

## Unusual Striper Caught in the Potomac River

Danny Torbett reported catching a this unusual striper along with six other normal stripers near Morgantown on the Potomac River this past March 29-30 weekend. He said the fish fought normally and was 26 inches long but would have been about 30 inches if it had been straightened out. The high arch of the back is a condition called lordosis and is caused by an abnormal development of the spine. Mr. Torbett's fish has an arch at the spiny dorsal fin but, for fish with lordosis, this arch can occur any place along the body.

Fishermen may often see another spinal abnormality in stripers called scoliosis in which the spine is curved from side to side rather than top to bottom as in lordosis. Both conditions are created by the fusion and shortening of individual vertebrae. Depending upon severity of the condition, the fish may have impaired swimming ability, impaired balance and decreased ability to escape predators or to catch prey.



Photo by Bill Burton



A third unusual condition that is seen in stripers is called pughead or pugnose in which there are various degrees of a shortened and broadened upper jaw, steep forehead, pushed-in snout and pop eyes. Although this condition may appear to be highly detrimental to the fish, pugheaded stripers as large as 30 inches have been collected on the spawning grounds by Fisheries Service biologists. No less an authority than Bill Burton, then outdoors writer to the Sun, reported in a 1960 article of a five pound pughead caught near Millers Island. Growth is reduced in fish with this condition as they may have difficulty in passing water over the gills or seizing and holding prey.

These abnormalities are not new or limited to the Bay. A 1977 survey in Long Island Sound found all three abnormalities in striped bass collected from there. An 1849 article in the Proceedings of the Boston Society of Natural History describes a pugheaded striper from

Massachusetts.

These conditions have been reported from a variety of species and research on causes dates back into the 1930s. Mechanical injury has been ruled out as a major cause. Findings of the conditions in juvenile fish indicates that conditions affecting egg and larval development are key. In salmon eggs, varying temperatures produced vertebral abnormalities. In trout hatcheries, vitamin deficiencies contributed to scoliosis and lordosis. Pugheaded striped bass larvae (less than ½ inch long) may have been produced by low oxygen conditions. Pollutants may also play a role. Some researchers believe that genetics plays a strong role and that these

conditions are genetic recessives that show up very infrequently.

Although the cause or causes are not clear, there is no indication that these form altering conditions are becoming more common. Fishermen reports into Fisheries Service have not increased nor have our observations of thousands of stripers from the Striped Bass Assessment Project shown any increase. Fishermen could count the catch of one of these oddities as simply adding to the enjoyment of fishing in the always surprisingly variable Bay.