Gray's Reef Ocean Science Course

Rivers to Reefs

Coastal Ecosystems of the Southeastern United States

Rivers to Reefs represents a journey across the region boundaries and ecosystems of the southeastern U.S. coast. Focus is specifically on areas of the Georgia coastline, also provides specifically depicts the area from Sapelo Island National Estuarine Research Reserve in Georgia to the Gray's Reef National Marine Sanctuary, 17 miles offshore. Some of the topographic features of Sapelo Island have been exaggerated and the distance to Gray's Reef has been shortened to portray the ecological relationships among the ecosystems in this area. The coast is a dynamic, constantly changing environment in which the ecosystems, extending from land to sea, depend on and support one another. This poster serves as a starting point for further study of our coastal and marine environments. An understanding of the interdependence of coastal ecosystems is the first step for their proper conservation and protection.

HTTP://GRAYSREEF.NOAA.GOV

Rivers collect and transport due falls or land runoff, or rain. Rivers come from a higher to lower elevation transporting nutrients, sediments and substances, pollutants of the way to the coast. Freshwater from along the coastal USA flow into the Atlantic Ocean where salt water from the ocean meets and mixes with the rivers' freshwater. Freshwater where is the southern are typically called "black rivers" because their relatively slow moving water has the tint and tannin in Each factor from the vegetation that falls into them, which is much like brewing tea.

Salt Marshes are found in the relatively calm, low-energy coastal areas between the mainland and barrier islands. The brackish water has twice the salt much twice daily as the high tides forms a natural tub soup for nurturing marine animals including fish, shrimp, crabs and oysters. The salt marsh complex also provides habitat for numerous animals including birds, crab or marsh hens, snake and otters. They provide protection from power storms as well as serve as a filter for pollutants. Salt marshes are considered among the most productive ecosystems on our planet.

Maritime Forests first emerge on the inner parts of barrier islands where the soil has had time to accumulate nutrients. Fire remains plays and plants are the first into to become established and will predominate their species as long as the climate through is a periodic basis. If fire is suppressed over sufficient time, forest stand hardwood trees like live oaks, magnolias, red bays and various holly overtake the pines and palms to become the climax forest. Pine flood dwell, energetic forest increases providing an excellent environment for the nesting birds and palms that prefer drier conditions.

Beaches & Dunes are built and sculpted by wind, water currents and waves that deposit and remove sand and substrate transported by the ocean. Behind the beach, dunes are created when lighter sand grains are blown inland and become trapped by stabilizing plants such as sea oats, grass grass and colonial oats. During the summer, gentle breezes push grains sand downward creating broad, gently sloping beaches that provide nesting habitat for shore birds and sea turtles. In the winter the beaches become narrow and steep, shaped in part by storm waves, sea or sea. In some cases.

Coastal Waters is an abundance of diverse sea life extend from the beaches inward to the reefs. These waters are relatively shallow reaching a depth of only 19 feet near Georgia coast offshore. Commercial and recreational fishing boats are more prominent waters for fish such as flounder and king mackerel. Black sea bass and tomato spadefish and of course shrimp. Fish and shrimp along with many other species find larger and smaller females prey on larger fish and marine animals like dolphins, sea turtles, dolphins and whales. In spring and summer, many other sea life come to these feeding or nesting.

Reefs comprise a small fraction of the ocean bottom, but they are spectacular and unique in our country. If you live near or live, sea urchins, sponges and corals. Locally these subtropical reefs are reduced to an hard ground five meters deep. Marine geologists say they are cut by numerous outcroppings that formed a few million years ago. They were recently became with these are so low enough to cover them allowing sea life to survive there. Surrounding the reefs is a vast expanse of sand and grassy barren, but it is actually teeming with life also fish called "sea scrapers in the sand".

Gray's Reef