

GEORGIA'S MARINE FISH PLAY AN ESSENTIAL ROLE IN KEEPING THE ECOSYSTEMS OF OUR STATE'S INSHORE COASTAL MARSHES, AND OFFSHORE OCEAN HABITATS HEALTHY. THAT'S WHY THE COASTAL RESOURCES DIVISION OF THE GEORGIA DEPARTMENT OF NATURAL RESOURCES DOES OUR BEST TO MAKE SURE FISH HAVE A PLACE TO THRIVE.

MANY TYPES OF FISH ALL OVER THE WORLD LIVE IN SPECIAL ECOSYSTEMS CALLED REEFS. YOU MAY HAVE HEARD OF AUSTRALIA'S GREAT BARRIER REEF OR GRAY'S REEF RIGHT HERE OFF GEORGIA'S COAST. THESE ARE NATURAL REEFS, FORMED AS MARINE LIFE LIKE CORALS AND SEA FANS CLING TO HARD SURFACES SUCH AS ROCK FORMATIONS, OR EVEN THE HARDENED REMAINS OF PREVIOUS CORALS.

GEORGIA'S COASTLINE IS MADE UP OF SAND, SHELL AND MUD. THE UNDERWATER LANDSCAPE LOOKS MUCH LIKE WHAT YOU SEE ON THE BEACH AT LOW TIDE. THIS SANDY BOTTOM STRETCHES FOR MANY MILES OUT TO THE CONTINENTAL SHELF. THERE ARE NOT REALLY MANY PLACES FOR FISH TO HIDE IN AN FLAT, OPEN ENVIRONMENT LIKE THIS. THEY NEED A PROTECTED SPACE TO FEED AND SPAWN. AND THAT'S WHERE THE COASTAL RESOURCES DIVISION COME IN, WITH SOMETHING CALLED AN ARTIFICIAL REEF.

AN ARTIFICIAL REEF MIMICS NATURAL FORMATIONS LIKE THE GREAT BARRIER REEF AND GRAY'S REEF TO PROVIDE FISH WITH A PLACE TO

LIVE IN AREAS WHERE THEY MIGHT NOT HAVE OTHERWISE BEEN ABLE TO. IN ORDER TO BUILD AN ARTIFICIAL REEF, WE PROVIDE STRUCTURES WHERE FISH CAN HIDE FROM PREDATORS, AND WILL ATTRACT OTHER TYPES OF MARINE LIFE TO THE NEIGHBORHOOD. AND WHILE THE STRUCTURE ITSELF IS MAN-MADE, OR ARTIFICIAL, THE REEF THAT FORMS ON THIS FOUNDATION IS TOTALLY NATURAL.

BIG CHUNKS OF ROCKS AND EVEN STEEL AND CONCRETE ARE OBVIOUS MATERIALS TO BUILD A REEF FOUNDATION, BUT DID YOU KNOW WE'VE ALSO MADE REEFS OUT OF ARMY TANKS, OLD METAL BRIDGES AND RETIRED SHIPS? ALMOST ANY SUBSTANTIAL SURFACE THAT IS CLEAN, FREE FROM TOXINS AND WON'T TRAP ANIMALS CAN BE USED. FISH CAN FIND THEIR NEW HOME HERE RIGHT AWAY, AND WITHIN A YEAR, ENCRUSTING ORGANISMS LIKE CORALS, ALGAE, AND BARNICLES WILL ATTACH THEMSELVES TO THESE SURFACES. SEA TURTLES LOVE THESE NEW HIDING PLACES! AFTER A TIME, THE REEF WILL CREATE ITS OWN SELF-SUSTAINING ECOSYSTEM WHERE EVERY ORGANISM PLAYS A ROLE IN THE FOOD CHAIN.

ARTIFICIAL REEFS IN GEORGIA'S INSHORE MARSHES ARE SIMILAR, BUT INSTEAD OF BEING LOCATED FAR OUT INTO THE OCEAN, THEY CAN BE FOUND IN OUR TIDAL CREEKS AND RIVERS. THEY CAN ENHANCE AREAS THAT LACK SUITABLE HABITAT FOR FISH AND PROVIDE INCREASED OPPORTUNITIES FOR RECREATIONAL FISHING. WHILE OFFSHORE, COASTAL

RESOURCES DIVISION MAY CREATE REEFS FROM LARGE ITEMS LIKE SHIPS, THE INSHORE REEFS ARE MADE OF SMALLER MATERIALS. CONCRETE STRUCTURES LIKE FISH-ATTRACTION DEVICES, SUCH AS REEF BALLS, HAVE BEEN PLACED ALL ACROSS GEORGIA'S INSHORE COASTLINE TO PROMOTE HEALTHY FISH HABITATS.

INSHORE ARTIFICIAL REEFS NOT ONLY PROVIDE HABITAT FOR FISH, BUT FOR OYSTERS AS WELL. OYSTERS ARE KNOWN AS A KEYSTONE SPECIES. THIS MEANS THAT OYSTERS ARE SO IMPORTANT TO THE INSHORE HABITAT, THAT IF THEY WERE TAKEN AWAY, THE ENTIRE ECOSYSTEM WOULD STOP WORKING. AS FILTER FEEDERS, OYSTERS ARE ABLE TO FILTER OUT MAN-MADE POLLUTANTS AND NATURALLY OCCURRING BACTERIA. OYSTERS HAVE THE ABILITY TO CLEAN ABOUT TWO GALLONS OF WATER EVERY HOUR, MAKING THEIR JOB VERY IMPORTANT.

OYSTERS PREFER TO BUILD THEIR MOUNDS UPON THEIR OWN SHELLS. SO, WHILE SURFACES LIKE ROCKS AND CONCRETE MAKE GREAT INSHORE FISH HABITAT, WE OFTEN CHOOSE TO RECYCLE DISCARDED OYSTER SHELLS BACK INTO THE ECOSYSTEM. OYSTER SHELLS CAN BE USED TO RESTORE AND ENHANCE OYSTER REEFS.

TO REHABILITATE AN OYSTER REEF, OYSTER SHELLS ARE COLLECTED TOGETHER IN NET BAGS SO THEY CAN BE HANDLED. THESE BAGS OF OYSTER SHELLS ARE PLACED ALONG THE EDGE OF A TIDAL CREEK. AS

NEW OYSTERS GROWN ON OLD ONES, THE MOUND GROWS AS THEY MATURE INTO ADULTS. THE REVITALIZED MOUND HELPS PROTECT THE SHORELINE BY ACTING AS A BUFFER AGAINST WAVE ACTION ALONG THE CREEK. THE HEALTHY REEF WILL ALSO PROVIDE ADDITIONAL FISH HABITAT.

BUILDING HOMES FOR FISH IS AN ESSENTIAL PART OF MAINTAINING A HEALTHY INSHORE MARSH SYSTEM AND OCEAN HABIT ALL ALONG GEORGIA'S COAST. WE HOPE YOU'VE ENJOYED LEARNING ABOUT OUR INSHORE AND OFFSHORE REEF PROGRAM, AND LOOK FORWARD TO SEEING YOU AT COASTFEST 2021.