An Introduction to Mississippi Mainland Natural Beaches

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Introduction to Mississippi Beaches

Mississippi Beaches

Petit Bois Island Mainland Natural Beach

Mississippi has the largest man-made beach in the world

26 miles from Biloxi to Gulfport
Mainland Natural Beach
Grand Battures

Natural beaches are **imperiled** in Mississippi because of their rarity, restricted range, and threats that make them vulnerable to further decline.

There are **less than 1,000 acres** of natural beach in Mississippi.

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**Important Plants**

- **Saltmarsh Hay** (*Spartina patens*)
- **Coastal Panicgrass** (*Panicum amarum*)
- **Beach Morning Glory** (*Ipomoea stolonifera*)
- **Groundsel** (*Baccharis halimifolia*)
- **Marsh Elder** (*Iva frutescens*)

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Plants are important sand stabilizers.

Plants are indicators of elevation.
Important Animals
Terrapins and Birds

Diamondback Terrapin

Beach Nesting–Summer Birds

Wilson's Plover

Least Tern

Black Skimmer
Winter Birds

Western Sandpipers

Black-bellied Plover

Ecological Processes
Ecosystem Functions

- Elevation Profile/Beach Parts
- Beaches are dynamic
  - Constantly being reworked: deposition, erosion, overwash
- Beaches buffer wind, water, and waves
- Beaches support nesting and foraging

Mainland Natural Beach Profile — Cross View
Beaches are *dynamic*

**Erosion**

**Overwash**

**New sand deposited from offshore**

**Utricular drift**

**Nesting Habitat**

**Erosion – exposed marsh platform**
Conservation and Management Issues

• Natural Forces
  – erosion, storms, sea level rise

• Coastal Development and Urbanization
  – habitat loss and degradation
  – bulkheading, vegetation clearing
  – invasive species (plants, fire ants)
  – channel modification and dredging
  – excessive nest predation
  – marine debris

Suggested Readings

Diamonds in the Marsh: A Natural History of the Diamondback Terrapin by Barbara Brennessel

The Smithsonian Guide to Seaside Plants of the Gulf and Atlantic Coasts from Louisiana to Massachusetts by Wilber H. Duncan and Marion B. Duncan


Questions?

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