

South Florida

Note the proximity of the **Miami Metro area** with the **Everglades** and agricultural land south of **Lake Okeechobee**.



13

Everglades National Park



It's a "river of grass" (left), 60 mi wide, flowing from south of Orlando to the tip of Florida.

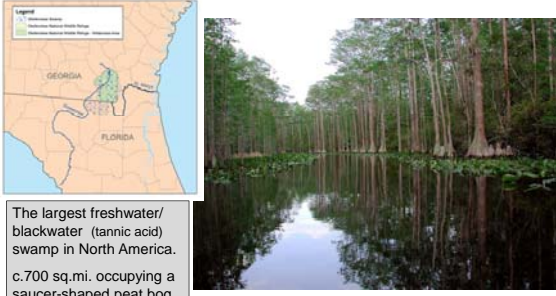
The **mangrove forest** (above) exists in briny water and may be adversely affected by sea level rise.

<http://www.nps.gov/ever/index.htm>

14

Okefenokee Swamp NWR

Georgia-Florida



The largest freshwater/blackwater (tannic acid) swamp in North America. c.700 sq.mi. occupying a saucer-shaped peat bog.

<http://www.fws.gov/okefenokee/>

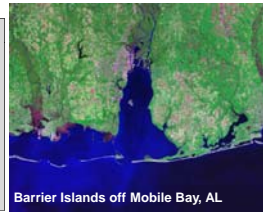
15

Barrier Island

A **long and narrow island**, lying parallel to the mainland and separated from it by a **lagoon**.

Built of sand.
Shaped by a long shore current, waves and wind.

Barrier islands are temporary geologic features.



Barrier Islands off Mobile Bay, AL


16

Barrier Islands




17

Miami Beach and Cape Canaveral

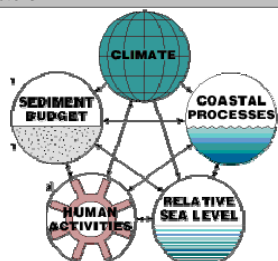


18

COASTS in CRISIS

Louisiana Barrier Islands

Barrier islands form, change shape and disappear as a result of five interrelated factors.



Then came Hurricane Andrew in 1992 .

19

COASTS in CRISIS

aftermath of Hurricane Andrew, 1992



Figure 4. Photographs taken 7 weeks apart of a beach viewed through Tivoli Island as a result of Hurricane Andrew: A) Before - taken July 9, 1992, and B) After - taken August 30, 1992.

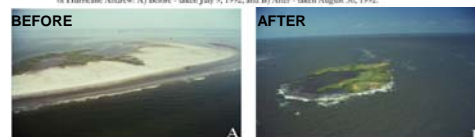


Figure 5. Photographs taken 7 weeks apart of the east end of Tivoli Island illustrating the severe erosion that occurred along the margin of Little Pine Tivoli Island during Hurricane Andrew: A) Before - taken July 9, 1992, and B) After - taken August 30, 1992.

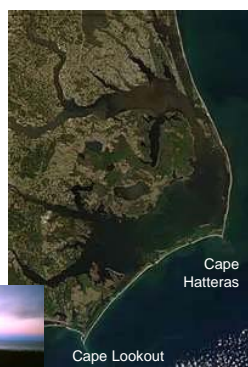
20

The Outer Banks

North Carolina

The **Outer Banks** is a **200 mile long** string of barrier islands.

Cape Hatteras is the site of a lighthouse which has had to be moved 1500 ft. inland in 1999 to prevent it from collapsing into the sea.



21

Florida Keys

- The **Florida Keys** is a chain of **coral islands**, linked by causeways, stretching 130 miles from Key Biscayne to Key West.
- The **Florida Key Formation** is the **world's 3rd largest barrier reef**.

❖ A **cay** or **key** is a low coral island (Sp. *cayo* = *shoal*)

❖ **Key West** is the southernmost and most tropical part of the U.S. outside of Hawaii.

22

Florida Keys



US Route 1, the Overseas Highway, connects the Keys with the U.S. mainland.

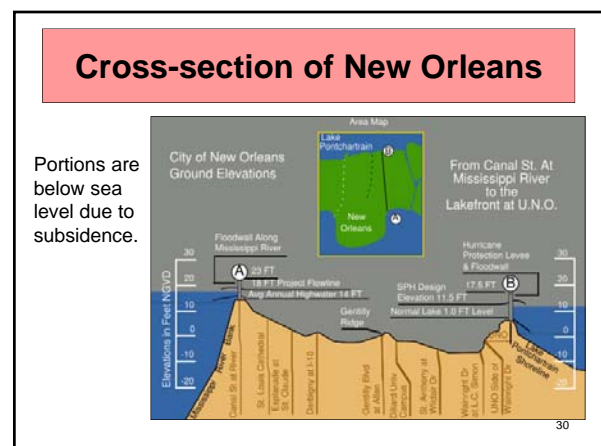
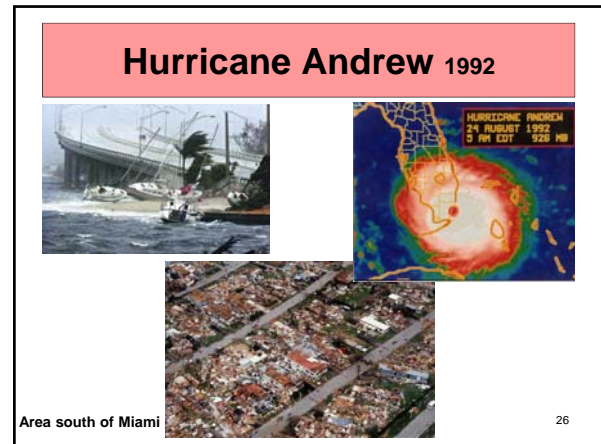
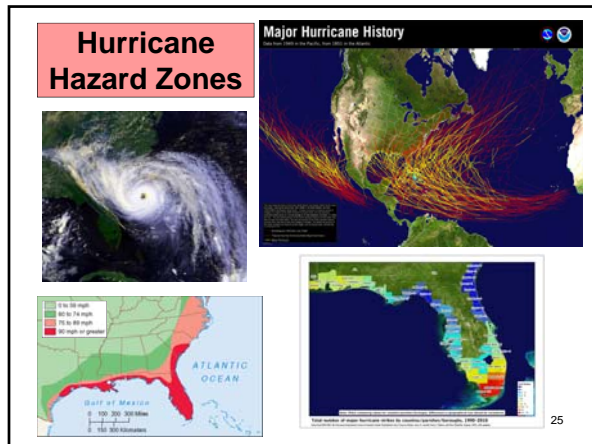


23

Natural Hazards

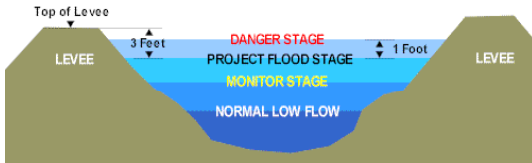
- **Coastal hazards**
 - Wave erosion
 - Storm surge
 - Rising sea level
- **Subsidence and sinkholes**
- **Hurricanes**
 - In path of storm tracks from Africa and the Caribbean
- **Winter freeze** (rare)
- **Fresh water supply problem**
 - Land too flat for reservoirs.
 - Salt water intrusion into groundwater in coastal areas

24



Levee

A levee is a natural feature created from the alluvium that is deposited when rivers overflow their banks on a regular basis.

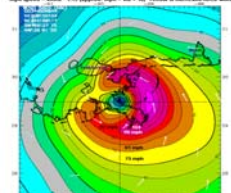


A artificial levee is an embankment designed and built by people to contain the flow of a river and prevent it from flooding the surrounding territory.

31

Path of Hurricane Katrina

The eye passed east of New Orleans, pushing a storm surge into the lower Mississippi River and into Lake Pontchartrain. Levees failed to contain the rising water.



12

New Orleans after Hurricane Katrina



33

Agriculture Setting

- Humid subtropical climate
- Long growing season (from 9-12 mo.)
- Average rainfall greater than 50 in./yr

Advantages for agriculture

- Can grow crops that cannot be grown elsewhere as citrus and sugar cane
- Double-cropping possible
- Winter vegetables



Citrus

- **Introduced by Spanish in the 1500s.**
Produced only in Florida, Texas and California
- **Location**
 - south of 29°N
 - 40% between Tampa and Orlando
 - southward shift to avoid frost, but farther south, soils are too swampy
- **Oranges and grapefruit chief crops**
- **Local processing**
- **Labor-intensive:**
use of migrant labor



35

Harvesting Citrus

Older groves are labor-intensive, employing large numbers of workers.

Mechanized harvesting has taken hold in newer groves with widely spaced trees



36

Sugar Cane

Sugar cane needs warm temperatures, lots of rain and a long growing season.

Historically labor intensive, now mechanized.



37

Alligator Farming

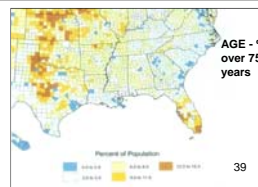
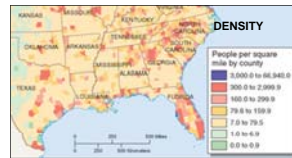
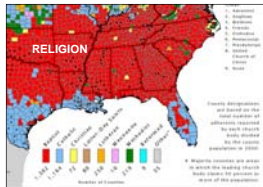
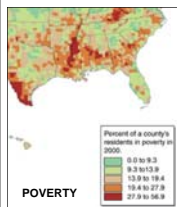
Alligators are native to the southern coast -- thrive in warm climate and swampy conditions.

A source of food. Skins are used to make leather goods.



38

Demographics



39

A distinctive regional demography

- ✓ **In-migration.** Most residents were born somewhere else.
- ✓ **A very "non-southern" population.**
- ✓ **Mix of retirees and refugees** (Cubans, Haitians).
- ✓ **Pull Factor:** the attraction of both a favorable climate and tax environments.
- ✓ **Unique local cultural groups:** Cajuns, Creoles, Gullahs
- ❖ **"Snowbirds":** People from the northern states and Canada who spend the winter in Florida.

40

Regional Demography Cajuns and Creoles

- ❖ **Cajuns:** people of French Canadian descent. They migrated to N. America (French Acadia now the Canadian Maritimes) and then were expelled after the French and Indian War. Settled in the U.S.
- ❖ **Creoles:** people of French/Spanish/Afro-Caribbean descent usually from the West Indies. Associated with speaking a pidgin language combining words from other languages with French.

- The term was also applied to a slave born in the Americas as opposed to one brought from Africa.



Red = high % of French-speakers 41

Regional Demography Gullah

- ❖ **Gullah:** descendants of Africans brought as slaves to cotton plantations on the Sea Islands. Noteworthy for their distinctive African language and culture, which has been handed down by generations relatively intact.

- Once isolated, their uniqueness is now threatened by development and tourism on the coastal islands.



42

Gullah Culture



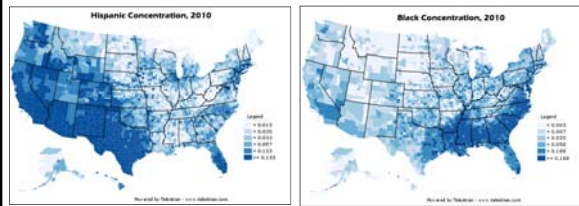
43

Other Demographic Groups

- **Hispanics** (South Texas and South Florida)
 - From Mexico, Puerto Rico, Cuba, Dominican Rep
 - Remain distinctive:
 - Spanish-speaking
 - Catholic
 - Cuisine
- **Caribbean Islanders** (South Florida)
 - From Haiti and the West Indies
 - French, English and Asian backgrounds
 - Cultural conflict between Blacks of Caribbean and American heritage

44

Racial Patterns in the South



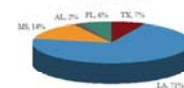
Percent of total county population, 2010 US Census

45

Fishing

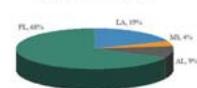
Commercial Fishing

Distribution of Commercial Fishing Landings



Sport Fishing

Distribution of Marine Recreational Fishing Trips



46

Industrial Development

- **Petrochemical industry**
 - Natural **gas** and **petroleum** products
 - Money for industrial growth, esp. Houston area
 - Area from Corpus Christi, TX to Pascagoula, MS
 - Important materials for other chemical industries
 - Cheap water transportation to East Coast customers
- **Aluminum**
 - **Bauxite** from Caribbean and South America
 - Cheap water transportation; abundant local fuel

47

Houston

Houston is the 4th largest city of the US.

It is a major industrial center and the focus of the oil industry. Its port facilities are located 40 mi from the Gulf, linked to it by the **Houston Ship Channel** (1873).



48

