

ADDITIONAL DATA ON THE POMACENTRID FISH *CHROMIS SCOTTI*.—Several specimens of a species of *Chromis* (*Heliases*) resembling *C. scotti*, but differing by the presence of a bright blue V-line on the snout and head, were collected during an ecological and distributional survey of fishes inhabiting eastern Gulf of Mexico patch reefs (Smith, 1976). An attempt to determine more fully the taxonomic status of this form prompted comparative examination of *Chromis scotti*, *C. insolatus* and *C. enchrysurus* material from widely scattered western Atlantic localities. This study established for *Chromis scotti* 1) at least two color phases, one of which was hitherto incompletely described, 2) an expanded geographic distribution and 3) an expanded range of variation for certain meristic characters.

Material examined.—Specimens of *Chromis scotti* were examined from ichthyological collections at the Florida Department of Natural Resources Marine Research Laboratory (FSBC),

University of Miami (UMML) and Texas A and M University (TAMU). Methods for counts and measurements follow those of Hubbs and Lagler (1949). Abbreviated locality data, institutional abbreviations, catalogue numbers and number and size range in mm SL (in parentheses) of specimens examined follow. Florida East Coast: Broward Co., UMML 22551 (50.0). Florida Keys: UMML 19338 (18:23.0–56.3), 18810 (16:8.7–61.9), 19352 (29:9.4–53.0), 1076 (4:48.5–64.7), 18927 (3:15.4–56.9), 5453 (59.5, paratype). Eastern Gulf of Mexico: Ft. Myers, Florida, FSBC 3721 (52.7); Sarasota, Florida, FSBC 7394 (45.4), 7617 (55.7); St. Petersburg, Florida, FSBC 7619 (30.3), 7618 (2:22.2–34.1), 3896 (55.2); Florida Middle Ground, FSBC 7667 (20:27.9–60.5), 7393 (54.9), 7756 (8:26.9–50.1), 8984 (29.8); Panama City, Florida, FSBC 8985 (28.3). Western Gulf of Mexico: West Flower Garden Reef, Texas, TAMU 6-0001 (79.7); Isla de Lobos, Mexico, TAMU 6-0002 (53.2), 6-0003 (57.6). Caribbean Sea: Curacao, UMML 30735 (35.8).

Discussion.—Emery (1968) recognized four species of *Chromis* (*Heliases*) from the western Atlantic Ocean: *C. enchrysurus*, *C. flavicauda*, *C. scottii* and *C. insolatus*. In the Gulf of Mexico, only *C. enchrysurus* and *C. scottii* occur (Bright and Cashman, 1974; Smith et al., 1975; Smith, 1976). In the eastern Gulf, *C. enchrysurus* prefers low-relief limestone bottoms perforated with solution holes and shallow basins, whereas *C. scottii* resides almost exclusively at rocky ledges of areas of high topographic expression (Smith, 1976).

Emery (1968) described for *C. enchrysurus* and *C. flavicauda* a "thin raised line, pale when preserved, brilliant blue when alive, beginning in a V above the upper lip, running above the nostril, over the eye (on the head), and continuing onto the body as far back as the dorsal fin," but thought a similar feature to be absent in both *C. scottii* and *C. insolatus*. However, in situ SCUBA observations of certain *C. scottii* specimens in the eastern Gulf of Mexico revealed the presence of two bright blue lines diverging from the snout, continuing over the nostrils, and terminating at the upper orbital edges. While this V-line is abbreviated and variably expressed in *C. scottii*, it otherwise resembles that described for the head of *C. enchrysurus* (Emery 1968). Two specimens of *C. scottii* maintained in aquaria demonstrated the ability to "turn on and off" this blue V-line as well as reflective blue spots on the body scales. While Emery (1973) mentioned that

adult *C. scottii* were able to "turn on" or "turn off" the blue reflective spots, he failed to detect or at least describe the blue V-line on the head.

The blue V-line of *Chromis scottii* has not been overlooked by earlier workers. Descriptions of *C. scottii* (under the name *C. insolatus*) by Jordan and Gilbert (1882) and Jordan and Evermann (1898) included mention of a "curved blue streak between eyes in front, disappearing with age; many scales on upper and anterior parts of body, each with a blue spot." Emery (1968) recognized these specimens as *C. scottii*, but did not comment on the blue snout lines. Longley and Hildebrand (1941) did not mention blue snout lines in *C. scottii* (under the name *C. insolatus*) at Tortugas, Florida.

Eastern Gulf of Mexico specimens of juvenile *C. scottii* nearly always show the blue V-line on the head and reflective blue spots on the head and body; adult *C. scottii* variably express these same features and may instantaneously acquire or lose them. In alcohol, specimens of *C. scottii* in the "reflective blue-spotted phase" retain some of the spots anteriorly and a faded but discernible V-line on the snout. We have detected the V-line or remnants thereof in preserved specimens of *C. scottii* from SE Florida (UMML 22551), Florida Keys (UMML 19338, 30.0; 18810, 53.4; 19352, 29.0), and eastern Gulf of Mexico (FSBC 7667, 29.8 and 32.7; 8984; 8985; 7756, 46.3 and 39.7; 7394; 7617, 55.7).

The position of *C. scottii* adults in the water column seems to be correlated with color phase expression. Individuals feeding 2–4 m above bottom most often demonstrate the "blue-spotted phase"; individuals at or near bottom generally express the "solid color phase."

Emery (1968) suggested that *C. scottii* was a "Florida endemic derived from the more widespread *C. insolatus*." However, in addition to being known from the Florida Keys (Starck, 1968; Emery, 1968, 1973) and SE Florida (Emery, 1968; Gilbert, 1972; Herrema, 1974), *C. scottii* is now known from the western Bahama Islands (Gilbert, 1972), entire Gulf of Mexico (Hastings, 1972; Cashman, 1973; Bright and Cashman, 1974; Smith et al., 1975; Smith, 1976), Jamaica (Colin, 1974), Belize (Colin, 1974), and Colombia (Palacio, 1974).

Emery (1968) compiled meristic data for 31 specimens of *C. scottii* from south Florida. Examination of additional specimens throughout its geographic range expanded the ranges for selected meristic characters of *C. scottii* (Table 1).

TABLE 1. FREQUENCY DISTRIBUTION FOR SELECTED MERISTIC DATA ON *Chromis scotti* EMERY.

Dorsal Rays				
11	12	13		
7	71	10		
Gill Rakers				
17	18	19	20	21
1	4	49	18	5
Anal Rays				
10	11	12	13	
1	15	72	2	
Lateral Line Scales				
15	16	17	18	19
2	20	54	6	1

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