

NOTES

AN ADULT BLUEFIN TUNA, *Thunnus thynnus*, FROM A FLORIDA WEST COAST URBAN WATERWAY¹

The bluefin tuna, *Thunnus thynnus* (Linnaeus), is a wide-ranging pelagic species occurring in most tropical and temperate seas (Gibbs and Collette, 1966: 119). In the Gulf of Mexico exploratory and commercial catches have been limited to the northern, western, and central parts, from waters beyond the continental shelf. The collection of a large adult from the Florida west coast represents a new record for the Florida shelf.

The specimen, a female, was captured by local fishermen with harpoons in a waterway at Hudson, Fla., (lat 28°21'24" N, long 82°42'42" W) on 10 May 1970. It weighed 239 kg (525 lb.), was 244 cm (96 inches) in fork length and 168 cm (66 inches) in girth, and appeared to be in healthy but lean condition, characteristic of post-spawning fish in May on the Bahama Banks (Rivas, 1955: 139).

Histological examination of gonadal tissue sectioned at 6 μ and stained with Harris hematoxylin and Eosin Y showed early and late atretic

¹ Contribution No. 154.

body formations, indicating recent spawning. The stomach contained a mussel, *Brachidontis recurvus* (Rafinesque), a piece of marl (no doubt ingested accidentally), and a digenetic trematode; gills and other tissues were free of parasites.

The fish had entered the waterway through a shallow navigation channel from the adjacent grass flats. The waterway, a network of channels cut through marl, consists of several 161 m by 15 m "fingers" branching from a 1370 m by 22 m central channel, with depths averaging less than 5 m at low tide. Surface salinity in the waterway, tested at a subsequent low tide, was 27.0 ‰; surface temperature in the adjacent Gulf was 26° C.

This occurrence, although admittedly irregular, may help to fill a gap in our emerging picture of the origin and distribution of Gulf of Mexico bluefin tuna stocks.

Bluefin tuna are taken from the Greater Antilles in spring, with substantial numbers of large adults being reported from the Windward Passage in April (Bullis, 1955: 6). During May they begin their dramatic migration through the Straits of Florida toward the summer feeding grounds (Rivas, 1954, 1955).

The occurrence of large bluefins at Grand Cayman and east of Cozumel in April (Bullis and Mather, 1956: 9) suggests that at least a component of these Caribbean stocks may undertake a similar northward movement through the Yucatan Straits and into the Gulf of Mexico. The occurrence of ripe or nearly ripe females in the Gulf in May and of small juveniles (less than 8 cm) in the northern Gulf in late May and early June (Mather, 1962: 5) implies that these stocks spawn in the Yucatan Straits or in the Gulf of Mexico proper. Our spent female on the Florida shelf could be from the Caribbean stock or from a stock wintering in the Gulf (Bullis, 1955: 13; Wathne, 1959: 16).

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