

Video	Audio
	>>MALE NARRATOR: The Georgia Coast is an excellent destination for eco-tourism. On this program we'll tour the coast with trips to Sapelo Island and Gray's Reef...coming up next.
	>>Narrator: Eco-tourism unites travel with ecology, and often with local history. Most people tend to associate eco-tourism with exotic locales far and wide, but eco-tourism is available right here in your own home state.
	The Georgia coast region alone is home to five National Wildlife Refuge Areas, one state Wildlife Management Area, three state parks, one National Seashore and one National Marine Sanctuary—not to mention the nearly 100 miles of public beaches and waterways. And Georgia is home to a significant travel industry established to promote and provide recreational opportunities to visit, observe, and commune with the wild places and the wildlife in our state's natural areas.
	Eco-tourism includes activities such as bird-watching, kayaking, hiking, and scuba diving, but the term also includes those that just want to be tourists. One way to take the edifying portions of an eco-touring off your own shoulders is to sign up for a guided tour led by one of the many not-for-profit conservation organizations.
	Groups like the Sierra Club, the Nature Conservancy, the Georgia Conservancy and the Georgia Department of Natural Resources all offer tours of the Georgia Coast including several of the barrier islands. These tours can vary in their length of stay and their variety of activities. This weekend we chose to explore Sapelo Island with a group guided by the Georgia Conservancy, an environmental organization that has been around for quite a long time.
	>>Jackson: The Georgia Conservancy was founded in 1967, and our mission, basically is to preserve Georgia's natural resources and make Georgia a better place to live. And, the best way is to get people here and enjoy it and say "oh yeah, now I understand; now I understand why you don't want to have development on these barrier islands and now I understand why you're, you're trying to get this law passed.
	Narrator: Presently, most of Sapelo Island enjoys federal and state protection. The Sapelo Island National Estuarine Research Reserve was purchased by the state of Georgia in 1969 with matching funds from the National Oceanic and Atmospheric Administration. The Georgia Department of Natural Resources is the steward organization in charge of managing the island. It also leases 1500 acres to the University of Georgia for operation of the Marine Institute.
	>>Sullivan: DNR is, has as it's primary interest the preservation of Sapelo as a unique resource of culture and the environmental factors which come into play. And that's the beauty of Sapelo being a state owned island. There's only so much room to expand and grow from the standpoint of development. Essentially the Hog Hammock community is the only privately owned land on Sapelo with the exception of a few scattered small tracks, and that is only four hundred and thirty acres. So the island is safe from development to a degree,

	although there are some questions in Hog Hammock, being private land, the people do have the option of selling their property if they so chose to do so.
	>>Narrator: Sapelo island is the fourth largest island in the coastal chain ranking behind Cumberland, St Simons and Ossabaw. Much of our weekend here will be spent exploring the ecology of Sapelo Island. Fred Hay, a naturalist, will lead the way.
	>>Hay: A lot of the folks, it's their first time on the islands, and there's a lot out here to capture and what my job is, is to give them enough of an introduction so that they can make a decision about whether they want to come back. I think the biggest challenge from me is to not get bogged down in too many little details about the island's history and the plants and all that. But just give them a good general overview and plant those seeds that makes it exciting. They'll be back.
	Beynart: Well I think we do tend to plan vacations around, you know, leisure and fun, and I think they can be both that and educational. To become even more sensitive to the importance of protecting the environment, you know, is something we've we, we have to do. This is our habitat, and if we don't protect it, it's not going to be sustainable.
	>>Narrator: Sapelo Island has a history rich in not just ecology but also in Native American culture, Colonial culture and African Culture. This history will also be included in our tour.
	>>Jackson: We'll tour the historic island, part of the island on the north end, and we'll see a lot of the tabby runes and where different civilizations before us lived. We will go into the Hog Hammock community, and see the descendents of the slaves that worked the plantations here still live. And they have a festival this weekend and we're going to visit the Culture Day festival, and hopefully hear some of their native music and sample some their food.
	>>Narrator: The tour begins in the Reynolds mansion where our group will be spending the next two nights. The mansion is now managed by the Georgia Department of State Parks and Lodges and can accommodate up to 29 guests.
	>>Kelton: Well, this is my forth trip to Sapelo. And, I had such a good time, and it was such a unique experience that I have come back every once in a while.
	>>Narrator: On Sapelo, history and nature are intertwined. After an excellent meal and night of rest it's off for a morning of exploration at Nanny Goat Beach, a beach that before two hundred years of natural accretion could be viewed from the porch of the mansion.
	>>Beynart: The ocean is my favorite place to be, but I really wanted the opportunity to come and see an unspoiled portion of the Georgia coastline. And, you know, it's bitter-sweet because, you know, I see what it what it should be. This has just been spectacular. Tnd I'm learning about things that I have seen for decades that I never questioned or understood and I'm absolutely fascinated. I mean, the naturalist that's working with us, Fred, is just so knowledgeable and enthusiastic that it's been quite and education in really a short amount of time.
	>>Parsons: If I were here by myself, I would be on the beach reading a book and I'd never hear anything or learn anything. To have someone who has the breath of knowledge that our guide has. And I mean, it's so much more interesting to come and hear about what's really going on.

	<p>>>Narrator: Next on our tour is the lighthouse. This highlight of the tour has a history as rich as the mansion.</p>
	<p>The Sapelo Lighthouse was first activated in 1820 and it served as a guide for mariners crossing Doboy Sound to and from the Port of Darien. The lighthouse was re-activated in 1868 following the Civil War that is also when it received its distinctive daymark, six alternating red and white bands.</p>
	<p>The original brick lighthouse, the oil house and the cistern were meticulously restored in 1998 by the Georgia Department of Natural Resources. A spiral staircase was rebuilt inside the lighthouse permitting visitors to climb the tower for an elevated view of Doboy Sound. And the lantern room, after having been dark for almost a century, exhibits a light once again.</p>
	<p>After lunch it’s time to visit the Sapelo Island Cultural Day in Hog Hammock.</p>
	<p>>>Hay: And, it was a great time; there was music and food and story telling and all kinds of crafts and paintings and such, and it was so well received by the folks. In term of the experience, it can’t be beat. It brings the folks from the community out into a big event where everyone can interact, so the atmosphere is perfect for talking and just casual conversation. One of the most unique features of the island, one of the things that makes it what it is, is the legacy and the people currently in the community. It’s definitely a huge part of what the island is.</p>
	<p>>>Narrator: The Hog Hammock is one of the few places where evidence of the Gullah-Geechee culture is still strong. The Gullah-Geechees are descendants of African slaves, who first inhabited Sapelo island in the 1790s. Some inhabitants of Hog Hammock still speak with the special cadence of the Gullah-Geechee dialect a blend of West African, French and English. At its peak, Hog Hammock had a population that numbered 400-500 now Hog Hammock has a population of only 75—but not today! Today, there are nearly 5 thousand people here outside the First African Baptist Church.</p>
	<p>>>Suzanne Donovan: That was also really, really, really interesting to me. I was able to I think learn more both about Sapelo Island and it’s history and get to connect with some of the folks that live here and have been a part of this community for generations. So the food was great. I think the music was wonderful. We met and spoke with this woman who was weaving baskets. That was really interesting. I mean, you just don’t see that kind of thing. Met the woman who has written a book about her history, her family history and the island history, and she was delightful. So, you know, for me, it was an added highlight to the whole trip.</p> <p>>>Armstrong: Everybody was so nice, so warm, so friendly. Everybody was out there enjoying themselves. It was just, you know, “hey, let’s celebrate.” It was beautiful.</p>
	<p>>>Narrator: The Cultural Day Festival carries on until the last ferry leaves. Some of our group stays to enjoy the performances and some</p>

	<p>head back to the mansion to enjoy some solitude or a bike ride on the beach.</p>
	<p>>>Parsons: Oh, I think they're maybe misconceptions that these kinds of trips that you are constantly on the go or you're constantly involved in activities, but you have a lot of freedom. So, if you don't want to participate in the activities, you can wander on the beach and just enjoy the environment or you can choose to take part in activities.</p>
	<p>>>Narrator: The last day of our weekend begins with a driving tour of the north end of the island through the RJ Reynolds Wildlife Refuge. Our first stop is the tabby ruins of the Chocolate Plantation. Our tour guide, Fred, has a lot of interesting information to share.</p>
	<p>>>Fred Hay: This is called climbing buckthorn, Sageretia manutiflora. It's one of the only protected plants that we have on the islands. Its roots will work their way down into the tabby, continue to grow and bust the tabby. So what do you do?</p>
	<p>>>Narrator: Our last stop of the day is at Raccoon Bluff. Raccoon Bluff was once its own community of about a dozen families. In the 1950s the families were asked by RJ Reynolds to swap their land for land in Hog Hammock. This concentrated the black community into one area. In 1969, Reynolds sold most of his holdings to the state of Georgia.</p>
	<p>After our tour, its time to head back to the mainland. The Ferry ride itself is just another treat for the folks visiting Sapelo Island. Visiting Sapelo island has been a rare treat indeed. Sapelo is truly a gem of the Georgia Coast, an island rich in both ecological and human history.</p>
	<p>Female Narrator: Coming up, we'll visit Gray's Reef National Marine Sanctuary and we'll learn how to be an underwater eco-tourist.</p>
	<p>>>Male Narrator: For some people who have been eco-tourists for years and have been inspired by the wild beauty they have seen, it is time to go a little farther. Its time to take some action. One organization which helps turn the eco-tourist into the eco-volunteer is REEF, the Reef Environmental Education Foundation.</p>
	<p>>>Akins: REEF is a non-profit organization of volunteers that do bird-watching underwater. Of course, we're not watching birds; we're watching fish. We were established in 1990 and we now have more than 25,000 volunteers. They dive, look at fish and also gather information on what they see during their dives.</p>
	<p>>>Narrator: These volunteers travel all over the country to help collect data. Today they have descended on Savannah, Georgia to dive on Gray's Reef, a National Marine Sanctuary 17 miles east of Sapelo Island.</p>
	<p>>>Akins: We have a great team of people here. These are REEF volunteers that have achieved expert status in their observation skills, so they're really good at their identification skills. And they've come from all over the country as part of our advanced assessment team to go out and survey these reef sites.</p>
	<p>>>Fowler: It's like the Audubon Society and the guys that are real interested in</p>

	<p>doing the bird hunt. They go everywhere; they travel everywhere to find the different birds. Well, we do the same underwater. We know that certain species of fish live here. I'm not going to see them down there in the pretty tropical waters of Key Largo, so you travel up here and experience new environments.</p>
	<p>>>Akins: The volunteers are really excited about doing a project like this. It does cost them their money, their vacation time, but it's also fun for them to be able to contribute.</p>
	<p>>>Narrator: The data collected by the divers is compiled into a database that is then accessible to marine scientists, state wildlife managers and even the public.</p>
	<p>>>Fowler: I certainly believe that everything that we're doing has an influence. Um, just recently they wanted to open up the Goliath Grouper Fisheries again, and with the data we have taken; we were able to show that they are still below their historic levels. That's just one example of what we're doing and how it does make a difference. I always believe that anything that you do, even the smallest action, makes a difference in the long run.</p>
	<p>>>Grenda: There's not too many opportunities that as a typical diver I can have an impact like that on how the health of the ocean is.</p>
	<p>>>Narrator: Grays' Reef is an excellent location for this type of effort. It is one of 13 marine sanctuaries in the US. These are areas set aside for the protection of natural resources that might otherwise be consumed or destroyed by commercial activities.</p>
	<p>>>Bohne: The Georgia Department of Natural Resources recommended to NOAA that Gray's reef be a marine sanctuary. This was a new program back then. Marine sanctuaries were first established in 1972 by congress. And Gray's Reef was selected as a candidate for a marine sanctuary at that time because it was just about the perfect representation of live bottom habitat throughout the southeast. It is a real jewel, and it is the gem of the Georgia coast as far as both fishing and diving.</p>
	<p>>>Woodward: Live bottom is the term that people have traditionally used throughout the southeastern united states to describe naturally occurring reef communities out in the ocean versus the expanses of sand where there's life on the sand, but it's not as prominent and not as recognizable.</p>
	<p>>>McFall: While grays reef is not the only naturally occurring area off the coast of Georgia, it is one of the larger protected areas. In fact it's the only protected area off the coast of Georgia. Typically the naturally occurring reefs can be found anywhere from as little as 3 miles to as much as 200 miles off the shore of Georgia. They are every bit as pretty as what we have inside gray's reef.</p>
	<p>>>Narrator: Gray's Reef is basically a limestone outcropping under the ocean. The rocks were formed 3 to 5 million years ago during the Pliocene Age. Over time the sea level rose and fell, carving out the rock formations you see today. Interestingly, the seas has receded around 8 thousand to 20 thousand years ago and Grays' Reef was dry land. It was much like a temperate forest covered in trees.</p>
	<p>>>Bohne: We're hopeful that we may find some evidence of human habitation out at gray's reef.</p>
	<p>>>Narrator: The different sections of the rock outcroppings host different invertebrates. It is these invertebrates that make up what's</p>

	<p>called the “live bottom reef.” But what some may argue make up the most interesting part of the reef community are the fish, and that is precisely what our volunteers from REEF are here to count!</p>
	<p>Schulke: I'm from Wisconsin and this is a great opportunity to come into a warm state and do diving in an area that I have never done before. I didn't even know there was this good diving here.</p>
	<p>>>McFall: What makes Grays reef so unique is that it is unlike what you would find in an environment like the Caribbean or in the Florida keys. We talk about it as being a crossroads. Gray's reef is a compilation of species that might be found in the Caribbean, but also of species that live further north in what are known as more temperate environments.</p>
	<p>>>Narrator: The sea temperature at Grays Reef can vary by as much as 30 degrees, reaching lows in the 50s during the winter and highs in the mid eighties during the summer. This environment invites species to live at their geographic and sea temperature limit.</p>
	<p>>>McFall: A good example is during the summer you might find butterfly fish, which are very common in the tropics living right next to black sea bass, which are known to be a more northern species.</p>
	<p>>>Narrator: With this unique diversity of fish species, no wonder our REEF volunteers have come from their own geographic limits to dive in our backyard!</p>
	<p>>>Manning: We have this thing called a life-long list citing, and so the more fish you see, the longer your list gets. And I looked at this as an opportunity to get this list even longer than it was before, see these fish I hadn't seen before.</p>
	<p>>>Fowler: We all do this for the love of it. We're not getting paid so we all take time off from work or spend our vacations and travel to the different destinations. It's a way to kind of do your part, I guess. It's all part of stewardship of the oceans, and sometimes it's not easy to do that; you have to go the extra steps.</p>
	<p>>>Amy Fowler: We don't use all of our vacation time for REEF projects however, we try to help out as much as we can. I never get in the water without doing a REEF survey.</p>
	<p>>>Narrator: And it precisely this Fish Survey Project that is the bread and butter of what REEF does, but it is a little more complicated than just counting one fish, two fish, red fish, blue fish.</p>
	<p>>>Akins: What we do is we take an underwater slate with us, drop down and start recording species that we find. So I just mark off the fish that are sighted. Anything that's not on the check list is still recorded on the backside by writing in the names of the species. So we are doing a hunt. We are looking for as many different species as we can find during the dive.</p>
	<p>>>Narrator: The divers also make notes on the abundance of each species. It is impossible to count each and every fish so divers categorize the abundances into four groups: SINGLE which is a lone fish, FEW which is two to ten, MANY which is eleven to one hundred and ABUNDANT which is more than one hundred.</p>

	After the dive, REEF volunteers transfer this information into a computer database.
	>>Akins: Well it still takes a lot of labor.
	>>Narrator:...And a lot of fish. There are over 300 marine fish species in Georgia's coastal waters. Roughly one-third of these are considered reef fishes and many others are indirectly associated with reefs.
	>>Bohne: When you dive down to the reef, you travel through a series of environments that different species inhabit. Uh, when you start at the top, you'll often see cannonball jellies and other planktonic organisms. At the surface, you might also see barracuda and occasionally mackerel swimming by fairly fast or watching the divers as they descend. When you get to the bottom and look around you'll often see schools, swarms of what are called cigar minnows over the reef, and these are the forage fish for many of the predator fish on the reef.
	Mixed among the fish species are many of more tropical origins like 2 spot cardinal fish. And recently on this last dive, we counted some parrot fish, which is very unusual for grays reef. You'll also notice, as you swim along the ledges, if you look underneath, you'll occasionally come across a loggerhead sea turtle. You'll find them both floating at the surface to get air and resting or foraging at the bottom.
	>>Narrator: Spying a new species keeps these volunteers going dive after dive. But how do the volunteers become so knowledgeable about fish?
	>>Akins: Anybody can do this, any time they dive. Our program is set up for volunteers to get started wherever they're diving, even if they're not an expert on their fish, and that's how all this group became experts. They started out as a novice volunteer and they kind of learned as they went. So this is program that involves everyday divers in learning more about what they see and then gaining experience as they go.
	>>Grenda: The advantage of REEF is that any diver no matter what their background, whether it's business, which is what my background is, or science; it doesn't matter what you are, you can go into fish counting. You know, if you know just five species that's what you write down because you've positively identified it, and as you go more and more, you learn more and more.
	>>Narrator: Some of the commonly seen fish at Gray's Reef are some of the most unique like the Black Sea Bass. This fish is both an economically and ecologically important part of the north Atlantic ecosystem. The white margins on the tail are a good visual clue to its identification.
	>>Bohne: You'll find a lot of black sea bass. That's one of the key species that we monitor in our research. They are fairly abundant at gray's reef as well as grouper.
	>>Narrator: The Atlantic Spadefish is typically found in medium to large schools in open water. They get their name from their body shape that

	<p>resembles a spade on playing cards. But there are a few other species of fish that may get a scuba diver's bleeding going.</p>
	<p>>>McFall: As far as dangerous organisms that might inhabit gray's reef, there are sharks which can potentially be dangerous, but in my estimation or my experience it is the people that harass marine life that are usually the ones that get assaulted by marine life. So of course if you're not watching where you set your knee or your hands while you're diving you might set it on a stingray. There are several barbed stingrays within the sanctuary. Besides that there aren't too many other organisms that you really need to watch out for. If you happen to put your hand back in a crack or a crevice to retrieve something, you might find that there's a moray back there that doesn't like you with your hands in his home.</p>
	<p>>>Bohne: Probably the most exciting thing that I've encountered at the reef are dives when Manta rays come over the reef. It's not a common occurrence. Usually in the fall you might see them. Essentially out of the mist, these large squadrons of very graceful manta rays swimming through the water and they seem to be attracted to the bubbles of the divers as they circle around. When you first look up, you think it's probably a big shark so you're startled, but you see these magnificent creatures and it's really awe inspiring.</p>
	<p>>>Narrator: Getting to know your fish and conducting Fish Surveys for REEF can add a level of enjoyment to what might other wise be an ordinary dive.</p>
	<p>>>Hitt: It has added a tremendous enjoyment to diving, knowing what you're looking at. Fish, just like animals have different behaviors, and it's really fun to stay down there and just sit and watch a fish.</p>
	<p>>>Fowler: The waters in Georgia are very productive. They are thriving with marine life. The whole reef itself is alive. And the fish here, you see some fish that you're not going to see anywhere else in the world. Some people travel thousands of miles, spend hundreds of dollars to go to exotic locations, yet they're unable to see some of the marine life that Georgia has right off its coast.</p>
	<p>>>Schulke: I feel that REEF is doing a great job in bringing awareness into the whole ecology of the coral reef system. When you get people very intimately involved in looking at the fish and counting the fish, they themselves, if they dive over a period of time, can see something improving or lacking in a reef, and that gets you more involved in the whole environmental issues.</p>
	<p>>>Narrator: And that is precisely what eco-tourism is all about and more! These wonderful men and women are actively pursuing a sport they enjoy, and at the same time, striving to help save the environment that they love.</p>