

# Tarpon Larval and Juvenile Stage

**A**fter adult tarpon spawn, sperm and eggs that were released join together and form the tiny baby tarpon. The baby tarpon are considered to be “larvae” at this point and this is their “larval stage” in their life cycle. The larval stage is the first month of their life. These tiny tarpon are transparent like a jellyfish body and are long and thin like little eels. A tarpon's larvae type is special to



Tarpon larvae are called leptocephalus, and are small, thin and see-through so that predators have a hard time seeing them.

just a few species of fish. It is called a leptocephalus. In the clear open ocean where these little larvae start their lives, being transparent is a form of camouflage. This transparent camouflage also helps them make the long journey back safely into the shallow areas around the coast such as estuaries, tidal creeks and mangrove areas. They will spend the juvenile stage of their lives in these areas.

The age of the larvae can be determined by small bones called otoliths. These bones gain a new layer each day that the larvae is alive. If a scientist catches a larva, he or she can look at the otolith and count the layers to figure out how many days old the fish is.



Juvenile tarpon grow up in mangrove-lined creeks, because it is hard for predators to get into these areas.

A leptocephalus can grow to be about three to four inches long and must swim towards shore and find an opening, or inlet, into an estuary. Once inside this inlet, the leptocephalus is a little bit safer, but it still has a long way to go. The little tarpon must travel through seagrass beds, oyster reefs and shoals full of hungry predators looking for a meal. The leptocephalus that make it across these habitats and travel into shallow water with lots of protection can enter their next life stage, the juvenile stage. The juvenile stage is the first time that a tarpon begins to really look like what you think of as a tarpon, just in miniature version. The ideal habitat for this young fish is a mangrove area deep in an estuary. You might be wondering why they would want to live there. Well, there is a maze of mangrove roots and oysters back in those areas. This maze makes it hard for a large predator fish to chase and eat a small juvenile tarpon. Tarpon are also special because they use their swim bladder (an organ some fish have that helps to keep them floating when they stop swimming) to breathe in low-oxygen environments like mangroves. A tarpon can breathe by rolling over the surface and gulping air. They store the air in their swim bladder where they can then absorb the oxygen. This allows them to live back in these mangroves where most other fish would not be able to survive due to lack of oxygen in the water.

Juvenile tarpon need to live in this specific type of habitat, and cannot live in other places. This can mean trouble if that habitat is removed. Mangrove habitats have been destroyed very quickly by humans building and changing the land. For a hundred years in Florida, people thought mangroves were a problem because they blocked our beaches and they got in the way of building houses, hotels, and marinas. Now that we understand that mangroves are important habitat for tarpon and other fish, governments have enacted strict laws about protecting them. But now we need to fix all the mangroves that have been cut down or destroyed, which is very expensive. Trying to fix these habitats is important because the mangrove roots act as protection for the juvenile fish and as a place for them to get food.



This happy angler releases a juvenile tarpon far back in a beautiful mangrove setting.

## The Cafeteria

Juvenile tarpon are "opportunistic feeders." This means that they are not picky. They will eat anything that might be around that they can fit into their mouths. The size of their mouth is important for juvenile tarpon. A tarpon has to "grow into" what it can eat. When tarpon turn from leptocephalus into juveniles, they can only eat small shrimp, crabs and worms. As they grow larger they can start to eat small fish like mosquitofish. The changes in their food choices is similar to that of any living thing. As they grow larger, the prey they eat usually gets larger (and harder to catch, too!)



Just about every predator fish eats shrimp, especially when the fish are young.

