

FREE

NORTH CAROLINA 2016

COASTAL RECREATIONAL FISHING DIGEST

Saltwater Regulations and More

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Good Reef! It's Fishing Time in Coastal North Carolina!

It's a great new year for fishing on the North Carolina coast, and the N.C. Division of Marine Fisheries is pleased to introduce the 2016 *Coastal Recreational Fishing Digest*.

New to this year's digest is an article on how to fish on North Carolina's artificial reefs.

An artificial reef is a manmade underwater structure designed to serve many of the habitat functions as a natural reef.

North Carolina has 42 ocean artificial reefs and 20 estuarine reefs and oyster/fishing sanctuaries. Coordinates and information about the materials on these reefs can be found at <http://portal.ncdenr.org/web/mf/artificial-reefs-program>.

As always, this digest contains information on fishing license options, tips for ethical angling, how to identify and measure fish, and a regulations table.

Because marine fisheries regulations are subject to change frequently, anglers should check the N.C. Division of Marine Fisheries' website at <http://portal.ncdenr.org/web/mf/recreational-fishing-size-and-bag-limits> for the most up-to-date fishing regulations.

Notable regulatory changes this year include:

Sheepshead



established in June 2015.

A 10-inch fork length size limit and 10-fish-per-person daily bag limit on sheepshead was

Cobia

The daily recreational bag limit for cobia dropped to one-fish-per-person in February.

Fishermen should also frequently check <http://portal.ncdenr.org/web/mf/> proclamations for an announcement of a cobia season closure.



Flounder

The flounder season will close Oct. 16-Dec. 31

for the recreational hook-and-line and gig fisheries.



Coastal Angling Program

Occasionally, while you are fishing you may be approached by someone from the N.C. Division of Marine Fisheries who is carrying a clipboard and wants to ask you some questions.

This person is conducting an in-person interview for the division's Coastal Angling Program, which includes recreational fishing survey programs that gather statistics that are used to help determine the health of fish populations and what size and bag limits or seasons are needed.

Division staff go out to boat ramps, to the beach and piers to ask fishermen where they fished, how long they fished and what fish they targeted. They will ask to weigh and measure the fish caught and ask what was thrown back. They may also ask questions about trip expenditures.

The division interviews roughly 20,000 anglers per year during both day and nighttime hours, at public and private water access sites.



In addition, the division sends written questionnaires through the mail to Coastal Recreational Fishing License holders throughout the year. The questionnaires ask for information such as where an angler fished, how many fish they caught, and how many fish they threw back. Anglers can answer this survey by mail or online at <http://ncrecfish.com>.

Anglers can also use this web-based tool to record their individual fishing trips and monitor their fishing success. Information from the Coastal Angling Journal enables the division to better characterize and assess recreational fisheries.

Fish bones for science

Fishermen can help the N.C. Division of Marine Fisheries collect scientific data on the recreational fishery by donating their cleaned fish to the Carcass Collection Program. The program collects carcasses from many species.

When a fisherman cleans a fish, he should leave the head and tail intact on the carcass, and then take it to one of the division's freezer locations. Instructions on target species and how to deposit the carcasses are posted on the freezer.

Those participating will be required to provide their name and address. Anglers also will be asked to give information related to when and where the fish was caught. Rewards will be given to anglers taking part in the program.

Division biologists will collect the carcasses, measure the fish, determine the sex, if possible, and remove the otoliths (ear bones) to determine the fish's age. The information collected will be used for stock assessments at the state and federal levels.

For more information, see <http://portal.ncdenr.org/web/mf/carcass-collection>.

Get Hooked on Ethical Angling



Tools of the ethical angler: needle nose pliers, de-hooking device and barbless hook.



If possible, leave the fish in the water while using a de-hooking device to remove the hook.

What is ethical angling?

Ethical angling is a set of habits adopted by conservation-minded fishermen that aims to protect the well-being of one of North Carolina's most prized natural resources – its fisheries.

While regulations are in place to ensure that fish populations can reproduce and sustain the population, ethical anglers go beyond just obeying size and bag limits. Ethical anglers fish in a way that minimizes harm to the fish and their environment.

Here are some easy ways to get started on becoming an ethical angler, but more information, including sample riggings, videos on ethical technique and habitat protection information, can be found at <http://portal.ncdenr.org/web/mf/edu/ethical-angling>.

Before you go

- Make sure you have a valid Coastal Recreational Fishing License or are covered under an exemption.
- Check the latest size and bag limits on the N.C. Division of Marine Fisheries' website, <http://portal.ncdenr.org/web/mf/recreational-fishing-size-and-bag-limits>. Size and bag limits can change frequently.
- Become familiar with the fish commonly caught in North Carolina waters so that you can properly apply size and bag limits (see center poster of this digest).
- Stock your tackle box with a pair of needle-nose pliers or a de-hooking device, a tape measure and a glove or towel.

While you fish

- Practice catch and release. Many released fish survive to be caught another day.
- Use circle hooks to help prevent the fish from swallowing the hook.
- Pinch the barb down on circle hooks and J-hooks to make it easier to release the fish without causing more damage.
- Match your gear size and strength to your target species. Using proper gear reduces the time that a fish is on the line, improving a released fish's survival odds.
- Use non-stainless steel hooks. If lost to the environment or left inside a fish, they will rust away.
- Do not fight a fish to exhaustion. Tighten the drag and land it as quickly as possible.
- Do not discard a previously caught legal fish for a larger fish to remain within the bag limit. This is a waste of fish.

To release your catch

- If possible, leave the fish in the water while removing the hook. If you must remove the fish from the water, use a rubber dip net to lift the fish.
- Keep the fish out of the water for as little time as possible. If taking a picture, have your camera ready to shoot before the fish is landed so that you can return the catch to the water with minimal stress.
- Handle the fish as little as possible. When you must handle the fish, be gentle, but still grip it firmly enough to prevent it from thrashing around. Never touch a fish's gills.

- Use a de-hooking device or needle-nose pliers to grip the hook and gently pull the hook free. Do not twist the hook. If necessary, cut the hook to remove it.
- If the hook has been swallowed, cut the fishing line as close to the hook as possible; the hook may dissolve in the fish's digestive system.
- Return the fish to the water as gently as possible. If possible, slide the fish back into the water, holding it near the surface, allowing water to pass over its gills. When the fish attempts to swim on its own, it is ready to be let go. Tossing the fish back into the water may harm it.

Protect the environment

- Never throw trash overboard. Take it to shore and properly dispose of it.
- Never dump raw sewage overboard. Use pump-out facilities and dump stations to dispose of sewage. Dumping sewage directly into the water is illegal and can introduce disease into the water.
- Avoid spilling oil and gasoline into the water or on land.
- Never harm marine mammals or birds even if they try to steal your bait or catch.
- Attempt to retrieve all tackle and gear that may get snagged or fall overboard.
- Use fish-cleaning stations and trash receptacles. Excessive fish waste deposited directly into marine basins can produce foul odors and impair water quality.
- Report any pollution or environmental damage to the appropriate authorities.



Recreational Commercial Gear License

Recreational fishermen who want to use a gill net or other commercial gear in N.C. coastal waters need to purchase a Recreational Commercial Gear License.

The license costs \$70 per year for residents and \$500 per year for nonresidents. It is available at N.C. Division of Marine Fisheries' offices and at many bait and tackle shops.

The license authorizes the holder to use limited amounts of commercial gear to harvest seafood for personal consumption.

Seafood harvested under this license cannot be sold and the license holder must adhere to recreational size and possession limits, as well as other gear restrictions.

You will need this license if you want to use:

- Seine net (30 to 100 feet)
- Shrimp trawl (skimmer or otter)
- Eel, fish, shrimp or crab pots*
- Trotline
- Gill net
- Shrimp pound
- Electronic shocking devices to catch catfish in certain areas of the Cape Fear River

More information about the license and its requirements can be found on the N.C. Division of Marine Fisheries' website at <http://portal.ncdenr.org/web/mf/recreational-commercial-gear-license>. For restrictions on specific gears, call 252-726-7021 or 800-682-2632.

* One crab pot per person may be attached to the shore on privately owned land or to a privately owned pier without a license.



Coastal Recreational Fishing License

North Carolina requires people 16 or older to hold a Coastal Recreational Fishing License to fish in coastal waters of the state. A variety of license options are available and they can be purchased at many tackle shops, at N.C. Division of Marine Fisheries and N.C. Wildlife Resources Commission offices and online at <http://www.ncwildlife.org>. A \$2 transaction fee will be added to the price of all licenses.

Revenues from license sales are used to manage, protect, restore, develop, cultivate, conserve and enhance North Carolina's marine resources.

Annual Coastal Recreational Fishing Licenses

State Residents* — \$15
Nonresidents — \$30

10-day Coastal Recreational Fishing Licenses

State Residents* — \$5
Nonresidents, ages 16 or older — \$10
Blocks of Ten 10-day — \$150

Lifetime Coastal Recreational Fishing Licenses

Infant: younger than one year — \$100
Youth: ages 1-11 — \$150
Resident Adult*: ages 12-senior** — \$250
Nonresident Adult: ages 12 and older — \$500
Resident Senior* ** — \$15
Resident Disabled Veteran*: 50 percent or more disabled — \$10
Resident Totally Disabled*: totally and permanently disabled — \$10

Annual Unified Inland/Coastal Recreational Fishing License

Resident* — \$40

Annual Unified Sportsman/Coastal Recreational Fishing Licenses

Resident* — \$65

Lifetime Unified Sportsman/Coastal Recreational Fishing Licenses

Infant: younger than one year — \$275
Youth: ages 1-11 — \$450
Resident Adult*: ages 12-senior** — \$675
Nonresident Adult: ages 12 and older — \$1550
Resident Senior* ** — \$30
Resident Disabled Veteran* — 50 percent or more disabled — \$110
Resident Totally Disabled*: Totally and permanently disabled — \$110

Lifetime Unified Inland/Coastal Recreational Fishing License

Resident Legally Blind — No charge
Resident Adult Care Home — No charge

Exemptions

- N.C. residents serving on full-time active duty in the military or reserves outside of the state are exempt from license requirements while on leave for fewer than 30 days.
- Those who held a Wildlife Resources Commission Lifetime Sportsman License or Lifetime Comprehensive Fishing License prior to Jan. 1, 2006 are exempt from Coastal Recreational Fishing License requirements.
- No license is required to fish on July 4 or for children, ages 0-15.
- Annual Resident Subsistence Waivers are available at no charge for qualified individuals through their county Department of Social Services.

* Out-of-state students attending a university, college, or community college in North Carolina are considered residents. Members of the military stationed in North Carolina and their dependents are considered residents.

** Residents born on or before Aug. 1, 1953 are eligible to purchase a senior lifetime license when they turn 65 years of age. Those born after Aug. 1, 1953 are eligible to purchase a senior lifetime license when they turn 70 years of age.



Tag: You're It! (A way to help fisheries biologists with their research)

Ever catch a tagged fish and wonder what it's all about? Why should you report it?

There are several good reasons. For one, you may be eligible for a reward. Another good reason is you can help fisheries biologists collect the information they need to understand and assess fish populations.

If you turn in a red tag from a fish released by the N.C. Division of Marine Fisheries, along with all the required information, you will receive a \$100 reward. The tags are marked on one side: "\$100 REWARD" with a unique tag number. The other side gives the phone number to call "NCDMF."

If you turn in a yellow tag with all required information you may choose from a hat, \$5 or other rewards. The tags are marked with a unique tag number and the phone number to call "NCDMF."

You will also receive a letter and personalized certificate that states where and when the fish was tagged, the number of days it was at large and the distance between the original tagging location and where the fish was recaptured.

In addition, all those who turn in tags will be entered into an end-of-year cash drawing.

The N.C. Division of Marine Fisheries' researchers are tagging more than 15,000

striped bass, red drum, southern flounder and spotted seatrout per year. The information the division collects through returned tags helps researchers answer some very important questions, such as:

- What are the migration patterns of these fish?
- What kinds of habitat do these fish use?
- What is the population structure of these stocks?
- What is the fishing mortality rate?

If you're fishing and you catch a tagged fish, please cut off the tag and record the following:

1. Species
2. Tag number
3. Date
4. Location captured (water body and nearest landmark or latitude/longitude)
5. Length (total or fork length)
6. Fate of the fish (kept, released alive, etc.)
7. Gear used for capture

Then report the information to 800-682-2632 or 252-726-7021.

Red tags must be cut off and returned to the N.C. Division of Marine Fisheries, P.O. Box 769 Morehead City, N.C. 28557 to receive the \$100 reward.

Helpful Hints

- Cut off the tag, do not pull it out.
- If you are releasing the fish, cut the tag as close to the body of the fish as possible.
- Record the tag number in case you misplace the tag before reporting it.
- If the tag has algae growth, do not scrape the algae off. Scraping the algae can lead to tag damage that inhibits the division from recognizing what fish it came from. If you come across algae growth on the tag, either send the tag to the N.C. Division of Marine Fisheries or let the tag soak in soapy warm water until the algae comes off.
- Be careful when handling fish you intend to release. Handle it as little as possible, using wet hands or wet gloves. Return the fish to the water quickly to give the fish the greatest chance of post-release survival.
- Be alert! Tags are designed to be as unobtrusive as possible, so they don't change the fish's behavior. That means that you might not see one if you're not looking. Please report all tag and species information to the N.C. Division of Marine Fisheries.
- Some fish will have two tags, so check both sides of the fish and report both tags.

Highly Migratory Species

Vessel owners or operators who recreationally fish for regulated Atlantic tunas (bluefin, yellowfin, bigeye, albacore and skipjack), sharks, swordfish and billfish must obtain a Highly Migratory Species Angling category permit or a Highly Migratory Species Charter/Headboat Permit from the National Marine Fisheries Service. This requirement applies even for those who fish exclusively in state waters. Highly Migratory Species Permits may be obtained online at <https://hmspermits.noaa.gov/> or by contacting the Highly Migratory Species customer service representative at 888-872-8862.

Those who land bluefin tuna, blue marlin, white marlin, sailfish or swordfish in North

Carolina must participate in a state tagging and reporting procedure that takes the place of the National Marine Fisheries Service call-in or website reporting process. Fishermen must stop by one of the Highly Migratory Species Reporting Stations on their way in from fishing, fill out a catch card, and receive a landing tag.

The landing tag must be affixed to the fish before it is removed from the vessel. Captains or operators from trailered vessels must affix the landing tag before the vessel is removed from the water.

North Carolina began this reporting program in the mid-1990s, when recreational fishermen started landing more bluefin tuna in this state.

The number of bluefin tuna landed was so small that the state was unable to estimate the landings through its normal survey process. The state modeled the reporting system after those that wildlife agencies used for big game.

Later, as regulations on billfish became more restrictive, the state added blue marlin, white marlin, sailfish and swordfish to the program. Last year, sharks were added to the program on a voluntary basis.

More information on this reporting system, including a list of reporting stations, can be found on the N.C. Division of Marine Fisheries' website at <http://portal.ncdenr.org/web/mf/nmfs-highly-migratory-species-permits>.

Protected Species

The Endangered Species Act prohibits the take of endangered species, including sea turtles and sturgeons. The Marine Mammal Protection Act prohibits the take of marine mammals.

Three species of sea turtles are prevalent in North Carolina waters (loggerhead, Kemp's ridley and green) and two species (leatherback and hawksbill) occur less frequently. Atlantic and shortnose sturgeon are both found in North Carolina waters, with Atlantic being more common.

There are 36 species of marine mammals that can inhabit North Carolina waters, including bottlenose dolphin, several species of whales, harbor porpoises, seals and manatees.

What to do if you catch a sea turtle: Slow the boat and move towards the turtle. Once the turtle is alongside the vessel, stop and put the vessel in neutral. Do not use sharp objects in direct contact with the turtle. If you believe the sea turtle is gut hooked or otherwise injured, contact the Sea Turtle Stranding Network at 252-241-7367 or the North Carolina Marine Patrol at 252-726-7021. Otherwise, remove the hook with a de-hooking device while the turtle remains in the water. If the hook cannot be removed safely, cut the line as close to the turtle as possible. For more information, see the National Marine Fisheries Service Southeastern Regional Office website at <http://www.sefsc.noaa.gov/species/turtles/>.

What to do if you catch a sea turtle while fishing from a pier: Contact the Sea Turtle Stranding Network at 252-241-7367 or the North Carolina Marine Patrol at 252-726-7021. While you wait for a response team, keep your hands away from the turtle's mouth and flippers. Use a net or lift the turtle by the shell to bring it onto the pier or land. Do not lift the turtle by the hook or by pulling on the line. If the turtle is too large to net or lift, try to walk it to shore. When you have control of the sea turtle, use blunt scissors or a knife to cut the line, leaving at least two feet of line to aid rescuers in dehooking. Leave the hook in place because removing it could cause more harm. Keep the turtle out of direct sunlight, and cover the shell with a damp towel. If you cannot reach a response team or are unable to bring the turtle to shore, cut the line as short as possible to release the turtle.

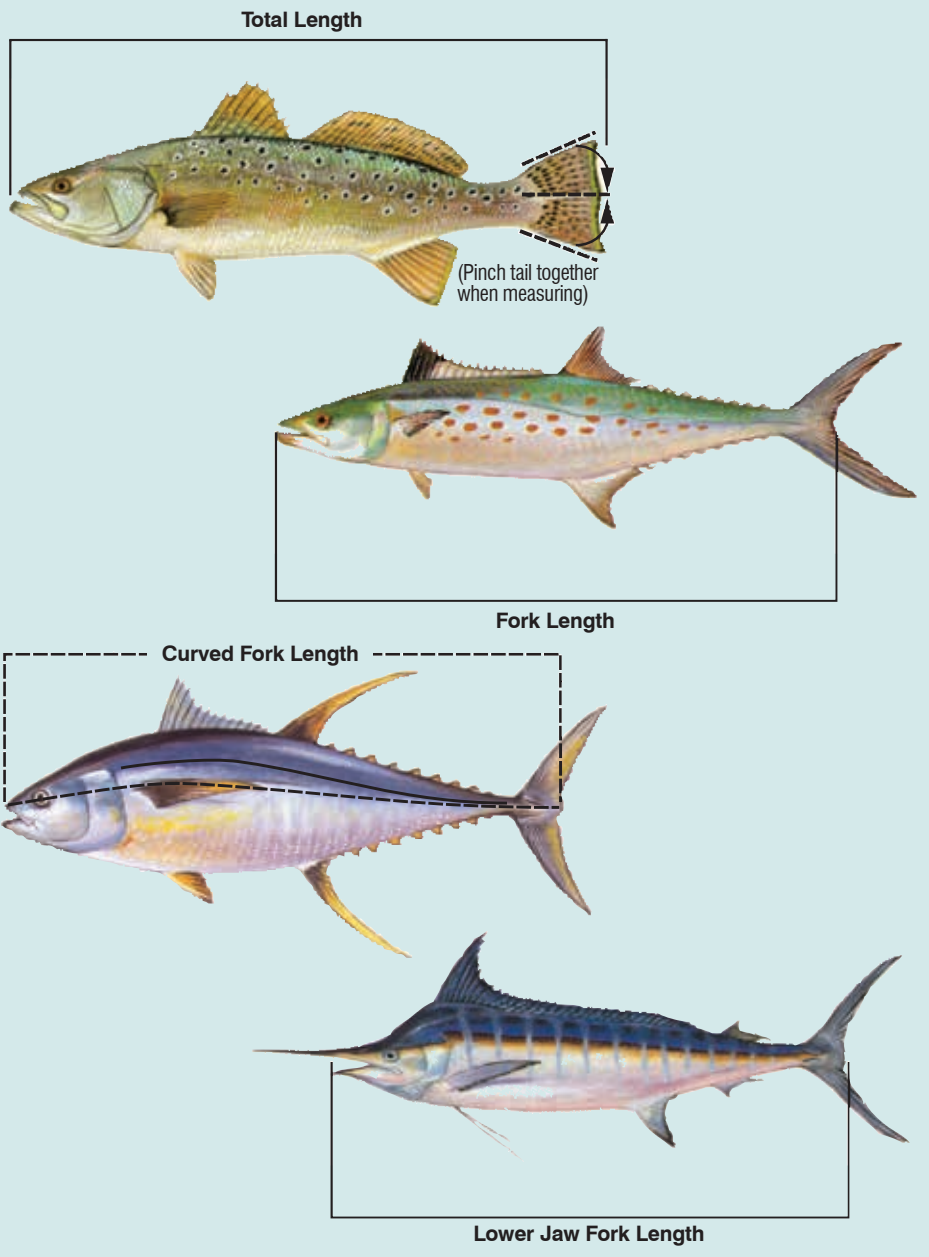
How to Measure a Fish

Total Length (TL) – The length of a fish as measured from the tip of the snout to the tip of the tail.

Fork Length (FL) – The length of a fish as measured from the tip of its snout to the fork of the tail.

Curved Fork Length (CFL) – The length of a fish as measured on a line tracing the contour of the body from the tip of the upper jaw to the fork of the tail.

Lower Jaw Fork Length (LJFL) – The length of a fish as measured from the tip of its lower jaw to the fork of the tail.



What to do if you catch a sturgeon: If possible, remove the hook while the sturgeon remains in the water while the boat motor is out of gear. If you need to remove the fish from the water, use wet hands or a wet rag and support the belly. If the hook is swallowed or if it is not safe to remove it, cut the line as close to the mouth as possible without causing injury to yourself or the animal. Deeply ingested hooks (where the insertion point of the barb is not visible) should not be removed. Always support the fish in the water until it is able to swim away. For more information on release of sturgeon,

see the National Marine Fisheries Service Greater Atlantic Regional Office website at <http://www.greateratlantic.fisheries.noaa.gov/protected/index.html>.

What to do if you encounter a stranded marine mammal: Report stranded marine mammals to the stranding coordinator at 252-241-5119 or the N.C. Marine Patrol at 252-726-7021. Report entanglements of large whales to the Center for Coastal Studies at 800-900-3622 or to the U.S. Coast Guard channel 16.

Fishing Tournaments

The N.C. Division of Marine Fisheries manages two recreational fishing tournament programs:

The North Carolina Saltwater Fishing Tournament, also known as the Citation Program, recognizes exceptional catches of North Carolina's most popular sport fish. The tournament runs from Jan. 1 to Dec. 31 each year and is open to any angler, except those who captain or work on a for-hire vessel or those who sell their fish.

To qualify for a citation, the fish must be caught on hook-and-line and landed without the use of electric or hydraulic equipment. The fish must meet program size requirements, be weighed at an official weigh

station and then recorded on an official application form. For release citations, an angler or mate must touch the fish or the leader. The angler and a witness must fill out and sign an application at an official weigh station. For a list of weigh stations, see <http://tinyurl.com/officialweighstations>.

The North Carolina Governor's Cup Billfishing Conservation Series is an annual sport fishing series operating cooperatively with eight major billfish tournaments in the state.

Participating boats or teams earn points cumulatively throughout the series for billfish landed or released. Penalty points are assessed for undersized fish taken.

Trophies are awarded at the conclusion of the tournament series for the most points in both the private boat and charter boat categories. Individual awards are given to the outstanding junior boy, outstanding junior girl and lady angler.

Additionally, trophies are awarded for the largest blue marlin, yellowfin tuna, wahoo and dolphin.

More information about the Governor's Cup and Saltwater Fishing tournaments can be found online at <http://portal.ncdenr.org/web/mf/recreational-fishing-tournaments>.

The Official 2016 North Carolina Saltwater Fishing Tournament Minimum Weights

SPECIES	MINIMUM WEIGHT	SPECIES	MINIMUM WEIGHT
Albacore, False	Release Only E	Pompano, Florida	2 lbs
Amberjack	50 lbs H	Porgy (Silver Snapper)	4 lbs
Atlantic Bonito	8 lbs B	Sailfish	Release Only A
Barracuda	Release Only G	Shark	150 lbs J
Bass, Black Sea	4 lbs	Sheepshead	8 lbs
Bluefish	15 lbs	Spearfish	Release Only A
Cobia	40 lbs D	Spot	1 lb
Croaker	3 lbs	Striped Bass	35 lbs G
Dolphin	35 lbs	Tarpon	Release Only A
Drum, Black	35 lbs F	Tilefish, Gray	10 lbs
Drum, Red	Release Only F	Triggerfish	5 lbs
Flounder	5 lbs	Trout, Gray	5 lbs B
Grouper	20 lbs	Trout, Speckled	5 lbs B
Jack, Crevalle	Release Only C	Tuna, Bigeye	100 lbs
Mackerel, King	30 lbs G	Tuna, Blackfin	20 lbs
Mackerel, Spanish	6 lbs	Tuna, Bluefin	200 lbs I
Marlin, Blue	400 lbs A	Tuna, Yellowfin	70 lbs
Marlin, White	Release Only A	Wahoo	40 lbs
Mullet, Sea	1 1/2 lbs		

A = Award for live release of fish, regardless of size
 B = Award for live release of fish, 24 inches or longer
 C = Award for live release of fish, 32 inches or longer
 D = Award for live release of fish, 33 inches or longer
 E = Award for live release of fish, 34 inches or longer

F = Award for live release of fish, 40 inches or longer
 G = Award for live release of fish, 45 inches or longer
 H = Award for live release of fish, 50 inches or longer
 I = Award for live release of fish, 70 inches or longer
 J = Award for live release of fish, 80 inches or longer

How to Fish on North Carolina's Artificial Reefs



Looking for a different, rewarding fishing experience? Try fishing on one of North Carolina's artificial reefs.

An artificial reef is a manmade structure built to enhance fisheries habitat and improve fishing opportunities. Artificial reefs attract every type of fish from bottom dwellers to pelagic fish (those that mostly swim in mid-water or near the surface), sharks and baitfish. Depending on the reef, fishing technique, and time of year, a wide assortment of popular fish can be caught.

Peak fishing activity occurs on the reefs from May through November, but excellent fishing can occur year-round, weather permitting.

During the spring, bluefish, cobia, amberjack, Spanish mackerel and king mackerel are among the more popular pelagic species

targeted at nearshore reefs. Bottom fish caught during this same period include black sea bass, gray triggerfish, flounder, sheepshead, weakfish, red drum and black drum.

In the winter, nearshore artificial reefs serve as a popular haven for large black sea bass, sheepshead, weakfish and red drum. Farther offshore, artificial reefs attract warm water species year-round, such as snapper, grouper, dolphin fish, wahoo, tuna, sailfish and marlin.

Keep in mind that North Carolina reefs are popular. Watch out for scuba divers in the water, and give them plenty of room. As for other anglers, it's always best to work together so everyone gets a chance at the big one.

Fishing the reefs

Any successful fishing trip begins with a good game plan. When planning, first consider your limitations. North Carolina's artificial reefs are found in a wide range of locations and environments, so be safe and do not exceed your capabilities. Only experienced crew with larger vessels should attempt to fish on offshore reefs. In many cases, nearshore reefs are just as productive as offshore reefs. Nearshore reefs can also be extremely dangerous in hazardous weather, so plan accordingly.

Once you have considered safety and limitations, the fun part begins. First, learn about the reef site by visiting the online guide, found at <http://portal.ncdenr.org/web/mf/artificial-reefs-program>. It will also help to pay attention to fishing reports and stop by local tackle shops to see what's biting. From there, select the fish you'd like to catch and how you'd like to catch it.

While there are many ways to catch fish on artificial reefs, here are some of the most effective:

Trolling

Trolling is the preferred method for targeting large pelagic fish such as tuna, billfish, dolphin fish, king mackerel, Spanish mackerel and bluefish. If done correctly, trolling can be very easy and effective. Typically, one or more fishing lines, baited with lures, bait fish or spoons are dragged through the water while the boat travels around and across the reef structure.

For this type of fishing, anglers use heavier rods and conventional-type reels designed to hold the resistance weight of lures in the water and battle the powerful fish that may take the bait. There are many ways to rig up for trolling, but in most cases, a snap swivel links to a trolling sinker or small planer, followed by some length of leader line and connected to the bait or lure. When trolling, be certain to set the drag on your reel so that the fish has an opportunity to run when it strikes. It may take some patience, but you'll surely feel the thrill when the reel screams from that first bite.

Drift fishing

Drift fishing is another fishing method used on artificial reefs. With drift fishing, live baits or artificial lures are drifted through the water column. Depending on the weight of your lure and type of bait, drifting can be excellent

for catching bottom dwelling species, such as flounder or pelagic fish, like Spanish or king mackerel. Another plus of drift fishing is that you can drift over many fish targets in one pass, increasing your chances of success. When your target species hits, it's frequently explosive.

If planning to drift fish, look closely at your reef guide for details of the reef you want to drift over. At the reef site, set up a search pattern using your fish finder, and mark points where you see fish targets. Knowing the current and wind direction will also be important to help you determine how the boat will drift. Start 20 to 50 yards up wind or up current (whichever is prevailing) from your target location, drop your bait to whatever depth you picked, idle your motor and start drifting across the reef. The first drift will often be a bit of a guess, taking into consideration the direction of the wind and current. After a few tries, you should have a better idea of where and how your boat will drift across the reef, which will allow you to reposition your drifts each time.

Bottom fishing

Bottom fishing is the most common way to fish reefs. Bottom fishing can lure any of the local bottom fish species, including black sea bass, sheepshead, porgy, flounder, red drum, black drum, grouper, snapper and gray triggerfish. Anglers usually rely on a one- or two-hook bottom rig with cut bait (especially squid) or live bait.

While seemingly easy, bottom fishing can take a bit of practice to be successful. The key is positioning. When you arrive at the reef, explore the area with a fish finder, looking for fish hovering above structure in the water column. Reef fish do not stray far away from structure, so anchor your boat to hover just above the reef. Pay attention to the wind and current to help set your anchor course.

Tackle is another important consideration. When you have hooked a fish in deep waters and near a structure, the first thing the fish will try to do is escape into the reef. Too many fish stories end this way. Be certain to match your equipment to the type of fish you are targeting. Grouper, for example, are powerful fighters, so stout tackle is required. In any case, braided line can be a good way to resist breaking your line on the reef, but it is also less forgiving with snags.

To learn more about the states artificial reefs, go to <http://portal.ncdenr.org/web/mf/artificial-reefs-program>. You can also email questions to artificialreefs@ncdenr.gov.

Aging Lab Has Bones Coming Out the Ears



Every fish ear bone tells a story, and the N.C. Division of Marine Fisheries' aging technicians know how to read it. They take a sliver of ear bone, mount it to a glass slide and place it under a microscope. An image pops up on a computer screen and the technician counts the rings, called annuli, on the ear bone (otolith). The same can be done with fish scales.

Each ring represents one year of the fish's life. Both put down a growth pattern. It is very similar to looking at growth rings on a tree.

The technician can tell the years when a fish has its biggest growth spurts (usually its first years of life), and with American shad, he can even tell at what age the fish spawned.

Make no bones about it, this is important work.

The age and maturity data collected by the Aging Lab helps stock assessment scientists determine the health of fish stocks in North Carolina.

Otoliths taken from fish at fish houses and fishing tournaments show the ages generally caught by the commercial and recreational fishermen.

The Aging Lab also samples otoliths taken from fish caught when biologists sample the waters.

These samples offer a good picture of the age composition that is out there and gives the scientists a better understanding of the dynamics of the population. Understanding the dynamics of the population and how it responds to fishing pressure allows for better management decisions to be made.

Otoliths are a calcium carbonate structure, and they are pretty essential to fish. They sit in a membrane at the base of the skull and they act as the fish's inner ear. There are small hairs in the membrane that the fish uses for balance. The fish also uses the inner ear to sense vibrations that alert it to predators.

Otoliths are pretty important to those who study fish, as well.

Where scales from different fish can be similar, otoliths are very distinct. When biologists look at the stomach contents of a fish to study its diet, they look for the otoliths of the eaten fish, which take longer to digest than other parts of the meal.

Some of the biggest fish have the smallest otoliths. For instance, the otolith of a marlin is about the size of a pin head. The otolith of a red drum is the size of a quarter.

There are two methods of removing otoliths from a fish. The easier method is to slice the fish's head off, but at tournaments and fish markets, it's better to go in through the gills so that the fish remains intact.

Most of the otoliths that come to the Aging Lab come from various division sampling programs with a form that lists the species, length, weight and sex of the fish.

Aging Lab technicians use a rock cutting saw with a diamond saw blade to grind to the middle otolith, called the focus. They use ultraviolet glue to mount the ground side to a glass slide. Then, they grind in a different direction to the other side of the focus until it is paper thin and can read through it.

The division has been aging fish since the late 1980s, but the Aging Lab did not form until 1995. By centralizing the operation, the division was able to concentrate all its aging equipment into one place and hire employees who specialize in this area.

Funded by a federal Sport Fish Restoration Fund grant, Aging Lab staff age 18 different species, all recreational fish. From 2010 to 2013, the Aging Lab aged 29,890 fish of all ages up to a 43-year-old red drum.

The Aging Lab also has a Marine Fisheries Initiative (MARFIN) grant from NOAA Fisheries Service to conduct length and age sampling of the commercial snapper/grouper fishery.

Common North Carolina Saltwater Fishes



Greater Amberjack
Seriola dumerili



Black Sea Bass
Centropristis striata



Striped Bass
Morone saxatilis



Bluefish
Pomatomus saltatrix



Cobia
Rachycentron canadum



Summer Flounder
Paralichthys dentatus



Gag Grouper
Mycteroperca microlepis



King Mackerel
Scomberomorus cavalla



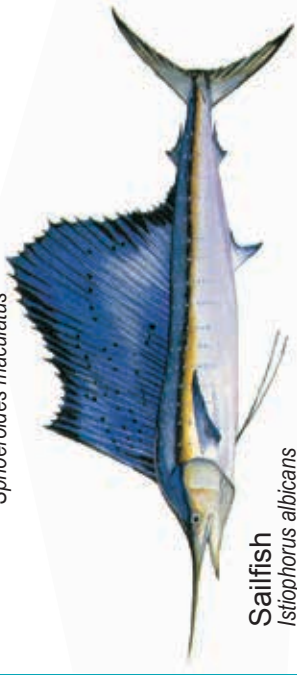
Spanish Mackerel
Scomberomorus maculatus



White Marlin
Tetrapturus albidus



Northern Puffer
Sphoeroides maculatus



Sailfish
Istiophorus albicans



Sheepshead
Archosargus probatocephalus



Vermilion Snapper
Rhomboplites aurorubens



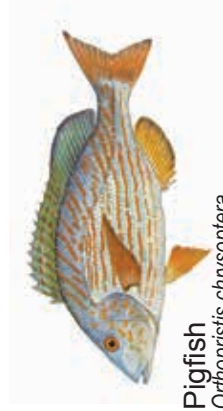
Atlantic Spadefish
Chaetodipterus faber



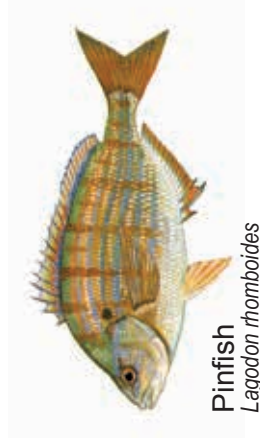
Blue Marlin
Makaira nigricans



Southern Kingfish
Menticirrhus americanus



Pigfish
Orthopristis chrysoptera



Pinfish
Lagodon rhomboides

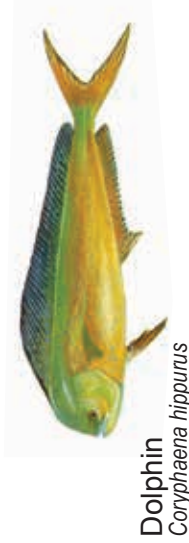


Red Porgy
Pagrus pagrus

**To report fisheries violations, or for
information on rules and regulations call
252-726-7021 or 800-682-2632.**



Atlantic Croaker
Micropogonias undulatus



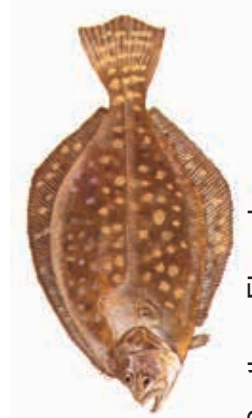
Dolphin
Coryphaena hippurus



Black Drum
Pogonias cromis



Red Drum
Sciaenops ocellatus



Southern Flounder
Paralichthys lethostigma



Spot
Leiostomus xanthurus



Spotted Seatrout (Speckled Trout)
Cynoscion nebulosus



Yellowfin Tuna
Thunnus albacares



Little Tunny
Euthynnus alletteratus



Weakfish (Gray Trout)
Cynoscion regalis



Wahoo
Acanthocybium solanderi

SHELLFISH				
Species	Minimum Length	Bag Limits (Per Person)	Seasons	Comments
Blue Crab	5" carapace width (minimum for males)	50 crabs/day not to exceed 100 crabs/vessel/day		One crab pot may be used without a license from private property or private pier. Recreational Commercial Gear License required otherwise. See maps for open/closed areas at http://portal.ncdenr.org/web/mf/ .
Hard Clam	1" thick	100 clams/day not to exceed 200 clams/vessel/day		
Oyster	3" shell length	1 bushel/day not to exceed 2 bushels/vessel/day	Open by proclamation Oct. 15 - March 31 (http://portal.ncdenr.org/web/mf/)	Frequent temporary closures due to stormwater runoff and rainfall apply to all shellfish harvest. Contact the N.C. Division of Marine Fisheries at 800-682-2632 or visit http://portal.ncdenr.org/web/mf/ proclamations for seasons, areas, or other restrictions.
Bay Scallop	None	1 bushel/day not to exceed 1 bushel/vessel/day	Closed unless opened by proclamation. (http://portal.ncdenr.org/web/mf/proclamations)	See maps for permanently open and closed areas at http://portal.ncdenr.org/web/mf/shellfish-closure-maps
Conchs and Whelks	None	10/day not to exceed 20/vessel/day		
Mussels	None	100/day not to exceed 200/vessel/day		
Shrimp	None	Closed shrimping area — 4 quarts/day (Cast net only) Open shrimping area — 48 quarts heads on, 30 quarts heads off (Per person or vessel)*		Recreational Commercial Gear License required for use of a shrimp trawl, shrimp pound and shrimp pots *Recreational Commercial Gear License holders may keep two limits of shrimp, when two or more license holders are on board a vessel, using commercial gear, while shrimping in open waters. See maps for open/closed areas at http://portal.ncdenr.org/web/mf/maps-to-view-and-print
Stone Crabs	2 3/4" propodus (forearm)	No limit on claws	Closed June 15 - Aug. 15	No possession of crab body; no removal of claw from egg-bearing crabs; no gigging.

THIS DIGEST IS EFFECTIVE MAY 1, 2016 AND IS FOR GENERAL INFORMATIONAL PURPOSES AND HAS NO LEGAL FORCE OR EFFECT. FISHERY RULES ARE SUBJECT TO CHANGE. THESE RESTRICTIONS APPLY TO FISH TAKEN FOR RECREATIONAL PURPOSES AND INCLUDE HOOK AND LINE. Updated State regulations can be found at <http://portal.ncdenr.org/web/mf/recreational-fishing-size-and-bag-limits> and updated Recreational Commercial Gear License information can be found at <http://portal.ncdenr.org/web/mf/recreational-commercial-gear-license>.

Total length (TL) is measured from tip of snout with mouth closed to top of compressed tail. Fork length (FL) is measured from tip of snout to middle of fork in tail. Lower jaw fork length (LJFL) is measured from lower jaw to middle of fork in tail. Curved fork length (CFL) is the measurement of the length taken in a line tracing the contour of the body from the tip of the upper jaw to the fork of the tail.

Anglers cannot catch both a federal and state bag limit for the same species on the same trip.

Ocean boundary is defined as water seaward of the COLREGS Demarcation Lines as indicated on National Ocean Service navigation charts.

No one may possess aboard a vessel or while engaged in fishing any fish subject to limits without head and tail attached, except for alewife and blueback herring used for bait provided not more than two fish per boat/operation may be cut at any one time.

N.C. Division of Marine Fisheries Telephone Directory

Morehead City Office (24 hours) 800-682-2632 or 252-726-7021	Elizabeth City Office 800-338-7805 (N.C. only) or 252-264-3911	Manteo Office 252-473-5734	Washington Office 800-338-7804 or 252-946-6481	Wilmington Office 800-248-4536 (N.C. only) or 910-796-7215
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Federal and State Agency Telephone Directory

Federal Regulations National Marine Fisheries Service (NMFS): 813-893-3722	State of N.C. — Freshwater Regulations N.C. Wildlife Resources Commission (WRC): 800-662-7137
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Off the Hook

Recreational fishing does not always involve a rod-and-reel. Below is some information you need to know if you want to fish with gigs, cast nets or pots.

Gig, Spear and Crossbow Fishing

Individuals need to hold a Coastal Recreational Fishing License to gig, spear or crossbow fish in North Carolina.

Properly licensed recreational fishermen are allowed to gig or spear any species except red drum, sharks, spiny lobster, stone crabs, tarpon or any species that is not in season.

Recreational size and bag limits apply and sale of catch is prohibited.



Cast Nets

There are no regulations limiting the size of cast nets used in N.C. coastal waters. A cast net may be used year-round in all coastal waters of the state.

Those who target finfish with a cast net need to hold a Coastal Recreational Fishing License. This includes cast netting for minnows or other bait fish.

No license or permit is needed to cast net for shrimp for recreational purposes, but you need a Coastal Recreational Fishing License to keep any finfish you catch.

Recreational size and bag limits apply and sale of catch is prohibited.

Crab Fishing

No license is needed to set one pot per person from a private pier or shoreline. A private pier or shoreline means there is no public access and does not apply to fishing piers where the public pays for fishing privileges. No buoy or identification is required.

No license is needed to use collapsible crab traps as long as the largest open dimension is no larger than 18 inches and the traps are designed to collapse at all times when in the water, except when they are being retrieved from or lowered to the bottom.

No license is needed for chicken necking (using a hand line with chicken as bait).

Recreational harvest limits apply and sale of catch is prohibited.

Other than the activities described above, a Recreational Commercial Gear License

is needed to fish for crabs. See page 4 and <http://tinyurl.com/RecreationalCrabFishing> for more information.

For the most up-to-date recreational size and bag limits, see <http://portal.ncdenr.org/web/mt/recreational-fishing-size-and-bag-limits>.



North Carolina Fishing — What's Hot and When



Bluefish



Summer Flounder



Spanish Mackerel



Dolphin (mahi mahi)



Spotted Seatrout

January

FISH: Black sea bass, bluefin tuna, bluefish, spotted seatrout (ocean and coastal rivers), striped bass (ocean, coastal rivers), flounder
SHELLFISH: clams, oysters

February

FISH: American and hickory shad (coastal river tributaries), black sea bass, bluefin tuna, bluefish, spotted seatrout (ocean and coastal rivers), striped bass (ocean, coastal rivers), flounder
SHELLFISH: clams, oysters

March

FISH: American and hickory shad (coastal river tributaries), black sea bass, bluefish, bluefin tuna, croaker, spotted seatrout, striped bass (coastal rivers), wahoo, yellowfin tuna
SHELLFISH: clams, oysters

April

FISH: American shad (coastal rivers), black sea bass, bluefish, bluefin tuna, croaker, gray trout, king mackerel, red drum, sea mullet, spotted seatrout, striped bass (coastal rivers), wahoo, yellowfin tuna
SHELLFISH: clams

May

FISH: Bluefish, cobia, dolphin, flounder, gray trout, king mackerel, sea mullet, sharks, spotted seatrout (sounds), striped bass (coastal rivers), yellowfin tuna
SHELLFISH: clams, hard crabs, soft crabs

June

FISH: Black sea bass, blue marlin, bluefish, cobia, dolphin, flounder, grouper, king mackerel, sailfish, sharks, Spanish mackerel, spotted seatrout (sounds), tuna, wahoo, white marlin
SHELLFISH: clams, hard crabs, soft crabs

July

FISH: Blue marlin, bluefish, flounder, red drum, dolphin, grouper, sailfish, sea mullet, tarpon (coastal rivers), Spanish mackerel, spotted seatrout, tuna, wahoo, white marlin
SHELLFISH: clams, hard crabs, soft crabs, shrimp

August

FISH: Bluefish, dolphin, flounder, grouper, sea mullet, Spanish mackerel, spotted seatrout, spots, tarpon (coastal rivers), tuna, wahoo, white marlin
SHELLFISH: clams, hard crabs, soft crabs, shrimp

September

FISH: Bluefish, dolphin, false albacore, flounder, gray trout, grouper, king mackerel, red drum, sea mullet, Spanish mackerel, spotted seatrout (ocean and coastal rivers), spot, white marlin, tarpon (coastal rivers)
SHELLFISH: clams, hard crabs, soft crabs, shrimp

October

FISH: Bluefish, false albacore, gray trout, grouper, king mackerel, red drum, sea mullet, flounder, spotted seatrout (ocean and coastal rivers), spots, striped bass (coastal rivers), wahoo, yellowfin tuna
SHELLFISH: clams, oysters

November

FISH: Bluefish, false albacore, grouper, king mackerel, sea mullet, sharks, spotted Seatrout (ocean and coastal rivers), striped bass (coastal rivers), yellowfin tuna
SHELLFISH: clams, oysters

December

FISH: Bluefin tuna, bluefish, false albacore, grouper, black sea bass, spotted seatrout (ocean and coastal rivers), sharks, striped bass (ocean and coastal rivers)
SHELLFISH: clams, oysters



Scan this quick response code to get the latest size and bag limits on your mobile phone.



N.C. Division of Marine Fisheries

3441 Arendell Street

Morehead City, NC 28557

<http://portal.ncdenr.org/web/mf/>

252-726-7021 | 800-682-2632



122,650 copies of this public digest were printed at a cost of \$34,498.10 or \$0.28 per copy.