A Xanthochroic Gar, Lepisosteus oculatus, from Mississippi

Xanthochroism, defined as having an abnormal yellow coloration (Kenneth, 1963) is rare or seldom observed in natural fish populations. It apparently has been reported in only eleven species of fishes (Dawson, 1964; Hulquist, 1967).

A 389 mm (standard length) xanthochroic Lepisosteus oculatus Winchell was caught on hook and line in Old Fort Bayou near Ocean Springs, Mississippi on 30 May 1970 by Mr. Frank Verner. In life, the upper body was deep yellow which shaded to pale yellow ventrad. The snout, head, and opercle were deep orange; the eyes were black. The base and anterior margin of each fin was brilliant orange which shaded to pale yellow posteriorad. After 15 weeks of preservation in an antioxidant and 10% formalin solution the body was pale yellow above and creamy white ventrad. The snout and head were yellow and the opercle somewhat dusky. All traces of orange had faded from the fins and previously orange areas were now dusky yellow. Three rows of small black spots were present dorsolaterally over the length of the fish. These spots, not visible in life, were located, bilaterally, on the second, third and fourth scale rows below the dorsal mid-line. Hulquist (1967) noticed the presence of black spots on a preserved xanthic sargo from the Salton Sea, California. He stated that “either the melanic pigmentation had been overlooked previously, or the process of preservation unveiled its presence.”

Except for abnormal coloration the present specimen exhibits all the characteristics of a spotted gar. Counts and proportions fall within the ranges given by Suttkus (1963). According to Dawson (1964, 1966) there are no other records of xanthochroic Lepisosteus oculatus Winchell. Two xanthochroic Lepisosteus platyrincus DeKay taken in Florida waters (Phillips, 1958) apparently represent the only records of this anomaly in Lepisosteus.

This specimen (GCRL 4606) has been deposited in the Gulf Coast Research Laboratory Museum, Ocean Springs, Mississippi.

LITERATURE CITED


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Effects of Formalin on the Length and Weight of Yellow Perch

Data for many fish growth studies are taken from formalin preserved specimens. Length decreases in salmonids range up to 6.8% (Burgner, 1962), with both losses (Hile, 1936; 15-17%) and gains (Parker, 1963; 5-11%) in weight being recorded. Clutter and Whitesel (1956) found no difference in effect due to solution strength, but Hoar (1939) found both the strength of solution and fish size affected the relative magnitude of change.

1 Part of M.Sc. research conducted at the Department of Biology, University of Ottawa, Ottawa, Canada.