Student Reading

Snook

Big snook hunt in a school of many small fish, called forage fish.

Snook, like many other animals, use different habitats during their life as they grow and start eating different things. We often say that everything in nature is connected, and the movement of animals over their lifetimes can link habitats including seagrass meadows, coral reefs and the blue pelagic ocean. A really interesting way of looking at how habitats and ecosystems are connected to each other is by following the movements of fish during their lives. That's especially true of snook.

When we talk about snook, we are actually talking about a group of 12 different species. Here in Florida we can find the common snook, which is one of the largest species and really popular among fishermen. We are going to focus on this species.

Spawning

Female snook can live to 21 years and about half of female snook can start producing eggs at five years old. About half of all males can start reproducing at age two, and can live 15 years. When snook are ready to reproduce, large groups from different places will all meet up in specific areas in "spawning aggregations." They will meet at specific times and places – usually in deeper waters between April and September. These times are chosen for a reason. Snook are fish that "broadcast spawn," which means the females all release their eggs and males all release their sperm into the water column at the same time. The eggs and sperm will hopefully meet as the water swirls them all around, and if they do, they will start to grow baby

Many snook group together to spawn. This group is called a "spawning aggregation."

fish larvae. If snook spawn at just the right time, the currents of the ocean will carry the tiny fish larvae into shallow coastal waters, the larvae will be able to stay safe and begin to grow.

When snook spawn, they will release hundreds of thousands of eggs and sperm with the aim of making just one or two more snook. Because each spawning event might only make a couple baby snook, adults will spawn many times during their life. Snook are also one of the many kinds of fish that will spawn as a male, then spawn as a female. Yes, like many fish, snook can change from male to female! This means that there are always plenty of females that can make eggs, and snook can always reproduce.

Snook Larvae

Snook larvae are "pelagic." That means that snook larvae float around in the open ocean, without any protection or places to hide, until they have grown a little bit. Once they are big enough, larvae become juveniles and can settle into safe shallow waters. Very few larvae survive to become juvenile snook, which is why the adult snook produce so many eggs when they spawn.

Juvenile Snook

Tiny juvenile fish are still in danger from predators, even after they settle. During their tiniest juvenile stage, snook hide in quiet, shallow creeks and mangroves. These habitats have lots of plants and vegetation to hide around, as well as plenty of small copepods, crabs, and shrimp for food. Predators cannot reach the baby snook in these places. As the snook grow, these habitats still have larger crabs, small fish, and other food items that the snook can eat. It is really important that the snook stay in these habitats while they are young in order to stay safe and still have lots of food.

Snook like to hide around underwater structures. These can be natural, like coral reefs and mangroves, or manmade like this dock.

As they grow up, juvenile snook start to become "braver," and can start to venture into new areas. They will always stay near structure of some kind, like mangroves, docks, or jetties. Being near something like a dock or mangrove roots will keep them safe from predators, but they can also hunt without their prey seeing them. When they are big enough that they don't have to worry about predators, they will look for bigger prey like blue crabs and mullet on grassy or sandy flats.

Mature Snook

Snook become mature adults at age four or five, and at lengths of about 24 to 26 inches. Even as adults, snook like to hide near structures like mangroves or docks. This is because of their feeding strategy. Snook are called "ambush predators," meaning they will hide and wait for their prey to swim by, then they will attack out of nowhere. They are specially designed to do this well. Their eyes are placed almost on top of their head so they can hide low on the bottom and see prey above them. They also have special eyes that can see well in the dark, so they can hunt well at night, or at times when there is little light. These adaptations make adult snook great predators.

Here a couple of fly anglers carefully release a snook. They want to ensure the opportunity for future generations of anglers.

Problems for Snook

Using many different habitats – including open ocean, mangroves, and flats – is a common strategy that many different animals use during their life cycles. But it can also make life more difficult for these fish. The number of fish in a population depends on the quality of the habitat, so If one or more of these habitats is damaged, it can hurt population numbers. Preserving all the habitats that snook use is a constant battle.

Habitat loss because of construction is the greatest threat to snook populations in Florida. Snook spend their juvenile stage – and much of their adult lives – in and around mangroves. Half of the mangroves in Florida have been removed, and many are replaced with manmade structures instead. These structures do not give juvenile snook places to hide, and usually remove food sources as well. This means juvenile snook are no longer able to live in these habitats.

In the mangroves and grassy flats that are not developed by construction, there are still other problems. These habitats are usually right next to the coast, and water that flows into these habitats is often full of pollution from nearby cities and farmlands. Even though the mangroves and grasses have not been cut down, they are still suffering. We need to take care of these habitats, and restore those that have been removed, if we want to keep enjoying snook and learning about this amazing species!

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