Species Profile:

BIACK

By Jason Hearon, Senior Biologist

Black drum (Pogonias cromis) are a valuable marine fish of sport, commercial and ecological importance throughout their range. This species can be found in U.S. waters primarily from Massachusetts to Florida along the East Coast and in the Gulf of Mexico, from the west coast of Florida along the northern Gulf of Texas. Their entire geographic range encompasses near-shore waters and estuaries from Argentina northward along the Gulf and Atlantic Coast to New England and as far north as the Bay of Fundy along the coast of Maine then extending into Canada between New Brunswick and Nova Scotia.

Black drum is the largest member of the family Sciaenidae, which also includes weakfish, spot, Atlantic croaker and red drum. A distinguishing characteristic of this family of fish is the ability to produce croaking and drumming sounds by rapping a muscle against the air bladder – the reason for the common name drum. This ability is most developed in the black drum and is associated with spawn-

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ing behavior. Drumming is used to locate and attract members of the opposite sex and can often be heard by anglers as schools pass near boats.

The black drum is a chunky, high backed fish with 10-14 chin barbles or whiskers under its lower jaw. Barbles are sensory structures used to detect prey such as clams, oysters, mussels and crabs that drum crush using powerful tooth plates in their throat, called pharyngeal teeth. The dorsal fins have 11 spines, 20 to 22 dorsal rays and 41 to 45 scales along the lateral line, which extends to the end of the tail. There are 14 to 16 gill rakers on the lower limb of the first arch. Young fish have four to five dark vertical bars on their sides (see photo) that gradually disappear with age. The bellies of

older fish are white, but coloration along the back and sides varies greatly. Fish from the gulf waters tend to be light gray or silver, while those living in bay waters have dark gray or bronze-colored back and sides. Black drum are long-lived fish capable of reaching 60 years, with the largest documented fish measuring 5 ½ feet and weighing 146 pounds.

Sexual maturity can be reached as early as the end of the second year of life at a length of 11 to 14 inches. Males mature at a somewhat younger age and smaller size than females. There is no evidence of sex-specific differences in growth rates of black drum.

Black drum spawn in the Delaware Bay and coastal inlets of New Jersey between April and early June when water temperatures are ideal (57-68° F). Drum are free spawners – fish that release gametes into the water, where fertilization may occur, with out parental care – and are capable of spawning every three days (multiple spawns). Mature females can produce more than 30 million eggs.

Eggs of black drum are pelagic (free floating); eggs hatch less than 24 hours after fertilization. Larvae measure approximately 1.9 – 2.4 millimeters at hatching. After hatching, larvae rely upon tidal currents for transportation into estuaries and can be found in the surf and along bay shorelines. Juvenile drum prefer shallow, nutrient-rich and relatively muddy waters where they feed on marine worms, shrimp, crabs and small fish.

Adult black drum are predominately an estuarine species that are usually found over sand and mud bottoms in coastal waters with salinities ranging from 9 to 26 parts per thousand. For comparison,

ocean water is typically 35 parts per thousand. The coastal stocks of black drum can undertake long-range migrations with a general pattern of movement to the north and inshore in the spring then south and offshore in the fall. These migrations are age-specific and influence fishing exploitation differently along the East Coast. Along the Atlantic Coast, fisheries for black drum tend to target small fish in the south and larger older fish in the north. A greater proportion of older fish



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are found north of Cape
Hatteras, North Carolina.
Chesapeake and Delaware
Bay fisheries target black
drum that are primarily old
(typically 26 years of age and
older) and large (over 43
inches and greater than 48
pounds).

The Delaware Bay is a black drum hot spot for International Game Fish Association records as is Cape Charles, Virginia. The "all tackle" category record of 113 pounds, 1 ounce was reported from Lewes, Delaware. The New Jersey state record black drum is 107 pounds, documented in 2006.

The prime fishing season to catch black drum is typically a six- to eight-week fishery from mid- to late-April on through early to mid-June and is usually concentrated on the lower Delaware Bay spawning grounds around the Pin Top and Tussy's Slough. The recreational fishery begins and ends a few weeks later than the commercial fishery. Recreational landings of black drum are significantly larger than commercial landings in all states within their range.

Black drum are typically caught on fresh surf clam in the Delaware Bay with a fish finder rig and a 9/0 hook attached to a 50-pound leader. Heavy boat rods with plenty of backbone are needed. Drum are powerful and will fight all the way to the boat, contrary to analogies that they are like catching a boot. Many lines and leaders have been broken trying to bring in these fish. Drum often "mouth" the bait for some time before swallowing it, so anglers must wait until they are sure the fish has the bait before setting the hook. If you wait too long, the fish may get a free meal. If you act too fast and strike too soon, the fish probably will not have taken the hook.

Instead of putting your fish on a stringer, kill it promptly and put it on ice in your cooler. The scales of drum are tough and not easily removed, so rather than scaling your fish, skin it. The flesh is solid white and full of flavor. A Cestode parasite known as the "spaghetti worm" is frequently found in the flesh of larger drum, sometimes making it appear unappetizing, though it presents no health hazard to humans.

Remember, a key difference between excellent or poor quality fish for the table is the way it was handled and prepared. Numerous coastal restaurants well-known for their fresh seafood frequently serve drum. Many people prefer properly cleaned and prepared drum to some fish considered "choice." For exciting tips on recreational fishing techniques for black drum, see *Delaware Bay Dangerfields* on page 6.

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