



Saltwater Fish

of Monmouth County



Bluefish, Juvenile

Fish are cold-blooded animals with backbones that live in water and have gills. Monmouth County's coastal oceans and brackish waters (salt-freshwater mix) host a variety of species such as sea bass, bluefish, fluke, striped bass, weakfish, and flounder, while deeper waters host big game such as bluefin tuna, swordfish, and sharks.

Four Categories of Fish in Monmouth County



Summer flounder (fluke) are speckled, bottom dwelling, flatfish with both eyes on the same side of their head. Average adult size 3-6 lb., 15-22."

Estuarine fishes live in tidal waters where fresh and salt waters mix. The salt content varies: water closer to the ocean has a higher salinity. The shallow water and low wave action of estuaries make them an important nursery for

juvenile fish. Sandy Hook Bay, Raritan Bay, and the tidal portions of the Navesink, Shrewsbury, Shark and Manasquan rivers are home to over 80 species, including:

- Bluefish
- Weakfish
- Winter & summer flounder (fluke)



Adult bluefish, note the shiny, blue-grey color. Average adult size 10-32 lb., 1-1 1/2 ft. Photo Source: NEFSC/NOAA

Marine or pelagic fishes spend much time living in the open ocean. These are often large, fast-growing and swift-moving species wonderfully adapted to living in deep waters.

- Marlin
- Tuna
- Predatory pelagic sharks (blue sharks, oceanic whitetip sharks, scalloped hammerheads, etc.)



Yellowfin tuna caught offshore. Average adult size 55 lb, 3-3 1/2 ft. Photo Source: NEFSC/NOAA

Anadromous fish migrate from the ocean to freshwater to spawn. After spawning, adult fish often swim downstream to an estuary and eventually out to sea.

- Striped bass
- Shad
- River herring (blueback herring, alewife, etc.)



Blueback herring. Average adult size 1/3 lb., 10-12"



Large, 47 lb. striped bass caught offshore. Average adult size 25-35 lb., 2 1/2 -3 ft. Photo Source: Derek Bielitz, Sam Skinner



Juvenile striped bass.

Catadromous fish migrate from freshwater to the ocean to spawn. Spawning takes place in far offshore waters of the Sargasso Sea, near Bermuda. Monmouth County has only one:

- Eel



American eel, juvenile

Fish Consumption Advisory

Fish are nutritious and tasty to eat, but some species can absorb contaminants from the water and from the food they eat. The Federal Government sets standards for chemicals in food sold commercially, including fish. The State of New Jersey routinely monitors contaminant levels in fish. The NJ Department of Health issues advisories when contaminant levels exceed federal standards. Please visit:

www.state.nj.us/dep/dsr/njmainfish.htm

Please Be a Responsible Angler

- **Limit your take.** Only keep enough for a meal, release the rest.
- **Use circle, wide gap and barbless hooks.** Reduce the chance of lethally wounding a fish during 'catch and release.'
- **Take photos (instead of keeping fish).** If you don't plan to eat your fish, consider having a release mount made. These look identical to the actual fish – especially if you submit a photo.
- **Don't trash the water.** Bring a bag for garbage and a separate bag for used fishing line/monofilament (it can be recycled).
- **Walk quietly and carefully.** Stirring up silt, pulling seaweed, and even causing big splashes can stress fish enough to make them leave the area.

Regulations

Rules are in place to maintain a healthy fish population and to provide anglers with the best opportunities without depleting stocks. For minimum size and catch limits, seasons, and gear restrictions please visit:

www.state.nj.us/dep/fgw/njregs.htm#fishing

Anglers ages 16 and older who fish in the tidal waters of NJ must now register with the NJ Saltwater Registry. It's FREE. Please visit: www.nj.gov/dep/saltwaterregistry/



Bait Fish: Small in Size, Large in Status

Baitfish are found in shallow areas and typically move in large schools. They produce many eggs, making them easy to catch but keeping them in regular supply.



Menhaden

Menhaden are small schooling fish that feed on plankton, and in turn are fed upon by larger fish, ospreys, and marine mammals. As such, they play a vital role in the aquatic food web. They are also an important baitfish used by anglers to catch crabs, striped bass, fluke, bluefish and sharks.

Killifish are 1-2" long, and known to be extremely hardy and tolerant of changeable water conditions, including muddy and polluted waters. The word 'killie' is Dutch, derived from "kilde," meaning small stream or creek, which is where these fish can often be found. Mummichogs are a type of killifish, their Native American name means "going in crowds." They can be found swimming in large schools in salt marshes where they help control the mosquito population by consuming larvae. They can live out of water for several hours, and can even swallow air if necessary, as long as their gills are moist.



Killifish

Common Baitfish of Monmouth County

- Menhaden
- Killifish
- Bay anchovy
- Silverside
- Sand eel (a fish not related to the eel)



Bay anchovy

Sharks: Principal Sea Predators



Clearnose skate. Photo Source: Page Valentine, USGS

Rays, skates, and sharks have skeletons composed entirely of cartilage, a light, flexible tissue that can also be found in the noses and ears of humans. The only bony tissue in sharks are their teeth and scales. Since cartilage is half as dense as bone, it reduces body mass so these fish swim faster (and quickly catch their prey).

As predators, sharks help keep fish populations healthy by weeding out the sick and unfit, which contributes to the stability of the ecosystem and maintains biodiversity. Shark predation is an important natural control on the size of many marine species populations.

Unfortunately, the shark population itself is decreasing because of human activity such as over-fishing or ending up as bycatch in large fishing nets targeting other species. Since sharks take a long time to mature (12-18 years for some species) and produce few young (generally only two pups every 1-2 years) it can be difficult for the population to recover.



Smooth dogfish shark



Sand tiger shark

Sharks, Skates & Rays of Monmouth County

SHARKS

- | | |
|---------------|------------------------|
| • Basking | • Sandbar |
| • Blue | • Scalloped hammerhead |
| • Bull | • Shortfin mako |
| • Great white | • Silky |
| • Longfin | • Smooth dogfish |
| • Mako | • Spiny dogfish |
| • Porbeagle | • Tiger |
| • Sand tiger | |

SKATES & RAYS

- | | |
|----------------------|----------------|
| • Clearnose skate | • Little skate |
| • Clownnose stingray | • Winter Skate |



Mako shark

Strange & Odd Fish

The tidal waters of Monmouth County are home to a variety of weird-looking fish.



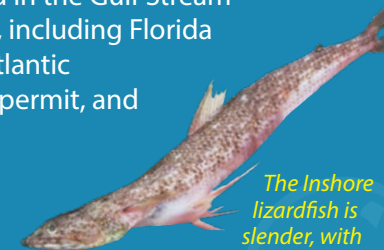
Lined seahorse, note the different color.

One of the most unusual fish is the small, Northern lined seahorse. It has a horse-shaped head and is a master of camouflage, changing color in seconds to match its background. Since seahorses are generally poor swimmers, they will cling to vegetation or pilings in the water to ingest small shrimp and plankton through a long, tubular snout. Males nourish and protect the young before releasing them.

Some species of young, tropical fish—born in the Caribbean or off the southern U.S.—can be swept northward in the Gulf Stream into Monmouth County, including Florida pompano, lookdown, Atlantic moonfish, crevalle jack, permit, and greater amberjack.



The Northern stargazer has a flat body and a large head with an organ that can deliver an electric shock (as much as 50 volts) to stun its prey.



The Inshore lizardfish is slender, with a wide mouth and sharp teeth.



The Northern pufferfish inflates its body by taking air into its stomach.



Lookdown

Crevalle jack