

Northeast Gulf Science

Volume 2
Number 1 *Number 1*

Article 6

6-1978

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DOI: 10.18785/negs.0201.06

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Recommended Citation

Schwartz, F. J. 1978. Xanthochromism in *Epinephelus drummondhayi* (Pisces: Serranidae) Caught off North Carolina. *Northeast Gulf Science* 2 (1).

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XANTHOCHROMISM IN *Epinephelus drummondhayi* (PISCES: SERRANIDAE) CAUGHT OFF NORTH CAROLINA

Xanthochromism has been reported among flounders, eels, gars, hogchokers (Dawson, 1964, 1966, 1971; Dawson and Heal, 1976) and sea chubs (Sgano and Abe, 1973). Within the family Serranidae yellow coloration is known for *Mycteroperca olfax* (Jenyns) (Smith, 1971), *Mycteroperca rosacea* (Streets) (Walford, 1936, 1937), *Epinephelus fulvus* (Linnaeus) (Smith, 1971), and *Epinephelus morio* (Valenciennes) (Moe, 1963, 1969). Walford (1936, 1937) and Smith (1958) referred to some of the xanthic *M. rosacea* and *E. fulvus* as "golden forms". Moe (1963) noted a xanthic *E. morio* from Florida with a white interorbital blotch. To these species, I add a speckled hind, *Epinephelus drummondhayi* Goode and Bean (167 mm SL, 173 mm TL; UNC 13534), captured on hook-and-line 27 August 1977 64 km SE of Beaufort Inlet, NC, at 34°05'N 76°32'W, depth 40 m. The fish was placed on ice immediately following capture. A color description was recorded three hours after capture, prior to preservation in 10% formaldehyde.

Color Prior to Preservation: The head, including the fleshy orbit, and the entire body was brilliant yellow except for the branchiostegal and lower cleithral areas (Fig. 1). The outer surfaces of the jaws were yellow as was the buccal cavity. The esophagus and gill arches were white. Externally the isthmus was white-pink with a yellow hue. The branchiostegal rays were golden-yellow on the bone while the membranes were rose-red. This pigmentation extended onto the cleithrum which was a pale white with a yellow-pink hue. Blue

spots, about 2 mm in diameter, occurred scattered on the preopercle, posterior to the orbit; a few were also present on the cheek. Blue spots on a whitish background were scattered on the opercle.

Spots were lacking on the nape. The entire body possessed irregularly scattered white spots, which extended onto the dorsal spines. The dorsal spine tips were golden-yellow with a dusky hue while the flaps were brilliant yellow. The second dorsal fin was yellow with a dusky hue distally. The extreme edge of the second dorsal fin from the third to 16th rays was pink-fuschia. The caudal peduncle was dusky-yellow with no white spots. White spots occurred on the yellow caudal fin, the outer third of which was pale fuschia. The ventral half of the caudal peduncle was yellow but lacked white spots. The anal fin was bright yellow to the first ray; the anterior edge of the other rays for the entire fin length was fuschia. The fuschia of the anal fin continued anteriorly over the anus to the pelvic fin base. The proximal fifth of the pelvic fin was fuschia to yellow-white while the distal eighth was clear. Fuschia occurred on the distal half of the yellow pectoral fins. A pale white-yellow area existed on the body between the base of the pectoral pelvic fins to a vertical halfway along the length of the pectoral fins (Fig. 1).

Color in Preservative: Eight months after preservation, the body and fins were white. The previously described blue and white spots on the head and just posterior to the eye were dusky while the fin and body white spots have a dusky overcast. A pale white background coloration extended from the preopercle across the interorbital space. A pale dusky aspect to the body coloration persisted from the nape to the fourth dorsal spine and in

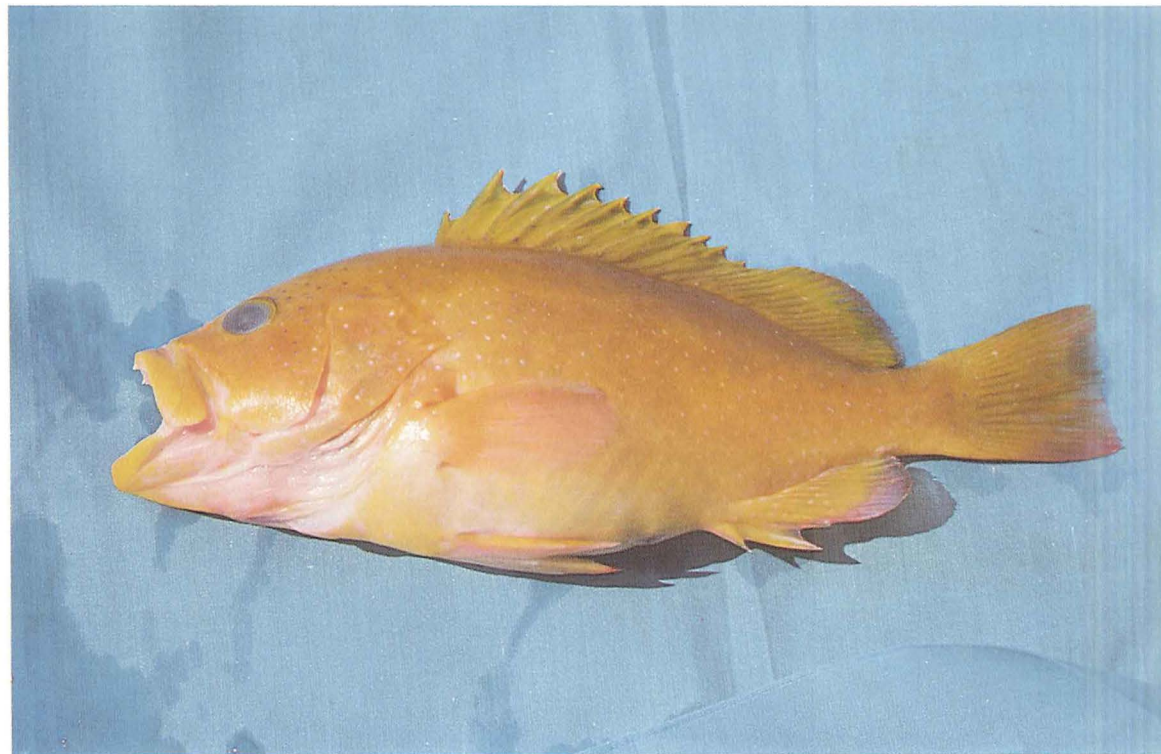


Figure 1. Xanthochromic *Epinephelus drummondhayi* from off Beaufort Inlet, NC.

slightly lighter tones a third of the way down over the body toward the lateral line. A dusky hue existed on the snout and at the symphysis of the lower jaw.

While Smith (pers. comm.) has seen specimens of *E. drummondhayi* as small as 225 mm SL, which were reddish maroon with white spots like adults, he has never seen a smaller young *E. drummondhayi* or knows if there is an ontogenetic color change as in several other grouper species (Smith, 1971). The above specimen agrees with published descriptions of *E. drummondhayi* except color. It possesses a XI, 16 dorsal, III, 9 anal spine-ray count, 17-18 pectoral fin rays, and 26 gill rakers.

ACKNOWLEDGMENTS

Thanks are due Captain W. Williams of M/V EBB TIDE for calling the specimen to my attention and Dr. C. L. Smith, American Museum of Natural History, New York, for verification of and comments on the specimen.

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